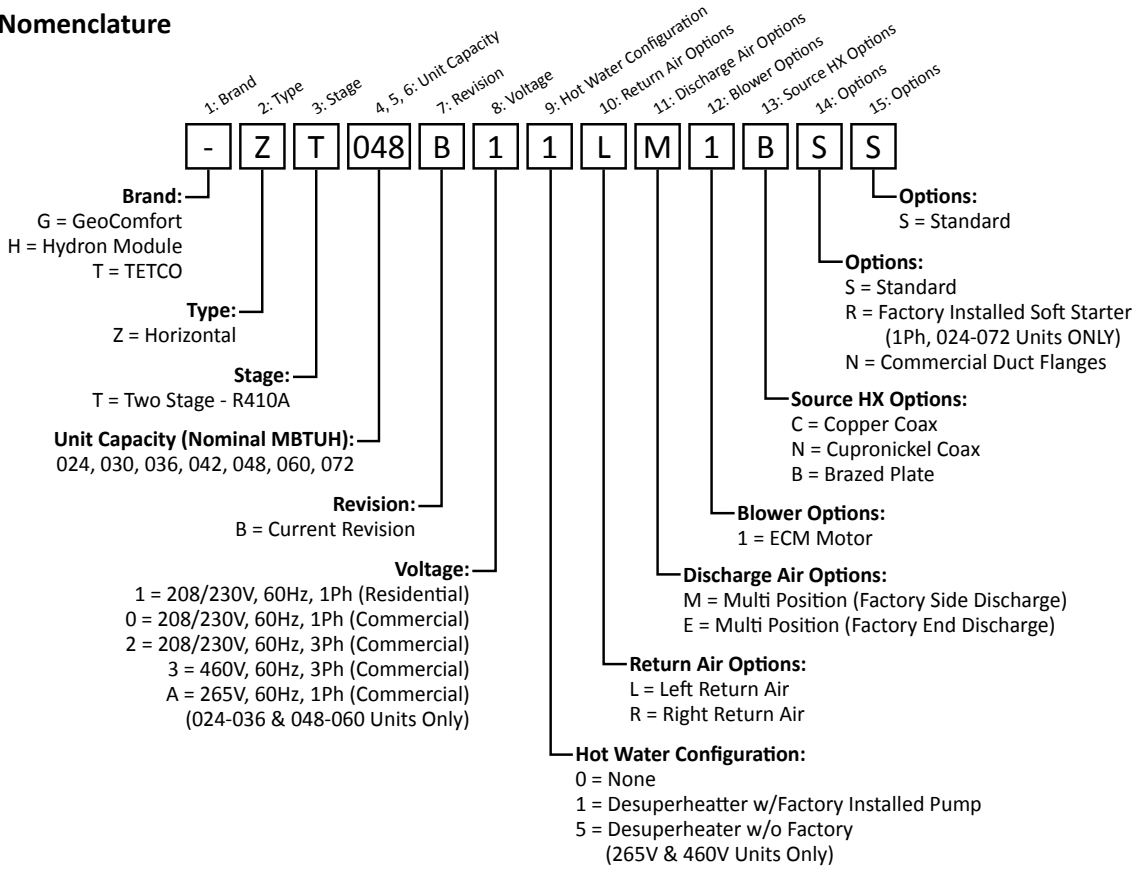
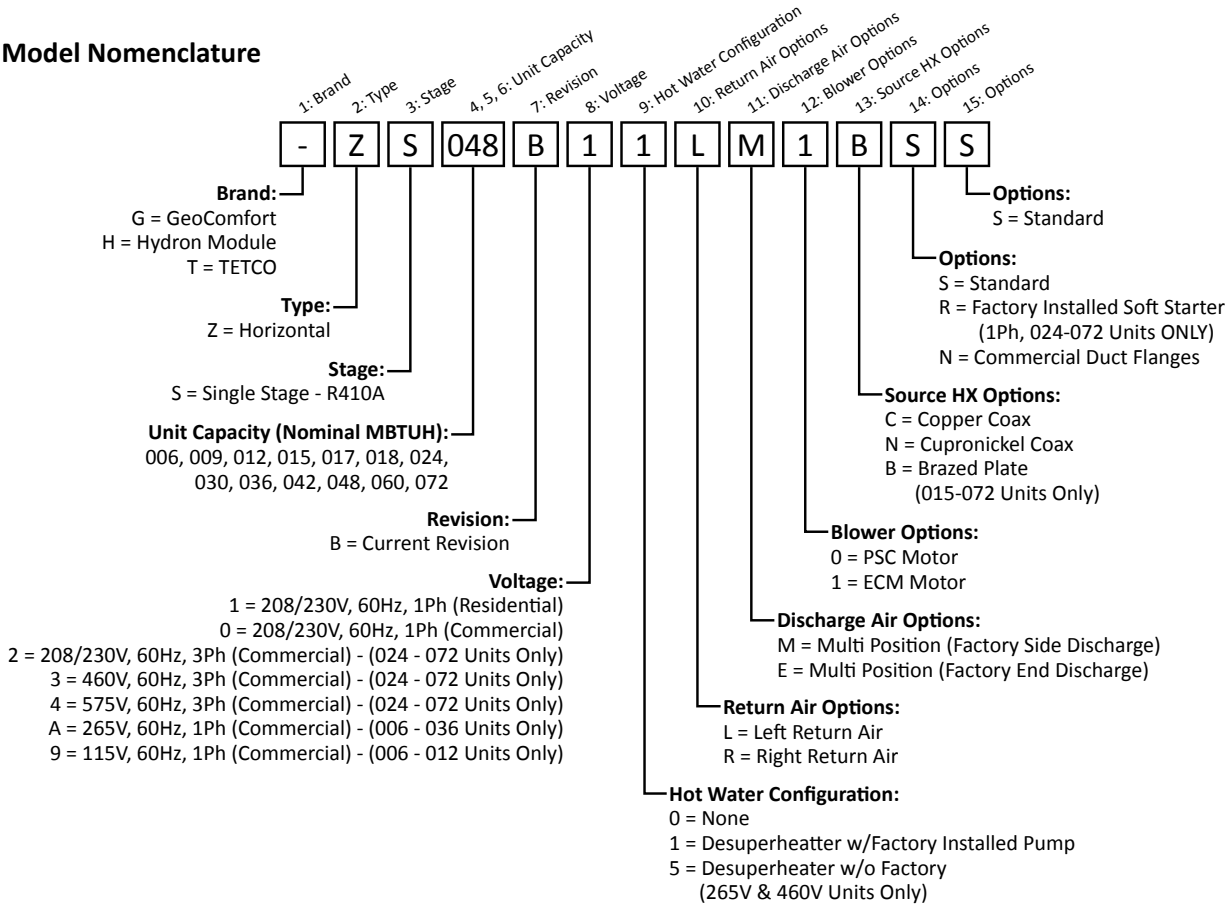


ENGINEERING SPECIFICATIONS

ZT Model Nomenclature



ZS Model Nomenclature



AHRI Performance Data

ZT-Two-Stage and ZS-Single Stage

NOTE: COAX=Coaxial Coil Heat Exchanger BPHE=Brazed Plate Heat Exchanger

UNIT	SOURCE COIL	BLOWER MOTOR	VOLTAGE	RATING TYPE	F/L COOL	F/L EER	F/L HEAT	F/L COP	P/L COOL	P/L EER	P/L HEAT	P/L COP	
ZS006	COAX	PSC	208/230	WL	6,500	14.6	7,800	5.2	N/A	N/A	N/A	N/A	
				GW	7,600	23.2	6,400	4.3	N/A	N/A	N/A	N/A	
				GL	6,900	17.1	5,200	3.5	N/A	N/A	N/A	N/A	
			265 and 115	WL	6,200	13.9	7,400	4.9	N/A	N/A	N/A	N/A	N/A
				GW	7,200	22.0	6,100	4.1	N/A	N/A	N/A	N/A	N/A
				GL	6,500	16.2	5,000	3.3	N/A	N/A	N/A	N/A	N/A
ZS009	COAX	PSC	208/230	WL	9,200	14.3	11,700	4.9	N/A	N/A	N/A	N/A	
				GW	10,500	22.9	9,500	4.2	N/A	N/A	N/A	N/A	
				GL	9,600	16.7	7,500	3.5	N/A	N/A	N/A	N/A	
			265 and 115	WL	8,700	13.6	11,100	4.7	N/A	N/A	N/A	N/A	N/A
				GW	10,000	21.7	9,000	4.0	N/A	N/A	N/A	N/A	N/A
				GL	9,200	15.9	7,100	3.3	N/A	N/A	N/A	N/A	N/A
ZS012	COAX	PSC	ALL VOLTAGES	WL	11,000	12.5	13,600	4.3	N/A	N/A	N/A	N/A	
				GW	12,400	18.7	11,700	3.7	N/A	N/A	N/A	N/A	
				GL	11,300	14.1	9,500	3.2	N/A	N/A	N/A	N/A	
ZS015	COAX	PSC	ALL VOLTAGES	WL	14,000	14.7	17,700	5.6	N/A	N/A	N/A	N/A	
				GW	16,100	24.4	14,300	4.7	N/A	N/A	N/A	N/A	
				GL	14,500	17.1	11,300	3.9	N/A	N/A	N/A	N/A	
		ECM	ALL VOLTAGES	WL	13,500	14.7	17,800	5.7	N/A	N/A	N/A	N/A	
				GW	15,600	24.9	14,300	4.8	N/A	N/A	N/A	N/A	
				GL	14,200	17.6	11,200	3.9	N/A	N/A	N/A	N/A	
	BPHE	PSC	ALL VOLTAGES	WL	14,600	16.3	17,100	5.4	N/A	N/A	N/A	N/A	
				GL	15,300	19.2	11,100	3.8	N/A	N/A	N/A	N/A	
				ECM	ALL VOLTAGES	WL	14,600	17.3	16,700	5.5	N/A	N/A	N/A
GL	15,200	20.3	10,900			3.9	N/A	N/A	N/A	N/A			
ZS017	COAX	PSC	ALL VOLTAGES			WL	16,900	14.7	20,900	5.3	N/A	N/A	N/A
				GW	19,200	22.5	16,900	4.5	N/A	N/A	N/A	N/A	
				GL	17,900	17.1	13,700	3.7	N/A	N/A	N/A	N/A	
		ECM	ALL VOLTAGES	WL	17,000	15.6	20,600	5.5	N/A	N/A	N/A	N/A	
				GW	19,400	24.9	16,700	4.7	N/A	N/A	N/A	N/A	
				GL	17,800	18.2	13,500	3.9	N/A	N/A	N/A	N/A	
	BPHE	PSC	ALL VOLTAGES	WL	17,000	15.8	21,000	5.3	N/A	N/A	N/A	N/A	
				GL	18,300	18.6	13,400	3.7	N/A	N/A	N/A	N/A	
				ECM	ALL VOLTAGES	WL	17,300	17.4	20,400	5.6	N/A	N/A	N/A
GL	18,100	20.5	13,000			3.8	N/A	N/A	N/A	N/A			
ZS018	COAX	PSC	ALL VOLTAGES			WL	18,500	13.2	23,400	4.8	N/A	N/A	N/A
				GW	20,900	20.7	18,600	4.2	N/A	N/A	N/A	N/A	
				GL	19,400	15.5	14,800	3.5	N/A	N/A	N/A	N/A	
		ECM	ALL VOLTAGES	WL	19,100	15.4	21,900	5.5	N/A	N/A	N/A	N/A	
				GW	21,400	26.0	17,500	4.7	N/A	N/A	N/A	N/A	
				GL	20,100	18.7	14,100	3.7	N/A	N/A	N/A	N/A	
	BPHE	PSC	ALL VOLTAGES	WL	19,400	15.3	23,000	5.0	N/A	N/A	N/A	N/A	
				GL	20,500	18.2	14,400	3.6	N/A	N/A	N/A	N/A	
				ECM	ALL VOLTAGES	WL	19,900	17.3	22,600	5.4	N/A	N/A	N/A
GL	20,800	20.5	14,200			3.8	N/A	N/A	N/A	N/A			

Note:
 Rated in accordance with ISO Standard 13256-1 which includes Pump Penalties.
 Heating capacities based on 68.0°F DB, 59.0°F WB entering air temperature.
 Cooling capacities based on 80.6°F DB, 66.2°F WB entering air temperature.
 GLHP - Entering water temperatures Full Load: 32°F heating / 77°F cooling.
 GLHP - Entering water temperatures Part Load: 41°F heating / 68°F cooling.
 GWHP - Entering water temperatures: 50°F heating / 59°F cooling.
 WLHP - Entering water temperatures: 68°F heating / 86°F cooling.



ENGINEERING SPECIFICATIONS

AHRI Performance Data

ZT-Two-Stage and ZS-Single Stage

UNIT	SOURCE COIL	BLOWER MOTOR	VOLTAGE	RATING TYPE	F/L COOL	F/L EER	F/L HEAT	F/L COP	P/L COOL	P/L EER	P/L HEAT	P/L COP		
ZS024	COAX	PSC	ALL VOLTAGES	WL	24,600	14.9	29,300	4.9	N/A	N/A	N/A	N/A		
				GW	27,400	22.9	23,700	4.3	N/A	N/A	N/A	N/A		
				GL	25,700	17.4	18,500	3.6	N/A	N/A	N/A	N/A		
		ECM	ALL VOLTAGES	WL	25,300	16.9	28,500	5.5	N/A	N/A	N/A	N/A		
				GW	27,900	26.3	22,900	4.8	N/A	N/A	N/A	N/A		
				GL	26,200	19.6	18,000	3.9	N/A	N/A	N/A	N/A		
	BPHE	PSC	ALL VOLTAGES	WL	24,100	15.8	29,700	5.0	N/A	N/A	N/A	N/A		
				GL	25,200	18.7	18,600	3.7	N/A	N/A	N/A	N/A		
				ECM	ALL VOLTAGES	WL	25,000	17.9	29,300	5.6	N/A	N/A	N/A	N/A
		GL	26,100			21.5	18,600	3.9	N/A	N/A	N/A	N/A		
		ZT024	COAX			ECM	ALL VOLTAGES	WL	25,300	15.9	28,800	5.2	18,200	17.4
				GW	28,200			23.7	22,900	4.6	20,800	29.7	16,600	4.6
GL	26,400			18.3	18,300			3.9	20,000	25.0	14,500	4.1		
BPHE	ECM		ALL VOLTAGES	WL	25,600	17.0	30,000	5.5	18,700	19.3	21,300	6.0		
				GL	26,800	19.8	18,100	4.0	20,700	28.8	14,900	4.3		
				ZS030	COAX	PSC	ALL VOLTAGES	WL	28,400	15.3	33,500	5.3	N/A	N/A
GW	31,800	23.4	27,900					4.5	N/A	N/A	N/A	N/A		
GL	29,700	17.7	22,900					3.6	N/A	N/A	N/A	N/A		
ECM	ALL VOLTAGES	WL	27,800			16.2	32,200	5.5	N/A	N/A	N/A	N/A		
		GW	30,900			24.6	26,300	4.7	N/A	N/A	N/A	N/A		
		GL	29,000			18.8	21,700	3.8	N/A	N/A	N/A	N/A		
BPHE	PSC	ALL VOLTAGES	WL		29,000	16.2	33,300	5.3	N/A	N/A	N/A	N/A		
			GL		30,300	19.1	21,900	3.7	N/A	N/A	N/A	N/A		
			ECM		ALL VOLTAGES	WL	29,500	17.5	33,000	5.7	N/A	N/A	N/A	N/A
	GL	30,700				20.7	21,500	4.0	N/A	N/A	N/A	N/A		
	ZT030	COAX				ECM	ALL VOLTAGES	WL	30,200	15.1	34,800	5.1	22,000	16.2
			GW		32,600			21.6	28,800	4.5	24,700	26.5	21,400	4.5
GL			31,500	17.5	23,300			3.7	23,900	22.7	19,300	4.0		
BPHE		ECM	ALL VOLTAGES	WL	30,600	15.4	36,000	5.0	22,800	17.4	26,100	5.3		
				GL	32,000	18.0	22,600	3.7	24,800	24.9	18,700	4.0		
				ZS036	COAX	PSC	ALL VOLTAGES	WL	35,100	15.4	43,800	4.9	N/A	N/A
GW	39,500	24.1	34,800					4.4	N/A	N/A	N/A	N/A		
GL	36,600	17.9	28,300					3.7	N/A	N/A	N/A	N/A		
ECM	ALL VOLTAGES	WL	35,300			16.0	42,600	5.1	N/A	N/A	N/A	N/A		
		GW	39,500			24.7	33,600	4.6	N/A	N/A	N/A	N/A		
		GL	37,200			18.8	27,500	3.9	N/A	N/A	N/A	N/A		
BPHE	PSC	ALL VOLTAGES	WL		35,900	15.6	43,400	4.9	N/A	N/A	N/A	N/A		
			GL		37,600	18.1	27,800	3.7	N/A	N/A	N/A	N/A		
			ECM		ALL VOLTAGES	WL	36,800	16.8	43,300	5.3	N/A	N/A	N/A	N/A
	GL	38,400				19.5	27,600	4.0	N/A	N/A	N/A	N/A		
	ZT036	COAX				ECM	ALL VOLTAGES	WL	35,100	15.5	42,300	5.0	25,700	18.0
			GW		39,400			23.6	34,000	4.6	29,100	31.8	24,400	4.8
GL			36,700	17.9	27,100			3.8	28,100	26.6	22,000	4.3		
BPHE		ECM	ALL VOLTAGES	WL	36,500	17.0	43,300	5.3	26,100	19.5	30,800	6.0		
				GL	38,200	19.9	27,600	4.1	28,900	29.8	21,200	4.4		

Note:

Rated in accordance with ISO Standard 13256-1 which includes Pump Penalties.

Heating capacities based on 68.0°F DB, 59.0°F WB entering air temperature.

Cooling capacities based on 80.6°F DB, 66.2°F WB entering air temperature.

GLHP - Entering water temperatures Full Load: 32°F heating / 77°F cooling.

GLHP - Entering water temperatures Part Load: 41°F heating / 68°F cooling.

GWHP - Entering water temperatures: 50°F heating / 59°F cooling.

WLHP - Entering water temperatures: 68°F heating / 86°F cooling.



AHRI Performance Data

ZT-Two-Stage and ZS-Single Stage

UNIT	SOURCE COIL	BLOWER MOTOR	VOLTAGE	RATING TYPE	F/L COOL	F/L EER	F/L HEAT	F/L COP	P/L COOL	P/L EER	P/L HEAT	P/L COP				
ZS042	COAX	PSC	ALL VOLTAGES	WL	39,500	15.4	47,900	5.2	N/A	N/A	N/A	N/A				
				GW	44,200	23.7	38,900	4.5	N/A	N/A	N/A	N/A				
				GL	41,100	17.9	31,700	3.7	N/A	N/A	N/A	N/A				
	ECM	ALL VOLTAGES	WL	39,100	16.4	46,300	5.0	N/A	N/A	N/A	N/A					
			GW	43,700	25.6	37,500	4.5	N/A	N/A	N/A	N/A					
			GL	40,700	19.2	30,200	3.8	N/A	N/A	N/A	N/A					
	BPHE	PSC	ALL VOLTAGES	WL	41,700	16.9	50,400	5.4	N/A	N/A	N/A	N/A				
				GL	43,400	19.8	32,800	3.9	N/A	N/A	N/A	N/A				
				ECM	ALL VOLTAGES	WL	42,500	17.7	49,600	5.4	N/A	N/A	N/A			
				GL	44,100	21.1	32,200	4.1	N/A	N/A	N/A	N/A				
				ZT042	COAX	ECM	ALL VOLTAGES	WL	41,200	15.5	49,500	4.7	30,500	16.9	35,800	5.2
								GW	46,000	23.4	40,100	4.3 ¹	34,800	30.5	28,900	4.5 ²
GL	43,000	18.0	32,900					3.6	33,500	25.3	26,400	4.1				
BPHE	ECM	ALL VOLTAGES	WL	41,000	16.5	48,400	4.6	30,400	17.5	35,200	5.0					
			GL	42,600	19.1	31,500	3.7	33,100	26.2	25,800	4.0					
			ZS048	COAX	PSC	ALL VOLTAGES	WL	46,600	14.7	57,100	4.7	N/A	N/A	N/A	N/A	
GW	52,100	22.4					46,800	4.2	N/A	N/A	N/A	N/A				
GL	48,600	17.0					37,800	3.5	N/A	N/A	N/A	N/A				
ECM	ALL VOLTAGES	WL		47,300	15.1	56,300	4.9	N/A	N/A	N/A	N/A					
		GW		52,900	22.6	45,600	4.3	N/A	N/A	N/A	N/A					
		GL		49,300	17.4	36,200	3.6	N/A	N/A	N/A	N/A					
BPHE	PSC	ALL VOLTAGES		WL	46,800	15.4	59,300	4.6	N/A	N/A	N/A	N/A				
				GL	48,500	17.8	38,500	3.6	N/A	N/A	N/A	N/A				
				ECM	ALL VOLTAGES	WL	48,100	16.3	58,100	4.9	N/A	N/A	N/A			
				GL	50,400	19.1	37,800	3.8	N/A	N/A	N/A	N/A				
				ZT048	COAX	ECM	ALL VOLTAGES	WL	46,500	15.1	55,300	4.8	34,600	16.6	40,400	5.5
								GW	52,200	22.1	45,900	4.3 ³	39,600	29.4	32,800	4.6
GL	48,700	17.3	36,900					3.6	38,000	24.4	29,300	4.1				
BPHE	ECM	ALL VOLTAGES	WL	47,600	15.8	58,300	4.9	36,200	17.8	42,000	5.5					
			GL	49,800	18.3	37,900	3.9	39,700	26.6	29,600	4.3					
			ZS060	COAX	PSC	ALL VOLTAGES	WL	56,400	14.5	72,800	4.7	N/A	N/A	N/A	N/A	
GW	62,000	21.0					59,600	4.2	N/A	N/A	N/A	N/A				
GL	57,000	16.1					48,400	3.5	N/A	N/A	N/A	N/A				
ECM	ALL VOLTAGES	WL		53,500	15.0	71,000	4.9	N/A	N/A	N/A	N/A					
		GW		60,500	22.3	58,600	4.3	N/A	N/A	N/A	N/A					
		GL		57,000	17.5	46,200	3.6	N/A	N/A	N/A	N/A					
BPHE	PSC	ALL VOLTAGES		WL	58,400	15.4	75,700	4.9	N/A	N/A	N/A	N/A				
				GL	60,500	17.8	49,200	3.8	N/A	N/A	N/A	N/A				
				ECM	ALL VOLTAGES	WL	59,300	17.0	74,700	5.3	N/A	N/A	N/A			
				GL	60,700	19.5	48,200	4.0	N/A	N/A	N/A	N/A				
				ZT060	COAX	ECM	ALL VOLTAGES	WL	55,100	14.6	70,700	4.7	42,000	16.5	50,900	5.4
								GW	62,000	21.2	58,500	4.2	47,300	27.9	41,300	4.5
GL	59,000	16.9	46,800					3.6	45,800	23.7	36,400	4.0				
BPHE	ECM	ALL VOLTAGES	WL	59,400	16.3	74,600	5.1	42,900	18.3	51,400	5.8					
			GL	61,200	18.7	48,100	3.9	47,300	26.9	34,200	4.1					

Note:

Rated in accordance with ISO Standard 13256-1 which includes Pump Penalties.

Heating capacities based on 68.0°F DB, 59.0°F WB entering air temperature.

Cooling capacities based on 80.6°F DB, 66.2°F WB entering air temperature.

GLHP - Entering water temperatures Full Load: 32°F heating / 77°F cooling.

GLHP - Entering water temperatures Part Load: 41°F heating / 68°F cooling.

GWHP - Entering water temperatures: 50°F heating / 59°F cooling.

WLHP - Entering water temperatures: 68°F heating / 86°F cooling.

¹ 4.4 for 208-230V/1 Ph Unit

² 4.6 for 208-230V/1 Ph Unit

³ 4.4 for 208-230V/1 Ph Unit



ENGINEERING SPECIFICATIONS

AHRI Performance Data

ZT-Two-Stage and ZS-Single Stage

UNIT	SOURCE COIL	BLOWER MOTOR	VOLTAGE	RATING TYPE	F/L COOL	F/L EER	F/L HEAT	F/L COP	P/L COOL	P/L EER	P/L HEAT	P/L COP		
ZS072	COAX	PSC	ALL VOLTAGES	WL	66,600	13.4	85,300	4.3	N/A	N/A	N/A	N/A		
				GW	74,200	19.1	69,000	3.8	N/A	N/A	N/A	N/A		
				GL	70,200	15.3	56,200	3.2	N/A	N/A	N/A	N/A		
		ECM	ALL VOLTAGES	WL	68,500	13.7	84,200	4.3	N/A	N/A	N/A	N/A		
				GW	75,600	19.8	68,900	3.9	N/A	N/A	N/A	N/A		
				GL	71,200	15.7	56,200	3.3	N/A	N/A	N/A	N/A		
	BPHE	PSC	ALL VOLTAGES	WL	68,600	15.1	88,400	4.6	N/A	N/A	N/A	N/A		
				GL	70,600	17.2	57,400	3.5	N/A	N/A	N/A	N/A		
				ECM	ALL VOLTAGES	WL	69,700	15.5	88,400	4.7	N/A	N/A	N/A	N/A
		GL	72,100	17.7		56,600	3.7	N/A	N/A	N/A	N/A			
		ZT072	COAX	ECM		ALL VOLTAGES	WL	66,600	13.7	83,200	4.5	50,700	15.2	62,700
					GW		73,500	19.2	67,500	4.0	58,100	24.8	49,200	4.2
GL	69,500				15.6		55,500	3.4	56,000	21.3	44,400	3.8		
BPHE	ECM		ALL VOLTAGES	WL	68,100	15.7	88,400	4.8	53,400	17.8	66,600	5.6		
				GL	70,400	18.0	57,900	3.8	57,100	25.2	47,600	4.2		

Note:

Rated in accordance with ISO Standard 13256-1 which includes Pump Penalties.

Heating capacities based on 68.0°F DB, 59.0°F WB entering air temperature.

Cooling capacities based on 80.6°F DB, 66.2°F WB entering air temperature.

GLHP - Entering water temperatures Full Load: 32°F heating / 77°F cooling.

GLHP - Entering water temperatures Part Load: 41°F heating / 68°F cooling.

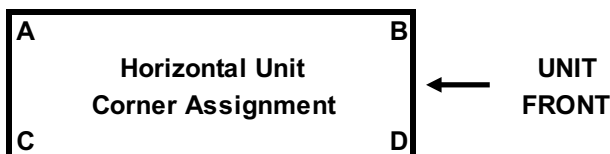
GWHP - Entering water temperatures: 50°F heating / 59°F cooling.



Unit Setup, Physical Data, and Dimensional Data

ZS-ZT Unit Physical Data (BPHE Units Only)

UNIT WEIGHTS ZS-ZT MODELS	BTU SIZES - BPHE UNITS ONLY									
	015	017	018	024	030	036	042	048	060	072
Unit Weight (lbs)	173	173	236	236	236	263	263	263	303	303
Tare Weight (lbs)	32	32	37	37	37	37	37	37	37	37
Shipped Unit Weight (lbs)	205	205	273	273	273	300	300	300	340	340
Left Return Corner A (Unit Wt.)	35	35	47	47	47	53	53	53	61	61
Left Return Corner B (Unit Wt.)	61	61	83	83	83	92	92	92	106	106
Left Return Corner C (Unit Wt.)	26	26	35	35	35	39	39	39	45	45
Left Return Corner D (Unit Wt.)	52	52	71	71	71	79	79	79	91	91
Right Return Corner A (Unit Wt.)	26	26	35	35	35	39	39	39	45	45
Right Return Corner B (Unit Wt.)	52	52	71	71	71	79	79	79	91	91
Right Return Corner C (Unit Wt.)	35	35	47	47	47	53	53	53	61	61
Right Return Corner D (Unit Wt.)	61	61	83	83	83	92	92	92	106	106



SINGLE CAPACITY ZS MODELS	BTU SIZES - BPHE UNITS ONLY									
	015	017	018	024	030	036	042	048	060	072
Compressor Type	Rotary		Single Capacity Scroll							
Blower/Fan Wheel (in)	9 x 7T	9 x 7T	10 x 8T	10 x 8T	10 x 8T	10 x 8	10 x 8	10 x 8	11 x 10T	11 x 10T
Fan Motor ECM (HP)	1/2 hp	1/2 hp	1/2 hp	1/2 hp	1/2 hp	1/2 hp	1/2 hp	3/4 hp	1 hp	1 hp
Fan Motor PSC (HP)	1/4 hp	1/4 hp	1/4 hp	1/3 hp	1/3 hp	1/3 hp	1/2 hp	3/4 hp	1 hp	1 hp
Source Water Connection Size	3/4" FPT		1" FPT							
HWG Water (when available)	3/4" FPT									
Refrigerant Charge (oz)*	37	36	41	41	40	46	52	48	56	60
Air Coil Face Area (sq.ft.)	1.79 sq.ft.		3.26 sq.ft.			4.17 sq.ft.			4.76 sq.ft.	
Air Coil Dimensions (in)	20.5 x 12.6 x 1.26		30.3 x 15.5 x 1			34.5 x 17.4 x 1			39.4 x 17.4 x 1	
Air Coil Type	All Aluminum Microchannel Coil									

* Always check the unit data plate for specific refrigerant charge volume

DUAL CAPACITY ZT MODELS	BTU SIZES - BPHE UNITS ONLY						
	024	030	036	042	048	060	072
Compressor Type	Dual Capacity Scroll						
Blower/Fan Wheel (in)	10 x 8T	10 x 8T	10 x 8	10 x 8	10 x 8	11 x 10T	11 x 10T
Fan Motor ECM (HP)	1/2 hp	1/2 hp	1/2 hp	1/2 hp	3/4 hp	1 hp	1 hp
Fan Motor PSC (HP)	1/3 hp	1/3 hp	1/3 hp	1/2 hp	3/4 hp	1 hp	1 hp
Source Water Connection Size	1" FPT						
HWG Water (when available)	3/4" FPT						
Refrigerant Charge (oz)*	41	39	46	49	51	56	62
Air Coil Face Area (sq.ft.)	3.26 sq.ft.		4.17 sq.ft.			4.76 sq.ft.	
Air Coil Dimensions (in)	30.3 x 15.5 x 1		34.5 x 17.4 x 1			39.4 x 17.4 x 1	
Air Coil Type	All Aluminum Microchannel Coil						

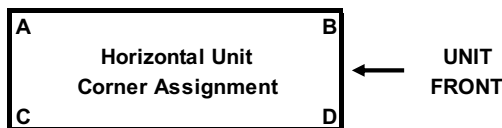
* Always check the unit data plate for specific refrigerant charge volume

ENGINEERING SPECIFICATIONS

Unit Setup, Physical Data, and Dimensional Data

ZS-ZT Unit Physical Data (COAX Units Only)

UNIT WEIGHTS ZS-ZT MODELS	BTU SIZES - COAX UNITS ONLY												
	006	009	012	015	017	018	024	030	036	042	048	060	072
Unit Weight (lbs)	140	140	140	175	175	246	246	255	278	292	306	342	344
Tare Weight (lbs)	32	32	32	32	32	37	37	37	37	37	37	37	37
Shipped Unit Weight (lbs)	172	172	172	207	207	283	283	292	315	329	343	379	381
Left Return Corner A (Unit Wt.)	28	28	28	35	35	49	49	51	55	58	61	67	67
Left Return Corner B (Unit Wt.)	49	49	49	62	62	90	90	92	102	106	110	130	130
Left Return Corner C (Unit Wt.)	21	21	21	26	26	35	35	37	39	42	44	46	46
Left Return Corner D (Unit Wt.)	42	42	42	52	52	72	72	75	82	86	91	99	101
Right Return Corner A (Unit Wt.)	21	21	21	26	26	35	35	37	39	42	44	46	46
Right Return Corner B (Unit Wt.)	42	42	42	52	52	72	72	75	82	86	91	99	101
Right Return Corner C (Unit Wt.)	28	28	28	35	35	49	49	51	55	58	61	67	67
Right Return Corner D (Unit Wt.)	49	49	49	62	62	90	90	92	102	106	110	130	130



SINGLE CAPACITY ZS MODELS	BTU SIZES - COAX UNITS ONLY												
	006	009	012	015	017	018	024	030	036	042	048	060	072
Compressor Type	Rotary						Single Capacity Scroll						
Blower/Fan Wheel (in)	6 X 9	6 X 9	6 X 9	9 x 7T	9 x 7T	10 x 8T	10 x 8T	10 x 8T	10 x 8	10 x 8	10 x 8	11 x 10T	11 x 10T
Fan Motor ECM (HP)	N/A	N/A	N/A	1/2 hp	1/2 hp	1/2 hp	1/2 hp	1/2 hp	1/2 hp	1/2 hp	3/4 hp	1 hp	1 hp
Fan Motor PSC (HP)	1/16 hp	1/16 hp	1/16 hp	1/4 hp	1/4 hp	1/4 hp	1/3 hp	1/3 hp	1/3 hp	1/2 hp	3/4 hp	1 hp	1 hp
Source Water Connection Size	3/4" FPT						1" FPT						
HWG Water (when available)	N/A	N/A	N/A	3/4" FPT									
Refrigerant Charge (oz)*	32	31	31	39	39	54	52	45	60	63	61	74	77
Air Coil Face Area (sq.ft.)	1.08 sq.ft.			1.79 sq.ft.		3.26 sq.ft.			4.17 sq.ft.			4.76 sq.ft.	
Air Coil Dimensions (in)	20.5 x 7.6 x 1.26			20.5 x 12.6 x 1.26		30.3 x 15.5 x 1			34.5 x 17.4 x 1			39.4 x 17.4 x 1	
Air Coil Type	All Aluminum Microchannel Coil												

* Always check the unit data plate for specific refrigerant charge volume

DUAL CAPACITY ZT MODELS	BTU SIZES - COAX UNITS ONLY						
	024	030	036	042	048	060	072
Compressor Type	Dual Capacity Scroll						
Blower/Fan Wheel (in)	10 x 8T	10 x 8T	10 x 8	10 x 8	10 x 8	11 x 10T	11 x 10T
Fan Motor ECM (HP)	1/2 hp	1/2 hp	1/2 hp	1/2 hp	3/4 hp	1 hp	1 hp
Fan Motor PSC (HP)	1/3 hp	1/3 hp	1/3 hp	1/2 hp	3/4 hp	1 hp	1 hp
Source Water Connection Size	1" FPT						
HWG Water (when available)	3/4" FPT						
Refrigerant Charge (oz)*	51	45	60	65	65	76	75
Air Coil Face Area (sq.ft.)	3.26 sq.ft.		4.17 sq.ft.			4.76 sq.ft.	
Air Coil Dimensions (in)	30.3 x 15.5 x 1		34.5 x 17.4 x 1			39.4 x 17.4 x 1	
Air Coil Type	All Aluminum Microchannel Coil						

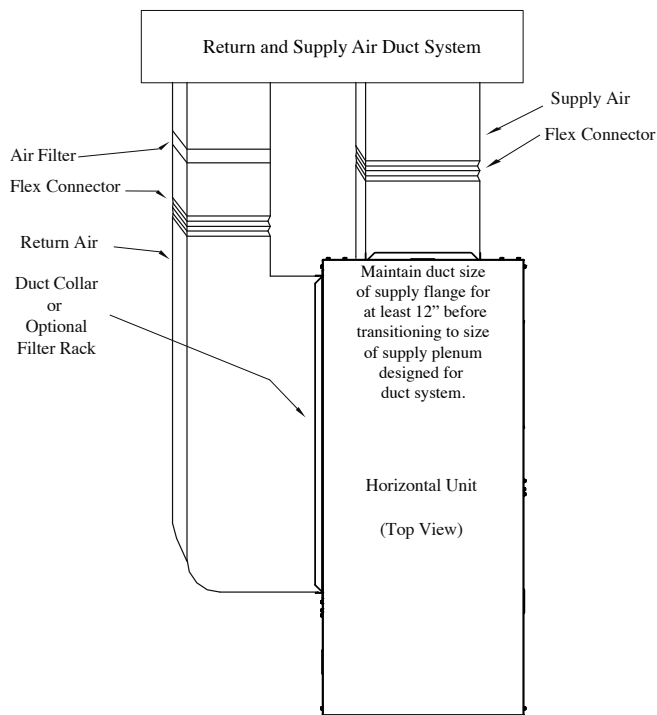
* Always check the unit data plate for specific refrigerant charge volume

Unit Setup, Physical Data, and Dimensional Data

Table 1: Maximum Air Velocities

Location	Supply	Return
Main Ducts	900 FPM	600 FPM
Branch Ducts	700 FPM	600 FPM
Grills, Registers, Diffusers	750 FPM	600 FPM

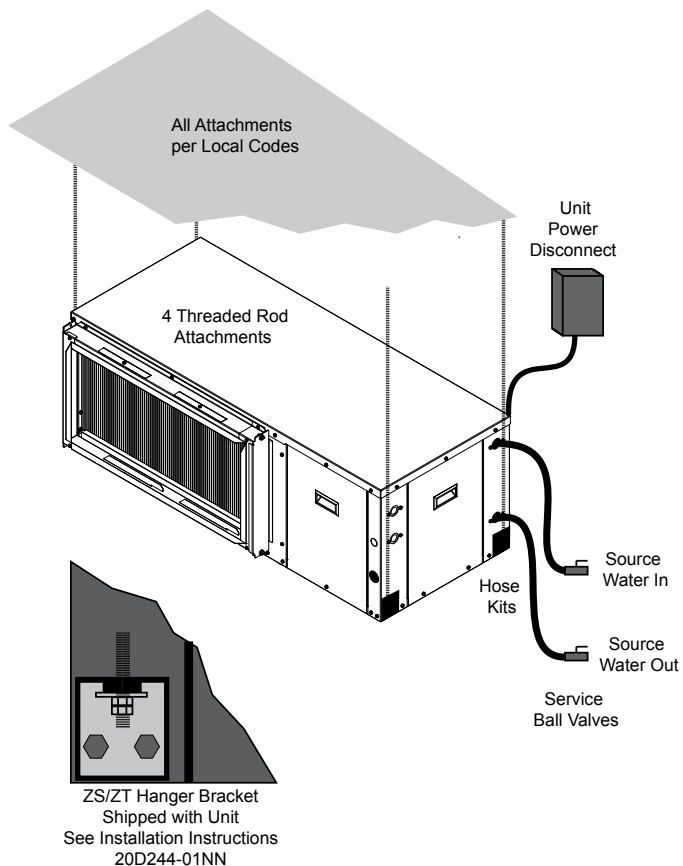
Typical Ductwork Connection Setup:



Optional Filter Rack Kit Installation

Installation of the optional and sold separately accessory filter rack is described in the installation instructions provided with that item. Maintenance and filter change instructions are included in the owners manual shipped with every packaged unit.

Horizontal Unit Suspension

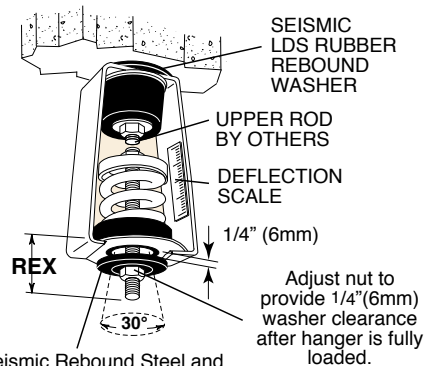


Seismic Hanger Bracket

PC30N (Mason Industries) -- Available from mason-industries.com

TYPE 30N PRECOMPRESSED & SEISMIC RESTRAINT

Install with hanger box snug to 1/4" (6mm) Seismic LDS Rubber Washer, so washer is tight to overhead surface. Upper hanger element deflects under load, leaving space on top. Washer cushions upward seismic travel.



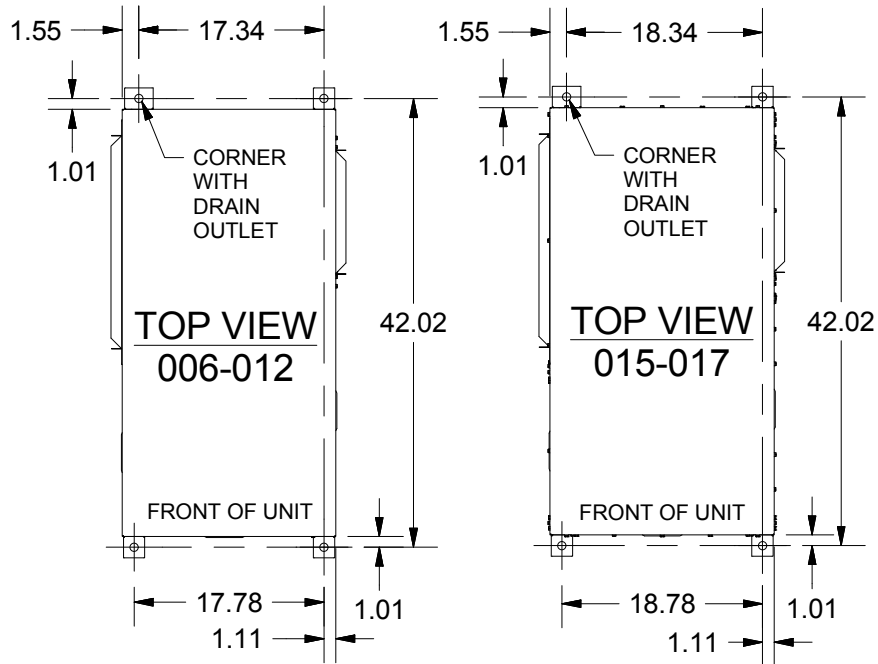
Seismic Rebound Steel and Bonded LDS Rubber Washer holds precompression and limits upward seismic motion. Hangers are precompressed to rated load or assigned load as required. Scale indicates deflection.

ENGINEERING SPECIFICATIONS

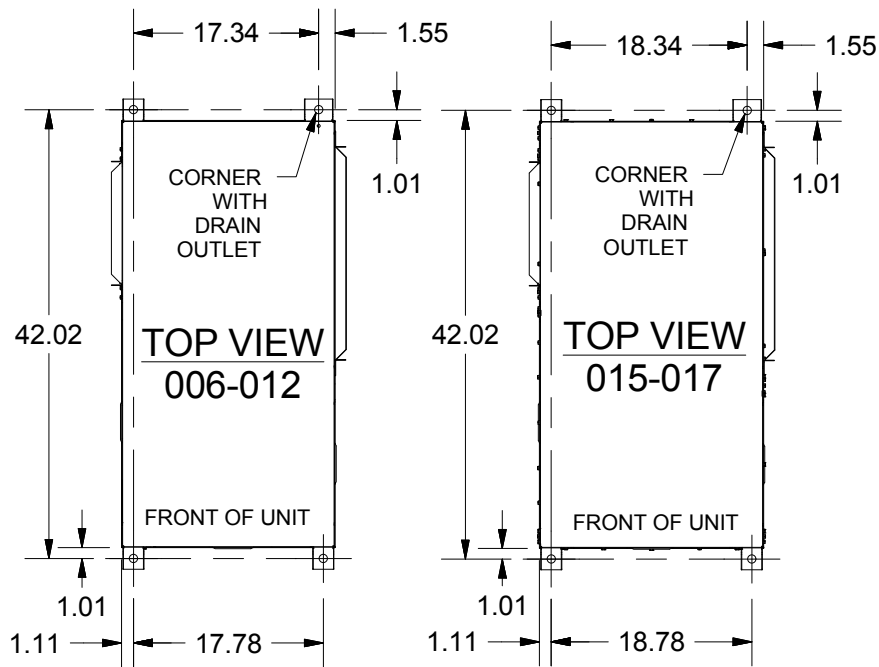
Unit Setup, Physical Data, and Dimensional Data

Horizontal Unit Suspension Hanger Locations and Dimensions

LEFT HAND RETURN CABINET



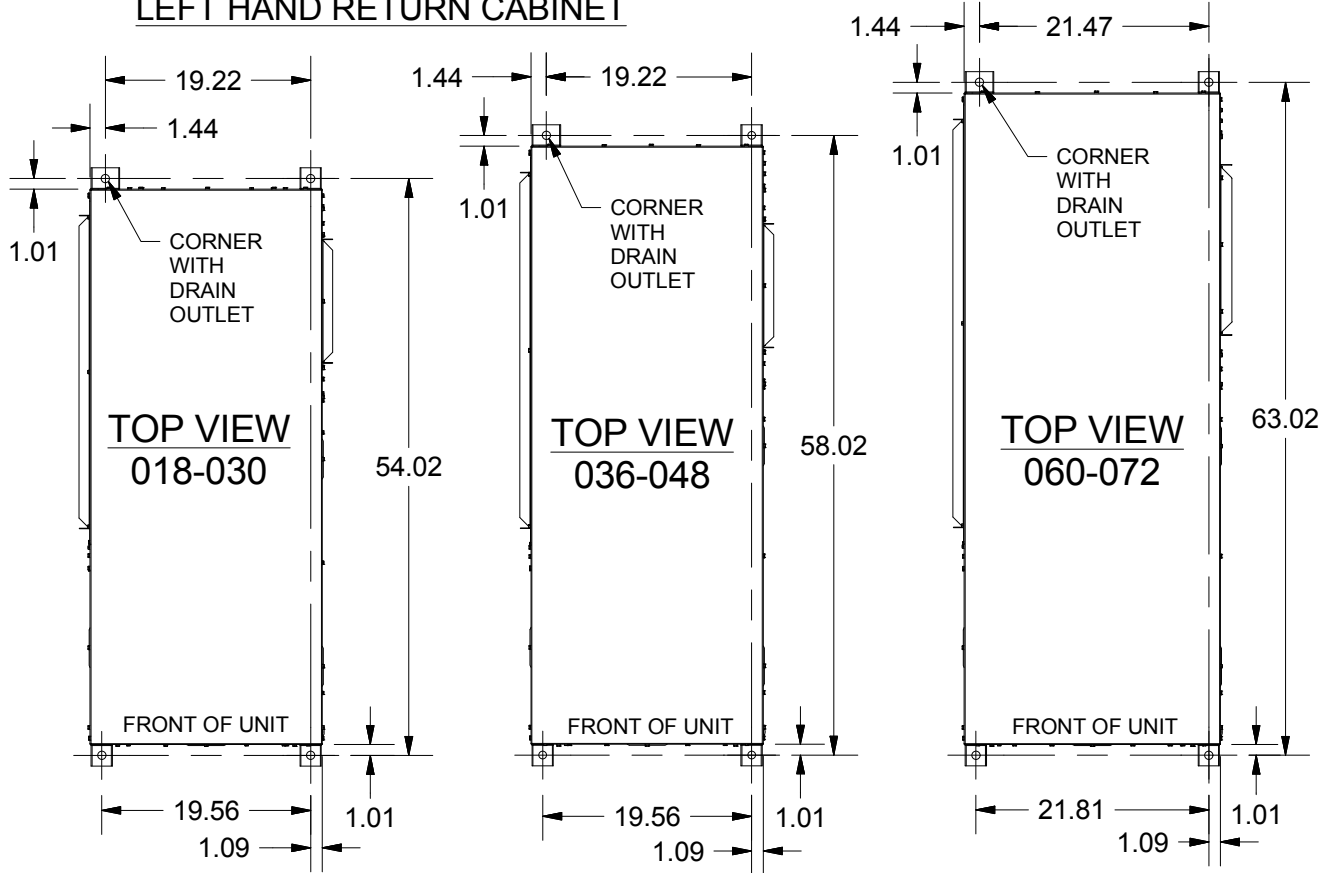
RIGHT HAND RETURN CABINET



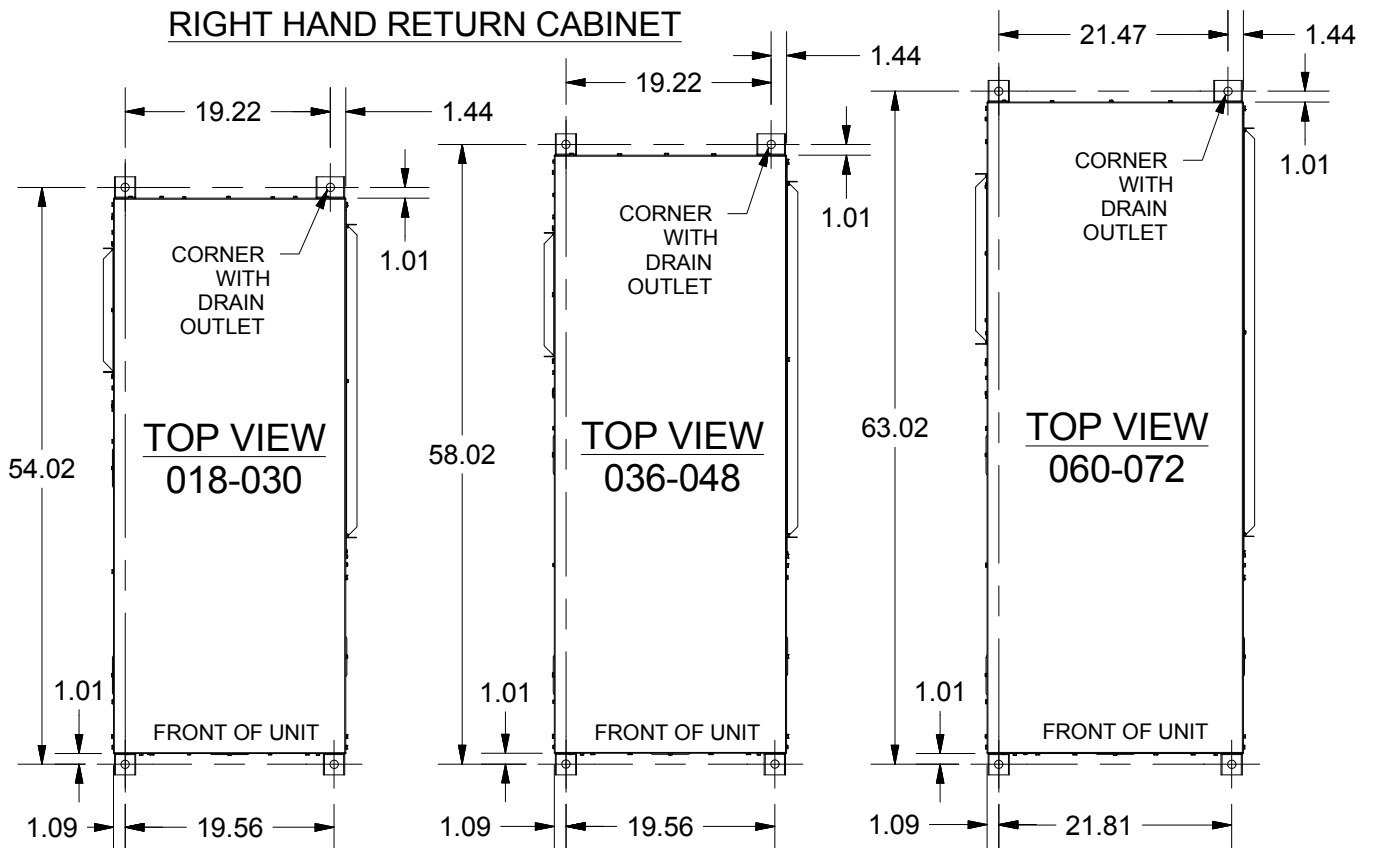
Unit Setup, Physical Data, and Dimensional Data

Horizontal Unit Suspension Hanger Locations and Dimensions

LEFT HAND RETURN CABINET



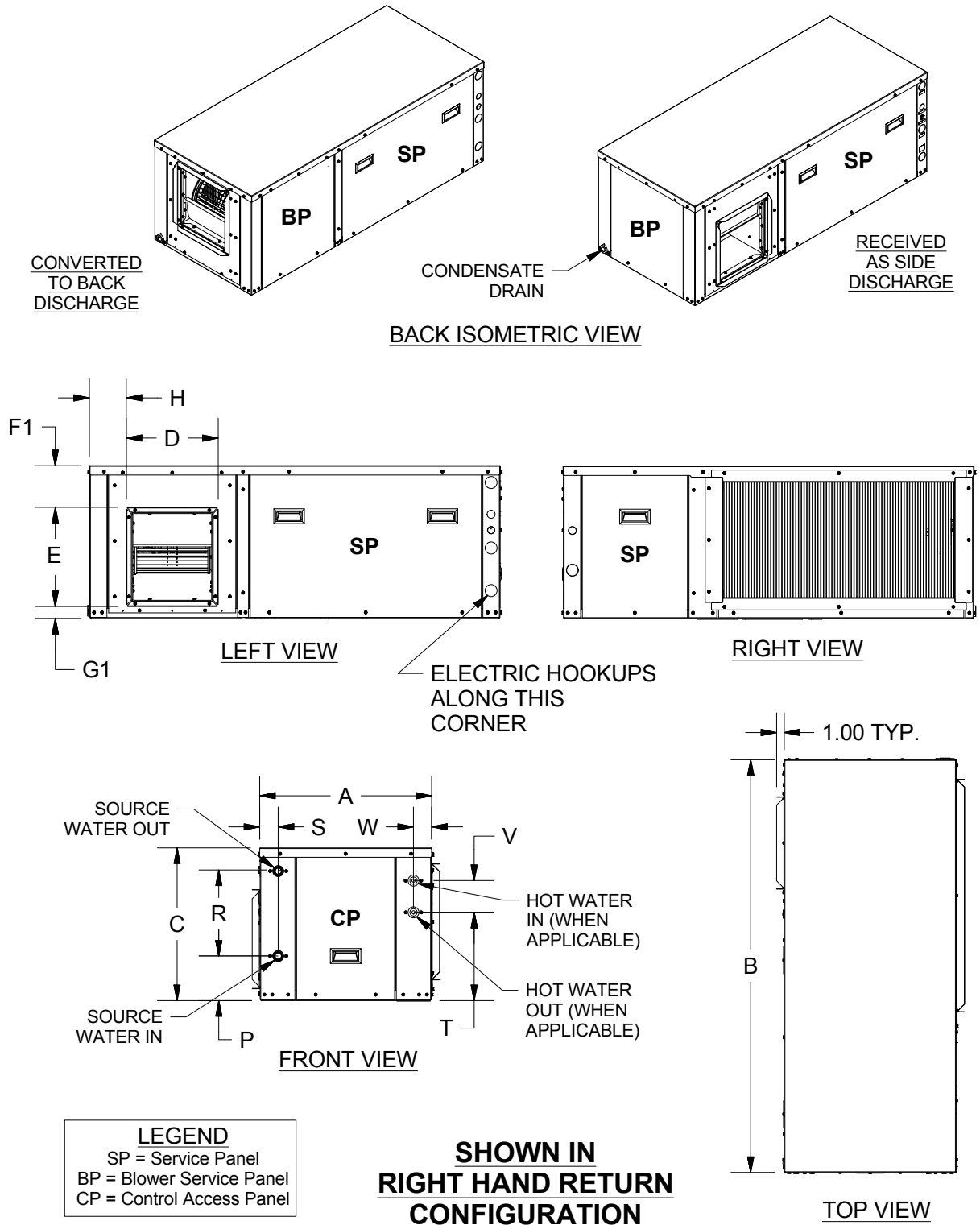
RIGHT HAND RETURN CABINET



ENGINEERING SPECIFICATIONS

Unit Setup, Physical Data, and Dimensional Data

Unit Dimensional Data

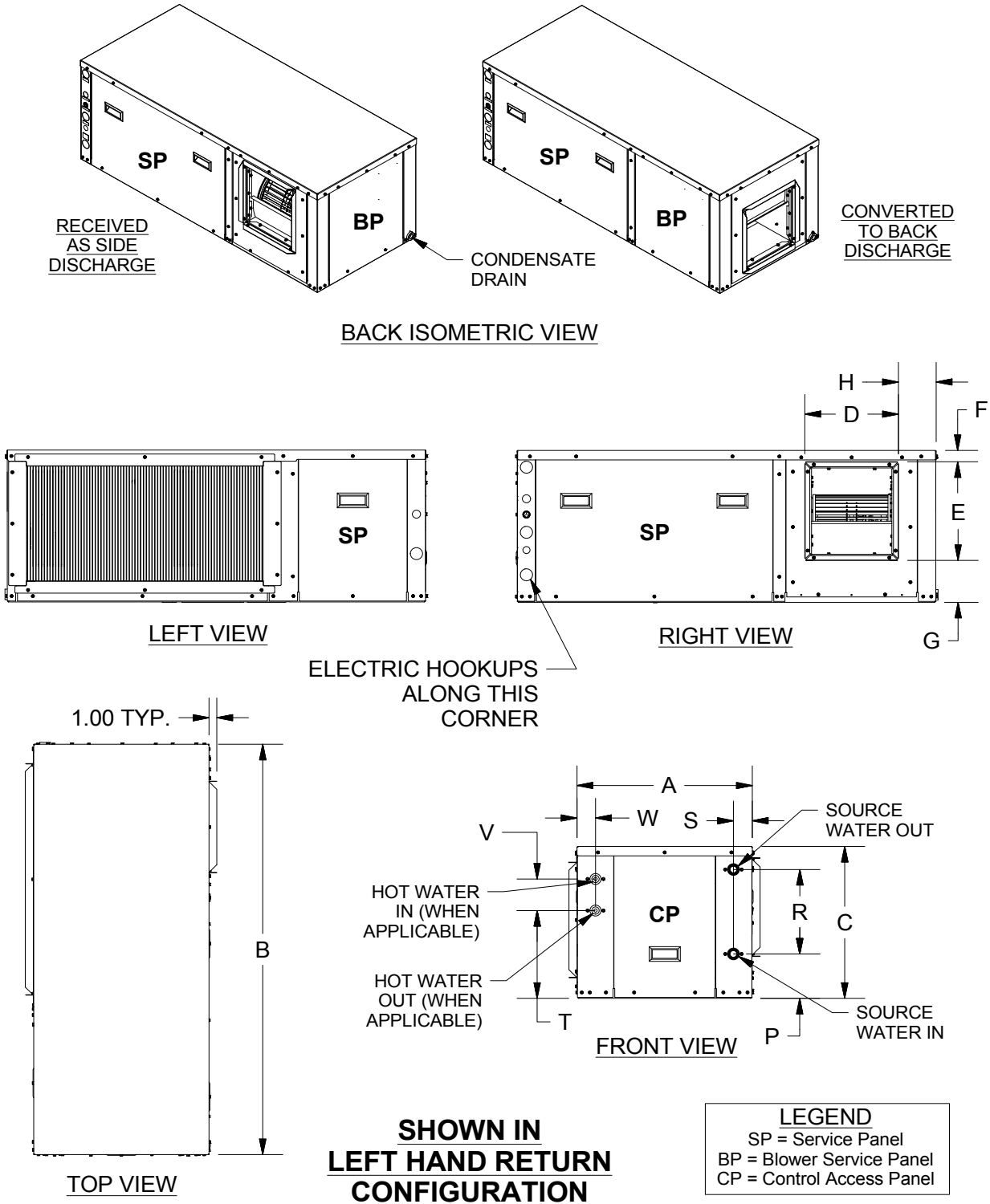


Reference dimensional data enclosed.
 Units utilize FPT source water connections.
 Units with Desuperheater utilize FPT connections.
 Electrical knockouts are sized to 1/2" or 3/4" conduit.
 All views are shown with flanges for reference.
 Return duct flanges or 1" commercial filter rack are factory installed. See separate dimensional data sheet for further detail.

All measurements are in inches.
 Drawings are typical, individual models may vary.
 Optional filter rack kits are available as needed. See separate dimensional data sheet for details.
 Discharge flanges are field installed and are shipped inside of the unit.

Unit Setup, Physical Data, and Dimensional Data

Unit Dimensional Data



Reference dimensional data enclosed.
 Units utilize FPT source water connections.
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 All views are shown with flanges for reference.
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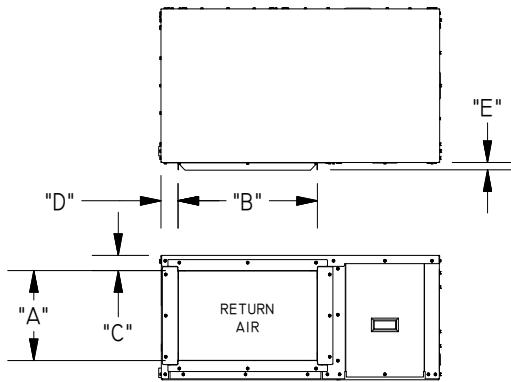
ENGINEERING SPECIFICATIONS

Unit Setup, Physical Data, and Dimensional Data

Return Flanges/Filter Rack Dimensional Data

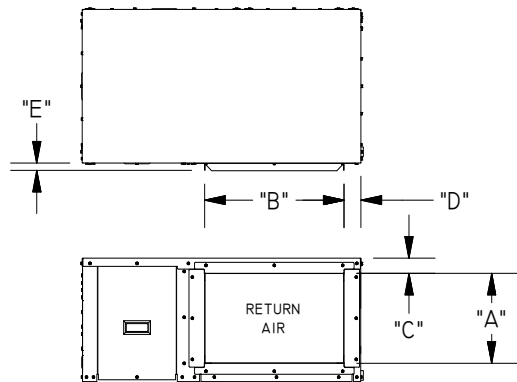
LEFT HAND RETURN MODELS

WITH RETURN FLANGES

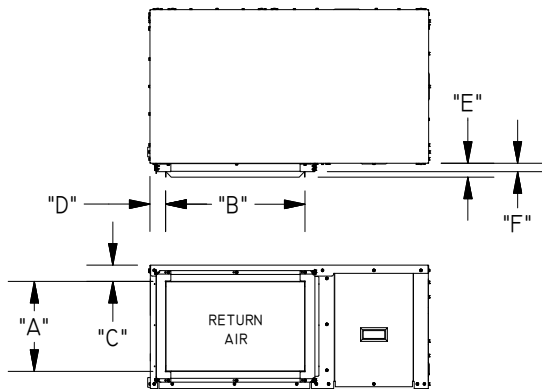


RIGHT HAND RETURN MODELS

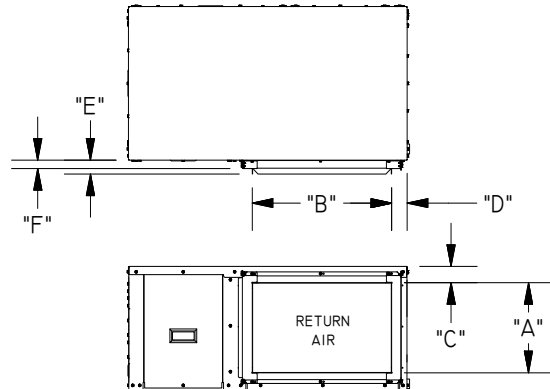
WITH RETURN FLANGES



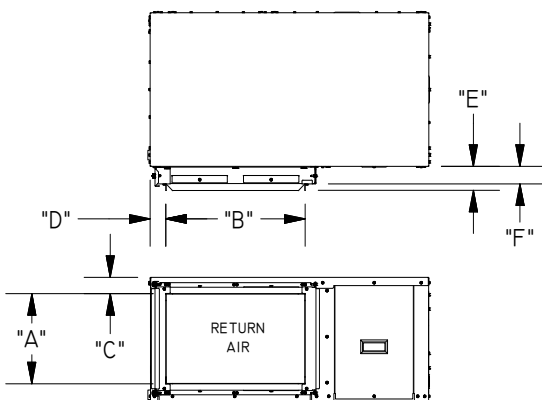
WITH 1" COMMERCIAL FILTER RACK



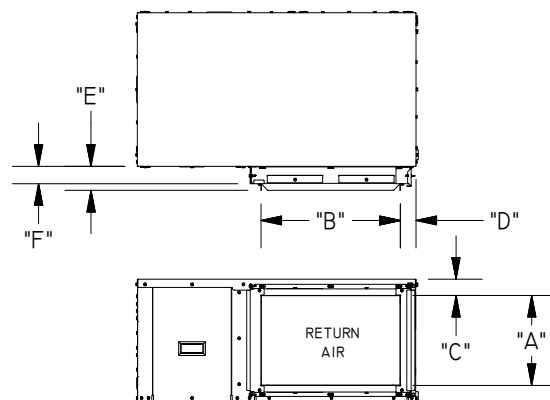
WITH 1" COMMERCIAL FILTER RACK



WITH 1"-2" DELUXE FILTER RACK

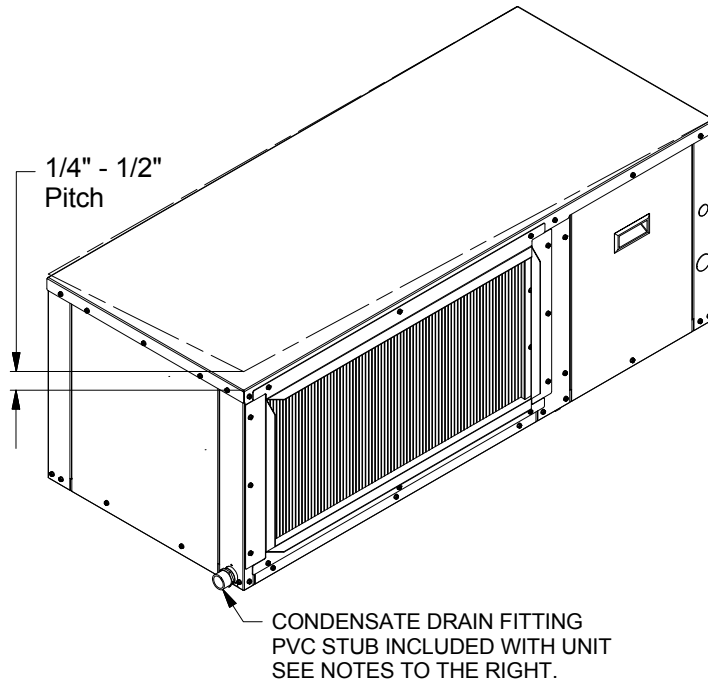


WITH 1"-2" DELUXE FILTER RACK



Unit Setup, Physical Data, and Dimensional Data

Unit Dimensional Data

UNIT PITCH FOR CONDENSATE DRAINCondensate Drain Notes:

1. Unit must pitch from level towards the condensate drain for proper drainage.
2. Confirm that condensate drains properly from unit and that the amount of pitch does not cause condensate leaks inside of the unit.
3. Units are equipped with overflow protection.
4. Be sure to leave adequate height for the P-Trap in applications where clearance could be an issue.
5. In some high humidity applications you may need to apply insulative tape around condensate drain fitting.

ENGINEERING SPECIFICATIONS

Blower Data

Unit Dimensional Data

MODEL	Overall Cabinet Size			Supply Air (Side Blower Discharge)						
	A (Width)	B (Depth)	C (Height)	D (Width)	E (Height)	F (LHR)	G (LHR)	F1 (RHR)	G1 (RHR)	H
006	20.0	40.0	12.0	11.6	7.5	1.6	2.9	2.9	1.6	3.8
009	20.0	40.0	12.0	11.6	7.5	1.6	2.9	2.9	1.6	3.8
012	20.0	40.0	12.0	11.6	7.5	1.6	2.9	2.9	1.6	3.8
015	21.0	40.0	17.0	11.6	12.5	1.4	3.1	3.1	1.4	3.8
017	21.0	40.0	17.0	11.6	12.5	1.4	3.1	3.1	1.4	3.8
018	21.7	52.0	19.2	11.6	12.5	1.4	5.3	5.3	1.4	4.7
024	21.7	52.0	19.2	11.6	12.5	1.4	5.3	5.3	1.4	4.7
030	21.7	52.0	19.2	11.6	12.5	1.4	5.3	5.3	1.4	4.7
036	21.7	56.0	21.2	11.6	12.5	1.4	7.3	7.3	1.4	7.2
042	21.7	56.0	21.2	11.6	12.5	1.4	7.3	7.3	1.4	7.2
048	21.7	56.0	21.2	11.6	12.5	1.4	7.3	7.3	1.4	7.2
060	24.0	61.0	21.2	16.0	16.0	1.4	3.8	3.8	1.4	6.7
072	24.0	61.0	21.2	16.0	16.0	1.4	3.8	3.8	1.4	6.7

MODEL	Source Water			Hot Water (If Applicable)		
	P	R	S	T	V	W
006	3.6	6.0	2.1	N/A	N/A	N/A
009	3.6	6.0	2.1	N/A	N/A	N/A
012	3.6	6.0	2.1	N/A	N/A	N/A
015	5.6	8.0	2.1	8.6	4.0	2.1
017	5.6	8.0	2.1	8.6	4.0	2.1
018	5.6	10.7	2.3	11.1	4.0	2.3
024	5.6	10.7	2.3	11.1	4.0	2.3
030	5.6	10.7	2.3	11.1	4.0	2.3
036	5.6	12.0	2.5	11.1	4.0	2.3
042	5.6	12.0	2.5	11.1	4.0	2.3
048	5.6	12.0	2.5	11.1	4.0	2.3
060	5.6	12.0	2.5	11.1	4.0	2.3
072	5.6	12.0	2.5	11.1	4.0	2.3

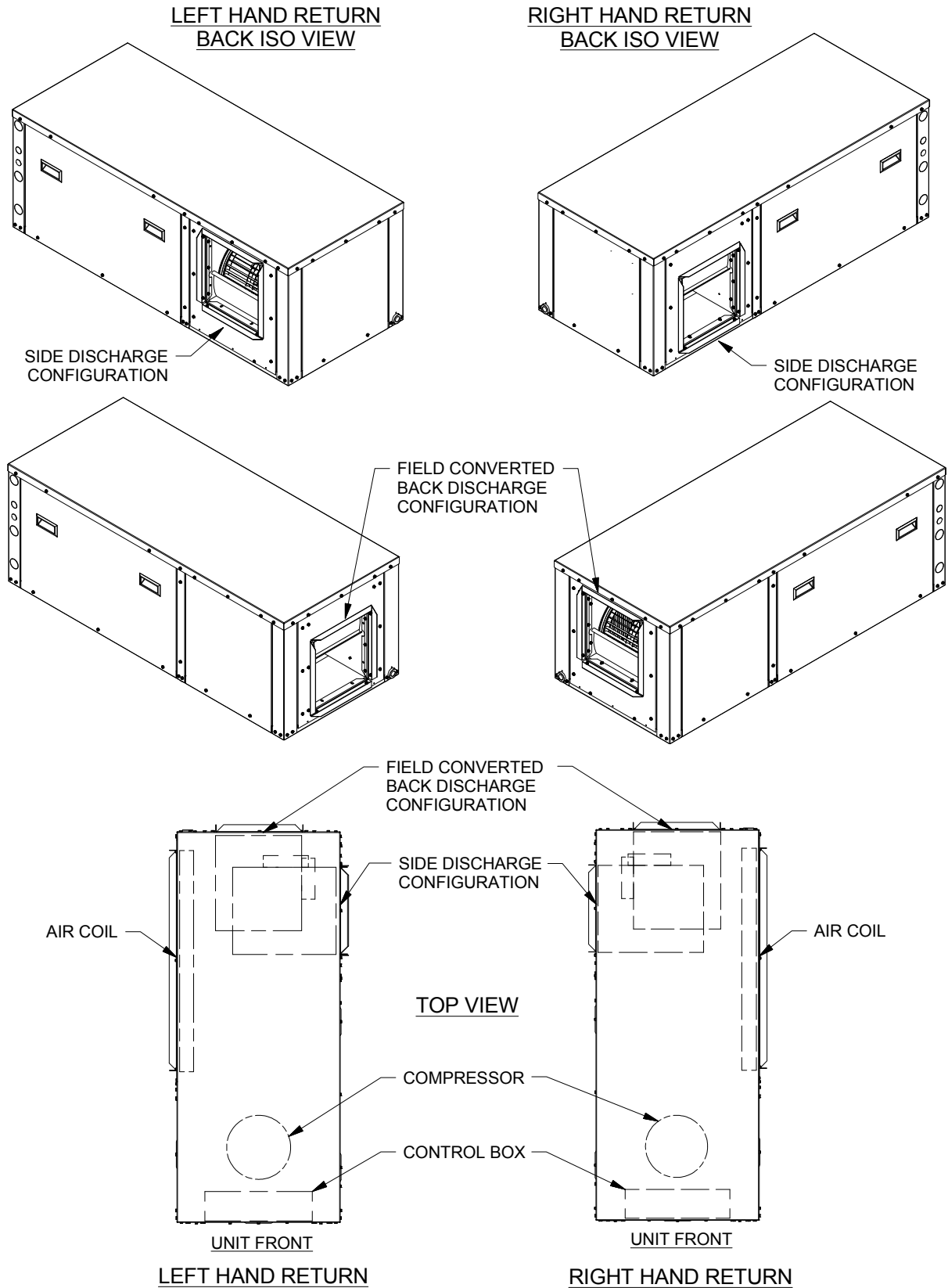
MODEL	1"-2" Optional Deluxe Filter Rack
	Order Item Number
006	AFR0923A
009	AFR0923A
012	AFR0923A
015	AFR1423A
017	AFR1423A
018	AFR1632A
024	AFR1632A
030	AFR1632A
036	AFR1836A
042	AFR1836A
048	AFR1836A
060	AFR1841A
072	AFR1841A

Note:

1. For Return Flange / Filter Rack Dimensional Data see additional sheet.
2. Residential Models are shipped with factory applied Return Duct Flanges.
3. Commercial Models are shipped with either a factory applied 1" Commercial Filter Rack or Return Duct Flanges.

Unit Setup, Physical Data, and Dimensional Data

Isometric Views

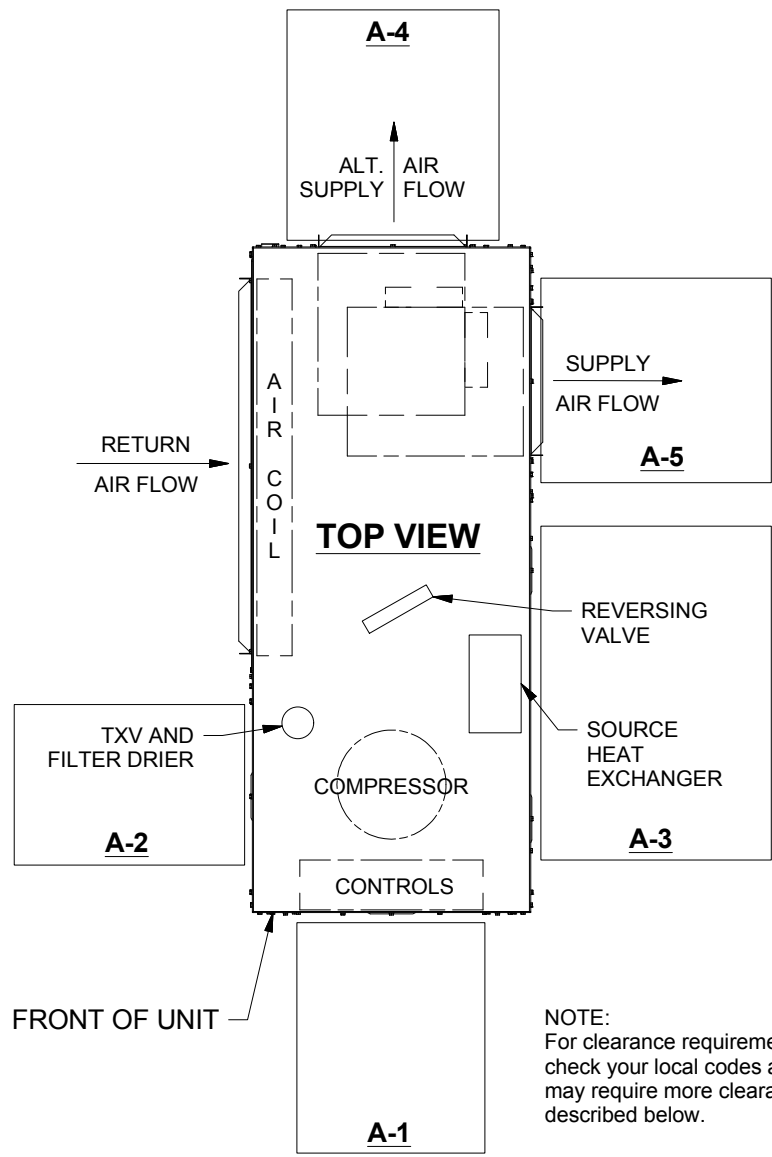


ENGINEERING SPECIFICATIONS

Unit Setup, Physical Data, and Dimensional Data

Service Access Clearances

SERVICE ACCESS CLEARANCE (Shown below as Left Hand Return)



LEGEND:

A-1: This is the main controls and compressor access panel. Requires 2 feet of clearance.

A-2: This is the txv-filter drier access area. Be sure to leave adequate clearance for any future maintenance if needed.

A-3: This is the source heat exchanger reversing valve access area. Be sure to leave adequate clearance for any future maintenance if needed.

A-4: This is the blower motor access when the unit is configured as side discharge. This is the configuration that the unit is shipped in. When side discharge then this access area requires 2 feet of clearance.

ONLY FOR ALT. SUPPLY AIR

A-5: This is the blower motor access when the unit is configured as back discharge. When back discharge then this access area requires 2 feet of clearance.

Blower Data

ECM Fan Performance

*ZS/*ZT Series ECM Fan Performance Data: One & Two-Stage Compressor Units																			
Model	Max ESP in. w.c. ²	Program ³	Heating Mode		Cooling Mode		Dehumidification Mode		Fan Only	AUX/EMG Heat ⁴	DIP Switch Settings								
			1st	2nd	1st	2nd	1st	2nd			S1	S2	S3	S4	S5	S6	S7	S8	
015	1.0	A	-	620	-	620	-	490	295	N/A	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	
		B	-	500	-	500	-	430	260		ON	OFF	OFF	OFF	ON	OFF	OFF	OFF	OFF
		C	-	430	-	430	-		230		OFF	ON	OFF	OFF	OFF	ON	OFF	OFF	OFF
		D	-	360	-	370	-		200		ON	ON	OFF	OFF	ON	ON	OFF	OFF	OFF
017	1.0	A	-	670	-	690	-	600	355	N/A	OFF	OFF	ON	OFF	OFF	OFF	OFF	OFF	
		B	-	620	-	620	-	490	295		OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
		C	-	500	-	500	-		260		ON	OFF	OFF	OFF	ON	OFF	OFF	OFF	OFF
		D	-	430	-	430	-		230		OFF	ON	OFF	OFF	OFF	ON	OFF	OFF	OFF
018	1.0	A	-	680	-	680	-	580	370	990	OFF	ON	ON	OFF	OFF	ON	OFF	OFF	
		B	-	630	-	630	-	520	340	900	OFF	ON	OFF	OFF	OFF	ON	OFF	OFF	
		C	-	560	-	570	-	480	290	800	ON	ON	ON	OFF	ON	ON	OFF	OFF	
		D	-	500	-	510	-		260	720	ON	ON	OFF	OFF	ON	ON	OFF	OFF	
024	1.1	A	700	930	740	930	610	800	500	1210	OFF	OFF	ON	OFF	OFF	OFF	OFF	OFF	
		B	650	850	650	860	570	740	460	1100	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	
		C	600	780	620	780	520	690	400	990	OFF	OFF	OFF	ON	OFF	OFF	OFF	OFF	
		D	560	730	570	730	480	640	390	920	ON	OFF	ON	OFF	ON	OFF	OFF	OFF	
030	1.1	A	920	1240	820	1060	730	960	610	1230	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	
		B	840	1070	750	960	660	870	570	1130	OFF	OFF	OFF	ON	OFF	OFF	OFF	OFF	
		C	770	1050	680	830	610	780	480	1050	ON	OFF	ON	OFF	ON	OFF	OFF	OFF	
		D	720	960	630	740			430	950	ON	OFF	OFF	OFF	ON	OFF	OFF	OFF	
036	0.9	A	1080	1380	990	1390	880	1190	850	1490	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	
		B	980	1230	910	1260	870	1090	760	1450	ON	OFF	OFF	OFF	ON	OFF	OFF	OFF	
		C	870	1090	840	1100	830	960	670	1420	OFF	ON	OFF	OFF	OFF	ON	OFF	OFF	
		D	840	1020	820	960			550	1380	ON	ON	OFF	OFF	ON	ON	OFF	OFF	
042	1.1	A	1120	1430	1330	1570	970	1290	740	1580	ON	OFF	OFF	OFF	ON	OFF	OFF	OFF	
		B	1010	1270	1200	1410	870	1150	660	1430	ON	OFF	OFF	ON	ON	OFF	OFF	OFF	
		C	910	1140	1090	1270	810	1050	560	1250	ON	ON	OFF	OFF	ON	ON	OFF	OFF	
		D	820	1030	1000	1130			470	1130	ON	ON	OFF	ON	ON	ON	OFF	OFF	
048	1.1	A	1490	1900	1660	1880	1150	1550	890	1950	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	
		B	1230	1580	1510	1710	1050	1420	810	1760	ON	OFF	ON	OFF	ON	OFF	OFF	OFF	
		C	1120	1420	1390	1580	950	1280	730	1600	ON	OFF	OFF	OFF	ON	OFF	OFF	OFF	
		D	1000	1260	1270	1420			650	1400	ON	ON	ON	OFF	ON	ON	OFF	OFF	
060	1.1	A	1810	2290	1660	2090	1390	1750	1010	2410	OFF	OFF	ON	OFF	OFF	OFF	OFF	OFF	
		B	1560	2000	1500	1900	1260	1590	910	2220	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	
		C	1470	1870	1390	1730			810	2000	OFF	OFF	OFF	ON	OFF	OFF	OFF	OFF	
		D	1420	1790	1310	1650			770	1990	ON	OFF	ON	OFF	ON	OFF	OFF	OFF	
072	1.1	A	N/A																
		B	1900	2200	1820	2230	1530	1870	1110	2430	OFF	OFF	ON	OFF	OFF	OFF	OFF	OFF	
		C	1760	2030	1650	2000			1020	2180	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	
		D	1590	1840	1480	1810			910	1960	OFF	OFF	OFF	ON	OFF	OFF	OFF	OFF	

Notes:

1. Program **B (Bold Type)** is factory settings and rated CFM. CFM is controlled within 5% up to the Max ESP.
2. Max ESP includes allowance for wet coil and NO FILTER
3. Power must be off to the unit for at least 3 seconds before the ECM motor will recognize a program change.
4. Max ESP for ZS018 through ZS/ZT036 models with external electric heat is 0.8 in. w.c.; for ZS/ZT048 models it is 0.9 in. w.c.; and for ZS/ZT060 and ZS/ZT072 it is 1.1 in. w.c. Exceeding the Max ESP may result in nuisance trips of the electric heat. Thermal limits are rated at 100,000 cycles.

Dehumidification Mode Options

DIP Switch ³		Mode	Operation ¹
S9	S10		
ON	OFF	Normal	Dehumidification mode disabled (normal Htg/Clg CFM) - factory setting
OFF	ON	ODD	On Demand dehumidification mode (humidistat input at terminal ODD) - Humidistat required
OFF	OFF	Constant Dehum	Constant dehumidification mode (always uses dehum CFM for cooling and normal CFM for heating) - No humidistat required
ON	ON	Not Used	Not an applicable selection

Notes:

1. When calling for ODD, the ODD terminal should have 0 VAC. When ODD is satisfied, the ODD terminal should have 24VAC.
2. Heating CFM is not affected by dehumidification mode. When in dehumidification mode, cooling CFM is 85% of normal cooling CFM.
3. Power must be off to the unit for at least 3 seconds before the unit will recognize a dip switch setting change.

ENGINEERING SPECIFICATIONS

Blower Data

PSC Fan Performance

*ZS Series PSC Fan Performance Data																
Model	Motor Speed ¹	Blower Size	Motor HP	CFM Nominal	Static Pressure (inches w.c.)											
					0.10	0.15	0.20	0.25	0.30	0.35	0.40	0.45	0.50	0.60	0.70	0.80
006/009/012	H	6 x 9	1/16	350 (009/012 ²)	410	400	395	380	370	360	340	320	290			
	M/H			375	370	360	355	340	325	310	295	275				
	M/L			275 (006)	330	320	310	300	290	280	260	240	210			
	L			285	275	265	250	240	230	210	195	180				
015/017	H	9 x 7T	1/4	650 (017)	995	935	910	865	840	800	775	745	710	630	575	
	M			525 (015)	730	710	685	685	675	650	625	610	585	520		
	L			615	605	600	580	575	555	535	510	495				
018	H	10 x 8T	1/4		1050	1045	1040	1040	1035	1030	1025	1015	1000	965	925	875
	M			600 (018)	690	685	675	665	650	645	635	620	600	575	525	460
	L			600	590	580	570	555	535	515	510	500	445	410	380	
024/030	H	10 x 8T	1/3	1000 (030)	1110	1125	1135	1140	1140	1140	1140	1135	1130	1110	1090	1055
	M			750 (024)	780	780	780	785	785	785	780	775	770	750	700	660
	L			660	655	650	650	645	640	635						
036	H	10 x 8	1/3	1100	1210	1215	1220	1215	1210	1205	1195	1195	1190	1165	1135	1100
	M			865	870	870	875	875	875	870	865	860	845	825	790	
	L															
042	H	10 x 8	1/2	1400	1620	1620	1615	1610	1605	1600	1595	1580	1565	1520	1465	1405
	M			1000	1100	1015	1018	1020	1023	1025	1028	1030	1040	1025	990	
	L							875	875	875						
048	H	10 x 8	3/4		2090	2070	2050	2035	2015	1990	1965	1940	1910	1855	1790	1710
	M			1500	1740	1745	1750	1740	1730	1720	1710	1695	1675	1645	1600	1535
	L			1400	1410	1420	1430	1435	1440	1440	1440	1440	1440	1420	1390	1330
060/072	H	11 x 10	1	2200 (072)	2560	2540	2515	2505	2495	2470	2445	2420	2390	2350	2290	2210
	M			1900 (060)	2000	2000	1995	1998	2000	2005	2010	2005	1995	1940	1935	1885
	L			1590	1605	1620	1630	1640	1645	1645	1645	1645	1640	1625	1600	

Notes:

- PSC Blower motors come with 3 or 4 speed taps. To change the speed of the motor to a higher or lower speed, remove the electric box cover that is mounted on the blower. Locate the label on the motor to identify the wire color for each speed. Remove the wire nut on the existing speed and replace with the wire of selected speed.
- Running the ZS012 at the static/SCFM points highlighted in gray, is not recommended.
- Max ESP and speed settings for ZS models with external electric heat is shown below. Exceeding the Max ESP may result in nuisance trips of the electric heat. Thermal limits are rated at 100,000 cycles.

*ZS Series-Electric Heat Limitations					
Model	Electric Heater	Speed			Max Static
		High	Med	Low	
018	AXCH051MB		X		0.7
		X			0.8
024/030	AXCH051MB		X		0.7
		X			0.8
036	AXCH101MB		X		0.8
		X			0.9
042	AXCH101MB	X	X	X	0.9
			X		0.7
		X			0.8
048	AXCH151MB	X	X	X	0.9
		X	X		0.9
060/072	AXCH101LB	X	X	X	1.0
		X	X		0.9

Blower Data

Filter Performance

The blower performance data in the ECM Blower Performance table is WITHOUT FILTER. To determine the approximate blower performance WITH FILTER apply the filter pressure drop value for the filter being used or calculate the pressure drop as follows:

Below is typical filter performance data and should only be used as a guideline. Actual performance may vary between manufacturers.

Model	Return Size		
	Height (in.)	Width (in.)	Area (ft ²)
024	26	21	3.8
036	28	26	5.1
048			
060	32	26	5.8
072			

Filter Type	Thickness (in)	Rated Velocity (fpm)	Initial Resistance (in.w.c.)
MERV 8	1	300	0.21
MERV 11	2	500	0.24
MERV 13	2	500	0.43

To calculate filter pressure drop:

$$Filter \Delta Ps = \left[\frac{\left[\frac{CFM}{Area} \right]}{Rated Velocity} \right] * Initial Resistance$$

Applying Filter Pressure Drop to Determine Total ESP

To determine the Total ESP of a unit with the filter in place, follow the steps below:

1. Select the filter type and determine Rated Velocity and Initial Resistance
2. For the model being considered determine Max ESP, CFM and Return Area
3. Determine Filter pressure drop (ΔPs) using the equation above
4. Measure (or calculate) the ESP without filter in place
5. Calculate Total ESP = Measured ESP + Filter Pressure Drop
6. Total ESP should be less than or equal to Max ESP

Example: For an YT060 at an air flow of 1960 CFM calculate the filter pressure drop with a 2” MERV 11 filter and determine Total ESP and compare to Max ESP.

CFM = 1960
 Area = 5.8 ft²
 Rated Velocity = 500 fpm
 Initial Resistance = 0.24 in.w.c.
 Measured ESP without filter = 0.53

1. 1960 CFM ÷ 5.8 ft² = 338 fpm
2. 338 fpm ÷ 500 fpm = 0.676
3. 0.676 x 0.24 in.w.c. = 0.16 in.w.c. = Filter Pressure Drop
4. Total ESP is 0.53 + 0.16 = 0.69 in.w.c. which is less than the 1.2 in.w.c. Max ESP

Example: For an YT036 at an air flow of 1420 CFM calculate the filter pressure drop with a 2” MERV 13 filter and determine Total ESP and compare to Max ESP.

CFM = 1420
 Area = 5.1 ft²
 Rated Velocity = 500 fpm
 Initial Resistance = 0.43 in.w.c.
 Measured ESP without filter = 0.53

1. 1420 CFM ÷ 5.1 ft² = 278 fpm
2. 278 fpm ÷ 500 fpm = 0.556
3. 0.556 x 0.43 in.w.c. = 0.24 in.w.c. = Filter Pressure Drop
4. Total ESP is 0.36 + 0.24 = 0.6 in.w.c. which is less than the 1.1 in.w.c. Max ESP

ENGINEERING SPECIFICATIONS

Extended Data

Glossary of Terms

ASC = Anti-Short Cycle	HGT = Hot Gas Temperature
AFRZ = Anti-Freeze	HP = High Pressure
CFM = Airflow, Cubic Feet/Minute	HR = Total Heat Of Rejection, Btu/hr
CO = Condensate Overflow	HWG = Hot Water Generator
COP = Coefficient of Performance = BTU Output / BTU input	KW = Total Power Unit Input, Kilowatts
DGT = Hot Discharge Gas Temperature	LAT = Leaving Air Temperature, Fahrenheit
DH = Desuperheater Capacity, Btu/hr	LC = Latent Cooling Capacity, Btu/hr
DLWT = Domestic Leaving Water Temperature	LCT = Load Coil (Heat Exchanger) Temperature (Freeze)
EAT = Entering Air Temperature, Fahrenheit (Dry/Wet Bulb)	LLT = Leaving Load Water Temperature, Fahrenheit
ECM = Electronically Commutated Motors	LP = Low Pressure
EER = Energy Efficiency Ratio = BTU output/Watts input	LWT = Leaving Source Water Temperature, Fahrenheit
ELT = Entering Load Water Temperature, Fahrenheit	O/U = Over/Under
EWT = Entering Source Water Temperature, Fahrenheit	ODD = On Demand Dehumidification
FS = Factory Setting	SC = Sensible Cooling Capacity, Btu/hr
FSW Flow Switch	SCT Source Coil (Heat Exchanger) Temperature (Freeze)
GPM = Water Flow, Gallons Per Minute	TC = Total Cooling Capacity, Btu/hr
HC = Total Heating Capacity, Btu/hr	TEST = Test Mode
HE = Total Heat Of Extraction, Btu/hr	WPD = Water Pressure Drop, PSI & Feet of Water

Sensible Cooling Correction Factors

EAT (WB) °F	EAT (DB) °F				
	70	75	80	85	90
55	1.201	1.289			
60	0.943	1.067	1.192		
65	0.797	0.952	1.106	1.261	
67	0.624	0.812	1.000	1.188	1.343
70		0.697	0.820	0.944	1.067
75			0.637	0.817	0.983

Cooling Correction Factors

EAT (WB) °F	TC	HR	kW
55	0.8215	0.8293	0.8635
60	0.8955	0.9001	0.9205
65	0.9701	0.9715	0.9774
67	1.0000	1.0000	1.0000
70	1.0446	1.0425	1.0335
75	1.1179	1.1124	1.0878

Heating & Cooling Calculations

Heating	Cooling
$LAT = EAT + \frac{HC}{CFM \times 1.08}$	$LAT (DB) = EAT (DB) - \frac{SC}{CFM \times 1.08}$
$LWT = EWT - \frac{HE}{GPM \times 500}$	$LWT = EWT + \frac{HR}{GPM \times 500}$
$LC = TC - SC$	

Heating Correction Factors

EAT °F	HC	HE	kW
50	1.0465	1.1188	0.8024
55	1.0351	1.0918	0.8436
60	1.0253	1.0645	0.8928
65	1.0108	1.0300	0.9454
70	1.0000	1.0000	1.0000
75	0.9895	0.9701	1.0553
80	0.9742	0.9489	1.0518

Extended Data

Water Flow Selection

Proper flow rate is crucial for reliable operation of geothermal heat pumps. The performance data shows three flow rates for each entering water temperature (EWT column). Guidelines for selecting flow rates are as follows:

For Units with Coaxial Heat Exchangers

Top flow rate: Open loop (well water) systems (1.5 to 2.0 gpm per ton)

Middle flow rate: Minimum closed loop system flow rate (2.25 to 2.50 gpm/ton)

Bottom flow rate: Nominal (optimum) closed loop system flow rate (3.0 gpm/ton)

For Units with Brazed Plate Heat Exchangers (BPHE)

Top flow rate: Minimum flow rate for closed loop applications, on average about 2.3 to 2.5 gpm/ton (3 gpm/ton for ZS015). Verify minimum flow rates for each model.

Note: It is important to design the system to maintain flow rates above the minimum to avoid a flow switch fault.

Middle flow rate: Acceptable flow rates between minimum and nominal, on average about 2.5 to 2.75 gpm/ton (3.6 gpm/ton for ZS015 and 3 gpm/ton for ZS017/18).

Bottom flow rate: Nominal (optimum) closed loop flow rate (3.0 gpm/ton for most units, 4.0 gpm/ton for ZS015 and 3.3

Antifreeze

Antifreeze is generally required for all closed loop (geothermal) applications. Extreme Southern U.S. locations are the only exception. Open loop (well water) systems cannot use antifreeze, and must have enough flow rate in order to avoid freezing conditions at the Leaving Source Water Temperature (LWT) connection.

IMPORTANT: Applications with BPHE require antifreeze in the loop piping system if units will be operating in the heating mode. Coaxial heat exchangers are recommended for systems without antifreeze.

Heating Mode Leaving Water Temp Calculations

Calculations must be made for all systems without antifreeze to determine if the top flow rate is adequate to prevent LWT at or near freezing conditions. The following steps should be taken in making this calculation:

- Determine minimum EWT based upon your geographical area.
- Go to the performance data table for the heat pump model selected and look up the Heat of Extraction (HE) at the desired water flow rate (GPM) and at the design Entering Air Temperature (EAT).
- Calculate the temperature difference (TD) based upon the HE and GPM of the model.
- $TD = HE / (GPM \times \text{Fluid Factor})$ See next column for fluid factor.
- Calculate the LWT.
- $LWT = EWT - TD$.
- If the LWT is below 35-38°F, there is potential for freezing conditions if the flow rate or water temperature is less than ideal conditions, and the flow rate must be increased.

Example 1:

EWT = 55 °F

Model ZT036 (coax), full load. Flow rate = 4.5 GPM.

Air Flow = 1230 CFM. HE = 26,100 Btuh.

$TD = 26,100 / (4.5 \times 500) = 11.6 \text{ °F}$

$LWT = 55 - 11.6 = 43.4 \text{ °F}$

Water flow rate is acceptable.

Note: Use a fluid factor of 500 for water, 485 is for antifreeze.

Example 2:

EWT = 45 °F

Model ZT036 (coax), full load. Flow rate = 4.5 GPM.

Air Flow = 1230 CFM. HE = 22,600 Btuh.

$TD = 22,600 / (4.5 \times 500) = 10.0 \text{ °F}$

$LWT = 45 - 10 = 35 \text{ °F}$

Water flow rate must be increased to avoid freezing.

Note: Use a fluid factor of 500 for water, 485 is for antifreeze.

Performance Data Parameters and Guidelines

1. Capacity data is based on 15% (by mass) methanol antifreeze solution.
2. Heating data is based on 70°F EAT. Cooling data is based on 80/67°F EAT. Any condition outside performance table(s) requires correction factor(s).
3. Performance data accurate within ±15%.
4. Unit performance test is run without hot water generation.
5. Desuperheater capacity is based upon 2.0 GPM water flow at 70 °F entering water temperature.
6. Capacity data includes fan power but not pump power (pump power correction is included in AHRI data, not in extended data).
7. Performance data is based upon the lower voltage of dual voltage rated units.
8. Interpolation of unit performance data is permissible; extrapolation is not.
9. Performance data is a result of lab testing.
10. Due to variations in installation, actual unit performance may vary from the tabulated data.
11. See Flow Rate Selection above for proper application.
12. Continuous research and development may result in a change to the current product design and specifications without notice.

ENGINEERING SPECIFICATIONS

ZT Models Performance Tables

Model ZT024, 2 Ton, BPHE Full Load Performance Data

EWT °F	Flow GPM	WPD		BPHE Unit - Full Load Heating							BPHE Unit - Full Load Cooling																					
		PSI	FT	Aiflow CFM	LAT (DB) °F	HC MBtuh	HE MBtuh	Power kW	COP W/W	DH MBtuh	Aiflow CFM	LAT (DB) °F	TC MBtuh	SC MBtuh	HR MBtuh	Power kW	EER Btuh/W	DH MBtuh														
25	6.0	1.4	3.2	780	89.4	16.4	11.7	1.37	3.50	3.9	Operation Not Recommended																					
				850	87.9	16.5	11.9	1.35	3.59	3.7																						
30	3.8	0.8	1.8	780	89.3	16.3	11.6	1.4	3.5	3.6																						
				850	87.8	16.3	11.8	1.3	3.6	3.5																						
	5.0	1.1	2.4	780	90.4	17.2	12.5	1.38	3.66	3.9																						
				850	88.8	17.3	12.7	1.35	3.75	3.8																						
	6.0	1.3	3.1	780	91.1	17.7	13.0	1.39	3.74	4.1																						
				850	89.4	17.8	13.2	1.36	3.83	3.9																						
40	3.8	0.7	1.7	780	91.8	18.4	13.6	1.40	3.86	4.1								780	58.8	27.8	17.8	31.3	1.02	27.2	2.5							
				850	90.2	18.5	13.8	1.37	3.96	3.9								860	60.1	28.0	18.5	31.6	1.05	26.8	2.5							
	5.0	1.0	2.3	780	93.1	19.5	14.6	1.42	4.01	4.4								Operation Not Recommended														
				850	91.3	19.6	14.8	1.39	4.12	4.2																						
	6.0	1.3	2.9	780	93.8	20.1	15.2	1.44	4.10	4.6																						
				850	92.0	20.2	15.4	1.41	4.20	4.4																						
50	3.8	0.7	1.6	780	95.0	21.1	16.1	1.46	4.24	4.6															780	57.1	29.1	19.3	33.0	1.14	25.7	3.6
				850	93.1	21.2	16.3	1.43	4.35	4.5															860	58.4	29.3	20.0	33.2	1.16	25.3	3.6
	5.0	1.0	2.2	780	96.5	22.3	17.2	1.48	4.40	5.0								780	57.0	29.2	19.4	32.8	1.08	27.0	3.0							
				850	94.4	22.4	17.5	1.46	4.51	4.8								860	58.4	29.3	20.1	33.1	1.10	26.6	3.0							
	6.0	1.2	2.8	780	97.3	23.0	17.9	1.50	4.50	5.3								780	57.0	29.2	19.4	32.8	1.05	27.9	2.6							
				850	95.2	23.1	18.1	1.47	4.61	5.1								860	58.3	29.4	20.2	33.0	1.07	27.4	2.7							
60	3.8	0.7	1.6	780	98.9	24.4	19.1	1.54	4.64	5.3	780	56.5	29.0	19.8	33.4	1.27	22.9	4.7														
				850	96.7	24.5	19.4	1.51	4.77	5.1	860	57.9	29.2	20.6	33.6	1.30	22.6	4.8														
	5.0	0.9	2.1	780	100.6	25.8	20.4	1.57	4.83	5.8	780	56.4	29.1	19.9	33.2	1.20	24.2	4.1														
				850	98.2	25.9	20.7	1.53	4.95	5.6	860	57.8	29.2	20.6	33.4	1.23	23.8	4.1														
	6.0	1.2	2.7	780	101.6	26.6	21.2	1.58	4.93	6.1	780	56.3	29.1	19.9	33.1	1.17	24.9	3.7														
				850	99.2	26.8	21.5	1.55	5.06	5.9	860	57.7	29.3	20.7	33.4	1.20	24.5	3.7														
70	3.8	0.6	1.5	780	102.9	27.7	22.2	1.63	5.00	6.1	780	56.6	28.3	19.7	33.1	1.42	19.9	5.9														
				850	100.4	27.9	22.5	1.59	5.13	5.9	860	58.0	28.4	20.4	33.4	1.45	19.6	6.0														
	5.0	0.9	2.0	780	104.8	29.3	23.7	1.66	5.19	6.7	780	56.5	28.3	19.8	32.9	1.35	21.0	5.2														
				850	102.1	29.5	24.0	1.62	5.33	6.4	860	57.9	28.5	20.5	33.2	1.38	20.6	5.2														
	6.0	1.1	2.6	780	105.9	30.3	24.6	1.67	5.31	7.1	780	56.5	28.4	19.8	32.9	1.31	21.6	4.7														
				850	103.2	30.5	24.9	1.64	5.45	6.8	860	57.8	28.5	20.6	33.1	1.34	21.3	4.8														
80	3.8	0.6	1.5	780	106.4	30.6	24.8	1.71	5.25	6.9	780	57.2	27.2	19.2	32.7	1.60	17.0	7.2														
				850	103.6	30.8	25.1	1.68	5.38	6.7	860	58.5	27.4	20.0	33.0	1.63	16.8	7.3														
	5.0	0.9	2.0	780	108.5	32.4	26.5	1.74	5.45	7.6	780	57.1	27.3	19.3	32.5	1.52	17.9	6.3														
				850	105.5	32.6	26.8	1.71	5.59	7.3	860	58.4	27.4	20.0	32.7	1.55	17.7	6.4														
	6.0	1.1	2.5	780	109.7	33.5	27.4	1.76	5.57	8.1	780	57.0	27.3	19.4	32.4	1.48	18.5	5.9														
				850	106.7	33.7	27.8	1.73	5.72	7.8	860	58.4	27.5	20.1	32.6	1.51	18.2	5.9														
90	3.8	0.6	1.4	780	109.7	33.4	27.3	1.80	5.45	7.8	780	57.9	26.1	18.6	32.2	1.80	14.5	8.6														
				850	106.6	33.6	27.6	1.76	5.60	7.5	860	59.2	26.2	19.4	32.5	1.84	14.3	8.7														
	5.0	0.8	2.0	780	111.9	35.3	29.1	1.83	5.66	8.5	780	57.8	26.1	18.7	31.9	1.71	15.3	7.6														
				850	108.7	35.5	29.4	1.79	5.81	8.2	860	59.1	26.3	19.4	32.2	1.75	15.0	7.7														
	6.0	1.1	2.5	780	113.3	36.5	30.2	1.85	5.79	9.0	780	57.7	26.1	18.8	31.8	1.66	15.7	7.1														
				850	110.0	36.7	30.5	1.81	5.94	8.7	860	59.0	26.3	19.5	32.1	1.70	15.5	7.1														
100	3.8	0.6	1.5	Operation Not Recommended							780	58.5	24.8	18.1	31.7	2.02	12.3	10.1														
											860	59.8	24.9	18.8	32.0	2.06	12.1	10.2														
	5.0	0.9	2.0								780	58.4	24.8	18.2	31.3	1.92	12.9	9.0														
											860	59.7	24.9	18.9	31.6	1.96	12.7	9.1														
	6.0	1.1	2.5								780	58.4	24.9	18.2	31.2	1.87	13.3	8.3														
											860	59.6	25.0	18.9	31.5	1.91	13.1	8.5														
110	3.8	0.6	1.5								780	59.1	23.2	17.6	31.0	2.26	10.3	11.6														
											860	60.3	23.4	18.3	31.3	2.31	10.1	11.8														
	5.0	0.9	2.0								780	59.0	23.3	17.7	30.6	2.15	10.8	10.4														
											860	60.3	23.4	18.3	30.9	2.20	10.7	10.6														
	6.0	1.1	2.5								780	59.0	23.3	17.7	30.4	2.09	11.2	9.7														
											860	60.2	23.4	18.4	30.7	2.14	11.0	9.9														
120	3.8	0.6	1.5	780	60.0	21.3	16.9	29.9	2.53	8.4	13.3																					
				860	61.1	21.4	17.5	30.3	2.58	8.3	13.5																					
	5.0	0.8	2.0	780	59.9	21.4	17.0	29.5	2.40	8.9	12.0																					
				860	61.0	21.5	17.6	29.8	2.45	8.8	12.1																					
	6.0	1.1	2.5	780	59.8	21.4	17.0	29.4	2.33	9.2	11.2																					
				860	61.0	21.5	17.7	29.6	2.38	9.0	11.3																					

NOTE: See page 23 for performance data parameters and guidelines.

ZT Models Performance Tables

Model ZT024, 2 Ton, BPHE Part Load Performance Data

EWT °F	Flow GPM	WPD		BPHE Unit - Part Load Heating							BPHE Unit - Part Load Cooling														
		PSI	FT	Aiflow CFM	LAT (DB) °F	HC MBtuh	HE MBtuh	Power kW	COP W/W	DH MBtuh	Aiflow CFM	LAT (DB) °F	TC MBtuh	SC MBtuh	HR MBtuh	Power kW	EER Btuh/W	DH MBtuh							
25	6.0	1.3	3.1	600	87.8	11.6	7.9	1.07	3.18	3.0	Operation Not Recommended														
				650	86.8	11.8	8.2	1.04	3.32	2.9															
30	3.8	0.7	1.6	600	88.0	11.6	8.0	1.06	3.21	2.9															
				650	86.9	11.9	8.3	1.04	3.35	2.8															
				600	88.8	12.2	8.5	1.07	3.35	3.1															
	5.0	1.0	2.4	650	87.6	12.4	8.8	1.04	3.50	3.0															
				600	89.2	12.5	8.8	1.07	3.42	3.2															
				650	88.1	12.7	9.1	1.04	3.58	3.0															
40	3.8	0.7	1.6	600	90.8	13.5	9.8	1.07	3.69	3.2															
				650	89.5	13.7	10.2	1.04	3.86	3.1															
				600	91.7	14.1	10.4	1.07	3.85	3.4															
	5.0	1.0	2.3	650	90.4	14.3	10.8	1.05	4.02	3.2															
				600	92.2	14.4	10.7	1.07	3.93	3.5															
				650	90.9	14.7	11.1	1.05	4.11	3.3															
50	3.8	0.7	1.5	600	93.9	15.5	11.8	1.08	4.19	3.6															
				650	92.4	15.8	12.2	1.05	4.38	3.4															
				600	95.0	16.2	12.5	1.09	4.37	3.8															
	5.0	1.0	2.2	650	93.5	16.5	12.9	1.06	4.56	3.6															
				600	95.6	16.6	12.9	1.09	4.47	3.9															
				650	94.0	16.9	13.2	1.06	4.67	3.7															
60	3.8	0.6	1.5	600	97.3	17.7	13.9	1.10	4.71	4.0															
				650	95.6	18.0	14.3	1.07	4.92	3.9															
				600	98.5	18.5	14.7	1.10	4.91	4.2															
	5.0	0.9	2.1	650	96.8	18.8	15.1	1.07	5.13	4.1															
				600	99.2	18.9	15.1	1.10	5.02	4.4															
				650	97.4	19.2	15.6	1.07	5.25	4.2															
70	3.8	0.6	1.4	600	100.9	20.0	16.2	1.12	5.24	4.6															
				650	99.1	20.4	16.7	1.09	5.47	4.4															
				600	102.3	21.0	17.1	1.12	5.46	4.9															
	5.0	0.9	2.1	650	100.4	21.3	17.6	1.10	5.71	4.7															
				600	103.1	21.4	17.6	1.13	5.58	5.1															
				650	101.1	21.8	18.1	1.10	5.84	4.9															
80	3.8	0.6	1.4	600	104.9	22.6	18.7	1.15	5.76	5.2															
				650	102.8	23.0	19.2	1.12	6.03	5.0															
				600	106.5	23.6	19.7	1.15	6.01	5.6															
	5.0	0.9	2.0	650	104.2	24.0	20.2	1.12	6.28	5.4															
				600	107.3	24.2	20.2	1.15	6.15	5.8															
				650	105.1	24.6	20.8	1.12	6.42	5.6															
90	3.8	0.6	1.4	600	109.1	25.3	21.3	1.18	6.29	6.0															
				650	106.7	25.8	21.9	1.15	6.57	5.8															
				600	110.9	26.5	22.4	1.18	6.56	6.4															
	5.0	0.9	2.0	650	108.4	27.0	23.0	1.15	6.85	6.2															
				600	111.8	27.1	23.1	1.19	6.70	6.7															
				650	109.3	27.6	23.7	1.15	7.01	6.5															
100	3.8	0.6	1.3	Operation Not Recommended							620	59.4	17.7	13.8	22.3	1.36	13.0	7.8							
											650	59.9	17.8	14.1	22.5	1.37	13.0	7.8							
											620	59.3	17.8	13.9	22.1	1.27	14.0	6.9							
	650	59.8	17.9								14.2	22.2	1.27	14.1	6.9										
	620	59.2	17.9								13.9	22.0	1.22	14.6	6.4										
	650	59.8	18.0								14.2	22.1	1.23	14.6	6.4										
110	3.8	0.6	1.3								Operation Not Recommended							620	60.2	16.2	13.3	21.6	1.56	10.4	8.9
																		650	60.7	16.3	13.6	21.7	1.57	10.4	9.0
																		620	60.1	16.3	13.3	21.3	1.45	11.2	8.0
	650	60.6	16.4															13.6	21.4	1.46	11.3	8.1			
	620	60.0	16.4															13.4	21.2	1.40	11.7	7.4			
	650	60.5	16.5															13.7	21.3	1.41	11.7	7.5			
120	3.8	0.6	1.3	Operation Not Recommended														620	61.0	14.7	12.7	20.8	1.78	8.3	10.2
																		650	61.5	14.8	13.0	20.9	1.79	8.3	10.3
																		620	60.9	14.8	12.8	20.5	1.66	8.9	9.2
	650	61.4	14.9															13.1	20.6	1.66	9.0	9.3			
	620	60.8	14.9															12.8	20.3	1.60	9.3	8.6			
	650	61.3	14.9															13.1	20.4	1.60	9.3	8.7			

NOTE: See page 23 for performance data parameters and guidelines.

ENGINEERING SPECIFICATIONS

ZT Models Performance Tables

Model ZT024, 2 Ton, COAX Full Load Performance Data

EWT °F	Flow GPM	WPD		COAX Unit - Full Load Heating							COAX Unit - Full Load Cooling														
		PSI	FT	Aiffow CFM	LAT (DB) °F	HC MBtuh	HE MBtuh	Power kW	COP W/W	DH MBtuh	Aiffow CFM	LAT (DB) °F	TC MBtuh	SC MBtuh	HR MBtuh	Power kW	EER Btuh/W	DH MBtuh							
25	6.0	5.6	12.8	780	90.1	16.9	12.2	1.39	3.58	4.1	Operation Not Recommended														
				850	88.5	17.0	12.4	1.36	3.67	3.9															
30	3.0	2.0	4.6	780	90.0	16.9	12.2	1.4	3.6	4.1															
				850	88.4	16.9	12.3	1.3	3.7	3.9															
				780	90.9	17.6	12.8	1.39	3.71	4.2															
	4.5	3.4	7.9	850	89.2	17.6	13.0	1.36	3.81	4.0															
				780	91.4	18.1	13.3	1.40	3.78	4.3															
				850	89.7	18.1	13.4	1.37	3.88	4.1															
40	3.0	1.8	4.2	780	92.9	19.3	14.4	1.41	3.99	4.5								780	58.0	28.4	18.5	32.3	1.14	24.8	3.5
				850	91.0	19.3	14.6	1.38	4.09	4.3								860	59.1	29.0	19.4	33.0	1.16	25.0	3.6
				780	93.8	20.1	15.2	1.43	4.11	4.6								Operation Not Recommended							
	4.5	3.1	7.1	850	92.0	20.2	15.4	1.40	4.22	4.4															
				780	94.5	20.6	15.7	1.45	4.18	4.8															
				850	92.5	20.7	15.9	1.41	4.29	4.6															
50	3.0	1.7	3.9	780	96.1	22.0	16.9	1.48	4.35	5.0	780	56.8	29.4	19.5	33.6	1.26	23.4								4.1
				850	94.0	22.1	17.1	1.45	4.47	4.8	860	58.0	30.0	20.5	34.4	1.28	23.6								4.2
				780	97.2	22.9	17.8	1.50	4.48	5.3	780	56.7	29.7	19.6	33.7	1.17	25.4	3.6							
	4.5	2.8	6.5	850	95.1	23.0	18.0	1.47	4.60	5.0	860	57.9	30.4	20.5	34.5	1.19	25.6	3.6							
				780	98.0	23.5	18.4	1.51	4.56	5.4	780	56.7	30.0	19.7	33.8	1.12	26.8	3.3							
				850	95.7	23.6	18.6	1.48	4.68	5.2	860	57.8	30.7	20.6	34.5	1.13	27.0	3.3							
60	3.0	1.5	3.6	780	99.6	24.9	19.6	1.56	4.68	5.7	780	56.6	29.2	19.7	34.0	1.40	20.9	4.9							
				850	97.2	25.0	19.8	1.53	4.80	5.5	860	57.8	29.9	20.6	34.8	1.42	21.1	5.0							
				780	100.9	26.0	20.6	1.58	4.82	6.0	780	56.5	29.6	19.8	34.0	1.30	22.7	4.3							
	4.5	2.6	6.0	850	98.4	26.1	20.8	1.55	4.95	5.8	860	57.7	30.3	20.7	34.8	1.32	22.9	4.4							
				780	101.7	26.7	21.3	1.60	4.91	6.2	780	56.5	29.8	19.8	34.1	1.25	23.9	3.9							
				850	99.2	26.8	21.5	1.56	5.04	6.0	860	57.6	30.5	20.8	34.8	1.26	24.2	4.0							
70	3.0	1.4	3.3	780	103.2	28.0	22.3	1.65	4.97	6.5	780	57.0	28.3	19.3	33.7	1.57	18.0	6.0							
				850	100.6	28.1	22.6	1.61	5.10	6.3	860	58.2	29.0	20.3	34.4	1.59	18.2	6.1							
				780	104.6	29.2	23.5	1.67	5.11	6.9	780	56.9	28.7	19.4	33.7	1.46	19.6	5.3							
	4.5	2.4	5.6	850	101.9	29.3	23.7	1.63	5.25	6.6	860	58.1	29.4	20.4	34.4	1.48	19.8	5.3							
				780	105.6	30.0	24.2	1.69	5.20	7.1	780	56.9	28.9	19.5	33.7	1.40	20.7	4.9							
				850	102.7	30.1	24.4	1.65	5.34	6.9	860	58.0	29.6	20.4	34.4	1.42	20.9	4.9							
80	3.0	1.4	3.1	780	106.8	31.0	25.0	1.74	5.21	7.4	780	57.7	27.0	18.8	33.0	1.77	15.2	7.3							
				850	103.9	31.1	25.3	1.71	5.34	7.1	860	58.8	27.6	19.7	33.8	1.80	15.4	7.3							
				780	108.4	32.3	26.3	1.77	5.36	7.9	780	57.6	27.3	18.8	33.0	1.65	16.6	6.4							
	4.5	2.3	5.3	850	105.3	32.4	26.5	1.73	5.50	7.6	860	58.7	28.0	19.7	33.7	1.68	16.7	6.5							
				780	109.4	33.2	27.1	1.78	5.46	8.2	780	57.6	27.5	18.9	32.9	1.58	17.4	5.9							
				850	106.3	33.3	27.4	1.74	5.60	7.9	860	58.7	28.2	19.8	33.6	1.60	17.6	6.0							
90	3.0	1.3	3.0	780	110.2	33.9	27.6	1.84	5.41	8.4	780	58.5	25.5	18.1	32.3	2.01	12.7	8.7							
				850	107.0	34.0	27.9	1.79	5.55	8.1	860	59.6	26.1	19.0	33.0	2.03	12.8	8.8							
				780	111.9	35.3	29.0	1.86	5.57	9.0	780	58.4	25.8	18.2	32.2	1.87	13.8	7.7							
	4.5	2.2	5.0	850	108.6	35.4	29.2	1.82	5.72	8.6	860	59.5	26.4	19.1	32.9	1.89	14.0	7.8							
				780	113.1	36.3	29.9	1.88	5.67	9.3	780	58.3	26.0	18.2	32.1	1.78	14.6	7.2							
				850	109.7	36.4	30.1	1.83	5.82	9.0	860	59.4	26.6	19.1	32.8	1.81	14.7	7.3							
100	3.0	1.2	2.7	Operation Not Recommended							780	59.2	23.9	17.5	31.6	2.27	10.6	10.2							
											860	60.2	24.5	18.3	32.3	2.30	10.6	10.3							
											780	59.1	24.2	17.6	31.4	2.11	11.5	9.1							
	4.5	2.0	4.6								860	60.2	24.8	18.4	32.1	2.14	11.6	9.2							
											780	59.1	24.4	17.6	31.3	2.02	12.1	8.5							
											860	60.1	25.0	18.5	32.0	2.05	12.2	8.6							
110	3.0	1.1	2.6								780	60.0	22.3	16.9	31.0	2.56	8.7	11.8							
											860	61.0	22.8	17.7	31.6	2.59	8.8	11.9							
											780	59.9	22.6	16.9	30.7	2.38	9.5	10.6							
	4.5	1.9	4.4								860	60.9	23.1	17.8	31.3	2.41	9.6	10.7							
											780	59.8	22.7	17.0	30.5	2.27	10.0	9.9							
											860	60.8	23.3	17.8	31.1	2.31	10.1	10.0							
120	3.0	1.1	2.5	780	61.0	20.3	16.0	30.1	2.88	7.0	13.5														
				860	61.9	20.8	16.8	30.7	2.92	7.1	13.6														
				780	60.9	20.5	16.1	29.7	2.68	7.7	12.2														
	4.5	1.8	4.2	860	61.8	21.0	16.9	30.3	2.72	7.7	12.3														
				780	60.8	20.7	16.1	29.4	2.56	8.1	11.4														
				860	61.8	21.2	16.9	30.0	2.60	8.2	11.5														

NOTE: See page 23 for performance data parameters and guidelines.

ZT Models Performance Tables

Model ZT024, 2 Ton, COAX Part Load Performance Data

EWT	Flow °F GPM	WPD		COAX Unit - Part Load Heating							COAX Unit - Part Load Cooling																					
		PSI	FT	Aiflow CFM	LAT (DB) °F	HC MBtuh	HE MBtuh	Power kW	COP W/W	DH MBtuh	Aiflow CFM	LAT (DB) °F	TC MBtuh	SC MBtuh	HR MBtuh	Power kW	EER Btuh/W	DH MBtuh														
25	4.0	3.0	7.0	600	87.0	11.0	7.4	1.07	3.03	3.1	Operation Not Recommended																					
				650	85.8	11.1	7.5	1.04	3.11	3.0																						
30	2.0	1.2	2.7	600	87.3	11.2	7.6	1.06	3.09	3.1																						
				650	86.0	11.2	7.7	1.04	3.17	3.0																						
	3.0	1.9	4.3	600	88.0	11.7	8.1	1.06	3.22	3.2																						
				650	86.7	11.7	8.2	1.04	3.30	3.1																						
	4.0	2.8	6.4	600	88.7	12.1	8.4	1.07	3.32	3.2																						
				650	87.3	12.1	8.6	1.04	3.41	3.1																						
40	2.0	1.1	2.5	600	90.4	13.2	9.6	1.07	3.62	3.4								620	57.7	21.9	15.0	24.3	0.70	31.2	2.2							
				650	88.9	13.3	9.7	1.05	3.72	3.2								650	58.1	22.2	15.4	24.6	0.71	31.4	2.2							
	3.0	1.7	4.0	600	91.3	13.8	10.1	1.07	3.78	3.5								Operation Not Recommended														
				650	89.7	13.8	10.3	1.05	3.87	3.3																						
	4.0	2.5	5.8	600	92.0	14.3	10.6	1.07	3.89	3.6																						
				650	90.4	14.3	10.7	1.05	4.00	3.4																						
50	2.0	1.0	2.3	600	93.6	15.3	11.6	1.08	4.15	3.7															620	57.2	22.0	15.2	24.8	0.80	27.6	2.6
				650	91.9	15.4	11.8	1.06	4.26	3.6															650	57.7	22.3	15.7	25.1	0.80	27.8	2.7
	3.0	1.6	3.7	600	94.7	16.0	12.3	1.08	4.32	3.9								620	57.0	22.5	15.4	25.0	0.73	30.6	2.2							
				650	92.9	16.0	12.4	1.06	4.44	3.7								650	57.5	22.7	15.8	25.3	0.74	30.8	2.2							
	4.0	2.3	5.4	600	95.5	16.5	12.8	1.09	4.46	4.0								620	56.9	22.7	15.5	25.0	0.68	33.2	1.9							
				650	93.6	16.6	13.0	1.06	4.57	3.8								650	57.4	23.0	15.9	25.3	0.69	33.4	2.0							
60	2.0	0.9	2.1	600	97.0	17.5	13.7	1.10	4.66	4.2	620	57.6	21.5	15.0	24.6	0.92	23.3	3.4														
				650	95.0	17.5	13.9	1.08	4.78	4.0	650	58.1	21.7	15.4	24.9	0.93	23.5	3.5														
	3.0	1.5	3.4	600	98.2	18.3	14.5	1.10	4.86	4.4	620	57.4	21.9	15.1	24.8	0.85	25.8	2.9														
				650	96.1	18.3	14.6	1.08	4.98	4.2	650	57.9	22.1	15.5	25.0	0.85	26.0	2.9														
	4.0	2.2	5.0	600	99.1	18.9	15.1	1.10	5.01	4.5	620	57.3	22.1	15.2	24.8	0.79	28.0	2.6														
				650	97.0	18.9	15.3	1.08	5.14	4.4	650	57.7	22.4	15.6	25.1	0.79	28.2	2.6														
70	2.0	0.8	2.0	600	100.4	19.7	15.9	1.12	5.15	4.7	620	58.2	20.6	14.6	24.2	1.07	19.3	4.4														
				650	98.2	19.8	16.0	1.10	5.28	4.5	650	58.6	20.8	15.0	24.5	1.07	19.4	4.5														
	3.0	1.4	3.1	600	101.8	20.6	16.8	1.13	5.36	5.0	620	58.0	21.0	14.8	24.3	0.98	21.4	3.8														
				650	99.4	20.7	16.9	1.10	5.50	4.8	650	58.4	21.2	15.2	24.6	0.99	21.5	3.8														
	4.0	2.0	4.6	600	102.9	21.3	17.5	1.13	5.54	5.2	620	57.8	21.2	14.8	24.3	0.91	23.2	3.4														
				650	100.5	21.4	17.6	1.10	5.68	5.0	650	58.3	21.4	15.3	24.6	0.92	23.3	3.5														
80	2.0	0.8	1.8	600	104.0	22.1	18.1	1.15	5.61	5.4	620	58.7	19.6	14.2	23.8	1.24	15.8	5.5														
				650	101.5	22.1	18.3	1.13	5.75	5.2	650	59.2	19.8	14.6	24.0	1.25	15.9	5.5														
	3.0	1.3	2.9	600	105.5	23.0	19.1	1.16	5.84	5.7	620	58.5	19.9	14.4	23.8	1.14	17.5	4.8														
				650	102.9	23.1	19.2	1.13	5.99	5.5	650	59.0	20.2	14.8	24.1	1.15	17.6	4.8														
	4.0	1.9	4.3	600	106.8	23.8	19.9	1.16	6.03	5.9	620	58.4	20.1	14.5	23.8	1.06	19.0	4.4														
				650	104.0	23.9	20.0	1.13	6.19	5.7	650	58.8	20.4	14.9	24.0	1.07	19.1	4.4														
90	2.0	0.7	1.7	600	107.7	24.4	20.4	1.19	6.04	6.2	620	59.4	18.4	13.8	23.3	1.44	12.8	6.6														
				650	104.9	24.5	20.6	1.16	6.19	5.9	650	59.8	18.6	14.2	23.5	1.44	12.9	6.7														
	3.0	1.2	2.8	600	109.4	25.5	21.5	1.19	6.29	6.5	620	59.2	18.7	13.9	23.2	1.32	14.2	5.8														
				650	106.5	25.6	21.6	1.16	6.45	6.3	650	59.6	19.0	14.3	23.5	1.33	14.3	5.9														
	4.0	1.8	4.1	600	110.7	26.4	22.3	1.19	6.49	6.8	620	59.1	18.9	14.0	23.1	1.23	15.4	5.4														
				650	107.7	26.5	22.5	1.17	6.66	6.6	650	59.5	19.2	14.4	23.4	1.24	15.5	5.4														
100	2.0	0.7	1.5	Operation Not Recommended							620	60.3	17.0	13.2	22.7	1.66	10.3	7.8														
											650	60.7	17.2	13.6	22.9	1.67	10.3	7.8														
	3.0	1.1	2.4								620	60.1	17.3	13.3	22.6	1.53	11.4	6.9														
											650	60.5	17.6	13.7	22.8	1.53	11.4	7.0														
	4.0	1.6	3.7								620	60.0	17.5	13.4	22.4	1.42	12.3	6.4														
											650	60.4	17.7	13.8	22.6	1.43	12.4	6.5														
110	2.0	0.6	1.5								620	61.3	15.4	12.5	22.0	1.91	8.1	9.0														
											650	61.7	15.6	12.9	22.2	1.92	8.2	9.1														
	3.0	1.0	2.4								620	61.2	15.7	12.6	21.7	1.76	9.0	8.1														
											650	61.5	15.9	13.0	21.9	1.76	9.0	8.2														
	4.0	1.5	3.6								620	61.0	15.9	12.7	21.5	1.64	9.7	7.5														
											650	61.4	16.1	13.0	21.7	1.64	9.8	7.6														
120	2.0	0.6	1.5								620	62.1	13.8	12.0	21.3	2.18	6.3	10.4														
											650	62.5	14.0	12.3	21.5	2.19	6.4	10.4														
	3.0	1.0	2.3								620	62.0	14.1	12.1	20.9	2.01	7.0	9.4														
											650	62.3	14.3	12.4	21.1	2.02	7.1	9.4														
	4.0	1.5	3.5								620	61.9	14.3	12.2	20.6	1.87	7.6	8.7														
											650	62.2	14.4	12.5	20.8	1.88	7.7	8.8														

NOTE: See page 23 for performance data parameters and guidelines.

ENGINEERING SPECIFICATIONS

ZT Models Performance Tables

Model ZT030, 2.5 Ton, BPHE Full Load Performance Data

EWT °F	Flow GPM	WPD		BPHE Unit - Full Load Heating							BPHE Unit - Full Load Cooling								
		PSI	FT	Aiflow CFM	LAT (DB) °F	HC MBtuh	HE MBtuh	Power kW	COP W/W	DH MBtuh	Aiflow CFM	LAT (DB) °F	TC MBtuh	SC MBtuh	HR MBtuh	Power kW	EER Btuh/W	DH MBtuh	
25	7.5	1.9	4.3	960	89.8	20.5	14.3	1.80	3.33	5.1	Operation Not Recommended								
				1070	88.3	21.1	15.0	1.79	3.47	4.9									
30	5.8	1.2	2.8	960	90.6	21.4	15.2	1.8	3.5	5.3									
				1070	89.1	22.1	15.9	1.8	3.6	5.0									
	6.5	1.4	3.3	960	91.0	21.8	15.5	1.82	3.50	5.4									
				1070	89.4	22.4	16.3	1.81	3.64	5.1									
	7.5	1.8	4.2	960	91.4	22.2	15.9	1.83	3.55	5.5									
				1070	89.8	22.9	16.7	1.82	3.69	5.2									
40	5.8	1.2	2.7	960	94.1	25.0	18.5	1.89	3.87	6.0		740	54.8	32.8	20.1	37.0	1.24	26.5	4.1
				1070	92.3	25.8	19.4	1.88	4.02	5.7		960	58.1	34.9	22.7	39.4	1.29	27.0	4.4
	6.5	1.4	3.2	960	94.5	25.4	18.9	1.90	3.91	6.2									
				1070	92.7	26.2	19.8	1.89	4.07	5.8									
	7.5	1.7	4.0	960	95.0	25.9	19.4	1.92	3.96	6.3									
				1070	93.1	26.7	20.2	1.90	4.12	5.9									
50	5.8	1.1	2.6	960	97.8	28.8	22.0	2.00	4.23	7.0		740	53.4	34.1	21.3	38.7	1.34	25.4	3.8
				1070	95.7	29.7	23.0	1.98	4.41	6.6		960	56.8	36.4	24.0	41.1	1.40	25.9	3.9
	6.5	1.4	3.1	960	98.3	29.3	22.5	2.01	4.28	7.1		740	53.3	34.1	21.3	38.7	1.34	25.4	3.7
				1070	96.2	30.2	23.5	1.99	4.46	6.7		960	56.8	36.4	24.0	41.2	1.40	26.0	3.8
	7.5	1.7	3.9	960	98.8	29.9	23.0	2.02	4.34	7.2	740	53.3	34.1	21.4	38.7	1.34	25.4	3.6	
				1070	96.7	30.8	24.0	2.00	4.51	6.8	960	56.8	36.4	24.1	41.2	1.40	26.0	3.8	
60	5.8	1.1	2.6	960	101.5	32.6	25.5	2.10	4.55	7.9	740	52.9	34.2	21.7	39.2	1.48	23.1	4.8	
				1070	99.1	33.7	26.5	2.09	4.73	7.5	960	56.4	36.4	24.4	41.7	1.55	23.5	5.0	
	6.5	1.3	3.0	960	102.0	33.2	26.0	2.12	4.60	8.1	740	52.8	34.2	21.7	39.2	1.48	23.1	4.7	
				1070	99.6	34.2	27.1	2.10	4.78	7.7	960	56.4	36.5	24.5	41.7	1.55	23.5	4.9	
	7.5	1.7	3.8	960	102.6	33.8	26.6	2.13	4.66	8.2	740	52.8	34.2	21.7	39.2	1.48	23.1	4.6	
				1070	100.2	34.9	27.7	2.11	4.85	7.8	960	56.4	36.5	24.5	41.7	1.55	23.6	4.8	
70	5.8	1.1	2.5	960	104.9	36.2	28.6	2.21	4.79	8.9	740	53.1	33.3	21.5	39.0	1.66	20.1	6.0	
				1070	102.3	37.3	29.8	2.19	4.99	8.5	960	56.6	35.6	24.2	41.5	1.73	20.5	6.2	
	6.5	1.3	3.0	960	105.5	36.8	29.2	2.23	4.85	9.1	740	53.0	33.4	21.5	39.0	1.66	20.1	5.9	
				1070	102.8	38.0	30.4	2.21	5.04	8.7	960	56.6	35.6	24.3	41.5	1.73	20.6	6.1	
	7.5	1.6	3.7	960	106.2	37.5	29.9	2.24	4.91	9.3	740	53.0	33.4	21.6	39.0	1.66	20.2	5.8	
				1070	103.5	38.7	31.1	2.22	5.11	8.8	960	56.6	35.6	24.3	41.5	1.73	20.6	6.0	
80	5.8	1.1	2.4	960	107.8	39.2	31.3	2.31	4.97	9.9	740	53.7	32.0	21.0	38.3	1.86	17.2	7.4	
				1070	105.0	40.4	32.6	2.29	5.17	9.4	960	57.2	34.1	23.7	40.8	1.95	17.5	7.7	
	6.5	1.3	2.9	960	108.4	39.9	31.9	2.32	5.03	10.1	740	53.7	32.0	21.0	38.4	1.86	17.2	7.2	
				1070	105.6	41.1	33.3	2.30	5.23	9.6	960	57.1	34.1	23.7	40.8	1.95	17.5	7.5	
	7.5	1.6	3.7	960	109.2	40.6	32.6	2.34	5.09	10.3	740	53.6	32.0	21.1	38.4	1.86	17.2	7.1	
				1070	106.3	41.9	34.0	2.32	5.30	9.8	960	57.1	34.2	23.7	40.8	1.95	17.5	7.4	
90	5.8	1.0	2.4	960	110.0	41.4	33.3	2.39	5.08	10.8	740	54.5	30.4	20.4	37.6	2.11	14.4	8.9	
				1070	107.0	42.7	34.7	2.37	5.29	10.2	960	57.9	32.4	23.0	39.9	2.20	14.7	9.2	
	6.5	1.2	2.9	960	110.6	42.1	33.9	2.40	5.14	11.0	740	54.5	30.4	20.4	37.6	2.11	14.4	8.7	
				1070	107.6	43.5	35.3	2.38	5.35	10.5	960	57.8	32.4	23.0	39.9	2.20	14.7	9.0	
	7.5	1.6	3.6	960	111.4	42.9	34.7	2.42	5.21	11.2	740	54.4	30.4	20.4	37.6	2.11	14.4	8.6	
				1070	108.3	44.3	36.1	2.40	5.42	10.6	960	57.8	32.4	23.0	39.9	2.20	14.7	8.9	
100	5.8	1.0	2.3	Operation Not Recommended							740	55.3	28.6	19.7	36.8	2.38	12.0	10.5	
											960	58.6	30.5	22.2	39.0	2.49	12.3	10.9	
	6.5	1.2	2.7								740	55.3	28.7	19.7	36.8	2.38	12.0	10.3	
											960	58.6	30.6	22.2	39.1	2.49	12.3	10.7	
	7.5	1.5	3.5								740	55.3	28.7	19.8	36.8	2.38	12.0	10.2	
											960	58.5	30.6	22.3	39.1	2.49	12.3	10.6	
110	5.8	1.0	2.3								740	56.2	26.7	19.0	35.9	2.70	9.9	12.2	
											960	59.3	28.5	21.4	38.1	2.82	10.1	12.7	
	6.5	1.2	2.7								740	56.2	26.7	19.0	35.9	2.70	9.9	12.0	
											960	59.3	28.5	21.4	38.1	2.82	10.1	12.5	
	7.5	1.5	3.4								740	56.2	26.7	19.1	35.9	2.70	9.9	11.9	
											960	59.3	28.5	21.5	38.1	2.82	10.1	12.3	
120	5.8	1.0	2.2								740	57.4	24.3	18.1	34.7	3.04	8.0	14.1	
											960	60.3	25.9	20.4	36.8	3.18	8.2	14.6	
	6.5	1.2	2.7								740	57.3	24.3	18.1	34.7	3.04	8.0	13.9	
											960	60.3	25.9	20.4	36.8	3.18	8.2	14.4	
	7.5	1.5	3.4								740	57.3	24.3	18.1	34.7	3.04	8.0	13.7	
											960	60.3	25.9	20.4	36.8	3.18	8.2	14.2	

NOTE: See page 23 for performance data parameters and guidelines.

ZT Models Performance Tables

Model ZT030, 2.5 Ton, BPHE Part Load Performance Data

EWT °F	Flow GPM	WPD		BPHE Unit - Part Load Heating							BPHE Unit - Part Load Cooling														
		PSI	FT	Aiflow CFM	LAT (DB) °F	HC MBtuh	HE MBtuh	Power kW	COP W/W	DH MBtuh	Aiflow CFM	LAT (DB) °F	TC MBtuh	SC MBtuh	HR MBtuh	Power kW	EER Btuh/W	DH MBtuh							
25	7.5	2.0	4.5	720	89.3	15.0	10.1	1.45	3.05	4.1	Operation Not Recommended														
				840	87.0	15.4	10.6	1.40	3.23	3.8															
30	5.8	1.2	2.8	720	91.1	16.4	11.5	1.46	3.31	4.2															
				840	88.6	16.9	12.1	1.41	3.51	3.9															
	6.5	1.5	3.4	720	91.2	16.5	11.5	1.46	3.32	4.3															
				840	88.6	16.9	12.1	1.41	3.51	4.0															
7.5	1.9	4.5	720	91.1	16.4	11.4	1.45	3.30	4.3																
			840	88.5	16.8	12.0	1.41	3.50	4.0																
40	5.8	1.2	2.7	720	94.7	19.2	14.2	1.48	3.81	4.7								630	54.4	27.1	17.4	29.6	0.72	37.5	2.1
				840	91.7	19.7	14.8	1.43	4.03	4.4								750	56.5	27.7	19.0	30.2	0.74	37.5	2.1
	6.5	1.4	3.3	720	94.8	19.2	14.2	1.48	3.82	4.8								Operation Not Recommended							
				840	91.8	19.7	14.9	1.43	4.04	4.4															
	7.5	1.8	4.2	720	94.6	19.1	14.1	1.48	3.80	4.9															
				840	91.6	19.6	14.7	1.43	4.02	4.5															
50	5.8	1.1	2.6	720	98.3	22.0	16.9	1.50	4.29	5.3	630	53.6	27.6	17.9	30.4	0.81	33.9	2.2							
				840	94.9	22.6	17.6	1.45	4.55	5.0	750	55.9	28.2	19.6	31.0	0.83	33.9	2.2							
	6.5	1.4	3.1	720	98.4	22.1	16.9	1.50	4.30	5.4	630	53.6	27.7	18.0	30.5	0.81	34.1	2.0							
				840	94.9	22.6	17.7	1.46	4.56	5.0	750	55.8	28.3	19.6	31.1	0.83	34.1	2.1							
	7.5	1.8	4.1	720	98.2	21.9	16.8	1.50	4.28	5.5	630	53.5	28.0	18.0	30.9	0.83	33.7	1.7							
				840	94.8	22.5	17.5	1.45	4.53	5.1	750	55.8	28.7	19.6	31.6	0.85	33.8	1.7							
60	5.8	1.1	2.5	720	102.0	24.9	19.7	1.53	4.76	6.1	630	53.9	27.0	17.7	30.2	0.93	29.0	3.1							
				840	98.1	25.5	20.5	1.48	5.05	5.6	750	56.1	27.6	19.3	30.8	0.95	29.0	3.1							
	6.5	1.3	3.0	720	102.1	25.0	19.7	1.53	4.77	6.1	630	53.9	27.1	17.8	30.2	0.93	29.1	2.9							
				840	98.2	25.6	20.5	1.48	5.06	5.7	750	56.1	27.7	19.4	30.9	0.95	29.2	2.9							
	7.5	1.7	3.9	720	101.9	24.8	19.6	1.53	4.75	6.2	630	53.8	27.4	17.8	30.7	0.95	28.8	2.5							
				840	98.0	25.4	20.4	1.48	5.03	5.8	750	56.0	28.0	19.4	31.3	0.97	28.9	2.5							
70	5.8	1.0	2.4	720	105.8	27.8	22.5	1.56	5.22	6.9	630	54.5	25.9	17.4	29.6	1.07	24.2	4.0							
				840	101.5	28.5	23.4	1.51	5.53	6.4	750	56.6	26.5	18.9	30.2	1.10	24.2	4.1							
	6.5	1.3	2.9	720	105.9	27.9	22.6	1.56	5.23	7.0	630	54.4	26.0	17.4	29.7	1.07	24.3	3.8							
				840	101.6	28.6	23.5	1.51	5.54	6.5	750	56.6	26.6	19.0	30.3	1.09	24.3	3.9							
	7.5	1.6	3.8	720	105.7	27.7	22.4	1.56	5.20	7.1	630	54.4	26.3	17.4	30.1	1.10	24.0	3.3							
				840	101.3	28.4	23.3	1.51	5.51	6.6	750	56.5	26.9	19.0	30.7	1.12	24.0	3.4							
80	5.8	1.0	2.3	720	109.7	30.8	25.4	1.60	5.65	7.9	630	55.1	24.7	16.9	28.9	1.24	19.9	5.1							
				840	104.9	31.6	26.3	1.55	5.99	7.3	750	57.2	25.3	18.5	29.6	1.27	19.9	5.2							
	6.5	1.2	2.8	720	109.8	30.9	25.5	1.60	5.67	7.9	630	55.0	24.8	17.0	29.0	1.24	20.0	4.8							
				840	105.0	31.7	26.4	1.55	6.00	7.4	750	57.1	25.3	18.5	29.7	1.26	20.1	4.9							
	7.5	1.6	3.7	720	109.5	30.7	25.3	1.60	5.64	8.1	630	55.0	25.1	17.0	29.4	1.27	19.8	4.3							
				840	104.7	31.5	26.2	1.55	5.97	7.5	750	57.1	25.7	18.6	30.1	1.30	19.8	4.4							
90	5.8	1.0	2.3	720	113.6	33.9	28.3	1.64	6.07	8.9	630	55.8	23.4	16.5	28.3	1.43	16.3	6.2							
				840	108.3	34.8	29.4	1.59	6.43	8.3	750	57.8	24.0	18.0	28.9	1.47	16.3	6.3							
	6.5	1.2	2.8	720	113.8	34.0	28.4	1.64	6.08	9.0	630	55.7	23.5	16.5	28.4	1.43	16.4	5.9							
				840	108.5	34.9	29.5	1.59	6.44	8.4	750	57.8	24.0	18.0	29.0	1.46	16.4	6.0							
	7.5	1.6	3.6	720	113.5	33.8	28.2	1.64	6.05	9.2	630	55.7	23.8	16.6	28.8	1.47	16.2	5.3							
				840	108.2	34.7	29.3	1.58	6.41	8.5	750	57.7	24.3	18.1	29.4	1.50	16.3	5.4							
100	5.8	1.0	2.2	Operation Not Recommended							630	56.6	22.0	15.9	27.7	1.65	13.3	7.3							
											750	58.6	22.5	17.4	28.3	1.69	13.3	7.5							
	6.5	1.2	2.7								630	56.5	22.1	16.0	27.7	1.65	13.4	7.0							
											750	58.5	22.6	17.4	28.4	1.68	13.4	7.2							
	7.5	1.5	3.5								630	56.5	22.4	16.0	28.2	1.69	13.3	6.3							
											750	58.5	22.9	17.4	28.8	1.73	13.3	6.5							
110	5.8	0.9	2.2								Operation Not Recommended							630	57.6	20.5	15.2	26.9	1.90	10.8	8.6
																		750	59.5	20.9	16.6	27.5	1.94	10.8	8.8
	6.5	1.2	2.7															630	57.5	20.5	15.3	27.0	1.89	10.9	8.2
																		750	59.4	21.0	16.7	27.6	1.93	10.9	8.4
	7.5	1.5	3.5															630	57.5	20.8	15.3	27.4	1.94	10.7	7.5
																		750	59.4	21.3	16.7	28.0	1.98	10.7	7.6
120	5.8	0.9	2.1	Operation Not Recommended														630	58.4	18.7	14.7	26.1	2.17	8.6	9.9
																		750	60.2	19.1	16.0	26.7	2.21	8.6	10.2
	6.5	1.1	2.6															630	58.4	18.8	14.7	26.2	2.16	8.7	9.6
																		750	60.2	19.2	16.0	26.7	2.21	8.7	9.8
	7.5	1.5	3.4															630	58.3	19.0	14.7	26.6	2.21	8.6	8.7
																		750	60.2	19.4	16.1	27.2	2.26	8.6	8.9

NOTE: See page 23 for performance data parameters and guidelines.

ENGINEERING SPECIFICATIONS

ZT Models Performance Tables

Model ZT030, 2.5 Ton, COAX Full Load Performance Data

EWT	Flow °F	WPD		COAX Unit - Full Load Heating							COAX Unit - Full Load Cooling																							
		PSI	FT	Aiflow CFM	LAT (DB) °F	HC MBtuh	HE MBtuh	Power kW	COP W/W	DH MBtuh	Aiflow CFM	LAT (DB) °F	TC MBtuh	SC MBtuh	HR MBtuh	Power kW	EER Btuh/W	DH MBtuh																
25	7.5	7.4	17.2	960	91.8	22.6	15.9	1.97	3.36	5.6	Operation Not Recommended																							
				1070	89.8	22.9	16.2	1.94	3.45	5.3																								
30	3.8	2.7	6.2	960	92.1	22.9	16.2	2.0	3.4	5.6																								
				1070	90.0	23.2	16.6	1.9	3.5	5.3																								
	5.6	4.5	10.3	960	93.0	23.9	17.1	1.97	3.55	5.7																								
				1070	90.9	24.1	17.5	1.94	3.65	5.4																								
	7.5	6.8	15.6	960	93.4	24.3	17.5	1.98	3.60	5.8																								
				1070	91.3	24.6	17.9	1.94	3.70	5.5																								
40	3.8	2.5	5.7	960	95.1	26.1	19.3	1.98	3.85	6.0									740	56.5	30.3	18.8	34.5	1.21	25.1	4.5								
				1070	92.8	26.4	19.7	1.95	3.96	5.8									960	59.6	32.1	21.2	36.4	1.28	25.0	4.8								
	5.6	4.1	9.5	960	96.2	27.1	20.3	1.99	4.00	6.2									Operation Not Recommended															
				1070	93.8	27.5	20.8	1.96	4.11	5.9																								
	7.5	6.2	14.3	960	96.6	27.6	20.8	2.00	4.05	6.4																								
				1070	94.2	27.9	21.2	1.97	4.16	6.1																								
50	3.8	2.3	5.3	960	98.1	29.1	22.2	2.03	4.21	6.6																	740	54.8	31.8	20.1	36.3	1.33	23.8	5.0
				1070	95.5	29.5	22.7	1.99	4.33	6.3																	960	58.1	33.6	22.7	38.4	1.42	23.7	5.3
	5.6	3.8	8.7	960	99.3	30.4	23.4	2.03	4.37	6.9									740	54.8	32.1	20.2	36.7	1.33	24.1	4.5								
				1070	96.6	30.7	23.9	2.00	4.49	6.5									960	58.1	34.0	22.8	38.8	1.42	24.0	4.9								
	7.5	5.7	13.2	960	99.8	30.9	23.9	2.04	4.43	7.0	740	54.7	32.2	20.2	36.8	1.33	24.2	4.4																
				1070	97.0	31.3	24.4	2.01	4.56	6.7	960	58.0	34.1	22.8	38.9	1.42	24.1	4.8																
60	3.8	2.1	4.9	960	101.0	32.1	25.0	2.08	4.52	7.3	740	53.9	32.2	20.8	37.2	1.49	21.7	5.6																
				1070	98.1	32.5	25.5	2.05	4.64	7.0	960	57.3	34.0	23.5	39.4	1.58	21.6	6.0																
	5.6	3.5	8.1	960	102.3	33.5	26.3	2.09	4.69	7.6	740	53.9	32.6	20.9	37.6	1.49	21.9	5.1																
				1070	99.3	33.9	26.8	2.06	4.82	7.3	960	57.3	34.4	23.6	39.8	1.58	21.8	5.4																
	7.5	5.3	12.3	960	102.9	34.1	26.9	2.10	4.75	7.8	740	53.8	32.7	20.9	37.7	1.49	22.0	4.9																
				1070	99.8	34.5	27.4	2.07	4.88	7.5	960	57.2	34.5	23.6	39.9	1.58	21.9	5.2																
70	3.8	2.0	4.6	960	103.7	35.0	27.6	2.16	4.76	8.1	740	53.8	31.8	20.9	37.5	1.67	19.1	6.6																
				1070	100.6	35.4	28.2	2.12	4.89	7.8	960	57.3	33.6	23.6	39.6	1.77	19.0	7.0																
	5.6	3.3	7.6	960	105.2	36.5	29.1	2.16	4.94	8.5	740	53.7	32.2	21.0	37.9	1.67	19.3	5.9																
				1070	101.9	36.9	29.6	2.13	5.07	8.1	960	57.2	34.0	23.7	40.0	1.77	19.2	6.2																
	7.5	5.0	11.5	960	105.8	37.1	29.7	2.17	5.01	8.8	740	53.7	32.3	21.0	38.0	1.67	19.4	5.6																
				1070	102.5	37.5	30.2	2.14	5.15	8.4	960	57.1	34.1	23.7	40.1	1.77	19.3	6.0																
80	3.8	1.9	4.3	960	106.4	37.7	30.1	2.23	4.95	9.1	740	54.3	30.8	20.5	37.1	1.87	16.4	7.9																
				1070	103.0	38.2	30.7	2.20	5.09	8.7	960	57.7	32.5	23.2	39.3	1.99	16.3	8.3																
	5.6	3.1	7.2	960	107.9	39.3	31.6	2.24	5.14	9.5	740	54.2	31.1	20.6	37.5	1.87	16.6	7.0																
				1070	104.4	39.8	32.2	2.21	5.28	9.2	960	57.6	32.9	23.2	39.7	1.99	16.5	7.4																
	7.5	4.7	10.8	960	108.6	40.0	32.3	2.25	5.21	9.9	740	54.2	31.2	20.7	37.6	1.87	16.7	6.7																
				1070	105.0	40.5	32.9	2.22	5.35	9.5	960	57.5	33.0	23.3	39.8	1.99	16.6	7.1																
90	3.8	1.8	4.1	960	108.9	40.3	32.4	2.31	5.10	10.2	740	55.1	29.3	19.9	36.5	2.11	13.9	9.4																
				1070	105.3	40.8	33.0	2.28	5.24	9.8	960	58.3	30.9	22.5	38.6	2.24	13.8	9.9																
	5.6	2.9	6.8	960	110.5	42.0	34.0	2.32	5.30	10.7	740	55.0	29.6	20.0	36.8	2.11	14.0	8.4																
				1070	106.7	42.5	34.7	2.29	5.44	10.3	960	58.3	31.3	22.5	38.9	2.24	14.0	8.9																
	7.5	4.5	10.3	960	111.2	42.7	34.8	2.33	5.37	11.1	740	54.9	29.7	20.0	36.9	2.11	14.1	8.1																
				1070	107.4	43.2	35.4	2.30	5.52	10.7	960	58.2	31.4	22.6	39.0	2.24	14.0	8.5																
100	3.8	1.6	3.7	Operation Not Recommended																														
																		960	106.4	37.7	30.1	2.23	4.95	9.1	740	54.3	30.8	20.5	37.1	1.87	16.4	7.9		
	5.6	2.7	6.3															960	107.9	39.3	31.6	2.24	5.14	9.5	740	54.2	31.1	20.6	37.5	1.87	16.6	7.0		
																		1070	104.4	39.8	32.2	2.21	5.28	9.2	960	57.6	32.9	23.2	39.7	1.99	16.5	7.4		
	7.5	4.2	9.6															960	108.6	40.0	32.3	2.25	5.21	9.9	740	54.2	31.2	20.7	37.6	1.87	16.7	6.7		
																		1070	105.0	40.5	32.9	2.22	5.35	9.5	960	57.5	33.0	23.3	39.8	1.99	16.6	7.1		
110	3.8	1.6	3.6															960	108.9	40.3	32.4	2.31	5.10	10.2	740	55.1	29.3	19.9	36.5	2.11	13.9	9.4		
																		1070	105.3	40.8	33.0	2.28	5.24	9.8	960	58.3	30.9	22.5	38.6	2.24	13.8	9.9		
	5.6	2.7	6.1															960	110.5	42.0	34.0	2.32	5.30	10.7	740	55.0	29.6	20.0	36.8	2.11	14.0	8.4		
																		1070	106.7	42.5	34.7	2.29	5.44	10.3	960	58.3	31.3	22.5	38.9	2.24	14.0	8.9		
	7.5	4.1	9.4															960	111.2	42.7	34.8	2.33	5.37	11.1	740	54.9	29.7	20.0	36.9	2.11	14.1	8.1		
																		1070	107.4	43.2	35.4	2.30	5.52	10.7	960	58.2	31.4	22.6	39.0	2.24	14.0	8.5		
120	3.8	1.6	3.6															960	106.4	37.7	30.1	2.23	4.95	9.1	740	54.3	30.8	20.5	37.1	1.87	16.4	7.9		
																		1070	103.0	38.2	30.7	2.20	5.09	8.7	960	57.7	32.5	23.2	39.3	1.99	16.3	8.3		
	5.6	2.6	6.0															960	107.9	39.3	31.6	2.24	5.14	9.5	740	54.2	31.1	20.6	37.5	1.87	16.6	7.0		
																		1070	104.4	39.8	32.2	2.21	5.28	9.2	960	57.6	32.9	23.2	39.7	1.99	16.5	7.4		
	7.5	4.0	9.2															960	108.6	40.0	32.3	2.25	5.21	9.9	740	54.2	31.2	20.7	37.6	1.87	16.7	6.7		
																		1070	105.0	40.5	32.9	2.22	5.35	9.5	960	57.5	33.0	23.3	39.8	1.99	16.6	7.1		
100	3.8	1.6	3.6	960	108.9	40.3	32.4	2.31	5.10	10.2	740	55.1	29.3	19.9	36.5	2.11	13.9	9.4																
				1070	105.3	40.8	33.0	2.28	5.24	9.8	960	58.3	30.9	22.5	38.6	2.24	13.8	9.9																
	5.6	2.6	6.0	960	110.5	42.0	34.0	2.32	5.30	10.7	740	55.0	29.6	20.0	36.8	2.11	14.0	8.4																
				1070	106.7	42.5	34.7	2.29	5.44	10.3	960	58.3	31.3	22.5	38.9	2.24	14.0	8.9																
	7.5	4.0	9.2	960	111.2	42.7	34.8	2.33	5.37	11.1	740	54.9	29.7	20.0	36.9	2.11	14.1	8.1																
				1070	107.4	43.2	35.4	2.30	5.52	10.7	960	58.2	31.4	22.6	39.0	2.24	14.0	8.5																
100	3.8	1.6	3.6	960	106.4	37.7	30.1	2.23	4.95	9.1	740	54.3	30.8	20.5	37.1	1.87	16.4	7.9																
				1070	103.0	38.2	30.7	2.20	5.09	8.7	960	57.7	32.5	23.2	39.3	1.99	16.3	8.3																
	5.6	2.6	6.0	960	107.9	39.3	31.6	2.24	5.14	9.5	740	54.2	31.1	20.6	37.5	1.87	16.6	7.0																
				1070	104.4	39.8	32.2	2.21	5.28	9.2	960	57.6	32.9	23.2	39.7	1.99	16.5	7.4																
	7.5	4.0	9.2	960	108.6	40.0	32.3	2.25	5.21	9.9	740	54.2	31.2	20.7	37.6	1.87																		

ZT Models Performance Tables

Model ZT030, 2.5 Ton, COAX Part Load Performance Data

EWT °F	Flow GPM	WPD		COAX Unit - Part Load Heating							COAX Unit - Part Load Cooling														
		PSI	FT	Aiflow CFM	LAT (DB) °F	HC MBtuh	HE MBtuh	Power kW	COP W/W	DH MBtuh	Aiflow CFM	LAT (DB) °F	TC MBtuh	SC MBtuh	HR MBtuh	Power kW	EER Btuh/W	DH MBtuh							
25	5.0	4.2	9.7	720	90.9	16.2	11.2	1.49	3.20	4.3	Operation Not Recommended														
				840	88.3	16.6	11.5	1.49	3.27	4.1															
30	2.5	1.6	3.6	720	91.8	16.9	12.0	1.45	3.43	4.4															
				840	89.0	17.3	12.3	1.45	3.50	4.1															
	3.8	2.6	6.0	720	92.5	17.5	12.5	1.47	3.48	4.5															
				840	89.7	17.9	12.9	1.48	3.56	4.2															
	5.0	3.8	8.8	720	92.6	17.6	12.5	1.49	3.46	4.5															
				840	89.8	18.0	12.9	1.49	3.53	4.2															
40	2.5	1.4	3.3	720	95.1	19.5	14.6	1.45	3.94	4.8								630	57.1	24.9	15.6	27.7	0.81	30.7	2.6
				840	92.0	19.9	15.0	1.45	4.02	4.5								750	58.8	26.2	17.2	29.0	0.82	31.8	2.6
	3.8	2.4	5.5	720	96.0	20.2	15.2	1.48	4.00	4.9								Operation Not Recommended							
				840	92.8	20.6	15.6	1.48	4.08	4.5															
	5.0	3.5	8.1	720	96.1	20.3	15.2	1.50	3.97	4.8															
				840	92.9	20.7	15.6	1.50	4.05	4.5															
50	2.5	1.3	3.1	720	98.4	22.1	17.1	1.46	4.43	5.2	630	56.1	25.3	16.3	28.5	0.92	27.7								3.0
				840	94.9	22.6	17.6	1.46	4.52	4.9	750	57.8	26.6	18.0	29.8	0.93	28.6								3.0
	3.8	2.2	5.1	720	99.4	22.9	17.8	1.49	4.50	5.3	630	55.9	25.5	16.4	28.5	0.88	28.9	2.8							
				840	95.8	23.4	18.3	1.49	4.59	5.0	750	57.6	26.8	18.1	29.8	0.90	29.9	2.8							
	5.0	3.2	7.5	720	99.6	23.0	17.9	1.51	4.47	5.4	630	55.8	25.6	16.5	28.5	0.87	29.4	2.8							
				840	95.9	23.5	18.3	1.51	4.56	5.0	750	57.5	26.9	18.2	29.9	0.88	30.5	2.8							
60	2.5	1.2	2.9	720	101.7	24.7	19.7	1.47	4.92	5.8	630	56.1	24.7	16.3	28.3	1.05	23.6	3.6							
				840	97.8	25.2	20.2	1.47	5.02	5.4	750	57.8	26.0	18.0	29.6	1.06	24.4	3.7							
	3.8	2.1	4.8	720	102.9	25.6	20.4	1.50	4.99	5.9	630	55.9	24.8	16.4	28.3	1.01	24.6	3.4							
				840	98.8	26.1	21.0	1.50	5.10	5.6	750	57.6	26.1	18.1	29.6	1.02	25.5	3.4							
	5.0	3.0	7.0	720	103.0	25.7	20.5	1.52	4.96	5.9	630	55.8	24.9	16.5	28.3	1.00	25.1	3.4							
				840	98.9	26.2	21.0	1.52	5.06	5.6	750	57.5	26.2	18.2	29.7	1.01	25.9	3.4							
70	2.5	1.2	2.7	720	105.0	27.2	22.2	1.48	5.39	6.5	630	56.6	23.7	15.9	27.8	1.21	19.6	4.5							
				840	100.7	27.8	22.8	1.48	5.50	6.1	750	58.3	24.9	17.6	29.1	1.23	20.3	4.6							
	3.8	1.9	4.4	720	106.3	28.2	23.1	1.51	5.47	6.7	630	56.4	23.8	16.0	27.8	1.16	20.5	4.2							
				840	101.7	28.8	23.6	1.51	5.59	6.2	750	58.2	25.0	17.7	29.0	1.18	21.2	4.3							
	5.0	2.8	6.5	720	106.4	28.3	23.1	1.53	5.44	6.7	630	56.3	23.9	16.1	27.8	1.15	20.9	4.2							
				840	101.9	28.9	23.7	1.53	5.55	6.2	750	58.1	25.1	17.8	29.1	1.16	21.6	4.2							
80	2.5	1.1	2.5	720	108.3	29.8	24.7	1.49	5.85	7.3	630	57.4	22.5	15.4	27.3	1.39	16.2	5.6							
				840	103.5	30.4	25.3	1.49	5.97	6.9	750	59.1	23.7	17.0	28.5	1.41	16.8	5.7							
	3.8	1.8	4.2	720	109.7	30.8	25.6	1.52	5.93	7.6	630	57.2	22.6	15.5	27.2	1.34	16.9	5.2							
				840	104.7	31.5	26.3	1.52	6.06	7.1	750	58.9	23.8	17.1	28.5	1.36	17.5	5.3							
	5.0	2.6	6.1	720	109.9	31.0	25.7	1.54	5.89	7.6	630	57.1	22.7	15.6	27.2	1.32	17.2	5.2							
				840	104.9	31.6	26.4	1.54	6.02	7.1	750	58.8	23.9	17.2	28.5	1.34	17.8	5.3							
90	2.5	1.0	2.3	720	111.6	32.3	27.2	1.51	6.28	8.3	630	58.2	21.4	14.8	26.8	1.60	13.3	6.7							
				840	106.4	33.0	27.8	1.51	6.40	7.8	750	59.8	22.5	16.3	28.0	1.63	13.8	6.9							
	3.8	1.7	3.9	720	113.0	33.5	28.2	1.54	6.38	8.6	630	58.1	21.5	14.9	26.7	1.54	13.9	6.4							
				840	107.7	34.2	28.9	1.54	6.50	8.0	750	59.7	22.6	16.5	27.9	1.57	14.4	6.5							
	5.0	2.5	5.7	720	113.2	33.6	28.3	1.56	6.33	8.6	630	58.0	21.6	15.0	26.8	1.52	14.2	6.3							
				840	107.9	34.3	29.0	1.56	6.46	8.1	750	59.6	22.7	16.5	27.9	1.55	14.7	6.4							
100	2.5	0.9	2.2	Operation Not Recommended							630	59.1	20.1	14.3	26.4	1.84	10.9	8.0							
											750	60.6	21.1	15.7	27.5	1.87	11.3	8.1							
	3.8	1.6	3.6								630	58.9	20.2	14.4	26.2	1.77	11.4	7.6							
											750	60.4	21.3	15.9	27.4	1.80	11.8	7.7							
	5.0	2.3	5.4								630	58.8	20.3	14.4	26.3	1.75	11.6	7.5							
											750	60.3	21.3	15.9	27.4	1.78	12.0	7.6							
110	2.5	0.9	2.1								630	59.9	18.6	13.7	25.8	2.11	8.8	9.3							
											750	61.3	19.6	15.1	26.9	2.14	9.2	9.5							
	3.8	1.5	3.5								630	59.7	18.7	13.8	25.6	2.03	9.2	8.8							
											750	61.2	19.7	15.2	26.7	2.06	9.6	9.0							
	5.0	2.3	5.2								630	59.6	18.8	13.9	25.6	2.00	9.4	8.8							
											750	61.1	19.8	15.3	26.7	2.03	9.7	8.9							
120	2.5	0.9	2.0	630	60.8	16.8	13.1	25.0	2.40	7.0	10.7														
				750	62.2	17.7	14.4	26.0	2.43	7.3	10.9														
	3.8	1.5	3.4	630	60.7	16.9	13.2	24.8	2.30	7.3	10.2														
				750	62.1	17.8	14.5	25.8	2.34	7.6	10.4														
	5.0	2.2	5.1	630	60.6	17.0	13.2	24.8	2.28	7.5	10.1														
				750	62.0	17.9	14.6	25.7	2.31	7.7	10.3														

NOTE: See page 23 for performance data parameters and guidelines.

ENGINEERING SPECIFICATIONS

ZT Models Performance Tables

Model ZT036, 3 Ton, BPHE Full Load Performance Data

EWT °F	Flow GPM	WPD		BPHE Unit - Full Load Heating							BPHE Unit - Full Load Cooling														
		PSI	FT	Aiflow CFM	LAT (DB) °F	HC MBtuh	HE MBtuh	Power kW	COP W/W	DH MBtuh	Aiflow CFM	LAT (DB) °F	TC MBtuh	SC MBtuh	HR MBtuh	Power kW	EER Btuh/W	DH MBtuh							
25	9.0	1.6	3.7	1090	90.7	24.3	17.4	2.04	3.50	6.0	Operation Not Recommended														
				1230	88.5	24.5	17.7	1.99	3.61	5.6															
30	8.0	1.4	3.1	1090	91.8	25.7	18.7	2.1	3.7	5.9															
				1230	89.5	25.9	19.1	2.0	3.8	5.5															
	8.5	1.5	3.4	1090	92.0	25.9	18.9	2.06	3.69	6.1															
				1230	89.7	26.1	19.3	2.01	3.80	5.8															
	9.0	1.5	3.6	1090	92.2	26.1	19.1	2.06	3.71	6.3															
1230				89.8	26.3	19.4	2.02	3.82	5.9																
40	8.0	1.3	3.1	1090	95.0	29.4	22.2	2.13	4.05	6.4								1100	62.9	32.2	20.4	37.0	1.41	22.9	3.3
				1230	92.3	29.7	22.6	2.08	4.18	6.0								1260	64.1	32.8	21.7	37.8	1.46	22.5	3.4
	8.5	1.4	3.3	1090	95.2	29.7	22.4	2.13	4.08	6.7								Operation Not Recommended							
				1230	92.5	29.9	22.8	2.09	4.20	6.3															
	9.0	1.5	3.5	1090	95.4	29.9	22.6	2.14	4.10	6.9															
				1230	92.7	30.1	23.0	2.09	4.22	6.5															
50	8.0	1.3	3.0	1090	98.4	33.4	25.8	2.23	4.39	7.2	1100	59.8	37.6	24.0	42.8	1.51	25.0								4.8
				1230	95.3	33.6	26.2	2.18	4.52	6.7	1260	61.3	38.3	25.5	43.7	1.57	24.5								4.8
	8.5	1.4	3.2	1090	98.6	33.7	26.0	2.24	4.41	7.5	1100	59.8	37.7	24.0	42.8	1.50	25.1	4.2							
				1230	95.5	33.9	26.5	2.19	4.55	7.1	1260	61.2	38.4	25.5	43.7	1.56	24.6	4.2							
	9.0	1.5	3.4	1090	98.8	33.9	26.3	2.24	4.43	7.8	1100	59.8	37.7	24.0	42.8	1.50	25.2	3.8							
				1230	95.7	34.2	26.7	2.19	4.57	7.3	1260	61.2	38.4	25.6	43.7	1.55	24.7	3.9							
60	8.0	1.2	2.9	1090	102.0	37.6	29.6	2.36	4.67	8.3	1100	58.3	40.0	25.7	45.8	1.70	23.5	6.1							
				1230	98.5	37.9	30.0	2.31	4.81	7.8	1260	59.9	40.8	27.4	46.8	1.76	23.1	6.2							
	8.5	1.3	3.1	1090	102.2	37.9	29.8	2.37	4.69	8.7	1100	58.3	40.0	25.8	45.8	1.69	23.7	5.5							
				1230	98.8	38.2	30.3	2.32	4.84	8.2	1260	59.8	40.8	27.4	46.8	1.76	23.2	5.5							
	9.0	1.4	3.3	1090	102.5	38.2	30.1	2.37	4.72	9.1	1100	58.3	40.0	25.8	45.8	1.69	23.8	5.0							
				1230	99.0	38.5	30.6	2.32	4.86	8.5	1260	59.8	40.8	27.5	46.8	1.75	23.3	5.1							
70	8.0	1.2	2.8	1090	105.8	42.1	33.5	2.52	4.89	9.6	1100	58.0	40.0	26.1	46.4	1.90	21.1	7.7							
				1230	101.9	42.4	34.0	2.47	5.04	9.0	1260	59.4	40.7	28.0	47.5	1.97	20.7	7.8							
	8.5	1.3	3.0	1090	106.0	42.4	33.8	2.53	4.92	10.1	1100	58.0	40.0	26.2	46.4	1.89	21.2	6.9							
				1230	102.2	42.8	34.3	2.47	5.07	9.5	1260	59.4	40.8	28.0	47.5	1.96	20.8	6.9							
	9.0	1.4	3.2	1090	106.3	42.7	34.1	2.53	4.94	10.5	1100	58.0	40.0	26.2	46.5	1.89	21.2	6.3							
				1230	102.4	43.1	34.6	2.48	5.09	9.9	1260	59.4	40.8	28.1	47.5	1.96	20.8	6.4							
80	8.0	1.2	2.8	1090	109.8	46.8	37.6	2.71	5.07	11.0	1100	58.5	38.3	25.6	45.4	2.09	18.3	9.4							
				1230	105.5	47.2	38.1	2.65	5.22	10.3	1260	60.0	39.0	27.2	46.5	2.17	18.0	9.5							
	8.5	1.3	2.9	1090	110.1	47.2	37.9	2.72	5.09	11.6	1100	58.5	38.3	25.6	45.4	2.08	18.4	8.4							
				1230	105.8	47.6	38.5	2.66	5.25	10.9	1260	60.0	39.1	27.2	46.5	2.17	18.1	8.5							
	9.0	1.4	3.1	1090	110.4	47.6	38.3	2.72	5.12	12.0	1100	58.4	38.4	25.6	45.5	2.08	18.5	7.8							
				1230	106.1	47.9	38.8	2.66	5.27	11.3	1260	60.0	39.1	27.3	46.5	2.16	18.1	7.8							
90	8.0	1.2	2.7	1090	114.0	51.8	41.8	2.93	5.19	12.4	1100	59.4	35.7	24.5	43.6	2.31	15.5	11.2							
				1230	109.3	52.2	42.4	2.86	5.35	11.6	1260	60.9	36.4	26.0	44.6	2.40	15.2	11.3							
	8.5	1.3	2.9	1090	114.4	52.2	42.2	2.93	5.22	13.1	1100	59.4	35.7	24.5	43.6	2.30	15.5	10.1							
				1230	109.6	52.6	42.8	2.87	5.38	12.3	1260	60.8	36.4	26.1	44.6	2.39	15.3	10.2							
	9.0	1.3	3.1	1090	114.7	52.6	42.6	2.94	5.24	13.5	1100	59.4	35.8	24.5	43.6	2.29	15.6	9.4							
				1230	109.9	53.0	43.2	2.87	5.41	12.8	1260	60.8	36.5	26.1	44.6	2.38	15.3	9.5							
100	8.0	1.2	2.7	Operation Not Recommended							1100	60.4	32.9	23.2	41.7	2.58	12.7	13.2							
											1260	61.8	33.5	24.7	42.7	2.68	12.5	13.2							
	8.5	1.2	2.9								1100	60.4	32.9	23.3	41.7	2.57	12.8	11.9							
											1260	61.8	33.5	24.8	42.7	2.67	12.6	12.0							
	9.0	1.3	3.0								1100	60.4	32.9	23.3	41.7	2.56	12.8	11.1							
											1260	61.8	33.6	24.8	42.7	2.66	12.6	11.2							
110	8.0	1.2	2.7								1100	61.2	30.5	22.3	40.6	2.94	10.4	15.0							
											1260	62.5	31.1	23.8	41.6	3.05	10.2	15.1							
	8.5	1.2	2.8								1100	61.2	30.6	22.4	40.6	2.93	10.4	13.7							
											1260	62.5	31.2	23.8	41.6	3.04	10.3	13.8							
	9.0	1.3	3.0								1100	61.2	30.6	22.4	40.6	2.92	10.5	12.8							
											1260	62.5	31.2	23.8	41.5	3.03	10.3	12.9							
120	8.0	1.2	2.7	1100	61.3	29.4	22.2	40.9	3.36	8.8	17.2														
				1260	62.6	30.0	23.6	41.9	3.49	8.6	17.3														
	8.5	1.2	2.8	1100	61.3	29.5	22.2	40.9	3.35	8.8	15.7														
				1260	62.6	30.1	23.6	41.9	3.48	8.6	15.8														
	9.0	1.3	3.0	1100	61.3	29.5	22.2	40.9	3.34	8.8	14.8														
				1260	62.6	30.1	23.7	41.9	3.47	8.7	14.9														

NOTE: See page 23 for performance data parameters and guidelines.

ZT Models Performance Tables
 Model ZT036, 3 Ton, BPHE Part Load Performance Data

EWT °F	Flow GPM	WPD		BPHE Unit - Part Load Heating							BPHE Unit - Part Load Cooling								
		PSI	FT	Aiflow CFM	LAT (DB) °F	HC MBtuh	HE MBtuh	Power kW	COP W/W	DH MBtuh	Aiflow CFM	LAT (DB) °F	TC MBtuh	SC MBtuh	HR MBtuh	Power kW	EER Btuh/W	DH MBtuh	
25	9.0	1.5	3.5	870	87.9	16.9	11.8	1.48	3.34	4.2	Operation Not Recommended	840	59.6	29.2	18.5	31.6	0.72	40.5	2.4
				980	86.1	17.0	12.1	1.45	3.44	4.0									
30	8.0	1.2	2.8	870	89.3	18.1	13.0	1.49	3.57	4.1									
				980	87.3	18.3	13.3	1.45	3.69	3.9									
	8.5	1.3	3.1	870	89.3	18.2	13.1	1.49	3.58	4.3									
				980	87.3	18.3	13.4	1.45	3.70	4.0									
	9.0	1.5	3.4	870	89.4	18.2	13.1	1.49	3.59	4.4									
				980	87.4	18.4	13.4	1.45	3.70	4.1									
40	8.0	1.2	2.8	870	92.3	21.0	15.8	1.51	4.08	4.5		840	59.6	29.2	18.5	31.6	0.72	40.5	2.4
				980	90.0	21.2	16.1	1.47	4.21	4.2									
	8.5	1.3	3.0	870	92.4	21.1	15.9	1.51	4.10	4.6		Operation Not Recommended							
				980	90.1	21.3	16.2	1.47	4.23	4.3									
	9.0	1.5	3.4	870	92.5	21.1	16.0	1.51	4.10	4.7									
				980	90.1	21.3	16.3	1.47	4.23	4.5									
50	8.0	1.2	2.7	870	95.7	24.1	18.9	1.54	4.60	4.9	840		57.9	30.8	20.0	33.6	0.82	37.5	3.4
				980	93.0	24.3	19.2	1.50	4.75	4.6	910		58.7	31.5	20.9	34.4	0.83	38.0	3.4
	8.5	1.3	3.0	870	95.8	24.2	19.0	1.54	4.62	5.1	840	57.9	30.8	20.0	33.6	0.82	37.7	2.8	
				980	93.1	24.4	19.3	1.50	4.77	4.8	910	58.7	31.5	20.9	34.3	0.83	38.2	2.8	
	9.0	1.4	3.3	870	95.8	24.3	19.0	1.54	4.62	5.3	840	57.9	30.8	20.0	33.6	0.82	37.7	2.5	
				980	93.1	24.5	19.4	1.50	4.77	5.0	910	58.7	31.5	20.9	34.3	0.83	38.2	2.5	
60	8.0	1.2	2.7	870	99.3	27.5	22.2	1.58	5.12	5.5	840	57.5	30.7	20.4	34.0	0.95	32.4	4.5	
				980	96.3	27.8	22.5	1.54	5.28	5.2	910	58.3	31.4	21.3	34.7	0.96	32.8	4.5	
	8.5	1.3	3.0	870	99.4	27.7	22.3	1.58	5.14	5.7	840	57.5	30.7	20.4	34.0	0.95	32.5	3.8	
				980	96.4	27.9	22.6	1.54	5.30	5.4	910	58.3	31.4	21.3	34.7	0.95	32.9	3.8	
	9.0	1.4	3.3	870	99.5	27.7	22.3	1.58	5.14	5.9	840	57.5	30.7	20.4	34.0	0.95	32.5	3.4	
				980	96.4	28.0	22.7	1.54	5.31	5.6	910	58.3	31.4	21.3	34.7	0.95	32.9	3.4	
70	8.0	1.1	2.6	870	103.2	31.2	25.7	1.63	5.62	6.2	840	58.1	29.6	19.9	33.3	1.10	26.8	5.7	
				980	99.8	31.5	26.1	1.59	5.80	5.9	910	58.9	30.2	20.8	34.0	1.11	27.2	5.8	
	8.5	1.3	2.9	870	103.4	31.3	25.8	1.63	5.65	6.6	840	58.1	29.6	19.9	33.3	1.10	26.9	4.9	
				980	99.9	31.6	26.2	1.59	5.82	6.2	910	58.9	30.2	20.8	34.0	1.11	27.3	5.0	
	9.0	1.4	3.2	870	103.4	31.4	25.8	1.63	5.65	6.8	840	58.1	29.5	19.9	33.3	1.10	26.9	4.4	
				980	99.9	31.7	26.3	1.59	5.83	6.4	910	58.9	30.2	20.8	34.0	1.11	27.3	4.4	
80	8.0	1.1	2.6	870	107.4	35.2	29.4	1.69	6.10	7.2	840	59.1	27.9	19.0	32.2	1.28	21.8	7.1	
				980	103.5	35.5	29.9	1.65	6.30	6.8	910	59.8	28.5	19.9	32.9	1.29	22.1	7.1	
	8.5	1.2	2.9	870	107.6	35.3	29.5	1.69	6.13	7.6	840	59.1	27.9	19.0	32.2	1.27	21.9	6.2	
				980	103.7	35.6	30.0	1.65	6.32	7.1	910	59.8	28.5	19.9	32.9	1.29	22.1	6.2	
	9.0	1.4	3.2	870	107.6	35.4	29.6	1.69	6.13	7.9	840	59.1	27.9	19.0	32.2	1.27	21.9	5.5	
				980	103.7	35.7	30.1	1.65	6.33	7.4	910	59.8	28.5	19.9	32.9	1.29	22.1	5.6	
90	8.0	1.1	2.6	870	111.9	39.4	33.4	1.76	6.56	8.3	840	60.0	26.0	18.2	31.1	1.48	17.6	8.5	
				980	107.5	39.7	33.9	1.72	6.77	7.8	910	60.7	26.6	19.0	31.7	1.50	17.8	8.6	
	8.5	1.2	2.8	870	112.1	39.5	33.5	1.76	6.58	8.8	840	60.0	26.0	18.2	31.1	1.48	17.6	7.5	
				980	107.7	39.9	34.0	1.72	6.80	8.3	910	60.7	26.6	19.0	31.7	1.49	17.9	7.5	
	9.0	1.4	3.1	870	112.2	39.6	33.6	1.76	6.60	9.2	840	59.9	26.0	18.2	31.1	1.48	17.6	6.8	
				980	107.8	40.0	34.1	1.72	6.81	8.7	910	60.7	26.6	19.0	31.7	1.49	17.9	6.8	
100	8.0	1.1	2.5	Operation Not Recommended	840	60.6	24.2	17.6	30.1	1.71	14.2	10.0							
													910	61.2	24.8	18.4	30.7	1.73	14.3
	8.5	1.2	2.8		840	60.5	24.2	17.6	30.0	1.70	14.2	8.9							
					910	61.2	24.8	18.4	30.6	1.72	14.4	9.0							
	9.0	1.3	3.1		840	60.5	24.2	17.7	30.0	1.70	14.2	8.1							
					910	61.2	24.8	18.4	30.6	1.72	14.4	8.2							
110	8.0	1.1	2.5		840	61.0	22.4	17.2	29.1	1.96	11.4	11.6							
													910	61.7	22.9	18.0	29.6	1.98	11.5
	8.5	1.2	2.7		840	61.0	22.4	17.2	29.0	1.96	11.4	10.4							
													910	61.7	22.9	18.0	29.6	1.97	11.6
	9.0	1.3	3.0		840	61.0	22.4	17.3	29.0	1.96	11.4	9.6							
													910	61.7	22.9	18.0	29.6	1.97	11.6
120	8.0	1.1	2.4		840	62.0	20.1	16.3	27.7	2.24	9.0	13.2							
													910	62.6	20.5	17.1	28.3	2.26	9.1
	8.5	1.2	2.7	840	62.0	20.1	16.3	27.7	2.23	9.0	11.9								
												910	62.6	20.5	17.1	28.2	2.25	9.1	12.0
	9.0	1.3	3.0	840	62.0	20.1	16.4	27.7	2.23	9.0	11.0								
												910	62.6	20.5	17.1	28.2	2.25	9.1	11.1

NOTE: See page 23 for performance data parameters and guidelines.

ENGINEERING SPECIFICATIONS

ZT Models Performance Tables

Model ZT036, 3 Ton, COAX Full Load Performance Data

EWT °F	Flow GPM	WPD		COAX Unit - Full Load Heating							COAX Unit - Full Load Cooling																										
		PSI	FT	Aiflow CFM	LAT (DB) °F	HC MBtuh	HE MBtuh	Power kW	COP W/W	DH MBtuh	Aiflow CFM	LAT (DB) °F	TC MBtuh	SC MBtuh	HR MBtuh	Power kW	EER Btuh/W	DH MBtuh																			
25	9.0	4.6	10.7	1090	90.6	24.2	16.9	2.14	3.31	6.2	Operation Not Recommended	1100	58.2	40.2	25.9	45.6	1.59	25.3	4.9																		
				1230	88.3	24.3	17.2	2.08	3.44	5.8																											
30	4.5	1.7	4.0	1090	90.6	24.2	17.1	2.1	3.4	6.0		Operation Not Recommended	1100	58.2	40.2	25.9	45.6	1.59	25.3	4.9																	
				1230	88.3	24.3	17.4	2.0	3.5	5.6																											
	6.8	2.9	6.8	1090	91.6	25.4	18.1	2.13	3.49	6.2			Operation Not Recommended	1100	58.2	40.2	25.9	45.6	1.59	25.3	4.9																
				1230	89.2	25.5	18.5	2.07	3.62	5.8																											
				1090	92.1	26.0	18.7	2.15	3.54	6.4												Operation Not Recommended	1100	58.2	40.2	25.9	45.6	1.59	25.3	4.9							
				1230	89.7	26.2	19.0	2.09	3.67	5.9																											
9.0	4.3	10.0	1090	93.6	27.8	20.5	2.16	3.78	6.5	1100		58.2	40.2	25.9	45.6	1.59	25.3	4.9																			
			1230	91.0	28.0	20.8	2.09	3.92	6.1																												
40	4.5	1.6	3.8	1090	94.7	29.1	21.7	2.19	3.90	6.8		Operation Not Recommended	1100	58.2	40.2	25.9	45.6	1.59	25.3	4.9																	
				1230	92.0	29.3	22.0	2.12	4.05	6.3																											
	6.8	2.8	6.4	1090	95.4	29.9	22.4	2.21	3.96	7.0			Operation Not Recommended	1100	58.2	40.2	25.9	45.6	1.59	25.3	4.9																
				1230	92.6	30.1	22.7	2.14	4.11	6.5																											
				9.0	4.1	9.4	1090	96.8	31.6	23.9												2.25	4.12	7.3	1100	57.3	41.1	26.9	47.1	1.77	23.2	5.2					
							1230	93.9	31.8	24.3												2.18	4.27	6.8													
50	6.8	2.6	6.0	1090	98.1	33.1	25.3	2.28	4.25	7.7		1100	57.2	41.5	27.1	47.2	1.66	25.1	4.6																		
				1230	95.0	33.3	25.7	2.21	4.41	7.1																											
	9.0	3.8	8.8	1090	98.9	34.0	26.1	2.31	4.31	7.9										1100	57.1	41.7	27.2	47.2	1.61	26.0	4.3										
				1230	95.7	34.1	26.5	2.24	4.47	7.4																											
				1090	100.2	35.6	27.5	2.38	4.38	8.5	1100																	57.4	40.3	26.8	47.0	1.95	20.7	6.1			
																																			1230	96.9	35.8
60	6.8	2.4	5.6	1090	101.7	37.3	29.0	2.42	4.52	8.9	1100	57.3	40.8	27.0	47.0	1.83	22.3	5.4																			
				1230	98.2	37.5	29.5	2.34	4.69	8.3																											
	9.0	3.6	8.3	1090	102.5	38.3	29.9	2.44	4.59	9.2									1100	57.2	40.9	27.1	46.9	1.77	23.1	4.9											
				1230	99.0	38.5	30.4	2.37	4.76	8.5																											
				1090	103.8	39.8	31.1	2.55	4.57	9.8																	1100	57.8	39.1	26.4	46.4	2.15	18.2	7.4			
																																			1230	100.1	40.0
70	6.8	2.3	5.3	1090	105.4	41.7	32.9	2.59	4.72	10.3	1100	57.6	39.5	26.6	46.4	2.01	19.7	6.6																			
				1230	101.5	41.9	33.3	2.51	4.89	9.6																											
	9.0	3.4	7.8	1090	106.3	42.8	33.9	2.62	4.79	10.7									1100	57.6	39.6	26.7	46.3	1.95	20.4	6.0											
				1230	102.4	43.0	34.3	2.54	4.96	9.9																											
				1090	107.6	44.2	34.8	2.76	4.69	11.2																	1100	58.4	37.4	25.7	45.4	2.37	15.8	9.1			
																																			1230	103.5	44.4
80	6.8	2.2	5.1	1090	109.3	46.3	36.7	2.80	4.84	11.8	1100	58.2	37.8	25.9	45.4	2.21	17.1	8.1																			
				1230	105.0	46.5	37.3	2.72	5.02	11.1																											
	9.0	3.2	7.5	1090	110.4	47.5	37.9	2.83	4.91	12.2									1100	58.2	37.9	26.0	45.2	2.14	17.7	7.5											
				1230	106.0	47.8	38.4	2.75	5.09	11.5																											
				1090	111.5	48.8	38.6	3.01	4.76	12.6																	1100	58.9	35.7	25.1	44.7	2.62	13.6	10.9			
																																			1230	106.9	49.1
90	6.8	2.1	4.8	1090	113.4	51.1	40.7	3.05	4.91	13.3	1100	58.8	36.1	25.2	44.5	2.45	14.7	9.8																			
				1230	108.7	51.4	41.3	2.96	5.09	12.5																											
	9.0	3.1	7.1	1090	114.6	52.5	42.0	3.09	4.98	13.8									1100	58.7	36.2	25.3	44.3	2.37	15.3	9.0											
				1230	109.7	52.8	42.5	2.99	5.16	12.9																											
				1090	111.5	48.8	38.6	3.01	4.76	12.6																	1100	58.9	35.7	25.1	44.7	2.62	13.6	10.9			
																																			1230	106.9	49.1
100	4.5	1.2	2.7	1090	111.5	48.8	38.6	3.01	4.76	12.6	1100	58.9	35.7	25.1	44.7	2.62	13.6	10.9																			
				1230	106.9	49.1	39.1	2.92	4.93	11.8																											
	6.8	2.0	4.5	1090	113.4	51.1	40.7	3.05	4.91	13.3									1100	58.8	36.1	25.2	44.5	2.45	14.7	9.8											
				1230	108.7	51.4	41.3	2.96	5.09	12.5																											
				9.0	2.9	6.7	1090	114.6	52.5	42.0																	3.09	4.98	13.8	1100	58.7	36.2	25.3	44.3	2.37	15.3	9.0
							1230	109.7	52.8	42.5																	2.99	5.16	12.9								
110	4.5	1.1	2.6	1090	113.4	51.1	40.7	3.05	4.91	13.3	1100	58.8	36.1	25.2	44.5	2.45	14.7	9.8																			
				1230	108.7	51.4	41.3	2.96	5.09	12.5																											
	6.8	1.9	4.4	1090	114.6	52.5	42.0	3.09	4.98	13.8									1100	58.7	36.2	25.3	44.3	2.37	15.3	9.0											
				1230	109.7	52.8	42.5	2.99	5.16	12.9																											
				9.0	2.7	6.3	1090	114.6	52.5	42.0																	3.09	4.98	13.8	1100	58.7	36.2	25.3	44.3	2.37	15.3	9.0
							1230	109.7	52.8	42.5																	2.99	5.16	12.9								
120	4.5	1.1	2.6	1090	114.6	52.5	42.0	3.09	4.98	13.8	1100	58.7	36.2	25.3	44.3	2.37	15.3	9.0																			
				1230	109.7	52.8	42.5	2.99	5.16	12.9																											
	6.8	1.9	4.3	1090	114.6	52.5	42.0	3.09	4.98	13.8									1100	58.7	36.2	25.3	44.3	2.37	15.3	9.0											
				1230	109.7	52.8	42.5	2.99	5.16	12.9																											
				9.0	2.7	6.3	1090	114.6	52.5	42.0																	3.09	4.98	13.8	1100	58.7	36.2	25.3	44.3	2.37	15.3	9.0
							1230	109.7	52.8	42.5																	2.99	5.16	12.9								

NOTE: See page 23 for performance data parameters and guidelines.

ZT Models Performance Tables

Model ZT036, 3 Ton, COAX Part Load Performance Data

EWT °F	Flow GPM	WPD		COAX Unit - Part Load Heating							COAX Unit - Part Load Cooling																					
		PSI	FT	Aiflow CFM	LAT (DB) °F	HC MBtuh	HE MBtuh	Power kW	COP W/W	DH MBtuh	Aiflow CFM	LAT (DB) °F	TC MBtuh	SC MBtuh	HR MBtuh	Power kW	EER Btuh/W	DH MBtuh														
25	6.0	2.6	6.0	870	88.6	17.5	12.1	1.58	3.23	4.4	Operation Not Recommended	840	57.1	30.7	20.7	33.9	0.93	32.9	2.6													
				980	86.8	17.8	12.6	1.54	3.39	4.1																						
30	3.0	1.1	2.6	870	88.2	17.1	11.9	1.55	3.25	4.4		Operation Not Recommended	910	58.0	31.3	21.6	34.6	0.95	32.8	2.7												
				980	86.5	17.5	12.3	1.50	3.40	4.1																						
	4.5	1.7	4.0	870	89.2	18.0	12.7	1.57	3.37	4.5			Operation Not Recommended	910	58.0	31.3	21.6	34.6	0.95	32.8	2.7											
				980	87.4	18.4	13.2	1.53	3.53	4.2																						
				870	89.8	18.6	13.2	1.59	3.45	4.5												Operation Not Recommended	910	58.0	31.3	21.6	34.6	0.95	32.8	2.7		
				980	88.0	19.0	13.7	1.54	3.61	4.2																						
6.0	2.4	5.6	870	90.7	19.5	14.2	1.56	3.66	4.6	840		57.1	30.7	20.7	33.9	0.93	32.9	2.6														
			980	88.7	19.8	14.7	1.52	3.84	4.3																							
40	3.0	1.1	2.5	870	91.8	20.5	15.1	1.58	3.80	4.8		Operation Not Recommended	910	58.0	31.3	21.6	34.6	0.95	32.8	2.7												
				980	89.7	20.9	15.6	1.54	3.98	4.4																						
	4.5	1.6	3.7	870	92.5	21.2	15.7	1.60	3.89	4.9			Operation Not Recommended	910	58.0	31.3	21.6	34.6	0.95	32.8	2.7											
				980	90.4	21.6	16.3	1.55	4.07	4.5																						
				6.0	2.3	5.3	870	93.4	22.0	16.6												1.58	4.08	5.1	840	56.7	31.0	21.2	34.6	1.07	28.8	3.1
							980	91.2	22.4	17.2												1.54	4.27	4.7								
50	3.0	1.0	2.3	870	94.6	23.2	17.7	1.60	4.23	5.2		Operation Not Recommended	910	57.6	31.6	22.0	35.3	1.10	28.8	3.2												
				980	92.3	23.6	18.3	1.56	4.43	4.9																						
	4.5	1.5	3.6	870	95.5	23.9	18.4	1.62	4.33	5.4	Operation Not Recommended		910	57.4	32.1	22.2	35.5	0.99	32.4	2.7												
				980	93.1	24.4	19.0	1.58	4.54	5.0																						
				6.0	2.2	5.0	870	96.4	24.8	19.3											1.62	4.49	5.6	840	56.4	31.8	21.4	34.9	0.90	35.3	2.3	
							980	93.9	25.3	19.9											1.57	4.71	5.3									
60	3.0	1.0	2.2	870	97.8	26.1	20.5	1.64	4.66	5.9	Operation Not Recommended	910	57.2	30.0	20.7	34.2	1.24	24.1	4.2													
				980	95.1	26.6	21.1	1.60	4.88	5.5																						
	4.5	1.5	3.4	870	98.7	27.0	21.3	1.66	4.77	6.1		Operation Not Recommended	910	57.9	31.1	21.7	35.0	1.15	27.1	3.7												
				980	96.0	27.5	22.0	1.61	5.00	5.7																						
				6.0	2.1	4.8	870	99.6	27.8	22.1											1.67	4.89	6.4	840	57.8	28.7	20.2	33.6	1.44	19.9	5.4	
							980	96.8	28.3	22.8											1.62	5.12	6.0									
70	3.0	0.9	2.1	870	101.1	29.2	23.5	1.69	5.07	6.8	Operation Not Recommended	910	57.9	31.4	21.7	35.0	1.07	29.4	3.2													
				980	98.1	29.8	24.2	1.64	5.32	6.3																						
	4.5	1.4	3.2	870	102.2	30.2	24.4	1.71	5.19	7.0		Operation Not Recommended	910	57.9	31.4	21.7	35.0	1.07	29.4	3.2												
				980	99.1	30.8	25.1	1.66	5.44	6.5																						
				6.0	2.0	4.6	870	103.0	31.0	25.1											1.73	5.27	7.4	840	58.4	30.0	21.2	34.3	1.24	24.3	4.3	
							980	100.9	31.6	25.9											1.68	5.52	6.9									
80	3.0	0.9	2.0	870	104.7	32.6	26.7	1.75	5.46	7.9	Operation Not Recommended	910	58.0	27.9	19.9	33.1	1.51	18.5	5.8													
				980	101.4	33.2	27.4	1.70	5.72	7.3																						
	4.5	1.3	3.1	870	105.9	33.7	27.7	1.77	5.59	8.2		Operation Not Recommended	910	58.9	28.5	20.8	33.7	1.54	18.5	6.0												
				980	102.5	34.4	28.5	1.72	5.86	7.6																						
				6.0	1.9	4.4	870	106.7	34.5	28.3											1.80	5.62	8.7	840	58.0	28.2	20.0	33.0	1.40	20.1	5.2	
							980	103.2	35.1	29.2											1.75	5.88	8.1									
90	3.0	0.8	2.0	870	108.6	36.3	30.0	1.82	5.83	9.2	Operation Not Recommended	910	58.8	28.7	20.8	33.6	1.43	20.1	5.4													
				980	104.9	36.9	30.9	1.77	6.10	8.6																						
	4.5	1.3	3.0	870	109.9	37.5	31.2	1.84	5.96	9.6		Operation Not Recommended	910	58.8	28.7	20.8	33.6	1.43	20.1	5.4												
				980	106.1	38.2	32.1	1.79	6.25	9.0																						
				6.0	1.8	4.2	870	106.7	34.5	28.3											1.80	5.62	8.7	840	58.5	26.2	19.5	32.8	1.93	13.6	8.2	
							980	103.2	35.1	29.2											1.75	5.88	8.1									
100	3.0	0.8	1.9	870	108.6	36.3	30.0	1.82	5.83	9.2	Operation Not Recommended	910	59.4	26.7	19.6	32.6	1.74	15.3	7.2													
				980	104.9	36.9	30.9	1.77	6.10	8.6																						
	4.5	1.2	2.8	870	109.9	37.5	31.2	1.84	5.96	9.6		Operation Not Recommended	910	59.2	27.2	20.4	33.3	1.78	15.3	7.4												
				980	106.1	38.2	32.1	1.79	6.25	9.0																						
				6.0	1.7	4.0	870	106.7	34.5	28.3											1.80	5.62	8.7	840	59.2	27.5	20.5	33.1	1.65	16.6	6.6	
							980	103.2	35.1	29.2											1.75	5.88	8.1									
110	3.0	0.8	1.8	870	108.6	36.3	30.0	1.82	5.83	9.2	Operation Not Recommended	910	59.4	26.7	19.6	32.6	1.74	15.3	7.2													
				980	104.9	36.9	30.9	1.77	6.10	8.6																						
	4.5	1.2	2.7	870	109.9	37.5	31.2	1.84	5.96	9.6		Operation Not Recommended	910	59.2	27.2	20.4	33.3	1.78	15.3	7.4												
				980	106.1	38.2	32.1	1.79	6.25	9.0																						
				6.0	1.7	3.8	870	106.7	34.5	28.3											1.80	5.62	8.7	840	59.2	27.5	20.5	33.1	1.65	16.6	6.6	
							980	103.2	35.1	29.2											1.75	5.88	8.1									
120	3.0	0.8	1.8	870	108.6	36.3	30.0	1.82	5.83	9.2	Operation Not Recommended	910	59.4	26.7	19.6	32.6	1.74	15.3	7.2													
				980	104.9	36.9	30.9	1.77	6.10	8.6																						
	4.5	1.1	2.6	870	109.9	37.5	31.2	1.84	5.96	9.6		Operation Not Recommended	910	59.2	27.2	20.4	33.3	1.78	15.3	7.4												
				980	106.1	38.2	32.1	1.79	6.25	9.0																						
				6.0	1.6	3.7	870	106.7	34.5	28.3											1.80	5.62	8.7	840	59.2	27.5	20.5	33.1	1.65	16.6	6.6	
							980	103.2	35.1	29.2											1.75	5.88	8.1									

NOTE: See page 23 for performance data parameters and guidelines.

ENGINEERING SPECIFICATIONS

ZT Models Performance Tables

Model ZT042, 3.5 Ton, BPHE Full Load Performance Data

EWT °F	Flow GPM	WPD		BPHE Unit - Full Load Heating							BPHE Unit - Full Load Cooling														
		PSI	FT	Aiflow CFM	LAT (DB) °F	HC MBtuh	HE MBtuh	Power kW	COP W/W	DH MBtuh	Aiflow CFM	LAT (DB) °F	TC MBtuh	SC MBtuh	HR MBtuh	Power kW	EER Btuh/W	DH MBtuh							
25	10.5	2.0	4.6	1140	95.5	31.4	22.3	2.65	3.47	6.6	Operation Not Recommended														
				1270	93.0	31.5	22.8	2.56	3.61	6.0															
30	9.3	1.7	3.8	1140	96.8	32.9	23.7	2.7	3.6	6.7															
				1270	94.1	33.0	24.2	2.6	3.7	6.1															
	10.0	1.8	4.2	1140	97.0	33.2	24.0	2.71	3.59	6.7															
				1270	94.3	33.3	24.4	2.61	3.74	6.2															
				1140	97.1	33.4	24.1	2.72	3.60	6.8															
10.5	1.9	4.5	1140	94.4	33.5	24.6	2.62	3.75	6.3																
			1270	94.4	33.5	24.6	2.62	3.75	6.3																
40	9.3	1.6	3.7	1140	100.4	37.4	27.6	2.87	3.82	7.8								1270	59.3	44.0	28.4	49.7	1.67	26.3	3.3
				1270	97.3	37.5	28.1	2.76	3.98	7.1								1410	60.8	44.8	29.2	50.7	1.72	26.0	3.4
	10.0	1.8	4.1	1140	100.6	37.7	27.9	2.88	3.84	7.8								Operation Not Recommended							
				1270	97.6	37.8	28.3	2.77	4.00	7.2															
	10.5	1.9	4.4	1140	100.8	37.9	28.0	2.89	3.84	7.9															
				1270	97.7	38.0	28.5	2.78	4.01	7.3															
50	9.3	1.6	3.7	1140	104.4	42.3	31.8	3.07	4.04	9.2	1270	57.8	46.3	30.4	52.7	1.86	24.9	4.1							
				1270	100.9	42.4	32.4	2.95	4.21	8.5	1410	59.5	47.1	31.2	53.7	1.92	24.6	4.2							
	10.0	1.7	4.0	1140	104.6	42.6	32.1	3.08	4.06	9.3	1270	57.8	46.3	30.4	52.6	1.85	25.0	4.0							
				1270	101.2	42.8	32.7	2.97	4.23	8.6	1410	59.5	47.1	31.2	53.6	1.90	24.8	4.1							
	10.5	1.9	4.3	1140	104.8	42.9	32.3	3.09	4.07	9.4	1270	57.8	46.3	30.4	52.6	1.84	25.1	3.9							
				1270	101.3	43.0	32.8	2.97	4.24	8.7	1410	59.5	47.2	31.2	53.6	1.90	24.9	3.9							
60	9.3	1.6	3.6	1140	108.5	47.4	36.2	3.28	4.24	10.8	1270	57.4	46.9	31.0	53.9	2.06	22.7	5.5							
				1270	104.6	47.5	36.8	3.16	4.41	10.0	1410	59.1	47.7	31.9	54.9	2.12	22.5	5.6							
	10.0	1.7	3.9	1140	108.8	47.8	36.5	3.29	4.25	10.9	1270	57.4	46.9	31.1	53.9	2.05	22.9	5.4							
				1270	104.9	47.9	37.1	3.17	4.43	10.1	1410	59.1	47.7	31.9	54.9	2.11	22.6	5.5							
	10.5	1.8	4.2	1140	109.0	48.0	36.7	3.30	4.26	11.0	1270	57.4	46.9	31.1	53.9	2.04	23.0	5.3							
				1270	105.1	48.1	37.3	3.18	4.44	10.2	1410	59.1	47.7	31.9	54.9	2.10	22.7	5.3							
70	9.3	1.5	3.5	1140	112.5	52.3	40.4	3.48	4.40	12.3	1270	57.6	46.0	30.8	53.8	2.28	20.2	7.1							
				1270	108.3	52.5	41.0	3.35	4.59	11.4	1410	59.0	46.8	32.0	54.9	2.35	19.9	7.1							
	10.0	1.7	3.9	1140	112.8	52.7	40.8	3.50	4.42	12.4	1270	57.6	46.1	30.8	53.8	2.27	20.3	6.9							
				1270	108.6	52.9	41.4	3.37	4.61	11.5	1410	59.0	46.9	32.0	54.8	2.34	20.1	7.0							
	10.5	1.8	4.1	1140	113.1	53.0	41.0	3.51	4.43	12.6	1270	57.6	46.1	30.8	53.8	2.26	20.4	6.8							
				1270	108.8	53.2	41.7	3.37	4.62	11.7	1410	59.0	46.9	32.0	54.8	2.33	20.1	6.8							
80	9.3	1.5	3.5	1140	116.2	56.8	44.3	3.66	4.55	13.8	1270	58.2	44.2	29.9	52.9	2.54	17.4	8.7							
				1270	111.6	57.0	45.0	3.52	4.74	12.8	1410	59.8	45.0	30.8	53.9	2.61	17.2	8.8							
	10.0	1.7	3.8	1140	116.5	57.3	44.8	3.67	4.57	13.9	1270	58.2	44.2	30.0	52.9	2.53	17.5	8.5							
				1270	111.9	57.5	45.4	3.54	4.76	12.9	1410	59.8	45.0	30.8	53.9	2.60	17.3	8.6							
	10.5	1.8	4.1	1140	116.8	57.6	45.0	3.68	4.58	14.1	1270	58.2	44.3	30.0	52.8	2.52	17.6	8.4							
				1270	112.1	57.7	45.7	3.55	4.77	13.1	1410	59.8	45.0	30.8	53.9	2.59	17.4	8.4							
90	9.3	1.5	3.4	1140	119.2	60.6	47.7	3.79	4.69	15.1	1270	58.9	41.8	28.9	51.5	2.84	14.7	10.5							
				1270	114.3	60.8	48.3	3.65	4.89	14.0	1410	60.5	42.5	29.7	52.5	2.92	14.5	10.5							
	10.0	1.6	3.8	1140	119.6	61.1	48.1	3.80	4.71	15.2	1270	58.9	41.8	29.0	51.4	2.83	14.8	10.3							
				1270	114.7	61.3	48.8	3.66	4.91	14.2	1410	60.5	42.5	29.7	52.4	2.91	14.6	10.3							
	10.5	1.7	4.0	1140	119.9	61.4	48.4	3.81	4.72	15.4	1270	58.9	41.8	29.0	51.4	2.81	14.9	10.1							
				1270	114.9	61.6	49.1	3.67	4.92	14.3	1410	60.5	42.5	29.7	52.4	2.90	14.7	10.1							
100	9.3	1.5	3.4	Operation Not Recommended							1270	59.6	39.0	28.0	50.0	3.20	12.2	12.4							
											1410	61.1	39.7	28.7	51.0	3.29	12.1	12.4							
	10.0	1.6	3.8								1270	59.6	39.1	28.0	49.9	3.18	12.3	12.2							
											1410	61.1	39.7	28.7	50.9	3.27	12.2	12.2							
	10.5	1.7	4.0								1270	59.6	39.1	28.0	49.9	3.17	12.3	11.9							
											1410	61.1	39.8	28.7	50.9	3.26	12.2	12.0							
110	9.3	1.5	3.4								1270	60.3	36.4	27.1	48.8	3.62	10.1	14.4							
											1410	61.8	37.0	27.8	49.8	3.73	9.9	14.5							
	10.0	1.6	3.7								1270	60.3	36.4	27.1	48.7	3.60	10.1	14.1							
											1410	61.7	37.1	27.8	49.7	3.70	10.0	14.2							
	10.5	1.7	4.0								1270	60.3	36.4	27.1	48.7	3.59	10.2	13.9							
											1410	61.7	37.1	27.8	49.7	3.69	10.1	14.0							
120	9.3	1.4	3.3	1270	61.1	34.2	25.9	48.3	4.11	8.3	16.4														
				1410	62.5	34.8	26.6	49.3	4.23	8.2	16.6														
	10.0	1.6	3.7	1270	61.1	34.3	25.9	48.2	4.08	8.4	16.2														
				1410	62.5	34.9	26.6	49.2	4.20	8.3	16.3														
	10.5	1.7	3.9	1270	61.1	34.3	25.9	48.1	4.07	8.4	15.9														
				1410	62.5	34.9	26.6	49.1	4.19	8.3	16.0														

NOTE: See page 23 for performance data parameters and guidelines.

ZT Models Performance Tables

Model ZT042, 3.5 Ton, BPHE Part Load Performance Data

EWT °F	Flow GPM	WPD		BPHE Unit - Part Load Heating							BPHE Unit - Part Load Cooling														
		PSI	FT	Aiflow CFM	LAT (DB) °F	HC MBtuh	HE MBtuh	Power kW	COP W/W	DH MBtuh	Aiflow CFM	LAT (DB) °F	TC MBtuh	SC MBtuh	HR MBtuh	Power kW	EER Btuh/W	DH MBtuh							
25	10.5	2.1	4.8	910	91.3	20.9	14.1	2.00	3.07	4.5	Operation Not Recommended														
				1010	89.2	20.9	14.4	1.92	3.20	4.2															
30	9.3	1.7	3.9	910	93.3	22.9	16.0	2.03	3.31	4.8															
				1010	91.0	22.9	16.3	1.95	3.45	4.5															
	10.0	1.9	4.3	910	93.2	22.8	15.9	2.03	3.29	4.8															
				1010	90.9	22.8	16.2	1.95	3.43	4.5															
10.5	2.0	4.6	910	93.1	22.7	15.7	2.03	3.28	4.8																
			1010	90.8	22.7	16.0	1.95	3.41	4.4																
40	9.3	1.6	3.7	910	97.0	26.5	19.4	2.09	3.72	5.5								1090	60.7	35.5	22.7	38.7	0.93	38.2	2.4
				1010	94.3	26.5	19.7	2.01	3.87	5.1								1200	61.7	35.9	23.7	39.2	0.95	37.9	2.4
	10.0	1.8	4.2	910	96.8	26.4	19.3	2.09	3.71	5.5								Operation Not Recommended							
				1010	94.2	26.4	19.6	2.01	3.86	5.1															
	10.5	1.9	4.5	910	96.7	26.2	19.1	2.08	3.69	5.4															
				1010	94.1	26.2	19.4	2.00	3.84	5.0															
50	9.3	1.6	3.6	910	100.7	30.2	22.9	2.15	4.12	6.3	1090	59.3	36.7	24.4	40.4	1.06	34.7								2.4
				1010	97.7	30.2	23.2	2.07	4.29	5.8	1200	60.4	37.2	25.4	40.9	1.08	34.5								2.4
	10.0	1.7	4.0	910	100.6	30.1	22.7	2.15	4.10	6.3	1090	59.2	37.2	24.4	40.8	1.07	34.9	2.5							
				1010	97.6	30.1	23.0	2.06	4.27	5.8	1200	60.4	37.6	25.4	41.3	1.09	34.7	2.5							
	10.5	1.9	4.3	910	100.4	29.9	22.6	2.15	4.08	6.2	1090	59.2	37.6	24.5	41.3	1.08	34.9	2.6							
				1010	97.4	29.9	22.9	2.06	4.25	5.8	1200	60.3	38.1	25.5	41.8	1.10	34.7	2.6							
60	9.3	1.5	3.5	910	104.6	34.0	26.5	2.21	4.50	7.3	1090	59.1	36.1	24.6	40.3	1.22	29.6	3.6							
				1010	101.2	34.1	26.8	2.13	4.69	6.8	1200	60.2	36.6	25.6	40.8	1.24	29.5	3.6							
	10.0	1.7	3.9	910	104.5	33.9	26.3	2.21	4.49	7.3	1090	59.0	36.6	24.7	40.8	1.23	29.8	3.6							
				1010	101.1	33.9	26.6	2.13	4.67	6.7	1200	60.2	37.0	25.7	41.3	1.25	29.6	3.6							
	10.5	1.8	4.2	910	104.2	33.6	26.1	2.21	4.46	7.2	1090	58.9	37.0	24.8	41.2	1.24	29.9	3.7							
				1010	100.9	33.7	26.4	2.12	4.65	6.6	1200	60.1	37.4	25.8	41.7	1.26	29.7	3.8							
70	9.3	1.5	3.4	910	108.6	38.0	30.2	2.28	4.87	8.4	1090	59.4	34.7	24.2	39.5	1.41	24.6	4.8							
				1010	104.8	38.0	30.5	2.20	5.07	7.8	1200	60.6	35.1	25.2	40.0	1.44	24.4	4.9							
	10.0	1.6	3.8	910	108.4	37.8	30.0	2.28	4.85	8.4	1090	59.4	35.1	24.3	40.0	1.42	24.7	4.9							
				1010	104.7	37.8	30.3	2.19	5.05	7.8	1200	60.5	35.6	25.3	40.5	1.45	24.6	4.9							
	10.5	1.8	4.1	910	108.2	37.5	29.8	2.28	4.83	8.3	1090	59.3	35.5	24.3	40.4	1.43	24.8	5.0							
				1010	104.4	37.6	30.1	2.19	5.03	7.7	1200	60.4	36.0	25.3	40.9	1.46	24.6	5.1							
80	9.3	1.5	3.4	910	112.7	42.0	34.0	2.36	5.22	9.7	1090	60.0	33.0	23.5	38.6	1.64	20.2	6.2							
				1010	108.5	42.0	34.3	2.27	5.44	9.0	1200	61.1	33.4	24.5	39.1	1.67	20.0	6.2							
	10.0	1.6	3.8	910	112.5	41.8	33.8	2.35	5.20	9.7	1090	60.0	33.4	23.6	39.0	1.65	20.3	6.2							
				1010	108.3	41.8	34.1	2.26	5.42	9.0	1200	61.1	33.8	24.5	39.5	1.68	20.2	6.3							
	10.5	1.7	4.1	910	112.3	41.5	33.5	2.35	5.17	9.6	1090	59.9	33.8	23.6	39.5	1.66	20.3	6.4							
				1010	108.1	41.6	33.9	2.26	5.39	8.9	1200	61.0	34.2	24.6	40.0	1.69	20.2	6.4							
90	9.3	1.5	3.4	910	117.0	46.2	37.9	2.43	5.56	11.2	1090	60.7	31.3	22.8	37.7	1.89	16.5	7.6							
				1010	112.4	46.2	38.2	2.34	5.79	10.4	1200	61.7	31.6	23.7	38.2	1.93	16.4	7.7							
	10.0	1.6	3.8	910	116.7	45.9	37.6	2.43	5.54	11.1	1090	60.6	31.6	22.8	38.1	1.91	16.6	7.6							
				1010	112.1	46.0	38.0	2.34	5.76	10.4	1200	61.7	32.0	23.8	38.6	1.94	16.5	7.7							
	10.5	1.7	4.1	910	116.4	45.6	37.3	2.43	5.51	11.0	1090	60.5	32.0	22.9	38.5	1.92	16.6	7.8							
				1010	111.9	45.7	37.7	2.33	5.74	10.2	1200	61.6	32.4	23.8	39.1	1.96	16.5	7.9							
100	9.3	1.5	3.4	Operation Not Recommended							1090	61.2	29.4	22.1	36.8	2.18	13.5	9.1							
											1200	62.3	29.8	23.0	37.3	2.22	13.4	9.2							
	10.0	1.6	3.8								1090	61.2	29.8	22.2	37.2	2.20	13.6	9.1							
											1200	62.2	30.1	23.1	37.7	2.24	13.5	9.2							
	10.5	1.7	4.1								1090	61.1	30.1	22.2	37.7	2.22	13.6	9.3							
											1200	62.1	30.5	23.1	38.2	2.26	13.5	9.4							
110	9.3	1.5	3.4								Operation Not Recommended							1090	61.8	27.3	21.4	35.8	2.50	10.9	10.6
																		1200	62.8	27.6	22.2	36.3	2.55	10.9	10.8
	10.0	1.6	3.8															1090	61.8	27.6	21.4	36.2	2.52	11.0	10.7
																		1200	62.8	28.0	22.3	36.7	2.56	10.9	10.8
	10.5	1.7	4.0															1090	61.7	27.9	21.5	36.6	2.54	11.0	10.9
																		1200	62.7	28.3	22.4	37.1	2.59	10.9	11.0
120	9.3	1.5	3.4	Operation Not Recommended														1090	62.8	24.8	20.3	34.5	2.85	8.7	12.2
																		1200	63.7	25.1	21.1	35.0	2.91	8.6	12.4
	10.0	1.6	3.7															1090	62.7	25.1	20.3	34.9	2.87	8.7	12.3
																		1200	63.7	25.4	21.2	35.4	2.93	8.7	12.4
	10.5	1.7	4.0															1090	62.7	25.4	20.4	35.3	2.90	8.8	12.5
																		1200	63.6	25.7	21.2	35.8	2.95	8.7	12.6

NOTE: See page 23 for performance data parameters and guidelines.

ENGINEERING SPECIFICATIONS

ZT Models Performance Tables

Model ZT042, 3.5 Ton, COAX Full Load Performance Data

EWT °F	Flow GPM	WPD		COAX Unit - Full Load Heating							COAX Unit - Full Load Cooling																																																																																												
		PSI	FT	Aiflow CFM	LAT (DB) °F	HC MBtuh	HE MBtuh	Power kW	COP W/W	DH MBtuh	Aiflow CFM	LAT (DB) °F	TC MBtuh	SC MBtuh	HR MBtuh	Power kW	EER Btuh/W	DH MBtuh																																																																																					
25	10.5	5.7	13.2	1140	95.8	31.8	22.1	2.83	3.29	7.4	Operation Not Recommended																																																																																												
				1270	93.1	31.8	22.5	2.71	3.43	6.8																																																																																													
30	5.3	2.1	4.9	1140	95.8	31.7	22.2	2.8	3.3	7.3										Operation Not Recommended																																																																																			
				1270	93.1	31.7	22.6	2.7	3.5	6.7																																																																																													
	7.9	3.5	8.2	1140	96.9	33.1	23.5	2.81	3.45	7.5																			Operation Not Recommended																																																																										
				1270	94.1	33.1	23.9	2.69	3.61	6.9																																																																																													
	10.5	5.3	12.2	1140	97.4	33.7	24.0	2.83	3.48	7.6																												Operation Not Recommended																																																																	
				1270	94.5	33.7	24.4	2.71	3.64	7.0																																																																																													
40	5.3	2.0	4.5	1140	98.9	35.6	25.9	2.84	3.68	7.9																																						Operation Not Recommended																																																							
				1270	96.0	35.6	26.3	2.71	3.84	7.2																																																																																													
	7.9	3.3	7.6	1140	100.2	37.1	27.4	2.86	3.81	8.1																																															Operation Not Recommended																																														
				1270	97.1	37.1	27.8	2.74	3.97	7.4																																																																																													
	10.5	5.0	11.4	1140	100.7	37.8	28.0	2.88	3.84	8.3																																																								Operation Not Recommended																																					
				1270	97.6	37.8	28.4	2.76	4.01	7.6																																																																																													
50	5.3	1.8	4.2	1140	102.3	39.8	29.8	2.94	3.97	8.7																																																																		Operation Not Recommended																											
				1270	99.0	39.8	30.2	2.81	4.15	8.0																																																																																													
	7.9	3.1	7.1	1140	103.7	41.5	31.4	2.97	4.11	9.0																																																																											Operation Not Recommended																		
				1270	100.3	41.5	31.8	2.84	4.29	8.3																																																																																													
	10.5	4.6	10.7	1140	104.3	42.3	32.1	2.99	4.15	9.2																																																																																				Operation Not Recommended									
				1270	100.8	42.3	32.5	2.86	4.33	8.5																																																																																													
60	5.3	1.7	4.0	1140	106.0	44.3	33.8	3.08	4.22	9.8	Operation Not Recommended																																																																																												
				1270	102.3	44.3	34.2	2.95	4.40	9.0																																																																																													
	7.9	2.9	6.7	1140	107.6	46.2	35.6	3.11	4.36	10.2										Operation Not Recommended																																																																																			
				1270	103.7	46.2	36.1	2.98	4.55	9.4																																																																																													
	10.5	4.3	10.0	1140	108.2	47.1	36.4	3.13	4.40	10.5																			Operation Not Recommended																																																																										
				1270	104.3	47.0	36.8	3.00	4.60	9.6																																																																																													
70	5.3	1.6	3.7	1140	109.8	49.1	38.0	3.25	4.42	11.2																												Operation Not Recommended																																																																	
				1270	105.7	49.0	38.4	3.11	4.62	10.3																																																																																													
	7.9	2.7	6.3	1140	111.6	51.2	40.0	3.28	4.58	11.7																																					Operation Not Recommended																																																								
				1270	107.3	51.1	40.4	3.14	4.78	10.8																																																																																													
	10.5	4.1	9.4	1140	112.3	52.1	40.8	3.30	4.62	12.0																																														Operation Not Recommended																																															
				1270	108.0	52.1	41.3	3.16	4.82	11.1																																																																																													
80	5.3	1.5	3.5	1140	113.8	54.0	42.3	3.43	4.62	12.8																																																							Operation Not Recommended																																						
				1270	109.3	53.9	42.8	3.28	4.82	11.8																																																																																													
	7.9	2.6	5.9	1140	115.7	56.3	44.5	3.46	4.77	13.4																																																																Operation Not Recommended																													
				1270	111.0	56.3	45.0	3.31	4.99	12.3																																																																																													
	10.5	3.9	8.9	1140	116.5	57.3	45.4	3.49	4.82	13.8																																																																									Operation Not Recommended																				
				1270	111.8	57.3	45.9	3.34	5.03	12.7																																																																																													
90	5.3	1.5	3.4	1140	117.9	59.0	46.7	3.60	4.80	14.4																																																																																		Operation Not Recommended											
				1270	113.0	59.0	47.2	3.45	5.02	13.4																																																																																													
	7.9	2.5	5.7	1140	120.0	61.6	49.2	3.63	4.97	15.1	Operation Not Recommended																																																																																												
				1270	114.9	61.5	49.7	3.48	5.19	14.0																																																																																													
	10.5	3.7	8.5	1140	120.9	62.7	50.2	3.66	5.01	15.6										Operation Not Recommended																																																																																			
				1270	115.7	62.6	50.7	3.51	5.24	14.4																																																																																													
100	5.3	1.4	3.2	1140	113.8	54.0	42.3	3.43	4.62	12.8																			Operation Not Recommended																																																																										
				1270	109.3	53.9	42.8	3.28	4.82	11.8																																																																																													
	7.9	2.3	5.3	1140	115.7	56.3	44.5	3.46	4.77	13.4																												Operation Not Recommended																																																																	
				1270	111.0	56.3	45.0	3.31	4.99	12.3																																																																																													
	10.5	3.4	7.9	1140	116.5	57.3	45.4	3.49	4.82	13.8																																					Operation Not Recommended																																																								
				1270	111.8	57.3	45.9	3.34	5.03	12.7																																																																																													
110	5.3	1.3	3.1	1140	117.9	59.0	46.7	3.60	4.80	14.4																																														Operation Not Recommended																																															
				1270	113.0	59.0	47.2	3.45	5.02	13.4																																																																																													
	7.9	2.2	5.1	1140	120.0	61.6	49.2	3.63	4.97	15.1																																																							Operation Not Recommended																																						
				1270	114.9	61.5	49.7	3.48	5.19	14.0																																																																																													
	10.5	3.3	7.5	1140	120.9	62.7	50.2	3.66	5.01	15.6																																																																Operation Not Recommended																													
				1270	115.7	62.6	50.7	3.51	5.24	14.4																																																																																													
120	5.3	1.3	3.0	1140	113.8	54.0	42.3	3.43	4.62	12.8																																																																									Operation Not Recommended																				
				1270	109.3	53.9	42.8	3.28	4.82	11.8																																																																																													
	7.9	2.2	5.0	1140	115.7	56.3	44.5	3.46	4.77	13.4																																																																																		Operation Not Recommended											
				1270	111.0	56.3	45.0	3.31	4.99	12.3																																																																																													
	10.5	3.3	7.5	1140	116.5	57.3	45.4	3.49	4.82	13.8	Operation Not Recommended																																																																																												
				1270	111.8	57.3	45.9	3.34	5.03	12.7																																																																																													
120	5.3	1.3	3.0	1140	117.9	59.0	46.7	3.60	4.80	14.4										Operation Not Recommended																																																																																			
				1270	113.0	59.0	47.2	3.45	5.02	13.4																																																																																													
	7.9	2.2	5.0	1140	120.0	61.6	49.2	3.63	4.97	15.1																			Operation Not Recommended																																																																										
				1270	114.9	61.5	49.7	3.48	5.19	14.0																																																																																													
	10.5	3.3	7.5	1140	120.9	62.7	50.2	3.66	5.01	15.6																												Operation Not Recommended																																																																	
				1270	115.7	62.6	50.7	3.51	5.24	14.4																																																																																													

NOTE: See page 23 for performance data parameters and guidelines.

ZT Models Performance Tables

Model ZT042, 3.5 Ton, COAX Part Load Performance Data

EWT	Flow	WPD		COAX Unit - Part Load Heating							COAX Unit - Part Load Cooling																																																									
		PSI	FT	Aiflow CFM	LAT (DB) °F	HC MBtuh	HE MBtuh	Power kW	COP W/W	DH MBtuh	Aiflow CFM	LAT (DB) °F	TC MBtuh	SC MBtuh	HR MBtuh	Power kW	EER Btuh/W	DH MBtuh																																																		
25	7.0	3.1	7.3	910	92.6	22.2	15.2	2.04	3.19	5.8	Operation Not Recommended																																																									
				1010	90.4	22.2	15.5	1.95	3.34	5.4																																																										
30	3.5	1.3	3.0	910	92.6	22.2	15.3	2.03	3.21	5.8										Operation Not Recommended																																																
				1010	90.4	22.3	15.6	1.95	3.35	5.4																																																										
	5.3	2.1	4.8	910	93.7	23.3	16.3	2.04	3.34	5.9																		Operation Not Recommended																																								
				1010	91.3	23.3	16.6	1.96	3.48	5.6																																																										
		7.0	3.0	6.8	910	94.1	23.7	16.7	2.05	3.39																										6.0	Operation Not Recommended																															
					1010	91.8	23.7	17.0	1.97	3.54																										5.6																																
40	3.5	1.2	2.9	910	95.6	25.2	18.2	2.06	3.58	6.2																										1090									59.4	35.9	24.3	39.8	1.15	31.1	3.5																	
				1010	93.1	25.2	18.5	1.98	3.74	5.8																										1200									60.4	36.1	25.4	40.1	1.17	30.8	3.4																	
	5.3	2.0	4.5	910	96.8	26.3	19.3	2.08	3.72	6.4																										Operation Not Recommended																																
				1010	94.2	26.4	19.6	1.99	3.88	6.0																																																										
		7.0	2.8	6.4	910	97.3	26.9	19.7	2.08	3.78																																										6.5	Operation Not Recommended															
					1010	94.6	26.9	20.1	2.00	3.94																																										6.1																
50	3.5	1.2	2.7	910	98.8	28.3	21.1	2.09	3.95	6.8																																										1090									58.4	36.5	25.5	41.0	1.32	27.6	4.0	
				1010	95.9	28.3	21.4	2.01	4.13	6.3																																										1200									59.4	36.7	26.6	41.3	1.35	27.3	3.9	
	5.3	1.8	4.2	910	100.1	29.6	22.4	2.11	4.11	7.0																																										1090									58.2	37.3	25.7	41.3	1.19	31.4	3.2	
				1010	97.1	29.6	22.7	2.02	4.29	6.5																																										1200									59.2	37.5	26.9	41.6	1.21	31.1	3.2	
		7.0	2.6	6.0	910	100.7	30.1	22.9	2.12	4.17																																										7.2									1090	58.0	37.5	25.9	41.3	1.11	33.7	2.9
					1010	97.6	30.1	23.2	2.03	4.35																																										6.7									1200	59.1	37.7	27.1	41.6	1.13	33.4	2.9
60	3.5	1.1	2.5	910	102.0	31.5	24.2	2.13	4.33	7.5	1090	58.4	35.4	25.4	40.6	1.53	23.2	5.0																																																		
				1010	98.9	31.5	24.5	2.04	4.52	7.0	1200	59.5	35.6	26.5	40.9	1.55	22.9	5.0																																																		
	5.3	1.7	4.0	910	103.5	32.9	25.6	2.14	4.50	7.8	1090	58.2	36.2	25.6	40.9	1.37	26.4	4.1																																																		
				1010	100.2	32.9	25.9	2.05	4.70	7.3	1200	59.3	36.4	26.8	41.2	1.40	26.1	4.1																																																		
		7.0	2.5	5.7	910	104.1	33.5	26.2	2.15	4.57	8.0	1090	58.1	36.4	25.8	40.8	1.28	28.3	3.8																																																	
					1010	100.8	33.6	26.5	2.06	4.77	7.4	1200	59.2	36.6	27.0	41.1	1.31	28.1	3.7																																																	
70	3.5	1.0	2.4	910	105.4	34.8	27.4	2.16	4.71	8.3	1090	59.0	33.7	24.7	39.7	1.77	19.0	6.5																																																		
				1010	101.9	34.8	27.7	2.07	4.92	7.8	1200	60.1	33.9	25.8	40.0	1.80	18.8	6.5																																																		
	5.3	1.6	3.8	910	107.0	36.4	28.9	2.18	4.89	8.7	1090	58.8	34.4	24.9	39.8	1.59	21.7	5.5																																																		
				1010	103.4	36.4	29.3	2.09	5.11	8.1	1200	59.9	34.6	26.1	40.2	1.62	21.5	5.5																																																		
		7.0	2.3	5.4	910	107.7	37.1	29.6	2.19	4.96	9.0	1090	58.7	34.6	25.1	39.7	1.49	23.3	5.1																																																	
					1010	104.0	37.1	29.9	2.10	5.18	8.4	1200	59.8	34.8	26.2	40.0	1.51	23.1	5.0																																																	
80	3.5	1.0	2.3	910	108.9	38.2	30.7	2.20	5.09	9.4	1090	59.7	31.9	23.9	38.8	2.05	15.6	8.0																																																		
				1010	105.1	38.2	31.0	2.11	5.31	8.7	1200	60.7	32.1	25.0	39.2	2.08	15.4	8.0																																																		
	5.3	1.6	3.6	910	110.7	40.0	32.4	2.22	5.29	9.9	1090	59.5	32.6	24.1	38.9	1.84	17.7	6.9																																																		
				1010	106.7	40.0	32.7	2.12	5.52	9.2	1200	60.6	32.8	25.2	39.2	1.87	17.6	6.9																																																		
		7.0	2.2	5.1	910	111.4	40.7	33.1	2.23	5.37	10.2	1090	59.4	32.8	24.3	38.6	1.72	19.1	6.4																																																	
					1010	107.4	40.8	33.5	2.13	5.60	9.5	1200	60.4	33.0	25.4	39.0	1.75	18.9	6.4																																																	
90	3.5	0.9	2.2	910	112.5	41.8	34.1	2.24	5.47	10.6	1090	60.3	30.2	23.2	38.3	2.36	12.8	9.7																																																		
				1010	108.3	41.8	34.5	2.15	5.71	9.9	1200	61.3	30.4	24.2	38.6	2.40	12.7	9.7																																																		
	5.3	1.5	3.4	910	114.4	43.7	36.0	2.25	5.68	11.2	1090	60.1	30.9	23.4	38.1	2.12	14.6	8.4																																																		
				1010	110.1	43.7	36.3	2.16	5.93	10.5	1200	61.1	31.1	24.4	38.4	2.15	14.4	8.4																																																		
		7.0	2.1	4.9	910	115.3	44.5	36.8	2.26	5.77	11.6	1090	60.0	31.1	23.5	37.8	1.98	15.7	7.9																																																	
					1010	110.9	44.6	37.2	2.17	6.02	10.9	1200	61.0	31.3	24.6	38.2	2.02	15.5	7.9																																																	
100	3.5	0.9	2.1	Operation Not Recommended							1090	60.8	28.6	22.6	37.9	2.71	10.6	11.4																																																		
											1200	61.8	28.8	23.6	38.2	2.75	10.5	11.4																																																		
	5.3	1.4	3.3								1090	60.7	29.3	22.8	37.6	2.43	12.0	10.0																																																		
											1200	61.6	29.5	23.8	37.9	2.47	11.9	10.0																																																		
		7.0	2.0								4.5	1090	60.5	29.4	22.9	37.2	2.28	12.9	9.5																																																	
												1200	61.5	29.6	24.0	37.5	2.31	12.8	9.5																																																	
110	3.5	0.9	2.1								Operation Not Recommended							1090	61.3	26.9	22.0	37.4	3.09	8.7	13.0																																											
																		1200	62.3	27.0	23.0	37.8	3.15	8.6	13.1																																											
	5.3	1.4	3.1															1090	61.2	27.5	22.2	37.0	2.78	9.9	11.6																																											
																		1200	62.1	27.7	23.2	37.3	2.83	9.8	11.6																																											
		7.0	1.9															4.4	1090	61.0	27.6	22.3	36.5	2.60	10.6	11.0																																										
																			1200	62.0	27.8	23.3	36.8	2.64	10.5	11.0																																										
120	3.5	0.9	2.0															Operation Not Recommended							1090	62.1	24.6	21.1	36.6	3.52	7.0	14.8																																				
																									1200	63.0	24.8	22.1	37.0	3.58	6.9	14.9																																				
	5.3	1.3	3.0																						1090	61.9	25.2	21.3	35.9	3.16	8.0	13.3																																				
																									1200	62.8	25.3	22.3	36.3	3.21	7.9	13.4																																				
		7.0	1.8																						4.2	1090	61.8	25.3	21.5	35.4	2.96	8.6	12.7																																			
																										1200	62.7	25.5	22.4	35.7	3.01	8.5	12.7																																			

NOTE: See page 23 for performance data parameters and guidelines.

ENGINEERING SPECIFICATIONS

ZT Models Performance Tables

Model ZT048, 4 Ton, BPHE Full Load Performance Data

EWT °F	Flow GPM	WPD		BPHE Unit - Full Load Heating							BPHE Unit - Full Load Cooling																					
		PSI	FT	Aiflow CFM	LAT (DB) °F	HC MBtuh	HE MBtuh	Power kW	COP W/W	DH MBtuh	Aiflow CFM	LAT (DB) °F	TC MBtuh	SC MBtuh	HR MBtuh	Power kW	EER Btuh/W	DH MBtuh														
25	12.0	2.3	5.4	1420	91.8	33.4	23.3	2.95	3.32	8.0	Operation Not Recommended																					
				1580	89.6	33.5	23.5	2.92	3.36	7.6																						
30	9.3	1.7	3.9	1420	92.6	34.7	24.7	2.9	3.5	7.7																						
				1580	90.4	34.8	24.9	2.9	3.5	7.2																						
	11.0	2.1	4.8	1420	93.0	35.3	25.3	2.95	3.51	8.0																						
				1580	90.8	35.5	25.5	2.93	3.55	7.5																						
	12.0	2.3	5.3	1420	93.2	35.6	25.5	2.96	3.52	8.2																						
				1580	90.9	35.7	25.7	2.94	3.56	7.8																						
40	9.3	1.6	3.8	1420	95.8	39.6	29.3	3.01	3.85	8.3								1580	62.0	47.2	30.8	54.2	2.03	23.3	4.1							
				1580	93.3	39.8	29.6	2.99	3.90	7.8								1710	62.6	48.6	32.1	55.7	2.09	23.3	4.1							
	11.0	2.0	4.6	1420	96.3	40.3	30.0	3.04	3.89	8.7								Operation Not Recommended														
				1580	93.7	40.5	30.2	3.01	3.94	8.2																						
	12.0	2.2	5.2	1420	96.5	40.7	30.2	3.05	3.90	9.0																						
				1580	93.9	40.8	30.5	3.03	3.95	8.5																						
50	9.3	1.6	3.6	1420	99.4	45.1	34.3	3.16	4.18	9.3															1580	60.8	49.5	32.8	57.1	2.24	22.1	5.7
				1580	96.5	45.2	34.6	3.13	4.23	8.8															1710	61.5	50.9	34.2	58.8	2.31	22.0	5.8
	11.0	1.9	4.4	1420	99.9	45.9	35.0	3.19	4.22	9.8	1580	60.7	49.6	32.9	57.1	2.20	22.6	4.9														
				1580	97.0	46.1	35.3	3.16	4.27	9.2	1710	61.4	51.0	34.3	58.8	2.27	22.5	4.9														
	12.0	2.2	5.0	1420	100.2	46.3	35.3	3.20	4.24	10.1	1580	60.7	49.7	32.9	57.1	2.18	22.7	4.5														
				1580	97.2	46.4	35.6	3.17	4.29	9.6	1710	61.4	51.1	34.3	58.8	2.25	22.7	4.6														
60	9.3	1.5	3.5	1420	103.1	50.8	39.4	3.34	4.46	10.7	1580	60.3	50.0	33.6	58.4	2.47	20.3	7.3														
				1580	99.9	51.0	39.7	3.31	4.51	10.1	1710	61.0	51.4	35.0	60.1	2.54	20.2	7.4														
	11.0	1.8	4.3	1420	103.7	51.7	40.2	3.37	4.50	11.2	1580	60.2	50.2	33.7	58.4	2.42	20.7	6.4														
				1580	100.4	51.9	40.5	3.34	4.55	10.6	1710	61.0	51.6	35.1	60.1	2.49	20.7	6.5														
	12.0	2.1	4.8	1420	104.0	52.1	40.6	3.38	4.52	11.6	1580	60.2	50.2	33.8	58.4	2.40	20.9	6.0														
				1580	100.7	52.3	40.9	3.36	4.57	11.0	1710	61.0	51.6	35.2	60.1	2.48	20.9	6.1														
70	9.3	1.5	3.3	1420	106.9	56.6	44.5	3.53	4.69	12.1	1580	60.4	49.2	33.5	58.5	2.71	18.1	9.1														
				1580	103.3	56.8	44.8	3.50	4.75	11.5	1710	61.1	50.6	34.9	60.1	2.80	18.1	9.2														
	11.0	1.8	4.1	1420	107.5	57.6	45.4	3.57	4.73	12.7	1580	60.3	49.3	33.6	58.4	2.66	18.5	8.0														
				1580	103.9	57.8	45.7	3.54	4.79	12.0	1710	61.1	50.7	35.0	60.1	2.74	18.5	8.1														
	12.0	2.0	4.6	1420	107.8	58.0	45.8	3.58	4.75	13.2	1580	60.3	49.4	33.6	58.4	2.64	18.7	7.5														
				1580	104.1	58.2	46.1	3.55	4.81	12.5	1710	61.0	50.8	35.0	60.1	2.72	18.7	7.6														
80	9.3	1.4	3.2	1420	110.5	62.1	49.3	3.72	4.88	13.5	1580	60.8	47.3	32.7	57.6	3.00	15.8	11.0														
				1580	106.5	62.3	49.7	3.69	4.94	12.8	1710	61.6	48.7	34.0	59.2	3.09	15.7	11.1														
	11.0	1.7	3.9	1420	111.2	63.2	50.3	3.76	4.93	14.2	1580	60.8	47.5	32.8	57.5	2.94	16.1	9.7														
				1580	107.1	63.4	50.7	3.73	4.99	13.5	1710	61.5	48.8	34.1	59.2	3.03	16.1	9.9														
	12.0	1.9	4.4	1420	111.5	63.7	50.8	3.77	4.94	14.7	1580	60.8	47.5	32.8	57.5	2.92	16.3	9.2														
				1580	107.5	63.9	51.1	3.74	5.00	13.9	1710	61.5	48.9	34.2	59.2	3.01	16.2	9.3														
90	9.3	1.3	3.1	1420	113.7	67.0	53.8	3.89	5.06	14.7	1580	61.6	44.8	31.4	56.2	3.34	13.4	13.0														
				1580	109.4	67.3	54.1	3.85	5.12	14.0	1710	62.3	46.1	32.8	57.8	3.45	13.4	13.2														
	11.0	1.6	3.8	1420	114.5	68.2	54.9	3.92	5.10	15.4	1580	61.5	44.9	31.5	56.1	3.28	13.7	11.6														
				1580	110.1	68.5	55.2	3.89	5.16	14.6	1710	62.2	46.2	32.8	57.7	3.38	13.7	11.8														
	12.0	1.8	4.2	1420	114.9	68.8	55.4	3.94	5.12	16.0	1580	61.5	45.0	31.6	56.1	3.26	13.8	11.0														
				1580	110.5	69.0	55.7	3.91	5.18	15.1	1710	62.2	46.3	32.9	57.7	3.36	13.8	11.2														
100	9.3	1.3	3.0	Operation Not Recommended							1580	62.4	41.9	30.0	54.7	3.76	11.2	15.3														
											1710	63.1	43.1	31.3	56.3	3.87	11.1	15.5														
	11.0	1.6	3.7								1580	62.4	42.0	30.1	54.6	3.69	11.4	13.7														
											1710	63.0	43.2	31.3	56.2	3.80	11.4	13.9														
	12.0	1.8	4.1								1580	62.3	42.1	30.1	54.6	3.66	11.5	13.1														
											1710	63.0	43.3	31.4	56.2	3.77	11.5	13.2														
110	9.3	1.3	2.9								1580	63.2	39.1	28.7	53.6	4.26	9.2	17.8														
											1710	63.8	40.2	29.9	55.1	4.39	9.2	18.0														
	11.0	1.5	3.6								1580	63.2	39.2	28.7	53.4	4.18	9.4	16.1														
											1710	63.8	40.3	29.9	55.0	4.31	9.4	16.3														
	12.0	1.7	4.0								1580	63.1	39.2	28.8	53.4	4.15	9.5	15.3														
											1710	63.8	40.3	30.0	54.9	4.27	9.4	15.5														
120	9.3	1.2	2.9	1580	63.8	36.5	27.7	53.1	4.86	7.5	20.7																					
				1710	64.4	37.6	28.8	54.7	5.01	7.5	21.0																					
	11.0	1.5	3.5	1580	63.8	36.6	27.7	52.9	4.77	7.7	18.8																					
				1710	64.4	37.7	28.9	54.4	4.92	7.7	19.0																					
	12.0	1.7	3.9	1580	63.7	36.7	27.8	52.8	4.73	7.7	17.9																					
				1710	64.3	37.7	28.9	54.4	4.88	7.7	18.1																					

NOTE: See page 23 for performance data parameters and guidelines.

ZT Models Performance Tables

Model ZT048, 4 Ton, BPHE Part Load Performance Data

EWT °F	Flow GPM	WPD		BPHE Unit - Part Load Heating							BPHE Unit - Part Load Cooling								
		PSI	FT	Aiflow CFM	LAT (DB) °F	HC MBtuh	HE MBtuh	Power kW	COP W/W	DH MBtuh	Aiflow CFM	LAT (DB) °F	TC MBtuh	SC MBtuh	HR MBtuh	Power kW	EER Btuh/W	DH MBtuh	
25	12.0	1.9	4.5	1120	90.5	24.8	17.3	2.19	3.31	6.1	Operation Not Recommended								
				1230	88.7	24.8	17.5	2.15	3.38	5.8									
30	9.3	1.4	3.2	1120	90.7	25.1	17.4	2.24	3.29	5.9									
				1230	88.9	25.1	17.6	2.19	3.35	5.6									
	11.0	1.7	4.0	1120	91.2	25.7	18.1	2.23	3.37	5.9									
				1230	89.3	25.7	18.2	2.19	3.44	5.7									
	12.0	1.9	4.5	1120	91.6	26.2	18.6	2.22	3.46	6.1									
				1230	89.7	26.2	18.8	2.18	3.53	5.8									
40	9.3	1.3	3.1	1120	93.6	28.5	20.9	2.24	3.73	6.1									
				1230	91.5	28.6	21.1	2.20	3.80	5.9									
	11.0	1.6	3.8	1120	94.2	29.2	21.6	2.24	3.83	6.3									
				1230	92.0	29.3	21.8	2.20	3.90	6.0									
	12.0	1.9	4.3	1120	94.7	29.8	22.2	2.23	3.93	6.5									
				1230	92.5	29.9	22.4	2.19	4.00	6.1									
50	9.3	1.3	3.0	1120	97.1	32.8	25.1	2.26	4.26	6.8									
				1230	94.7	32.9	25.3	2.22	4.34	6.4									
	11.0	1.6	3.7	1120	97.8	33.6	25.9	2.25	4.37	6.9									
				1230	95.3	33.6	26.1	2.21	4.46	6.6									
	12.0	1.8	4.1	1120	98.3	34.3	26.6	2.24	4.48	7.2									
				1230	95.8	34.3	26.8	2.20	4.57	6.8									
60	9.3	1.2	2.9	1120	101.0	37.5	29.6	2.32	4.74	7.6									
				1230	98.3	37.5	29.8	2.28	4.83	7.2									
	11.0	1.5	3.5	1120	101.7	38.4	30.5	2.31	4.86	7.9									
				1230	98.9	38.4	30.7	2.27	4.96	7.5									
	12.0	1.7	4.0	1120	102.4	39.1	31.3	2.30	4.98	8.2									
				1230	99.5	39.2	31.5	2.26	5.08	7.8									
70	9.3	1.2	2.8	1120	104.9	42.2	33.9	2.43	5.10	8.6									
				1230	101.8	42.3	34.1	2.38	5.20	8.2									
	11.0	1.5	3.4	1120	105.7	43.2	34.9	2.42	5.23	9.0									
				1230	102.6	43.3	35.2	2.38	5.34	8.5									
	12.0	1.7	3.9	1120	106.4	44.1	35.9	2.41	5.37	9.3									
				1230	103.2	44.2	36.1	2.36	5.47	8.9									
80	9.3	1.2	2.7	1120	108.6	46.6	38.0	2.54	5.37	9.7									
				1230	105.2	46.7	38.2	2.50	5.48	9.2									
	11.0	1.4	3.3	1120	109.5	47.7	39.1	2.54	5.52	10.1									
				1230	106.0	47.8	39.3	2.49	5.63	9.7									
	12.0	1.6	3.8	1120	110.3	48.7	40.1	2.52	5.66	10.6									
				1230	106.7	48.8	40.3	2.48	5.77	10.1									
90	9.3	1.1	2.6	1120	111.7	50.4	41.6	2.59	5.70	10.7									
				1230	108.0	50.5	41.8	2.55	5.81	10.2									
	11.0	1.4	3.3	1120	112.6	51.6	42.8	2.58	5.85	11.2									
				1230	108.9	51.7	43.0	2.54	5.97	10.7									
	12.0	1.6	3.7	1120	113.5	52.7	43.9	2.57	6.00	11.7									
				1230	109.7	52.7	44.1	2.53	6.12	11.1									
100	9.3	1.1	2.6	1390	62.7	32.9	26.0	41.7	2.58	12.7	12.6								
				1510	63.3	33.8	27.2	42.9	2.65	12.8	12.8								
	11.0	1.4	3.3	1390	62.6	33.1	26.1	41.9	2.59	12.8	11.2								
				1510	63.3	34.1	27.3	43.1	2.66	12.8	11.3								
	12.0	1.6	3.7	1390	62.5	33.5	26.2	42.4	2.63	12.7	10.3								
				1510	63.2	34.4	27.4	43.7	2.70	12.7	10.4								
110	9.3	1.1	2.5	1390	63.4	30.1	24.9	40.2	2.96	10.1	14.6								
				1510	64.0	30.9	26.0	41.3	3.05	10.2	14.8								
	11.0	1.4	3.2	1390	63.4	30.3	25.0	40.4	2.97	10.2	13.1								
				1510	64.0	31.2	26.2	41.6	3.05	10.2	13.2								
	12.0	1.6	3.6	1390	63.3	30.6	25.1	40.9	3.02	10.1	12.1								
				1510	63.9	31.5	26.3	42.1	3.10	10.2	12.2								
120	9.3	1.1	2.5	1390	64.4	26.7	23.5	38.3	3.39	7.9	16.6								
				1510	64.9	27.5	24.6	39.4	3.48	7.9	16.9								
	11.0	1.3	3.1	1390	64.3	26.9	23.6	38.5	3.40	7.9	15.0								
				1510	64.9	27.7	24.7	39.6	3.49	7.9	15.2								
	12.0	1.5	3.5	1390	64.2	27.2	23.7	39.0	3.45	7.9	14.0								
				1510	64.8	28.0	24.8	40.1	3.55	7.9	14.2								

NOTE: See page 23 for performance data parameters and guidelines.

ENGINEERING SPECIFICATIONS

ZT Models Performance Tables

Model ZT048, 4 Ton, COAX Full Load Performance Data

EWT °F	Flow GPM	WPD		COAX Unit - Full Load Heating							COAX Unit - Full Load Cooling																		
		PSI	FT	Aiflow CFM	LAT (DB) °F	HC MBtuh	HE MBtuh	Power kW	COP W/W	DH MBtuh	Aiflow CFM	LAT (DB) °F	TC MBtuh	SC MBtuh	HR MBtuh	Power kW	EER Btuh/W	DH MBtuh											
25	12.0	7.0	16.2	1420	93.4	36.0	25.5	3.06	3.45	8.3	Operation Not Recommended	1580	91.2	36.2	26.0	3.01	3.53	7.9	1580	59.6	53.6	34.7	61.2	2.23	24.0	6.2			
				1580	91.2	36.2	26.0	3.01	3.53	7.9																	1710	60.7	54.0
30	6.0	2.5	5.7	1420	93.5	36.1	25.8	3.0	3.5	8.3		Operation Not Recommended	1580	91.3	36.4	26.2	3.0	3.6	7.8	1580	59.6	53.6	34.7	61.2	2.23	24.0	6.2		
				1580	91.3	36.4	26.2	3.0	3.6	7.8																		1710	60.7
	9.0	4.3	9.9	1420	94.5	37.6	27.2	3.05	3.61	8.4			Operation Not Recommended	1580	94.5	37.6	27.2	3.05	3.61	8.4	1580	59.6	53.6	34.7	61.2	2.23	24.0	6.2	
				1580	94.5	37.6	27.2	3.05	3.61	8.4																			1710
	12.0	6.5	15.0	1420	95.1	38.5	28.0	3.08	3.67	8.6				Operation Not Recommended	1580	95.1	38.5	28.0	3.08	3.67	8.6	1580	59.6	53.6	34.7	61.2	2.23	24.0	6.2
				1580	95.1	38.5	28.0	3.08	3.67	8.6																			
40	6.0	2.3	5.3	1420	96.7	40.9	30.3	3.09	3.88	8.9		Operation Not Recommended			1580	96.7	40.9	30.3	3.09	3.88	8.9	1580	59.6	53.6	34.7	61.2	2.23	24.0	6.2
				1580	96.7	40.9	30.3	3.09	3.88	8.9																			
	9.0	4.0	9.2	1420	97.7	42.5	31.9	3.12	4.00	9.1			Operation Not Recommended		1580	97.7	42.5	31.9	3.12	4.00	9.1	1580	59.6	53.6	34.7	61.2	2.23	24.0	6.2
				1580	97.7	42.5	31.9	3.12	4.00	9.1																			
	12.0	6.0	13.9	1420	98.5	43.6	32.9	3.14	4.07	9.3				Operation Not Recommended	1580	98.5	43.6	32.9	3.14	4.07	9.3	1580	59.6	53.6	34.7	61.2	2.23	24.0	6.2
				1580	98.5	43.6	32.9	3.14	4.07	9.3																			
50	6.0	2.1	4.9	1420	99.8	45.6	34.8	3.19	4.20	9.6		Operation Not Recommended			1580	99.8	45.6	34.8	3.19	4.20	9.6	1580	59.6	53.6	34.7	61.2	2.23	24.0	6.2
				1580	99.8	45.6	34.8	3.19	4.20	9.6																			
	9.0	3.7	8.5	1420	101.0	47.5	36.5	3.21	4.33	10.0			Operation Not Recommended		1580	101.0	47.5	36.5	3.21	4.33	10.0	1580	59.6	53.6	34.7	61.2	2.23	24.0	6.2
				1580	101.0	47.5	36.5	3.21	4.33	10.0																			
	12.0	5.6	13.0	1420	101.8	48.7	37.6	3.24	4.41	10.2	Operation Not Recommended			1580	101.8	48.7	37.6	3.24	4.41	10.2	1580	59.6	53.6	34.7	61.2	2.23	24.0	6.2	
				1580	101.8	48.7	37.6	3.24	4.41	10.2																			1710
60	6.0	2.0	4.6	1420	102.9	50.4	39.1	3.30	4.47	10.6		Operation Not Recommended		1580	102.9	50.4	39.1	3.30	4.47	10.6	1580	59.6	53.6	34.7	61.2	2.23	24.0	6.2	
				1580	102.9	50.4	39.1	3.30	4.47	10.6																			1710
	9.0	3.5	8.0	1420	104.2	52.4	41.1	3.33	4.62	11.0			Operation Not Recommended	1580	104.2	52.4	41.1	3.33	4.62	11.0	1580	59.6	53.6	34.7	61.2	2.23	24.0	6.2	
				1580	104.2	52.4	41.1	3.33	4.62	11.0																			1710
	12.0	5.3	12.2	1420	105.1	53.8	42.3	3.36	4.69	11.3	Operation Not Recommended			1580	105.1	53.8	42.3	3.36	4.69	11.3	1580	59.6	53.6	34.7	61.2	2.23	24.0	6.2	
				1580	105.1	53.8	42.3	3.36	4.69	11.3																			1710
70	6.0	1.9	4.4	1420	106.0	55.2	43.5	3.44	4.71	11.8		Operation Not Recommended		1580	106.0	55.2	43.5	3.44	4.71	11.8	1580	59.6	53.6	34.7	61.2	2.23	24.0	6.2	
				1580	106.0	55.2	43.5	3.44	4.71	11.8																			1710
	9.0	3.3	7.6	1420	107.5	57.5	45.6	3.47	4.86	12.3			Operation Not Recommended	1580	107.5	57.5	45.6	3.47	4.86	12.3	1580	59.6	53.6	34.7	61.2	2.23	24.0	6.2	
				1580	107.5	57.5	45.6	3.47	4.86	12.3																			1710
	12.0	5.0	11.5	1420	108.4	58.9	47.0	3.50	4.94	12.6	Operation Not Recommended			1580	108.4	58.9	47.0	3.50	4.94	12.6	1580	59.6	53.6	34.7	61.2	2.23	24.0	6.2	
				1580	108.4	58.9	47.0	3.50	4.94	12.6																			1710
80	6.0	1.8	4.1	1420	109.2	60.2	47.9	3.58	4.92	13.0		Operation Not Recommended		1580	109.2	60.2	47.9	3.58	4.92	13.0	1580	59.6	53.6	34.7	61.2	2.23	24.0	6.2	
				1580	109.2	60.2	47.9	3.58	4.92	13.0																			1710
	9.0	3.1	7.2	1420	110.8	62.6	50.3	3.61	5.08	13.6			Operation Not Recommended	1580	110.8	62.6	50.3	3.61	5.08	13.6	1580	59.6	53.6	34.7	61.2	2.23	24.0	6.2	
				1580	110.8	62.6	50.3	3.61	5.08	13.6																			1710
	12.0	4.7	10.9	1420	111.9	64.2	51.8	3.64	5.16	14.0	Operation Not Recommended			1580	111.9	64.2	51.8	3.64	5.16	14.0	1580	59.6	53.6	34.7	61.2	2.23	24.0	6.2	
				1580	111.9	64.2	51.8	3.64	5.16	14.0																			1710
90	6.0	1.7	3.9	1420	112.5	65.2	52.5	3.73	5.12	14.3		Operation Not Recommended		1580	112.5	65.2	52.5	3.73	5.12	14.3	1580	59.6	53.6	34.7	61.2	2.23	24.0	6.2	
				1580	112.5	65.2	52.5	3.73	5.12	14.3																			1710
	9.0	3.0	6.8	1420	114.3	67.9	55.0	3.76	5.29	14.9			Operation Not Recommended	1580	114.3	67.9	55.0	3.76	5.29	14.9	1580	59.6	53.6	34.7	61.2	2.23	24.0	6.2	
				1580	114.3	67.9	55.0	3.76	5.29	14.9																			1710
	12.0	4.5	10.3	1420	115.4	69.6	56.7	3.79	5.38	15.3	Operation Not Recommended			1580	115.4	69.6	56.7	3.79	5.38	15.3	1580	59.6	53.6	34.7	61.2	2.23	24.0	6.2	
				1580	115.4	69.6	56.7	3.79	5.38	15.3																			1710
100	6.0	1.6	3.7	1420	116.1	70.2	57.4	3.74	5.50	14.5		Operation Not Recommended		1580	116.1	70.2	57.4	3.74	5.50	14.5	1580	59.6	53.6	34.7	61.2	2.23	24.0	6.2	
				1580	116.1	70.2	57.4	3.74	5.50	14.5																			1710
	9.0	2.8	6.4	1420	117.1	71.1	58.3	3.78	5.57	14.8			Operation Not Recommended	1580	117.1	71.1	58.3	3.78	5.57	14.8	1580	59.6	53.6	34.7	61.2	2.23	24.0	6.2	
				1580	117.1	71.1	58.3	3.78	5.57	14.8																			1710
	12.0	4.2	9.7	1420	118.1	72.0	59.2	3.82	5.64	15.1	Operation Not Recommended			1580	118.1	72.0	59.2	3.82	5.64	15.1	1580	59.6	53.6	34.7	61.2	2.23	24.0	6.2	
				1580	118.1	72.0	59.2	3.82	5.64	15.1																			1710
110	6.0	1.6	3.6	1420	119.1	72.9	60.1	3.86	5.71	15.4		Operation Not Recommended		1580	119.1	72.9	60.1	3.86	5.71	15.4	1580	59.6	53.6	34.7	61.2	2.23	24.0	6.2	
				1580	119.1	72.9	60.1	3.86	5.71	15.4																			1710
	9.0	2.7	6.2	1420	120.1	73.8	61.0	3.90	5.78	15.7			Operation Not Recommended	1580	120.1	73.8	61.0	3.90	5.78	15.7	1580	59.6	53.6	34.7					

ZT Models Performance Tables

Model ZT048, 4 Ton, COAX Part Load Performance Data

EWT °F	Flow GPM	WPD		COAX Unit - Part Load Heating							COAX Unit - Part Load Cooling														
		PSI	FT	Aiflow CFM	LAT (DB) °F	HC MBtuh	HE MBtuh	Power kW	COP W/W	DH MBtuh	Aiflow CFM	LAT (DB) °F	TC MBtuh	SC MBtuh	HR MBtuh	Power kW	EER Btuh/W	DH MBtuh							
25	8.0	3.8	8.8	1120	89.7	23.8	16.2	2.25	3.11	6.3	Operation Not Recommended														
				1230	88.3	24.3	16.8	2.21	3.22	6.0															
30	4.0	1.4	3.3	1120	88.7	22.6	15.1	2.19	3.03	6.1															
				1230	87.4	23.1	15.7	2.16	3.13	5.8															
	6.0	2.4	5.5	1120	89.9	24.1	16.6	2.22	3.19	6.2															
				1230	88.5	24.6	17.1	2.19	3.30	5.9															
	8.0	3.6	8.2	1120	91.2	25.6	17.9	2.25	3.34	6.3															
				1230	89.7	26.1	18.5	2.21	3.46	6.0															
40	4.0	1.3	3.1	1120	91.7	26.2	18.7	2.20	3.49	6.3								1390	60.8	41.8	28.9	46.5	1.37	30.5	3.6
				1230	90.1	26.7	19.3	2.17	3.61	6.0								1510	61.7	42.1	29.9	46.9	1.41	29.8	3.6
	6.0	2.2	5.1	1120	93.1	28.0	20.4	2.23	3.68	6.4								Operation Not Recommended							
				1230	91.5	28.5	21.0	2.20	3.80	6.1															
	8.0	3.3	7.6	1120	94.5	29.7	22.0	2.26	3.85	6.6															
				1230	92.8	30.3	22.7	2.23	3.98	6.3															
50	4.0	1.3	2.9	1120	95.0	30.2	22.6	2.23	3.98	6.9	1390	60.0	42.0	30.0	47.3	1.56	27.0								4.3
				1230	93.2	30.8	23.3	2.19	4.12	6.5	1510	60.9	42.3	31.1	47.7	1.60	26.4								4.4
	6.0	2.1	4.8	1120	96.7	32.2	24.5	2.25	4.19	7.1	1390	59.8	42.8	30.4	47.6	1.41	30.5	3.6							
				1230	94.8	32.9	25.3	2.22	4.34	6.8	1510	60.7	43.1	31.4	48.0	1.45	29.8	3.6							
	8.0	3.1	7.1	1120	98.3	34.2	26.4	2.29	4.39	7.3	1390	59.6	42.9	30.6	47.5	1.35	31.9	3.1							
				1230	96.3	34.9	27.2	2.25	4.54	6.9	1510	60.6	43.1	31.6	47.9	1.38	31.2	3.1							
60	4.0	1.2	2.7	1120	98.4	34.3	26.6	2.26	4.46	7.8	1390	60.2	40.5	29.8	46.6	1.79	22.7	5.7							
				1230	96.4	35.0	27.4	2.23	4.61	7.4	1510	61.1	40.7	30.8	47.0	1.84	22.2	5.7							
	6.0	1.9	4.5	1120	100.3	36.6	28.8	2.29	4.70	8.0	1390	59.9	41.3	30.1	46.8	1.61	25.6	4.8							
				1230	98.1	37.4	29.7	2.25	4.86	7.7	1510	60.9	41.5	31.2	47.2	1.66	25.1	4.8							
	8.0	2.9	6.7	1120	102.1	38.9	31.0	2.32	4.92	8.3	1390	59.8	41.3	30.3	46.6	1.54	26.8	4.2							
				1230	99.9	39.7	31.9	2.29	5.09	7.9	1510	60.8	41.6	31.4	47.0	1.59	26.2	4.2							
70	4.0	1.1	2.6	1120	101.6	38.3	30.5	2.29	4.90	8.8	1390	60.6	38.4	29.1	45.4	2.05	18.7	7.3							
				1230	99.4	39.0	31.3	2.26	5.07	8.4	1510	61.6	38.6	30.1	45.8	2.11	18.3	7.3							
	6.0	1.8	4.2	1120	103.8	40.8	32.9	2.32	5.16	9.2	1390	60.4	39.1	29.4	45.4	1.85	21.1	6.2							
				1230	101.4	41.7	33.9	2.29	5.34	8.8	1510	61.3	39.3	30.4	45.8	1.90	20.7	6.3							
	8.0	2.7	6.3	1120	105.8	43.3	35.3	2.35	5.40	9.5	1390	60.3	39.2	29.6	45.2	1.77	22.1	5.6							
				1230	103.3	44.2	36.3	2.32	5.59	9.1	1510	61.2	39.4	30.6	45.6	1.82	21.6	5.6							
80	4.0	1.1	2.4	1120	104.5	41.7	33.8	2.32	5.28	9.9	1390	61.1	36.2	28.3	44.3	2.36	15.3	9.0							
				1230	102.0	42.5	34.8	2.28	5.46	9.4	1510	62.0	36.5	29.3	44.7	2.43	15.0	9.0							
	6.0	1.7	4.0	1120	106.8	44.5	36.5	2.35	5.56	10.4	1390	60.9	36.9	28.7	44.2	2.13	17.3	7.8							
				1230	104.2	45.4	37.5	2.31	5.75	9.9	1510	61.8	37.2	29.7	44.6	2.19	17.0	7.9							
	8.0	2.6	6.0	1120	109.0	47.2	39.1	2.38	5.82	10.7	1390	60.8	37.0	28.8	43.9	2.04	18.1	7.1							
				1230	106.3	48.2	40.2	2.35	6.02	10.3	1510	61.7	37.2	29.8	44.4	2.10	17.7	7.1							
90	4.0	1.0	2.3	1120	106.7	44.3	36.4	2.33	5.57	10.7	1390	61.5	34.3	27.7	43.6	2.72	12.6	10.7							
				1230	104.1	45.2	37.4	2.30	5.77	10.3	1510	62.4	34.5	28.7	44.1	2.79	12.4	10.8							
	6.0	1.6	3.8	1120	109.1	47.3	39.3	2.36	5.87	11.4	1390	61.3	35.0	28.0	43.4	2.45	14.3	9.5							
				1230	106.3	48.3	40.3	2.33	6.07	10.8	1510	62.2	35.2	29.0	43.8	2.52	14.0	9.5							
	8.0	2.5	5.7	1120	111.5	50.2	42.0	2.40	6.14	11.8	1390	61.2	35.0	28.2	43.1	2.35	14.9	8.7							
				1230	108.6	51.2	43.2	2.36	6.36	11.3	1510	62.1	35.3	29.2	43.5	2.41	14.6	8.8							
100	4.0	1.0	2.3	Operation Not Recommended							1390	62.0	32.6	27.0	43.2	3.11	10.5	12.6							
											1510	62.8	32.8	28.0	43.7	3.20	10.2	12.7							
	6.0	1.5	3.6								1390	61.8	33.2	27.4	42.8	2.81	11.8	11.2							
											1510	62.6	33.4	28.3	43.2	2.89	11.6	11.3							
	8.0	2.3	5.4								1390	61.7	33.2	27.5	42.4	2.69	12.4	10.4							
											1510	62.5	33.4	28.5	42.9	2.76	12.1	10.4							
110	4.0	0.9	2.2								1390	62.5	30.6	26.2	42.7	3.55	8.6	14.5							
											1510	63.4	30.7	27.1	43.2	3.65	8.4	14.6							
	6.0	1.5	3.5								1390	62.3	31.2	26.5	42.1	3.20	9.7	13.0							
											1510	63.2	31.3	27.4	42.6	3.30	9.5	13.1							
	8.0	2.2	5.2								1390	62.2	31.2	26.7	41.7	3.07	10.2	12.1							
											1510	63.1	31.4	27.6	42.1	3.16	9.9	12.2							
120	4.0	0.9	2.1	1390	63.3	27.8	25.1	41.6	4.04	6.9	16.4														
				1510	64.0	28.0	26.0	42.2	4.15	6.7	16.5														
	6.0	1.5	3.4	1390	63.1	28.4	25.4	40.8	3.64	7.8	14.8														
				1510	63.9	28.5	26.3	41.3	3.75	7.6	15.0														
	8.0	2.2	5.1	1390	63.0	28.4	25.6	40.3	3.49	8.1	13.9														
				1510	63.8	28.6	26.5	40.8	3.59	8.0	14.0														

NOTE: See page 23 for performance data parameters and guidelines.

ENGINEERING SPECIFICATIONS

ZT Models Performance Tables

Model ZT060, 5 Ton, BPHE Full Load Performance Data

EWT °F	Flow GPM	WPD		BPHE Unit - Full Load Heating							BPHE Unit - Full Load Cooling																																																																
		PSI	FT	Aiflow CFM	LAT (DB) °F	HC MBtuh	HE MBtuh	Power kW	COP W/W	DH MBtuh	Aiflow CFM	LAT (DB) °F	TC MBtuh	SC MBtuh	HR MBtuh	Power kW	EER Btuh/W	DH MBtuh																																																									
25	15.0	2.7	6.2	1870	93.4	47.2	34.1	3.86	3.59	9.8	Operation Not Recommended																																																																
				2000	92.0	47.4	34.4	3.83	3.63	9.5																																																																	
30	11.7	1.7	4.0	1870	93.8	48.0	34.9	3.8	3.7	9.2										Operation Not Recommended																																																							
				2000	92.3	48.2	35.2	3.8	3.7	8.9																																																																	
	13.0	2.1	4.8	1870	94.2	48.8	35.6	3.87	3.70	9.7																			Operation Not Recommended																																														
				2000	92.7	49.0	35.9	3.84	3.75	9.4																																																																	
		15.0	2.6	6.0	1870	94.6	49.8	36.5	3.90	3.75																												10.1	Operation Not Recommended																																				
					2000	93.1	50.0	36.8	3.87	3.79																												9.7																																					
40	11.7	1.7	3.9	1870	96.7	54.0	40.4	3.98	3.98	10.0																												1730										58.9	59.9	39.3	68.4	2.49	24.1	5.1																					
				2000	95.1	54.2	40.7	3.94	4.03	9.7																												1900										60.1	60.8	40.9	69.6	2.55	23.8	5.2																					
	13.0	2.0	4.6	1870	97.2	54.9	41.2	4.00	4.02	10.6																												Operation Not Recommended																																					
				2000	95.5	55.1	41.6	3.97	4.07	10.2																																																																	
		15.0	2.5	5.9	1870	97.7	56.0	42.2	4.03	4.07																																														11.0	Operation Not Recommended																		
					2000	96.0	56.2	42.6	4.00	4.12																																														10.6																			
50	11.7	1.7	3.8	1870	100.2	61.0	46.7	4.17	4.28	11.2																																														1730										57.9	62.2	41.2	71.6	2.75	22.6	6.8			
				2000	98.4	61.2	47.1	4.14	4.34	10.8																																														1900										59.1	63.2	42.8	72.8	2.82	22.4	6.9			
	13.0	2.0	4.5	1870	100.7	62.0	47.7	4.20	4.33	11.9																																														1730										57.9	62.2	41.2	71.5	2.72	22.9	5.9			
				2000	98.8	62.3	48.1	4.17	4.38	11.5																																														1900										59.1	63.2	42.8	72.8	2.79	22.7	6.0			
		15.0	2.5	5.7	1870	101.3	63.3	48.8	4.23	4.38																																														12.4										1730	57.9	62.3	41.2	71.4	2.68	23.2	5.6		
					2000	99.4	63.5	49.2	4.20	4.44																																														12.0										1900	59.1	63.3	42.9	72.7	2.75	23.0	5.6		
60	11.7	1.6	3.8	1870	104.0	68.6	53.5	4.41	4.56	12.7	1730	57.7	62.6	41.6	72.9	3.01	20.8	8.6																																																									
				2000	101.9	68.9	54.0	4.38	4.61	12.3	1900	58.9	63.6	43.3	74.2	3.10	20.5	8.7																																																									
	13.0	1.9	4.5	1870	104.5	69.8	54.6	4.44	4.60	13.5	1730	57.7	62.6	41.6	72.8	2.98	21.0	7.6																																																									
				2000	102.4	70.1	55.0	4.41	4.66	13.1	1900	58.9	63.6	43.3	74.1	3.06	20.8	7.7																																																									
		15.0	2.4	5.6	1870	105.2	71.2	55.9	4.47	4.66	14.1	1730	57.7	62.7	41.7	72.7	2.94	21.3	7.1																																																								
					2000	103.1	71.5	56.3	4.44	4.72	13.6	1900	58.9	63.7	43.3	74.0	3.02	21.1	7.2																																																								
70	11.7	1.6	3.7	1870	107.8	76.4	60.4	4.68	4.79	14.3	1730	58.0	61.5	41.1	72.8	3.30	18.6	10.6																																																									
				2000	105.5	76.7	60.9	4.64	4.85	13.9	1900	59.2	62.5	42.7	74.0	3.39	18.4	10.7																																																									
	13.0	1.9	4.4	1870	108.5	77.7	61.6	4.70	4.84	15.3	1730	58.0	61.5	41.1	72.7	3.26	18.8	9.4																																																									
				2000	106.1	78.0	62.1	4.67	4.90	14.8	1900	59.2	62.5	42.7	73.9	3.35	18.6	9.5																																																									
		15.0	2.4	5.5	1870	109.2	79.2	63.1	4.74	4.90	15.8	1730	58.0	61.6	41.1	72.6	3.22	19.1	8.9																																																								
					2000	106.8	79.6	63.5	4.70	4.96	15.3	1900	59.2	62.6	42.7	73.8	3.31	18.9	8.9																																																								
80	11.7	1.6	3.7	1870	111.5	83.9	67.0	4.94	4.98	15.9	1730	58.5	59.3	40.1	71.7	3.64	16.3	12.7																																																									
				2000	109.0	84.2	67.5	4.90	5.04	15.3	1900	59.7	60.3	41.7	73.0	3.74	16.1	12.8																																																									
	13.0	1.9	4.3	1870	112.2	85.3	68.3	4.97	5.03	16.9	1730	58.5	59.3	40.1	71.6	3.60	16.5	11.3																																																									
				2000	109.7	85.7	68.8	4.93	5.09	16.3	1900	59.7	60.3	41.7	72.9	3.69	16.3	11.4																																																									
		15.0	2.4	5.5	1870	113.1	87.0	69.9	5.01	5.09	17.5	1730	58.5	59.4	40.2	71.5	3.55	16.7	10.7																																																								
					2000	110.5	87.4	70.4	4.97	5.15	17.0	1900	59.7	60.3	41.7	72.8	3.65	16.5	10.8																																																								
90	11.7	1.6	3.6	1870	114.9	90.6	72.9	5.19	5.12	17.1	1730	59.1	56.5	39.0	70.3	4.05	14.0	15.0																																																									
				2000	112.1	91.0	73.5	5.15	5.19	16.6	1900	60.2	57.4	40.6	71.6	4.16	13.8	15.2																																																									
	13.0	1.9	4.3	1870	115.6	92.2	74.4	5.22	5.18	18.2	1730	59.1	56.5	39.1	70.2	4.00	14.1	13.4																																																									
				2000	112.9	92.6	74.9	5.18	5.24	17.6	1900	60.2	57.4	40.6	71.4	4.11	14.0	13.5																																																									
		15.0	2.3	5.4	1870	116.6	94.0	76.1	5.26	5.24	18.9	1730	59.1	56.6	39.1	70.0	3.95	14.3	12.8																																																								
					2000	113.7	94.5	76.7	5.22	5.31	18.3	1900	60.2	57.5	40.6	71.3	4.05	14.2	12.9																																																								
100	11.7	1.5	3.5	Operation Not Recommended							1730	59.6	53.5	38.1	69.0	4.54	11.8	17.5																																																									
											1900	60.7	54.4	39.6	70.3	4.66	11.7	17.7																																																									
	13.0	1.8	4.2								1730	59.6	53.5	38.1	68.8	4.49	11.9	15.8	Operation Not Recommended																																																								
											1900	60.7	54.4	39.6	70.1	4.61	11.8	15.9																																																									
		15.0	2.3								5.3	1730	59.6	53.6	38.1	68.7	4.43	12.1								15.0	Operation Not Recommended																																																
												1900	60.7	54.4	39.6	70.0	4.55	12.0								15.2																																																	
110	11.7	1.5	3.5								Operation Not Recommended							1730								60.0								50.7	37.4	68.3	5.15	9.9	20.3																																				
																		1900								61.1								51.6	38.9	69.6	5.29	9.8	20.5																																				
	13.0	1.8	4.2															1730								60.0								50.8	37.4	68.1	5.09	10.0	18.4	Operation Not Recommended																																			
																		1900								61.1								51.6	38.9	69.4	5.22	9.9	18.5																																				
		15.0	2.3															5.3								1730								60.0	50.8	37.4	67.9	5.02	10.1								17.5	Operation Not Recommended																											
																										1900								61.1	51.6	38.9	69.2	5.16	10.0								17.7																												
120	11.7	1.5	3.5															Operation Not Recommended																					1730								60.3								48.7	36.8	68.8	5.89	8.3	23.3															
																																							1900								61.4								49.5	38.2	70.1	6.05	8.2	23.5															
	13.0	1.8	4.2																																				1730								60.3								48.7	36.8	68.6	5.82	8.4	21.2	Operation Not Recommended														
																																							1900								61.4								49.5	38.2	69.9	5.98	8.3	21.4															
		15.0	2.3																																				5.3								1730								60.3	48.7	36.8	68.3	5.75	8.5								20.3	Operation Not Recommended						
																																															1900								61.4	49.5	38.2	69.7	5.90	8.4								20.5							

NOTE: See page 23 for performance data parameters and guidelines.

ZT Models Performance Tables

Model ZT060, 5 Ton, BPHE Part Load Performance Data

EWT °F	Flow GPM	WPD		BPHE Unit - Part Load Heating							BPHE Unit - Part Load Cooling														
		PSI	FT	Aiflow CFM	LAT (DB) °F	HC MBtuh	HE MBtuh	Power kW	COP W/W	DH MBtuh	Aiflow CFM	LAT (DB) °F	TC MBtuh	SC MBtuh	HR MBtuh	Power kW	EER Btuh/W	DH MBtuh							
25	15.0	2.5	5.8	1470	90.2	32.1	22.3	2.87	3.27	7.5	Operation Not Recommended														
				1560	89.1	32.2	22.5	2.85	3.32	7.3															
30	11.7	1.7	3.8	1470	90.8	33.1	23.5	2.81	3.45	7.2															
				1560	89.7	33.2	23.7	2.79	3.50	7.0															
	13.0	2.0	4.5	1470	91.0	33.3	23.7	2.83	3.45	7.2															
				1560	89.8	33.4	23.9	2.80	3.50	7.0															
	15.0	2.5	5.7	1470	91.2	33.7	23.9	2.88	3.43	7.4															
				1560	90.1	33.8	24.1	2.85	3.48	7.2															
40	11.7	1.6	3.8	1470	93.7	37.6	28.0	2.82	3.90	7.4								1390	58.5	50.0	32.3	54.5	1.32	37.8	3.2
				1560	92.4	37.8	28.2	2.80	3.95	7.1								1500	59.4	50.6	33.4	55.2	1.34	37.8	3.2
	13.0	1.9	4.4	1470	93.9	37.9	28.2	2.84	3.91	7.5								Operation Not Recommended							
				1560	92.6	38.0	28.4	2.82	3.96	7.2															
	15.0	2.4	5.6	1470	94.1	38.3	28.5	2.89	3.88	7.7															
				1560	92.8	38.5	28.7	2.87	3.93	7.5															
50	11.7	1.6	3.7	1470	97.4	43.4	33.7	2.85	4.47	8.0	1390	57.8	50.7	33.3	55.9	1.52	33.4								4.7
				1560	95.9	43.6	34.0	2.82	4.53	7.7	1500	58.7	51.4	34.5	56.6	1.54	33.5								4.7
	13.0	1.9	4.4	1470	97.5	43.7	33.9	2.86	4.48	8.2	1390	57.8	50.7	33.4	55.8	1.49	34.0	3.8							
				1560	96.1	43.9	34.2	2.84	4.53	7.9	1500	58.7	51.4	34.5	56.5	1.51	34.0	3.8							
	15.0	2.4	5.5	1470	97.9	44.2	34.3	2.91	4.45	8.5	1390	57.7	50.7	33.4	55.8	1.48	34.3	3.2							
				1560	96.4	44.4	34.6	2.89	4.50	8.2	1500	58.7	51.4	34.6	56.5	1.50	34.3	3.2							
60	11.7	1.6	3.7	1470	101.4	49.8	40.0	2.87	5.08	8.9	1390	58.0	49.6	33.1	55.5	1.74	28.4	6.4							
				1560	99.7	50.0	40.3	2.85	5.14	8.6	1500	58.9	50.2	34.2	56.3	1.77	28.5	6.4							
	13.0	1.9	4.3	1470	101.6	50.1	40.3	2.89	5.08	9.2	1390	58.0	49.6	33.1	55.4	1.72	28.9	5.4							
				1560	99.9	50.3	40.5	2.86	5.15	8.9	1500	58.9	50.2	34.2	56.2	1.74	29.0	5.4							
	15.0	2.4	5.5	1470	101.9	50.7	40.7	2.94	5.05	9.6	1390	57.9	49.6	33.1	55.4	1.70	29.1	4.7							
				1560	100.2	50.9	41.0	2.92	5.12	9.3	1500	58.8	50.3	34.3	56.2	1.72	29.2	4.7							
70	11.7	1.6	3.7	1470	105.3	56.0	46.1	2.91	5.65	9.9	1390	58.4	48.0	32.4	54.9	2.01	23.9	8.3							
				1560	103.4	56.3	46.4	2.88	5.72	9.6	1500	59.3	48.7	33.5	55.6	2.03	24.0	8.3							
	13.0	1.9	4.3	1470	105.5	56.4	46.4	2.92	5.66	10.4	1390	58.4	48.0	32.4	54.8	1.97	24.3	7.1							
				1560	103.6	56.6	46.7	2.90	5.73	10.0	1500	59.3	48.7	33.6	55.5	2.00	24.4	7.1							
	15.0	2.4	5.5	1470	105.9	57.1	46.9	2.98	5.62	10.8	1390	58.4	48.1	32.5	54.7	1.96	24.5	6.2							
				1560	104.0	57.3	47.2	2.95	5.69	10.5	1500	59.2	48.7	33.6	55.5	1.98	24.6	6.2							
80	11.7	1.6	3.7	1470	108.7	61.4	51.4	2.94	6.12	10.9	1390	58.8	46.5	31.8	54.4	2.31	20.1	10.2							
				1560	106.6	61.7	51.7	2.92	6.19	10.6	1500	59.7	47.1	32.9	55.1	2.34	20.1	10.3							
	13.0	1.9	4.3	1470	109.0	61.8	51.7	2.96	6.12	11.4	1390	58.8	46.5	31.9	54.3	2.27	20.4	8.9							
				1560	106.9	62.1	52.1	2.94	6.20	11.1	1500	59.7	47.1	33.0	55.0	2.30	20.5	9.0							
	15.0	2.4	5.4	1470	109.4	62.6	52.3	3.02	6.08	12.0	1390	58.7	46.6	31.9	54.3	2.26	20.6	8.0							
				1560	107.3	62.9	52.7	2.99	6.16	11.6	1500	59.6	47.2	33.0	55.0	2.28	20.7	8.0							
90	11.7	1.6	3.7	1470	111.2	65.4	55.2	2.99	6.41	11.7	1390	59.1	44.8	31.4	53.9	2.67	16.8	12.3							
				1560	109.0	65.7	55.5	2.96	6.49	11.3	1500	60.0	45.5	32.5	54.6	2.70	16.9	12.4							
	13.0	1.9	4.3	1470	111.4	65.8	55.6	3.01	6.42	12.2	1390	59.1	44.8	31.4	53.8	2.62	17.1	10.9							
				1560	109.2	66.1	55.9	2.98	6.50	11.9	1500	60.0	45.4	32.5	54.5	2.65	17.1	10.9							
	15.0	2.3	5.4	1470	111.9	66.6	56.2	3.06	6.38	12.8	1390	59.0	44.9	31.5	53.8	2.60	17.3	9.8							
				1560	109.7	66.9	56.5	3.03	6.46	12.4	1500	59.9	45.5	32.5	54.5	2.63	17.3	9.9							
100	11.7	1.6	3.6	Operation Not Recommended							1390	59.4	42.6	30.9	53.1	3.07	13.9	14.5							
											1500	60.3	43.2	32.0	53.8	3.11	13.9	14.6							
	13.0	1.8	4.3								1390	59.4	42.6	30.9	52.9	3.02	14.1	12.9							
											1500	60.3	43.2	32.0	53.6	3.05	14.2	13.0							
	15.0	2.3	5.4								1390	59.4	42.7	31.0	52.9	2.99	14.3	11.8							
											1500	60.2	43.3	32.0	53.6	3.03	14.3	11.8							
110	11.7	1.6	3.6								Operation Not Recommended							1390	59.9	39.8	30.2	51.8	3.53	11.3	16.8
																		1500	60.7	40.3	31.2	52.5	3.57	11.3	16.9
	13.0	1.8	4.3															1390	59.9	39.8	30.2	51.6	3.47	11.5	15.1
																		1500	60.7	40.3	31.2	52.3	3.51	11.5	15.2
	15.0	2.3	5.4															1390	59.8	39.8	30.3	51.6	3.44	11.6	13.8
																		1500	60.7	40.4	31.3	52.2	3.48	11.6	13.9
120	11.7	1.6	3.6	Operation Not Recommended														1390	60.5	36.8	29.2	50.6	4.05	9.1	19.1
																		1500	61.3	37.3	30.3	51.3	4.10	9.1	19.2
	13.0	1.8	4.2															1390	60.5	36.8	29.3	50.4	3.98	9.2	17.3
																		1500	61.3	37.3	30.3	51.0	4.03	9.3	17.4
	15.0	2.3	5.4															1390	60.5	36.8	29.3	50.3	3.95	9.3	16.0
																		1500	61.3	37.3	30.3	51.0	4.00	9.3	16.1

NOTE: See page 23 for performance data parameters and guidelines.

ENGINEERING SPECIFICATIONS

ZT Models Performance Tables

Model ZT060, 5 Ton, COAX Full Load Performance Data

EWT °F	Flow GPM	WPD		COAX Unit - Full Load Heating							COAX Unit - Full Load Cooling																																																																																				
		PSI	FT	Aiflow CFM	LAT (DB) °F	HC MBtuh	HE MBtuh	Power kW	COP W/W	DH MBtuh	Aiflow CFM	LAT (DB) °F	TC MBtuh	SC MBtuh	HR MBtuh	Power kW	EER Btuh/W	DH MBtuh																																																																													
25	15.0	10.9	25.0	1870	93.7	47.9	33.7	4.17	3.37	10.1	Operation Not Recommended																																																																																				
				2000	92.2	47.9	34.4	3.94	3.57	9.0																																																																																					
30	7.5	3.7	8.6	1870	93.1	46.6	32.7	4.1	3.4	9.7										Operation Not Recommended																																																																											
				2000	91.6	46.6	33.5	3.8	3.6	8.7																																																																																					
	11.3	6.6	15.2	1870	94.2	48.9	34.8	4.14	3.47	10.1																			Operation Not Recommended																																																																		
				2000	92.7	48.9	35.6	3.91	3.67	9.0																																																																																					
	15.0	10.0	23.0	1870	94.7	49.8	35.6	4.19	3.49	10.3																												Operation Not Recommended																																																									
				2000	93.1	49.8	36.3	3.95	3.69	9.2																																																																																					
40	7.5	3.4	7.8	1870	95.6	51.6	37.4	4.17	3.63	10.4																																						1730	60.1	58.7	37.2	68.1	2.73	21.5	7.6																																								
				2000	93.9	51.6	38.2	3.94	3.84	9.3																																						1900	61.1	60.8	38.8	70.3	2.79	21.8	7.8																																								
	11.3	6.0	13.9	1870	96.8	54.2	39.8	4.24	3.75	10.8																																						Operation Not Recommended																																															
				2000	95.1	54.2	40.6	4.00	3.97	9.7																																																																																					
	15.0	9.1	21.0	1870	97.3	55.2	40.6	4.29	3.77	11.1																																															Operation Not Recommended																																						
				2000	95.6	55.2	41.4	4.05	3.99	9.9																																																																																					
50	7.5	3.1	7.2	1870	98.7	58.0	43.2	4.34	3.92	11.5																																																									1730	59.0	61.0	39.2	71.4	3.03	20.2	8.1																					
				2000	96.8	58.0	44.0	4.10	4.15	10.3																																																									1900	60.0	63.2	40.9	73.7	3.09	20.4	8.3																					
	11.3	5.5	12.8	1870	100.1	60.9	45.8	4.41	4.05	12.0																																																									1730	59.0	61.5	39.3	71.2	2.85	21.6	7.4																					
				2000	98.2	60.9	46.7	4.16	4.29	10.8																																																									1900	60.0	63.6	41.0	73.6	2.91	21.9	7.6																					
	15.0	8.4	19.4	1870	100.7	62.0	46.8	4.46	4.07	12.3																																																									1730	58.9	61.6	39.3	71.0	2.76	22.3	7.2																					
				2000	98.7	62.0	47.6	4.21	4.31	11.1																																																									1900	60.0	63.8	41.1	73.4	2.82	22.6	7.4																					
60	7.5	2.9	6.7	1870	102.2	65.1	49.5	4.55	4.19	12.9	1730	58.5	61.6	40.2	73.0	3.33	18.5	8.9																																																																													
				2000	100.1	65.1	50.4	4.30	4.44	11.5	1900	59.5	63.7	42.0	75.4	3.40	18.7	9.0																																																																													
	11.3	5.1	11.9	1870	103.8	68.3	52.5	4.62	4.33	13.5	1730	58.4	62.1	40.3	72.8	3.13	19.8	8.0																																																																													
				2000	101.6	68.3	53.4	4.36	4.59	12.1	1900	59.5	64.2	42.1	75.1	3.20	20.1	8.2																																																																													
	15.0	7.8	18.0	1870	104.4	69.5	53.6	4.67	4.36	13.8	1730	58.4	62.2	40.3	72.6	3.04	20.4	7.7																																																																													
				2000	102.2	69.5	54.5	4.42	4.62	12.4	1900	59.5	64.3	42.1	74.9	3.10	20.7	7.9																																																																													
70	7.5	2.7	6.3	1870	105.8	72.3	56.0	4.78	4.43	14.4	1730	58.4	60.7	40.4	73.2	3.66	16.6	10.2																																																																													
				2000	103.5	72.3	56.9	4.52	4.69	13.0	1900	59.5	62.9	42.2	75.6	3.74	16.8	10.4																																																																													
	11.3	4.8	11.1	1870	107.6	75.9	59.3	4.86	4.58	15.1	1730	58.3	61.2	40.5	72.9	3.44	17.8	9.1																																																																													
				2000	105.1	75.9	60.2	4.59	4.85	13.6	1900	59.4	63.3	42.3	75.3	3.51	18.0	9.3																																																																													
	15.0	7.3	16.9	1870	108.3	77.3	60.5	4.91	4.61	15.5	1730	58.3	61.3	40.5	72.7	3.34	18.4	8.8																																																																													
				2000	105.8	77.3	61.4	4.64	4.88	14.0	1900	59.4	63.4	42.3	75.1	3.41	18.6	8.9																																																																													
80	7.5	2.6	5.9	1870	109.1	79.0	61.9	5.02	4.62	15.9	1730	58.6	58.8	39.9	72.5	4.03	14.6	12.1																																																																													
				2000	106.6	79.0	62.9	4.74	4.89	14.4	1900	59.7	60.8	41.7	74.9	4.11	14.8	12.2																																																																													
	11.3	4.6	10.5	1870	111.1	83.0	65.6	5.10	4.77	16.8	1730	58.6	59.2	40.0	72.2	3.79	15.6	10.8																																																																													
				2000	108.4	83.0	66.6	4.81	5.05	15.2	1900	59.6	61.3	41.8	74.5	3.87	15.9	11.0																																																																													
	15.0	6.9	16.0	1870	111.8	84.5	66.9	5.16	4.80	17.3	1730	58.6	59.3	40.0	71.9	3.68	16.1	10.4																																																																													
				2000	109.1	84.5	67.9	4.87	5.08	15.7	1900	59.6	61.4	41.8	74.2	3.75	16.4	10.6																																																																													
90	7.5	2.5	5.7	1870	112.0	84.7	66.9	5.23	4.75	17.4	1730	59.1	56.0	39.0	71.2	4.45	12.6	14.3																																																																													
				2000	109.2	84.7	67.9	4.94	5.02	15.8	1900	60.2	58.0	40.7	73.5	4.54	12.8	14.5																																																																													
	11.3	4.4	10.1	1870	114.1	89.0	70.8	5.32	4.91	18.4	1730	59.1	56.5	39.1	70.7	4.18	13.5	12.9																																																																													
				2000	111.2	89.0	71.8	5.02	5.19	16.7	1900	60.1	58.4	40.8	73.0	4.27	13.7	13.1																																																																													
	15.0	6.6	15.3	1870	114.9	90.6	72.2	5.38	4.94	18.9	1730	59.1	56.6	39.1	70.4	4.06	13.9	12.4																																																																													
				2000	111.9	90.6	73.3	5.08	5.23	17.2	1900	60.1	58.5	40.8	72.7	4.15	14.1	12.6																																																																													
100	7.5	2.2	5.2	Operation Not Recommended																																																																																											
																			1730	59.7	52.8	37.8	69.7	4.94	10.7	16.7																																																																					
	1900	60.8	54.7																39.5	71.9	5.04	10.8	16.9																																																																								
	1730	59.7	53.2																37.9	69.1	4.64	11.5	15.1																																																																								
	1900	60.7	55.1																39.6	71.3	4.74	11.6	15.4																																																																								
	1730	59.7	53.3																38.0	68.7	4.51	11.8	14.5																																																																								
11.3	4.0	9.2	1900																60.7	55.2	39.6	70.9	4.60	12.0	14.7	Operation Not Recommended																																																																					
			1730																60.4	49.5	36.6	68.3	5.51	9.0	19.1																																																																						
15.0	6.1	14.2	1900																61.4	51.2	38.2	70.4	5.63	9.1	19.4											Operation Not Recommended																																																											
			1730																60.4	49.8	36.7	67.5	5.18	9.6	17.4																																																																						
7.5	2.1	5.0	1900																61.3	51.6	38.3	69.6	5.29	9.7	17.7																					Operation Not Recommended																																																	
			1730																60.3	49.9	36.7	67.1	5.03	9.9	16.7																																																																						
11.3	3.8	8.9	1900																61.3	51.7	38.3	69.2	5.14	10.1	17.0																															Operation Not Recommended																																							
			1730																61.0	46.3	35.5	67.4	6.18	7.5	21.8																																																																						
15.0	5.9	13.6	1900																61.9	47.9	37.1	69.4	6.31	7.6	22.1																																									Operation Not Recommended																													
			1730																61.0	46.6	35.6	66.5	5.81	8.0	20.0																																																																						
7.5	2.1	4.8	1900																61.9	48.2	37.2	68.5	5.93	8.1	20.2																																																			Operation Not Recommended																			
			1730																60.9	46.7	35.6	66.0	5.64	8.3	19.2																																																																						
11.3	3.7	8.5	1900																61.9	48.3	37.2	68.0	5.76	8.4	19.5																																																													Operation Not Recommended									
			1730																61.9	48.3	37.2	68.0	5.76	8.4	19.5																																																																						

NOTE: See page 23 for performance data parameters and guidelines.

ZT Models Performance Tables

Model ZT060, 5 Ton, COAX Part Load Performance Data

EWT	Flow °F	WPD		COAX Unit - Part Load Heating							COAX Unit - Part Load Cooling																					
		PSI	FT	Aiflow CFM	LAT (DB) °F	HC MBtuh	HE MBtuh	Power kW	COP W/W	DH MBtuh	Aiflow CFM	LAT (DB) °F	TC MBtuh	SC MBtuh	HR MBtuh	Power kW	EER Btuh/W	DH MBtuh														
25	10.0	6.0	13.7	1470	89.7	31.3	21.6	2.85	3.22	7.5	Operation Not Recommended																					
				1560	88.6	31.4	22.1	2.73	3.38	7.1																						
30	5.0	2.2	5.1	1470	89.1	30.3	20.7	2.80	3.17	7.3																						
				1560	88.0	30.4	21.3	2.68	3.33	6.9																						
	7.5	3.7	8.4	1470	90.2	32.0	22.4	2.83	3.32	7.7																						
				1560	89.1	32.1	22.9	2.70	3.49	7.3																						
	10.0	5.5	12.6	1470	90.8	33.0	23.3	2.85	3.40	7.9																						
				1560	89.7	33.1	23.8	2.72	3.57	7.5																						
40	5.0	2.0	4.6	1470	91.4	34.0	24.4	2.82	3.53	7.9								1390	58.9	45.3	31.6	51.0	1.67	27.1	4.8							
				1560	90.2	34.1	24.9	2.70	3.71	7.5								1500	59.9	46.2	32.6	51.9	1.68	27.4	4.8							
	7.5	3.4	7.7	1470	92.6	35.9	26.2	2.85	3.70	8.4								Operation Not Recommended														
				1560	91.4	36.1	26.8	2.72	3.88	8.0																						
	10.0	5.0	11.6	1470	93.3	37.0	27.3	2.87	3.78	8.7																						
				1560	92.1	37.2	27.8	2.74	3.97	8.2																						
50	5.0	1.9	4.3	1470	94.1	38.2	28.4	2.87	3.90	8.5															1390	58.3	46.3	32.6	52.8	1.92	24.1	5.4
				1560	92.8	38.4	29.0	2.75	4.10	8.1															1500	59.2	47.2	33.7	53.8	1.94	24.4	5.4
	7.5	3.1	7.2	1470	95.5	40.4	30.5	2.90	4.09	9.1	1390	58.2	47.0	32.7	53.0	1.74	27.1	4.6														
				1560	94.1	40.6	31.1	2.77	4.29	8.7	1500	59.1	48.0	33.8	54.0	1.75	27.4	4.6														
	10.0	4.6	10.7	1470	96.3	41.7	31.7	2.92	4.18	9.5	1390	58.1	47.3	32.8	53.0	1.66	28.5	4.2														
				1560	94.8	41.8	32.3	2.79	4.39	9.0	1500	59.1	48.3	33.8	54.0	1.67	28.8	4.2														
60	5.0	1.7	4.0	1470	97.0	42.9	32.8	2.94	4.27	9.2	1390	58.3	45.9	32.5	53.4	2.20	20.8	6.6														
				1560	95.5	43.0	33.4	2.81	4.49	8.7	1500	59.3	46.8	33.6	54.3	2.22	21.1	6.6														
	7.5	2.9	6.6	1470	98.5	45.3	35.2	2.97	4.48	9.9	1390	58.3	46.6	32.6	53.4	1.99	23.4	5.6														
				1560	97.0	45.5	35.8	2.83	4.70	9.4	1500	59.2	47.6	33.7	54.4	2.01	23.7	5.6														
	10.0	4.3	9.9	1470	99.4	46.7	36.5	2.99	4.58	10.3	1390	58.2	46.9	32.7	53.4	1.90	24.6	5.2														
				1560	97.8	46.9	37.1	2.86	4.81	9.8	1500	59.2	47.8	33.7	54.4	1.92	24.9	5.2														
70	5.0	1.6	3.7	1470	100.0	47.7	37.4	3.01	4.65	9.9	1390	58.7	44.3	31.9	52.9	2.52	17.6	8.3														
				1560	98.4	47.8	38.0	2.87	4.88	9.4	1500	59.7	45.2	32.9	53.9	2.55	17.8	8.3														
	7.5	2.7	6.2	1470	101.7	50.4	40.0	3.03	4.87	10.8	1390	58.7	45.1	32.0	52.9	2.28	19.7	7.1														
				1560	100.0	50.6	40.7	2.90	5.11	10.2	1500	59.6	46.0	33.0	53.8	2.30	20.0	7.1														
	10.0	4.0	9.3	1470	102.7	52.0	41.5	3.06	4.98	11.2	1390	58.6	45.4	32.1	52.8	2.18	20.8	6.6														
				1560	101.0	52.2	42.2	2.92	5.23	10.7	1500	59.6	46.3	33.1	53.8	2.20	21.0	6.6														
80	5.0	1.5	3.5	1470	103.1	52.5	42.1	3.06	5.02	10.9	1390	59.2	42.0	31.2	51.9	2.89	14.6	10.1														
				1560	101.3	52.7	42.7	2.93	5.27	10.3	1500	60.1	42.8	32.2	52.8	2.91	14.7	10.2														
	7.5	2.5	5.8	1470	105.0	55.5	45.0	3.09	5.27	11.8	1390	59.2	42.7	31.3	51.6	2.61	16.4	8.9														
				1560	103.1	55.7	45.6	2.95	5.53	11.2	1500	60.1	43.6	32.3	52.6	2.64	16.5	8.9														
	10.0	3.8	8.7	1470	106.0	57.2	46.6	3.11	5.39	12.3	1390	59.1	43.0	31.3	51.5	2.49	17.2	8.3														
				1560	104.1	57.4	47.3	2.98	5.65	11.7	1500	60.0	43.8	32.3	52.4	2.52	17.4	8.3														
90	5.0	1.4	3.3	1470	106.0	57.1	46.6	3.09	5.42	12.0	1390	59.7	39.2	30.4	50.4	3.29	11.9	12.1														
				1560	104.0	57.3	47.3	2.95	5.69	11.4	1500	60.6	39.9	31.4	51.3	3.32	12.0	12.1														
	7.5	2.4	5.5	1470	108.0	60.4	49.8	3.12	5.68	13.0	1390	59.7	39.8	30.5	50.0	2.98	13.4	10.7														
				1560	106.0	60.6	50.4	2.98	5.96	12.4	1500	60.6	40.6	31.5	50.9	3.01	13.5	10.7														
	10.0	3.6	8.3	1470	109.2	62.3	51.6	3.14	5.81	13.7	1390	59.6	40.1	30.6	49.8	2.85	14.1	10.1														
				1560	107.1	62.5	52.2	3.00	6.10	13.0	1500	60.5	40.9	31.5	50.7	2.87	14.2	10.1														
100	5.0	1.3	3.1	Operation Not Recommended							1390	60.3	36.1	29.6	48.9	3.75	9.6	14.0														
											1500	61.2	36.8	30.5	49.7	3.79	9.7	14.1														
	7.5	2.2	5.1								1390	60.2	36.7	29.7	48.3	3.40	10.8	12.5														
											1500	61.1	37.4	30.6	49.1	3.43	10.9	12.6														
	10.0	3.3	7.6								1390	60.2	36.9	29.7	48.0	3.24	11.4	11.9														
											1500	61.1	37.6	30.7	48.8	3.27	11.5	12.0														
110	5.0	1.3	3.0								1390	61.0	33.0	28.5	47.6	4.26	7.7	16.0														
											1500	61.9	33.7	29.4	48.4	4.30	7.8	16.1														
	7.5	2.1	4.9								1390	61.0	33.6	28.6	46.8	3.86	8.7	14.4														
											1500	61.8	34.3	29.5	47.6	3.89	8.8	14.5														
	10.0	3.2	7.3								1390	60.9	33.8	28.6	46.4	3.69	9.2	13.7														
											1500	61.8	34.5	29.5	47.2	3.72	9.3	13.8														
120	5.0	1.2	2.9								1390	62.0	30.4	27.0	46.8	4.83	6.3	18.2														
											1500	62.8	31.0	27.9	47.6	4.88	6.3	18.3														
	7.5	2.0	4.7								1390	61.9	30.9	27.1	45.8	4.38	7.1	16.5														
											1500	62.7	31.5	28.0	46.5	4.42	7.1	16.6														
	10.0	3.1	7.1	1390	61.9	31.0	27.2	45.3	4.18	7.4	15.8																					
				1500	62.7	31.7	28.0	46.1	4.22	7.5	15.8																					

NOTE: See page 23 for performance data parameters and guidelines.

ENGINEERING SPECIFICATIONS

ZT Models Performance Tables

Model ZT072, 6 Ton, BPHE Full Load Performance Data

EWT °F	Flow GPM	WPD		BPHE Unit - Full Load Heating							BPHE Unit - Full Load Cooling														
		PSI	FT	Aiflow CFM	LAT (DB) °F	HC MBtuh	HE MBtuh	Power kW	COP W/W	DH MBtuh	Aiflow CFM	LAT (DB) °F	TC MBtuh	SC MBtuh	HR MBtuh	Power kW	EER Btuh/W	DH MBtuh							
25	18.0	3.7	8.6	2030	94.3	53.2	37.2	4.69	3.32	11.1	Operation Not Recommended														
				2200	92.4	53.2	37.5	4.61	3.38	11.1															
30	11.7	1.9	4.3	2030	94.5	53.7	37.7	4.7	3.4	11.0															
				2200	92.6	53.7	38.0	4.6	3.4	11.0															
	15.0	2.7	6.3	2030	95.2	55.3	39.2	4.70	3.45	11.1															
				2200	93.3	55.3	39.5	4.62	3.51	11.1															
	18.0	3.7	8.4	2030	95.7	56.2	40.1	4.72	3.49	11.3															
				2200	93.7	56.2	40.4	4.64	3.55	11.3															
40	11.7	1.8	4.2	2030	97.7	60.8	44.2	4.85	3.67	11.8								2000	60.3	68.3	42.5	78.3	2.91	23.5	5.3
				2200	95.6	60.8	44.5	4.77	3.74	11.8								2230	61.6	69.0	44.4	79.3	3.04	22.7	5.4
	15.0	2.7	6.2	2030	98.5	62.5	45.9	4.87	3.77	12.0								Operation Not Recommended							
				2200	96.3	62.6	46.2	4.78	3.83	12.0															
	18.0	3.6	8.3	2030	99.0	63.6	47.0	4.89	3.81	12.3															
				2200	96.8	63.7	47.2	4.81	3.88	12.3															
50	11.7	1.8	4.1	2030	101.5	69.1	51.6	5.12	3.95	13.2	2000	58.1	74.0	47.3	85.0	3.24	22.8								7.4
				2200	99.1	69.1	51.9	5.04	4.02	13.2	2230	59.5	74.6	49.3	86.2	3.37	22.1								7.5
	15.0	2.6	6.1	2030	102.4	71.1	53.5	5.14	4.05	13.4	2000	58.1	74.2	47.3	84.9	3.14	23.6	6.4							
				2200	99.9	71.1	53.8	5.05	4.13	13.4	2230	59.5	74.8	49.3	86.0	3.27	22.9	6.5							
	18.0	3.5	8.1	2030	103.0	72.3	54.7	5.16	4.10	13.7	2000	58.1	74.2	47.4	84.8	3.09	24.0	6.0							
				2200	100.4	72.3	55.0	5.08	4.18	13.7	2230	59.5	74.9	49.4	85.9	3.22	23.3	6.1							
60	11.7	1.8	4.0	2030	105.5	77.9	59.3	5.45	4.19	14.9	2000	56.9	76.5	49.8	88.7	3.57	21.4	9.6							
				2200	102.8	77.9	59.6	5.35	4.26	14.9	2230	58.4	77.2	52.0	89.9	3.72	20.7	9.6							
	15.0	2.6	6.0	2030	106.5	80.1	61.5	5.46	4.30	15.1	2000	56.9	76.7	49.9	88.5	3.46	22.2	8.4							
				2200	103.7	80.1	61.8	5.37	4.38	15.1	2230	58.4	77.4	52.0	89.7	3.61	21.5	8.5							
	18.0	3.4	7.9	2030	107.2	81.5	62.8	5.49	4.35	15.5	2000	56.9	76.8	50.0	88.4	3.41	22.5	7.9							
				2200	104.3	81.5	63.1	5.40	4.43	15.5	2230	58.4	77.5	52.1	89.6	3.55	21.8	8.0							
70	11.7	1.7	4.0	2030	109.5	86.6	66.9	5.77	4.39	16.6	2000	56.5	76.6	50.7	90.0	3.94	19.4	11.8							
				2200	106.4	86.6	67.2	5.68	4.47	16.6	2230	58.1	77.3	52.9	91.3	4.10	18.8	11.9							
	15.0	2.5	5.9	2030	110.6	89.0	69.3	5.79	4.51	16.9	2000	56.5	76.8	50.8	89.8	3.82	20.1	10.5							
				2200	107.5	89.0	69.6	5.69	4.59	16.9	2230	58.0	77.5	52.9	91.1	3.98	19.5	10.6							
	18.0	3.4	7.8	2030	111.3	90.6	70.8	5.82	4.56	17.3	2000	56.5	76.9	50.8	89.7	3.75	20.5	9.9							
				2200	108.1	90.6	71.1	5.72	4.64	17.3	2230	58.0	77.6	53.0	90.9	3.91	19.8	10.0							
80	11.7	1.7	3.9	2030	113.1	94.5	73.8	6.06	4.57	18.2	2000	56.7	74.7	50.3	89.5	4.35	17.2	14.1							
				2200	109.8	94.5	74.2	5.95	4.65	18.1	2230	58.2	75.4	52.4	90.9	4.53	16.7	14.2							
	15.0	2.5	5.8	2030	114.3	97.2	76.5	6.07	4.69	18.5	2000	56.7	74.9	50.3	89.3	4.21	17.8	12.7							
				2200	110.9	97.2	76.8	5.97	4.77	18.5	2230	58.2	75.6	52.5	90.6	4.39	17.2	12.7							
	18.0	3.3	7.7	2030	115.1	98.9	78.1	6.10	4.75	18.9	2000	56.7	75.0	50.4	89.1	4.14	18.1	12.0							
				2200	111.6	98.9	78.4	6.00	4.83	18.9	2230	58.2	75.7	52.5	90.4	4.32	17.5	12.1							
90	11.7	1.7	3.9	2030	116.0	100.9	79.6	6.25	4.74	19.3	2000	57.3	71.5	48.9	87.9	4.82	14.8	16.5							
				2200	112.5	100.9	80.0	6.14	4.82	19.3	2230	58.8	72.2	51.0	89.3	5.02	14.4	16.6							
	15.0	2.5	5.7	2030	117.4	103.8	82.5	6.26	4.86	19.6	2000	57.3	71.7	49.0	87.6	4.67	15.4	14.9							
				2200	113.7	103.8	82.8	6.15	4.95	19.6	2230	58.8	72.4	51.1	89.0	4.86	14.9	15.0							
	18.0	3.3	7.6	2030	118.2	105.7	84.2	6.29	4.92	20.1	2000	57.3	71.8	49.1	87.5	4.59	15.6	14.2							
				2200	114.5	105.7	84.6	6.19	5.01	20.1	2230	58.8	72.5	51.1	88.8	4.79	15.1	14.3							
100	11.7	1.7	3.9	Operation Not Recommended							2000	58.2	67.5	47.2	85.8	5.37	12.6	19.1							
											2230	59.6	68.1	49.2	87.2	5.59	12.2	19.3							
	15.0	2.5	5.7								2000	58.1	67.7	47.2	85.4	5.20	13.0	17.4							
											2230	59.6	68.3	49.2	86.8	5.42	12.6	17.5							
	18.0	3.3	7.6								2000	58.1	67.8	47.3	85.2	5.12	13.2	16.6							
											2230	59.5	68.4	49.3	86.6	5.33	12.8	16.7							
110	11.7	1.7	3.8								2000	59.0	63.3	45.4	83.8	6.01	10.5	22.0							
											2230	60.4	63.9	47.3	85.3	6.26	10.2	22.1							
	15.0	2.4	5.6								2000	59.0	63.5	45.4	83.3	5.82	10.9	20.0							
											2230	60.3	64.1	47.3	84.8	6.07	10.6	20.1							
	18.0	3.3	7.5								2000	58.9	63.5	45.5	83.1	5.73	11.1	19.1							
											2230	60.3	64.1	47.4	84.5	5.97	10.7	19.3							
120	11.7	1.7	3.8	2000	59.7	59.4	43.9	82.5	6.76	8.8	25.0														
				2230	61.0	60.0	45.8	84.0	7.05	8.5	25.2														
	15.0	2.4	5.6	2000	59.6	59.6	44.0	82.0	6.55	9.1	22.9														
				2230	61.0	60.2	45.9	83.5	6.83	8.8	23.0														
	18.0	3.2	7.5	2000	59.6	59.7	44.1	81.7	6.45	9.3	21.9														
				2230	60.9	60.2	45.9	83.2	6.72	9.0	22.1														

NOTE: See page 23 for performance data parameters and guidelines.

ZT Models Performance Tables

Model ZT072, 6 Ton, BPHE Part Load Performance Data

EWT	Flow	WPD		BPHE Unit - Part Load Heating						BPHE Unit - Part Load Cooling															
		PSI	FT	Aiflow CFM	LAT (DB) °F	HC MBtuh	HE MBtuh	Power kW	COP W/W	DH MBtuh	Aiflow CFM	LAT (DB) °F	TC MBtuh	SC MBtuh	HR MBtuh	Power kW	EER Btuh/W	DH MBtuh							
25	18.0	3.5	8.1	1760	90.7	39.4	27.2	3.59	3.22	8.7	Operation Not Recommended														
				1960	88.7	39.7	27.5	3.56	3.26	8.3															
30	11.7	2.0	4.7	1760	90.8	39.5	27.7	3.44	3.36	8.8															
				1960	88.8	39.7	28.1	3.42	3.41	8.4															
	15.0	2.9	6.7	1760	91.3	40.6	28.7	3.47	3.43	8.7															
				1960	89.3	40.8	29.1	3.44	3.48	8.4															
	18.0	3.7	8.4	1760	92.1	42.0	29.8	3.57	3.45	8.8															
				1960	90.0	42.3	30.2	3.54	3.50	8.4															
40	11.7	2.0	4.6	1760	93.7	45.1	33.3	3.46	3.83	9.2								1650	59.1	57.0	37.3	62.7	1.67	34.2	3.8
				1960	91.4	45.4	33.7	3.43	3.88	8.8								1820	60.1	57.6	39.0	63.4	1.71	33.7	3.8
	15.0	2.9	6.6	1760	94.4	46.3	34.4	3.48	3.90	9.2								Operation Not Recommended							
				1960	92.0	46.6	34.8	3.46	3.95	8.8															
	18.0	3.6	8.2	1760	95.2	48.0	35.8	3.58	3.93	9.3															
				1960	92.8	48.3	36.1	3.56	3.98	8.8															
50	11.7	1.9	4.5	1760	97.1	51.5	39.4	3.53	4.27	10.0	1650	57.4	59.5	40.3	66.0	1.92	31.0								5.5
				1960	94.5	51.8	39.8	3.51	4.33	9.5	1820	58.5	60.1	42.2	66.8	1.97	30.6								5.5
	15.0	2.8	6.4	1760	97.8	52.9	40.7	3.56	4.35	10.0	1650	57.3	59.6	40.4	66.0	1.86	32.1	4.5							
				1960	95.1	53.2	41.2	3.53	4.41	9.6	1820	58.5	60.2	42.2	66.8	1.91	31.6	4.5							
	18.0	3.5	8.1	1760	98.8	54.8	42.3	3.66	4.38	10.1	1650	57.3	59.8	40.4	66.2	1.90	31.5	3.9							
				1960	96.0	55.1	42.7	3.64	4.44	9.6	1820	58.5	60.4	42.3	67.0	1.94	31.1	3.9							
60	11.7	1.9	4.4	1760	100.7	58.3	45.9	3.65	4.69	11.0	1650	56.7	60.0	41.5	67.5	2.20	27.2	7.5							
				1960	97.7	58.7	46.3	3.62	4.75	10.5	1820	57.9	60.6	43.5	68.3	2.26	26.8	7.5							
	15.0	2.7	6.3	1760	101.5	59.9	47.4	3.67	4.78	11.1	1650	56.7	60.2	41.6	67.5	2.14	28.2	6.3							
				1960	98.5	60.3	47.8	3.65	4.84	10.6	1820	57.9	60.8	43.5	68.3	2.19	27.8	6.3							
	18.0	3.4	7.9	1760	102.6	62.0	49.1	3.78	4.81	11.2	1650	56.6	60.3	41.6	67.7	2.18	27.7	5.6							
				1960	99.5	62.4	49.6	3.75	4.88	10.7	1820	57.9	60.9	43.5	68.5	2.23	27.3	5.6							
70	11.7	1.9	4.3	1760	104.3	65.3	52.4	3.77	5.07	12.1	1650	56.7	59.0	41.5	67.6	2.53	23.3	9.5							
				1960	101.0	65.7	52.9	3.74	5.14	11.6	1820	57.9	59.6	43.4	68.4	2.59	23.0	9.5							
	15.0	2.7	6.2	1760	105.3	67.0	54.1	3.80	5.17	12.3	1650	56.7	59.1	41.6	67.5	2.45	24.1	8.2							
				1960	101.9	67.4	54.6	3.77	5.24	11.7	1820	57.9	59.7	43.5	68.3	2.52	23.7	8.2							
	18.0	3.4	7.7	1760	106.5	69.4	56.1	3.91	5.21	12.5	1650	56.7	59.3	41.6	67.8	2.50	23.7	7.3							
				1960	103.0	69.8	56.6	3.88	5.28	11.9	1820	57.9	59.9	43.5	68.6	2.56	23.4	7.3							
80	11.7	1.8	4.2	1760	107.9	72.0	58.8	3.88	5.44	13.3	1650	57.2	56.7	40.7	66.6	2.90	19.6	11.7							
				1960	104.2	72.4	59.3	3.85	5.52	12.7	1820	58.3	57.3	42.6	67.4	2.97	19.3	11.7							
	15.0	2.6	6.1	1760	108.9	73.9	60.6	3.90	5.55	13.6	1650	57.1	56.9	40.8	66.5	2.81	20.2	10.2							
				1960	105.1	74.4	61.2	3.88	5.63	12.9	1820	58.3	57.5	42.6	67.3	2.88	19.9	10.2							
	18.0	3.3	7.7	1760	110.3	76.6	62.9	4.02	5.59	13.7	1650	57.1	57.0	40.8	66.8	2.87	19.9	9.2							
				1960	106.4	77.1	63.4	3.99	5.66	13.1	1820	58.3	57.6	42.7	67.6	2.94	19.6	9.2							
90	11.7	1.8	4.2	1760	111.1	78.2	64.7	3.94	5.82	14.5	1650	57.8	53.6	39.5	65.0	3.32	16.2	14.0							
				1960	107.2	78.7	65.3	3.91	5.90	13.8	1820	59.0	54.2	41.3	65.8	3.40	15.9	14.0							
	15.0	2.6	6.0	1760	112.2	80.3	66.8	3.97	5.93	14.7	1650	57.8	53.8	39.6	64.8	3.22	16.7	12.3							
				1960	108.2	80.8	67.4	3.94	6.01	14.1	1820	59.0	54.3	41.4	65.6	3.30	16.5	12.3							
	18.0	3.3	7.7	1760	113.8	83.2	69.2	4.08	5.97	14.9	1650	57.8	53.9	39.6	65.1	3.28	16.4	11.2							
				1960	109.5	83.7	69.9	4.05	6.05	14.2	1820	58.9	54.4	41.4	65.9	3.36	16.2	11.3							
100	11.7	1.8	4.1	Operation Not Recommended						1650	58.6	50.1	38.2	63.0	3.79	13.2	16.4								
										1820	59.7	50.6	39.9	63.8	3.88	13.0	16.4								
	15.0	2.6	5.9							1650	58.6	50.2	38.2	62.8	3.67	13.7	14.5								
										1820	59.7	50.7	40.0	63.6	3.77	13.5	14.6								
	18.0	3.3	7.7							1650	58.5	50.3	38.2	63.1	3.74	13.4	13.4								
										1820	59.7	50.8	40.0	63.9	3.84	13.2	13.4								
110	11.7	1.8	4.0							1650	59.4	46.4	36.7	61.1	4.31	10.8	18.9								
										1820	60.5	46.9	38.4	62.0	4.42	10.6	18.9								
	15.0	2.5	5.9							1650	59.4	46.6	36.8	60.8	4.18	11.1	16.9								
										1820	60.4	47.0	38.4	61.6	4.28	11.0	16.9								
	18.0	3.3	7.6							1650	59.4	46.7	36.8	61.2	4.26	11.0	15.6								
										1820	60.4	47.1	38.5	62.0	4.37	10.8	15.7								
120	11.7	1.7	4.0	1650	60.3	43.0	35.1	59.7	4.89	8.8	21.6														
				1820	61.3	43.5	36.7	60.6	5.01	8.7	21.6														
	15.0	2.5	5.8	1650	60.3	43.1	35.1	59.3	4.74	9.1	19.4														
				1820	61.3	43.6	36.7	60.2	4.86	9.0	19.5														
	18.0	3.2	7.5	1650	60.3	43.2	35.1	59.7	4.83	8.9	18.0														
				1820	61.3	43.7	36.7	60.6	4.95	8.8	18.1														

NOTE: See page 23 for performance data parameters and guidelines.

ENGINEERING SPECIFICATIONS

ZT Models Performance Tables

Model ZT072, 6 Ton, COAX Full Load Performance Data

EWT °F	Flow GPM	WPD		COAX Unit - Full Load Heating							COAX Unit - Full Load Cooling									
		PSI	FT	Aiflow CFM	LAT (DB) °F	HC MBtuh	HE MBtuh	Power kW	COP W/W	DH MBtuh	Aiflow CFM	LAT (DB) °F	TC MBtuh	SC MBtuh	HR MBtuh	Power kW	EER Btuh/W	DH MBtuh		
25	18.0	14.3	33.1	2030	92.6	49.6	34.0	4.57	3.18	10.1	Operation Not Recommended	2000	60.5	67.2	42.2	78.3	3.26	20.6	8.0	
				2200	91.1	50.2	34.6	4.57	3.22	10.1										
				2030	92.3	48.8	33.4	4.5	3.2	10.1										
30	9.0	4.7	10.9	2200	90.8	49.4	34.0	4.5	3.2	10.1		Operation Not Recommended	2000	61.8	67.7	43.7	79.3	3.41	19.9	8.1
				2030	93.3	51.2	35.5	4.58	3.27	10.3										
	13.5	8.5	19.6	2200	91.8	51.8	36.2	4.58	3.32	10.3										
				2030	94.2	53.1	37.4	4.62	3.37	10.5										
	18.0	13.1	30.2	2200	92.7	53.8	38.1	4.62	3.41	10.5										
				2030	95.5	55.9	40.0	4.67	3.51	10.9										
40	9.0	4.3	10.0	2200	93.8	56.6	40.7	4.67	3.55	10.9		Operation Not Recommended	2000	61.8	67.7	43.7	79.3	3.41	19.9	8.1
				2030	96.7	58.6	42.4	4.74	3.62	11.2										
	13.5	7.8	18.0	2200	95.0	59.3	43.2	4.74	3.67	11.2										
				2030	97.8	60.9	44.5	4.78	3.73	11.4										
	18.0	12.0	27.7	2200	95.9	61.6	45.3	4.78	3.78	11.4										
				2030	98.9	63.4	46.8	4.88	3.81	12.0										
50	9.0	4.0	9.3	2200	97.0	64.3	47.6	4.88	3.86	12.0		2000	58.8	70.7	45.9	83.0	3.61	19.6	8.5	
				2030	100.3	66.5	49.6	4.95	3.94	12.4		2230	60.3	71.1	47.5	84.0	3.77	18.9	8.6	
	13.5	7.2	16.7	2200	98.3	67.3	50.5	4.94	3.99	12.4		2000	58.7	71.4	46.0	83.0	3.42	20.9	7.8	
				2030	101.5	69.1	52.0	4.99	4.05	12.6	2230	60.2	71.9	47.7	84.0	3.57	20.1	7.9		
	18.0	11.1	25.6	2200	99.4	70.0	52.9	4.99	4.11	12.6	2000	58.7	71.6	46.1	82.9	3.33	21.5	7.6		
				2030	102.5	71.2	53.7	5.12	4.08	13.2	2230	60.2	72.1	47.8	83.9	3.48	20.7	7.7		
60	9.0	3.8	8.7	2200	100.3	72.1	54.6	5.11	4.13	13.2	2000	57.9	71.7	47.7	85.2	3.96	18.1	9.5		
				2030	104.0	74.6	56.9	5.19	4.21	13.8	2230	59.5	72.2	49.5	86.3	4.13	17.5	9.6		
	13.5	6.8	15.6	2200	101.8	75.5	57.8	5.18	4.27	13.8	2000	57.8	72.5	47.9	85.2	3.74	19.4	8.7		
				2030	105.3	77.5	59.6	5.23	4.34	14.1	2230	59.4	73.0	49.6	86.3	3.91	18.7	8.7		
	18.0	10.4	24.0	2200	103.0	78.5	60.6	5.23	4.40	14.1	2000	57.8	72.6	48.0	85.1	3.65	19.9	8.4		
				2030	105.9	78.8	60.5	5.36	4.31	14.7	2230	59.4	73.2	49.7	86.1	3.81	19.2	8.5		
70	9.0	3.5	8.2	2200	103.6	79.8	61.5	5.36	4.36	14.7	2000	57.7	70.9	48.1	85.6	4.31	16.4	11.0		
				2030	107.7	82.5	64.0	5.44	4.45	15.4	2230	59.3	71.4	49.9	86.7	4.50	15.9	11.1		
	13.5	6.4	14.7	2200	105.2	83.6	65.1	5.43	4.51	15.4	2000	57.7	71.6	48.3	85.5	4.07	17.6	10.0		
				2030	109.1	85.8	67.0	5.49	4.58	15.8	2230	59.2	72.1	50.0	86.6	4.26	16.9	10.0		
	18.0	9.8	22.6	2200	106.6	86.9	68.2	5.48	4.64	15.8	2000	57.6	71.8	48.3	85.3	3.97	18.1	9.6		
				2030	109.2	86.0	66.9	5.60	4.50	16.3	2230	59.2	72.3	50.1	86.4	4.15	17.4	9.7		
80	9.0	3.4	7.8	2200	109.2	86.0	66.9	5.60	4.50	16.3	2000	58.1	68.5	47.4	84.5	4.69	14.6	12.9		
				2030	111.1	90.1	70.7	5.68	4.65	17.1	2230	59.6	68.9	49.1	85.6	4.90	14.1	13.0		
	13.5	6.0	14.0	2200	108.4	91.3	71.9	5.68	4.71	17.1	2000	58.0	69.1	47.5	84.3	4.43	15.6	11.7		
				2030	112.7	93.6	74.1	5.73	4.79	17.5	2230	59.5	69.6	49.3	85.4	4.63	15.0	11.8		
	18.0	9.3	21.5	2200	109.9	94.8	75.3	5.73	4.85	17.5	2000	58.0	69.3	47.6	84.1	4.32	16.0	11.2		
				2030	112.2	92.6	72.7	5.82	4.66	18.0	2230	59.5	69.8	49.3	85.2	4.51	15.5	11.3		
90	9.0	3.2	7.4	2200	109.5	93.7	73.9	5.81	4.73	18.0	2000	58.7	64.9	45.9	82.4	5.11	12.7	15.1		
				2030	114.2	97.0	76.9	5.90	4.82	18.9	2230	60.2	65.4	47.6	83.6	5.34	12.2	15.2		
	13.5	5.8	13.3	2200	111.3	98.2	78.1	5.89	4.88	18.9	2000	58.7	65.6	46.1	82.1	4.83	13.6	13.7		
				2030	116.0	100.7	80.4	5.95	4.96	19.3	2230	60.2	66.0	47.7	83.3	5.05	13.1	13.8		
	18.0	8.9	20.5	2200	112.9	102.0	81.8	5.95	5.03	19.3	2000	58.6	65.7	46.1	81.8	4.71	14.0	13.2		
				2030	112.9	102.0	81.8	5.95	5.03	19.3	2230	60.1	66.2	47.8	83.0	4.92	13.5	13.3		
100	9.0	2.9	6.7	Operation Not Recommended	2000	59.6	60.6	44.1	79.7	5.60	10.8	17.5								
													2230	61.0	61.1	45.7	81.0	5.85	10.4	17.6
	13.5	5.3	12.3		2000	59.5	61.3	44.2	79.3	5.29	11.6	16.0								
													2230	61.0	61.7	45.8	80.5	5.53	11.2	16.1
	18.0	8.3	19.1		2000	59.5	61.4	44.3	79.0	5.16	11.9	15.4								
													2230	61.0	61.8	45.9	80.2	5.39	11.5	15.5
110	9.0	2.8	6.5		2000	60.5	56.0	42.2	77.1	6.16	9.1	20.1								
													2230	61.9	56.4	43.7	78.4	6.44	8.8	20.2
	13.5	5.2	11.9		2000	60.4	56.6	42.3	76.5	5.83	9.7	18.4								
													2230	61.8	57.0	43.8	77.8	6.09	9.4	18.6
	18.0	8.0	18.5		2000	60.4	56.8	42.4	76.1	5.68	10.0	17.8								
													2230	61.8	57.2	43.9	77.4	5.93	9.6	17.9
120	9.0	2.7	6.3		2000	61.2	51.5	40.6	74.8	6.83	7.5	22.8								
													2230	62.5	51.9	42.1	76.2	7.13	7.3	22.9
	13.5	5.0	11.6		2000	61.1	52.1	40.7	74.1	6.46	8.1	21.0								
													2230	62.5	52.4	42.2	75.4	6.74	7.8	21.1
	18.0	7.8	17.9		2000	61.1	52.2	40.8	73.7	6.29	8.3	20.3								
													2230	62.4	52.6	42.3	75.0	6.57	8.0	20.4

NOTE: See page 23 for performance data parameters and guidelines.

ZT Models Performance Tables
 Model ZT072, 6 Ton, COAX Part Load Performance Data

EWT °F	Flow GPM	WPD		COAX Unit - Part Load Heating							COAX Unit - Part Load Cooling																					
		PSI	FT	Aiflow CFM	LAT (DB) °F	HC MBtuh	HE MBtuh	Power kW	COP W/W	DH MBtuh	Aiflow CFM	LAT (DB) °F	TC MBtuh	SC MBtuh	HR MBtuh	Power kW	EER Btuh/W	DH MBtuh														
25	12.0	7.9	18.3	1760	87.0	32.4	21.0	3.34	2.84	8.3	Operation Not Recommended																					
				1900	85.8	32.5	21.1	3.34	2.85	8.0																						
30	6.0	2.8	6.4	1760	87.3	32.9	21.6	3.30	2.92	8.1																						
				1900	86.1	33.0	21.7	3.29	2.94	7.8																						
	9.0	4.8	11.0	1760	88.2	34.5	23.2	3.32	3.05	8.2																						
				1900	86.9	34.6	23.3	3.31	3.06	8.0																						
12.0	7.1	16.4	1760	88.6	35.4	24.0	3.35	3.10	8.4																							
			1900	87.3	35.5	24.1	3.34	3.11	8.1																							
40	6.0	2.5	5.9	1760	90.4	38.7	27.3	3.34	3.40	8.4								1650	59.4	55.2	36.8	62.6	2.18	25.3	5.8							
				1900	88.9	38.8	27.4	3.34	3.41	8.1								1820	60.5	56.0	38.4	63.6	2.24	25.0	5.8							
	9.0	4.4	10.1	1760	91.4	40.6	29.2	3.37	3.54	8.6								Operation Not Recommended														
				1900	89.9	40.7	29.3	3.36	3.55	8.3																						
	12.0	6.5	15.1	1760	91.9	41.7	30.1	3.39	3.60	8.8																						
				1900	90.4	41.8	30.2	3.39	3.62	8.5																						
50	6.0	2.4	5.4	1760	93.6	44.9	33.2	3.42	3.84	9.0															1650	58.2	55.7	38.8	64.1	2.45	22.7	6.0
				1900	91.9	45.0	33.3	3.41	3.86	8.7															1820	59.4	56.5	40.6	65.1	2.52	22.4	6.0
	9.0	4.0	9.3	1760	94.8	47.1	35.3	3.44	4.01	9.3								1650	57.9	57.1	39.3	64.8	2.25	25.4	5.1							
				1900	93.0	47.2	35.5	3.44	4.02	9.0								1820	59.1	57.9	41.1	65.8	2.31	25.1	5.2							
	12.0	6.1	14.0	1760	95.4	48.3	36.4	3.47	4.07	9.6	1650	57.8	57.9	39.6	65.2	2.13	27.2	4.6														
				1900	93.6	48.4	36.6	3.47	4.09	9.2	1820	58.9	58.7	41.4	66.2	2.18	26.9	4.6														
60	6.0	2.2	5.1	1760	96.9	51.1	39.1	3.51	4.26	9.8	1650	58.1	54.9	39.1	64.4	2.77	19.8	7.4														
				1900	95.0	51.2	39.3	3.51	4.28	9.5	1820	59.2	55.7	40.8	65.4	2.84	19.6	7.4														
	9.0	3.8	8.7	1760	98.2	53.6	41.6	3.54	4.44	10.2	1650	57.8	56.3	39.6	65.0	2.54	22.1	6.4														
				1900	96.2	53.8	41.7	3.53	4.46	9.9	1820	59.0	57.1	41.3	66.0	2.61	21.9	6.4														
	12.0	5.6	13.0	1760	98.9	55.0	42.8	3.57	4.52	10.6	1650	57.6	57.1	39.9	65.3	2.40	23.8	5.8														
				1900	96.9	55.2	43.0	3.56	4.54	10.2	1820	58.8	57.9	41.7	66.3	2.47	23.5	5.8														
70	6.0	2.1	4.7	1760	100.2	57.4	45.1	3.61	4.66	10.8	1650	58.4	53.0	38.4	63.7	3.14	16.9	9.3														
				1900	98.0	57.5	45.2	3.61	4.68	10.5	1820	59.6	53.8	40.2	64.7	3.22	16.7	9.3														
	9.0	3.5	8.1	1760	101.7	60.2	47.8	3.64	4.85	11.4	1650	58.2	54.4	38.9	64.2	2.88	18.9	8.1														
				1900	99.4	60.4	48.0	3.63	4.87	11.0	1820	59.3	55.1	40.7	65.2	2.95	18.7	8.2														
	12.0	5.3	12.2	1760	102.5	61.8	49.3	3.67	4.94	11.8	1650	58.0	55.1	39.2	64.4	2.72	20.3	7.4														
				1900	100.2	61.9	49.4	3.66	4.96	11.3	1820	59.1	55.9	41.0	65.4	2.79	20.1	7.4														
80	6.0	1.9	4.5	1760	103.5	63.6	51.0	3.70	5.04	12.0	1650	59.0	50.3	37.4	62.4	3.55	14.2	11.3														
				1900	101.1	63.7	51.1	3.69	5.06	11.6	1820	60.1	51.0	39.1	63.4	3.64	14.0	11.3														
	9.0	3.3	7.7	1760	105.1	66.7	54.0	3.73	5.25	12.6	1650	58.7	51.6	37.9	62.7	3.25	15.9	10.0														
				1900	102.6	66.9	54.2	3.72	5.27	12.2	1820	59.8	52.3	39.6	63.7	3.34	15.7	10.0														
	12.0	5.0	11.5	1760	106.0	68.4	55.6	3.76	5.34	13.1	1650	58.6	52.3	38.2	62.8	3.07	17.0	9.2														
				1900	103.4	68.6	55.8	3.75	5.36	12.6	1820	59.7	53.0	39.9	63.8	3.15	16.8	9.2														
90	6.0	1.8	4.2	1760	106.6	69.5	56.7	3.76	5.42	13.2	1650	59.7	46.9	36.3	60.6	4.00	11.7	13.4														
				1900	104.0	69.7	56.9	3.75	5.45	12.8	1820	60.7	47.6	37.9	61.6	4.11	11.6	13.5														
	9.0	3.2	7.3	1760	108.4	73.0	60.1	3.79	5.65	13.9	1650	59.4	48.1	36.7	60.6	3.67	13.1	12.0														
				1900	105.7	73.2	60.3	3.78	5.67	13.5	1820	60.5	48.8	38.4	61.6	3.77	12.9	12.0														
	12.0	4.7	10.9	1760	109.4	74.9	61.8	3.82	5.75	14.5	1650	59.2	48.8	37.0	60.6	3.47	14.1	11.0														
				1900	106.6	75.0	62.0	3.81	5.77	14.0	1820	60.3	49.4	38.7	61.6	3.56	13.9	11.1														
100	6.0	1.7	3.8	Operation Not Recommended							1650	60.4	43.1	34.9	58.5	4.51	9.5	15.7														
											1820	61.5	43.7	36.4	59.5	4.63	9.4	15.7														
	9.0	2.9	6.6								1650	60.2	44.2	35.3	58.3	4.14	10.7	14.1														
											1820	61.2	44.8	36.9	59.3	4.25	10.5	14.1														
12.0	4.3	10.0	1650								60.0	44.8	35.6	58.1	3.91	11.5	13.1															
			1820								61.1	45.4	37.2	59.1	4.01	11.3	13.1															
110	6.0	1.6	3.7								1650	61.4	39.1	33.2	56.4	5.07	7.7	18.1														
											1820	62.3	39.6	34.7	57.4	5.20	7.6	18.1														
	9.0	2.7	6.3								1650	61.1	40.1	33.6	55.9	4.65	8.6	16.3														
											1820	62.1	40.6	35.2	56.9	4.77	8.5	16.4														
	12.0	4.2	9.6								1650	61.0	40.6	33.9	55.6	4.40	9.2	15.2														
											1820	62.0	41.2	35.4	56.6	4.51	9.1	15.3														
120	6.0	1.5	3.5								1650	62.3	35.0	31.5	54.4	5.69	6.2	20.4														
											1820	63.3	35.5	32.9	55.4	5.83	6.1	20.4														
	9.0	2.6	6.1								1650	62.1	35.9	31.9	53.7	5.22	6.9	18.5														
											1820	63.0	36.4	33.3	54.7	5.35	6.8	18.6														
12.0	4.0	9.3	1650	62.0	36.4	32.2	53.2	4.93	7.4	17.3																						
			1820	62.9	36.9	33.6	54.2	5.06	7.3	17.4																						

NOTE: See page 23 for performance data parameters and guidelines.

ENGINEERING SPECIFICATIONS

ZS Models Performance Tables

Model ZS006, .5 Ton, w/PSC, Full Load Performance Data

EWT	Flow	WPD		COAX PSC Unit - Heating						COAX PSC Unit - Cooling												
		°F	GPM	PSI	FT	Aiflow	LAT (DB)	HC	HE	Power	COP	DH	Aiflow	LAT (DB)	TC	SC	HR	Power	EER	DH		
					CFM	°F	MBtuh	MBtuh	kW	W/W	MBtuh	CFM	°F	MBtuh	MBtuh	MBtuh	kW	Btuh/W	MBtuh			
25	1.5	1.5	3.5	225	88.6	4.5	3.0	0.46	2.91													
				275	85.7	4.7	3.2	0.44	3.09													
				325	83.6	4.8	3.3	0.44	3.19													
30	0.8	0.6	1.5	225	88.7	4.5	3.0	0.46	2.92													
				275	85.8	4.7	3.2	0.45	3.10													
				325	83.7	4.8	3.3	0.44	3.19													
	1.1	0.9	2.1	225	89.2	4.7	3.1	0.46	2.97													
				275	86.2	4.8	3.3	0.45	3.16													
				325	84.0	4.9	3.4	0.44	3.26													
1.5	1.4	3.2	225	89.7	4.8	3.2	0.46	3.03														
			275	86.7	4.9	3.4	0.45	3.22														
			325	84.4	5.0	3.5	0.44	3.33														
40	0.8	0.6	1.4	225	91.3	5.2	3.6	0.47	3.23			225	58.1	7.7	5.3	8.9	0.33	23.4				
				275	88.0	5.3	3.8	0.46	3.43			275	60.3	8.1	5.8	9.2	0.33	24.3				
				325	85.5	5.4	3.9	0.45	3.54			325	62.0	8.3	6.3	9.5	0.34	24.8				
	1.1	0.9	2.0	225	91.8	5.3	3.7	0.47	3.28													
				275	88.4	5.5	3.9	0.46	3.49													
				325	85.9	5.6	4.0	0.45	3.61													
	1.5	1.3	3.0	225	92.4	5.4	3.8	0.47	3.36													
				275	88.9	5.6	4.0	0.46	3.57													
				325	86.3	5.7	4.2	0.46	3.68													
50	0.8	0.6	1.3	225	94.2	5.9	4.2	0.48	3.59			225	58.2	7.7	5.3	9.0	0.37	20.6				
				275	90.5	6.1	4.5	0.47	3.82			275	60.4	8.0	5.8	9.3	0.38	21.4				
				325	87.7	6.2	4.6	0.46	3.94			325	62.1	8.3	6.3	9.6	0.38	21.9				
	1.1	0.8	1.8	225	94.8	6.0	4.4	0.48	3.66			225	58.1	7.8	5.3	9.0	0.35	22.1				
				275	91.0	6.2	4.6	0.47	3.89			275	60.3	8.1	5.9	9.3	0.35	23.0				
				325	88.1	6.4	4.8	0.46	4.02			325	62.0	8.4	6.3	9.6	0.36	23.5				
	1.5	1.2	2.8	225	95.5	6.2	4.5	0.49	3.74			225	58.0	7.9	5.3	9.0	0.33	23.5				
				275	91.6	6.4	4.8	0.47	3.97			275	60.2	8.2	5.9	9.4	0.34	24.4				
				325	88.6	6.5	4.9	0.47	4.10			325	61.9	8.5	6.4	9.6	0.34	24.9				
60	0.8	0.5	1.2	225	97.5	6.7	5.0	0.49	3.98			225	59.0	7.3	5.1	8.8	0.42	17.5				
				275	93.2	6.9	5.3	0.48	4.23			275	61.0	7.7	5.6	9.1	0.42	18.2				
				325	90.1	7.0	5.4	0.47	4.37			325	62.7	7.9	6.1	9.4	0.43	18.6				
	1.1	0.8	1.7	225	98.1	6.8	5.2	0.49	4.06			225	58.8	7.4	5.1	8.8	0.40	18.8				
				275	93.8	7.1	5.4	0.48	4.32			275	60.9	7.8	5.7	9.1	0.40	19.6				
				325	90.5	7.2	5.6	0.47	4.46			325	62.6	8.0	6.1	9.4	0.40	19.9				
	1.5	1.1	2.6	225	98.9	7.0	5.3	0.50	4.15			225	58.7	7.5	5.2	8.8	0.38	20.0				
				275	94.5	7.3	5.6	0.48	4.41			275	60.8	7.8	5.7	9.1	0.38	20.8				
				325	91.1	7.4	5.8	0.48	4.55			325	62.5	8.1	6.1	9.4	0.38	21.2				
70	0.8	0.5	1.1	225	100.7	7.5	5.8	0.50	4.37			225	59.7	7.0	4.9	8.6	0.47	14.9				
				275	96.0	7.7	6.1	0.49	4.64			275	61.7	7.3	5.4	8.9	0.47	15.5				
				325	92.4	7.9	6.2	0.48	4.80			325	63.3	7.5	5.9	9.1	0.48	15.7				
	1.1	0.7	1.7	225	101.5	7.6	5.9	0.50	4.46			225	59.6	7.0	5.0	8.5	0.44	16.0				
				275	96.6	7.9	6.2	0.49	4.73			275	61.6	7.4	5.5	8.9	0.44	16.6				
				325	93.0	8.1	6.4	0.48	4.88			325	63.2	7.6	5.9	9.1	0.45	16.9				
	1.5	1.1	2.5	225	102.3	7.9	6.1	0.51	4.55			225	59.5	7.1	5.0	8.5	0.42	16.9				
				275	97.4	8.1	6.4	0.49	4.84			275	61.5	7.4	5.5	8.9	0.42	17.6				
				325	93.6	8.3	6.6	0.49	5.00			325	63.1	7.6	5.9	9.1	0.43	17.9				
80	0.8	0.5	1.1	225	103.8	8.2	6.5	0.51	4.74			225	60.3	6.6	4.8	8.4	0.52	12.7				
				275	98.6	8.5	6.8	0.50	5.03			275	62.3	6.9	5.3	8.7	0.52	13.2				
				325	94.7	8.7	7.0	0.49	5.19			325	63.8	7.1	5.7	8.9	0.53	13.4				
	1.1	0.7	1.6	225	104.7	8.4	6.7	0.51	4.82			225	60.2	6.7	4.8	8.3	0.49	13.6				
				275	99.3	8.7	7.0	0.50	5.13			275	62.2	7.0	5.3	8.6	0.49	14.1				
				325	95.3	8.9	7.2	0.49	5.29			325	63.7	7.2	5.7	8.9	0.50	14.4				
	1.5	1.0	2.4	225	105.6	8.7	6.9	0.51	4.93			225	60.1	6.7	4.8	8.3	0.47	14.4				
				275	100.1	9.0	7.2	0.50	5.24			275	62.1	7.0	5.3	8.6	0.47	15.0				
				325	96.0	9.1	7.4	0.50	5.40			325	63.6	7.2	5.7	8.9	0.47	15.3				
90	0.8	0.5	1.0	225	106.6	8.9	7.1	0.52	5.04			225	61.0	6.2	4.6	8.2	0.58	10.8				
				275	101.0	9.2	7.5	0.50	5.35			275	62.9	6.5	5.1	8.5	0.58	11.2				
				325	96.7	9.4	7.7	0.50	5.52			325	64.3	6.7	5.5	8.7	0.59	11.4				
	1.1	0.7	1.5	225	107.5	9.1	7.3	0.52	5.13			225	60.9	6.3	4.6	8.1	0.54	11.5				
				275	101.7	9.4	7.7	0.51	5.46			275	62.8	6.6	5.1	8.4	0.55	12.0				
				325	97.4	9.6	7.9	0.50	5.63			325	64.3	6.7	5.5	8.6	0.55	12.2				
	1.5	1.0	2.3	225	108.5	9.4	7.6	0.52	5.25			225	60.8	6.3	4.7	8.1	0.52	12.2				
				275	102.6	9.7	7.9	0.51	5.57			275	62.7	6.6	5.1	8.4	0.52	12.7				
				325	98.1	9.9	8.2	0.50	5.76			325	64.2	6.8	5.6	8.6	0.53	13.0				
100	0.8	0.4	1.0	225	61.8	5.7	4.4	7.9	0.64	9.0												
				275	63.6	6.0	4.9	8.2	0.64	9.4												
	1.1	0.6	1.4	225	65.0	6.2	5.3	8.4	0.65	9.5												
				275	61.7	5.8	4.5	7.8	0.60	9.6												
	1.5	0.9	2.1	225	63.5	6.0	4.9	8.1	0.60	10.0												
				275	64.9	6.2	5.3	8.3	0.61	10.2												
110	0.8	0.4	0.9	225	61.6	5.8	4.5	7.8	0.57	10.2												
				275	63.4	6.1	4.9	8.1	0.57	10.7												
				325	64.9	6.3	5.3	8.3	0.58	10.9												
	1.1	0.6	1.4	225	62.7	5.2	4.2	7.5	0.70	7.4												
				275	64.4	5.4	4.6	7.8	0.70	7.7												
				325	65.8	5.5	5.0	8.0	0.71	7.8												
	1.5	0.9	2.0	225	62.6	5.2	4.2	7.5	0.66	7.9												
				275	64.3	5.5	4.7	7.7	0.66	8.2												
				325	65.7	5.6	5.0	7.9	0.67	8.4												
120	0.8	0.4	0.9	225	62.5	5.3	4.2	7.4	0.63	8.4												
				275	64.3	5.5	4.7	7.7	0.63	8.7												
				325	65.6	5.7	5.0	7.8	0.64	8.9												
	1.1	0.6	1.3	225	63.2	4.7	4.1	7.3	0.76	6.1												
				275	64.9	4.9	4.5	7.5	0.77	6.3												
				325	66.2	5.0	4.8	7.7	0													

ZS Models Performance Tables
 Model ZS009, .75 Ton, w/PSC, Full Load Performance Data

EWT	Flow °F	WPD		COAX PSC Unit - Heating						COAX PSC Unit - Cooling											
		PSI	FT	Aiflow CFM	LAT (DB) °F	HC MBtuh	HE MBtuh	Power kW	COP W/W	DH MBtuh	Aiflow CFM	LAT (DB) °F	TC MBtuh	SC MBtuh	HR MBtuh	Power kW	EER Btuh/W	DH MBtuh			
25	2.3	3.1	7.1	300	90.7	6.7	4.5	0.65	3.02	Operation Not Recommended	300	57.6	11.1	7.3	12.7	0.46	24.2				
				350	88.2	6.9	4.7	0.63	3.18												
				400	86.3	7.0	4.9	0.62	3.30												
30	1.1	1.1	2.5	300	90.7	6.7	4.5	0.65	3.02		Operation Not Recommended	300	59.1	11.6	7.9	13.2	0.46	25.1			
				350	88.1	6.9	4.7	0.63	3.19												
				400	86.2	7.0	4.9	0.62	3.31												
	1.7	1.9	4.3	300	91.8	7.1	4.8	0.66	3.15												
				350	89.1	7.2	5.0	0.64	3.32												
				400	87.1	7.4	5.2	0.63	3.45												
2.3	2.8	6.5	300	92.4	7.3	5.0	0.67	3.20													
			350	89.7	7.4	5.2	0.65	3.38													
			400	87.6	7.6	5.4	0.64	3.51													
40	1.1	1.0	2.3	300	93.9	7.7	5.5	0.67	3.38	Operation Not Recommended	300	60.2	12.0	8.6	13.6	0.46	25.9				
				350	91.0	7.9	5.7	0.65	3.56												
				400	88.8	8.1	5.9	0.64	3.69												
	1.7	1.8	4.0	300	95.2	8.2	5.8	0.68	3.51												
				350	92.1	8.4	6.1	0.66	3.70												
				400	89.8	8.6	6.3	0.65	3.84												
	2.3	2.6	6.1	300	95.9	8.4	6.1	0.69	3.57												
				350	92.7	8.6	6.3	0.67	3.77												
				400	90.4	8.8	6.5	0.66	3.91												
	50	1.1	0.9	2.2	300	97.2	8.8	6.4	0.70		3.71	Operation Not Recommended	300	57.3	11.2	7.3	13.0	0.52	21.5		
					350	93.9	9.0	6.7	0.68		3.91										
					400	91.4	9.2	7.0	0.67		4.07										
1.7		1.6	3.8	300	98.7	9.3	6.9	0.71	3.86												
				350	95.2	9.5	7.2	0.69	4.07												
				400	92.5	9.7	7.4	0.68	4.23												
2.3		2.5	5.7	300	99.5	9.6	7.1	0.71	3.93												
				350	95.9	9.8	7.4	0.69	4.14												
				400	93.2	10.0	7.7	0.68	4.30												
60		1.1	0.9	2.1	300	100.6	9.9	7.5	0.72	4.04	Operation Not Recommended		300	58.0	10.7	7.1	12.7	0.59	18.2		
					350	96.8	10.1	7.8	0.70	4.26											
					400	94.0	10.4	8.0	0.69	4.42											
	1.7	1.5	3.6	300	102.3	10.5	8.0	0.73	4.20												
				350	98.3	10.7	8.3	0.71	4.43												
				400	95.3	10.9	8.6	0.70	4.60												
	2.3	2.3	5.3	300	103.2	10.8	8.2	0.74	4.28												
				350	99.1	11.0	8.6	0.72	4.51												
				400	96.1	11.3	8.9	0.71	4.68												
	70	1.1	0.8	1.9	300	104.1	11.0	8.5	0.74	4.35		Operation Not Recommended	300	58.9	10.1	6.8	12.4	0.66	15.3		
					350	99.9	11.3	8.8	0.72	4.59											
					400	96.7	11.6	9.1	0.71	4.77											
1.7		1.5	3.4	300	105.9	11.6	9.1	0.75	4.53												
				350	101.5	11.9	9.4	0.73	4.77												
				400	98.2	12.2	9.7	0.72	4.96												
2.3		2.2	5.1	300	107.0	12.0	9.4	0.76	4.61												
				350	102.4	12.2	9.7	0.74	4.86												
				400	99.0	12.5	10.0	0.73	5.05												
80		1.1	0.8	1.8	300	107.6	12.2	9.6	0.77	4.66	Operation Not Recommended		300	59.6	9.6	6.6	12.1	0.74	12.9		
					350	103.0	12.5	9.9	0.74	4.91											
					400	99.5	12.8	10.3	0.73	5.11											
	1.7	1.4	3.2	300	109.7	12.9	10.2	0.78	4.85												
				350	104.8	13.1	10.6	0.75	5.11												
				400	101.1	13.5	10.9	0.74	5.31												
	2.3	2.1	4.8	300	110.8	13.2	10.5	0.79	4.94												
				350	105.8	13.5	10.9	0.76	5.20												
				400	102.0	13.8	11.3	0.75	5.41												
	90	1.1	0.8	1.8	300	111.2	13.4	10.7	0.79	4.96		Operation Not Recommended	300	60.2	9.0	6.4	11.8	0.83	10.9		
					350	106.1	13.7	11.0	0.77	5.23											
					400	102.4	14.0	11.4	0.76	5.43											
1.7		1.3	3.1	300	113.5	14.1	11.4	0.80	5.16												
				350	108.1	14.4	11.8	0.78	5.44												
				400	104.1	14.7	12.1	0.77	5.65												
2.3		2.0	4.6	300	114.7	14.5	11.7	0.81	5.25												
				350	109.2	14.8	12.1	0.79	5.53												
				400	105.1	15.2	12.5	0.77	5.75												
100		1.1	0.7	1.6	300	111.2	13.4	10.7	0.79	4.96	Operation Not Recommended		300	61.0	8.4	6.2	11.5	0.92	9.1		
					350	106.1	13.7	11.0	0.77	5.23											
					400	102.4	14.0	11.4	0.76	5.43											
	1.7	1.2	2.8	300	113.5	14.1	11.4	0.80	5.16												
				350	108.1	14.4	11.8	0.78	5.44												
				400	104.1	14.7	12.1	0.77	5.65												
	2.3	1.8	4.2	300	114.7	14.5	11.7	0.81	5.25												
				350	109.2	14.8	12.1	0.79	5.53												
				400	105.1	15.2	12.5	0.77	5.75												
110	1.1	0.7	1.6	300	111.2	13.4	10.7	0.79	4.96	Operation Not Recommended	300	62.2	10.0	7.7	12.5	0.74	13.5				
				350	106.1	13.7	11.0	0.77	5.23												
				400	102.4	14.0	11.4	0.76	5.43												
	1.7	1.2	2.7	300	113.5	14.1	11.4	0.80	5.16												
				350	108.1	14.4	11.8	0.78	5.44												
				400	104.1	14.7	12.1	0.77	5.65												
	2.3	1.8	4.1	300	114.7	14.5	11.7	0.81	5.25												
				350	109.2	14.8	12.1	0.79	5.53												
				400	105.1	15.2	12.5	0.77	5.75												
120	1.1	0.7	1.5	300	111.2	13.4	10.7	0.79	4.96	Operation Not Recommended	300	62.8	6.9	5.6	10.7	1.12	6.1				
				350	106.1	13.7	11.0	0.77	5.23												
				400	102.4	14.0	11.4	0.76	5.43												
	1.7	1.1	2.6	300	113.5	14.1	11.4	0.80	5.16												
				350	108.1	14.4	11.8	0.78	5.44												
				400	104.1	14.7	12.1	0.77	5.65												
	2.3	1.7	4.0	300	114.7	14.5	11.7	0.81	5.25												
				350	109.2	14.8	12.1	0.79	5.53												
				400	105.1	15.2	12.5	0.77	5.75												

NOTE: See page 23 for performance data parameters and guidelines.

ENGINEERING SPECIFICATIONS

ZS Models Performance Tables

Model ZS012, 1 Ton, w/PSC, Full Load Performance Data

EWT	Flow	WPD		COAX PSC Unit - Heating						COAX PSC Unit - Cooling													
		°F	GPM	PSI	FT	Aiflow	LAT (DB)	HC	HE	Power	COP	DH	Aiflow	LAT (DB)	TC	SC	HR	Power	EER	DH			
					CFM	°F	MBtuh	MBtuh	kW	W/W	MBtuh	CFM	°F	MBtuh	MBtuh	MBtuh	kW	Btuh/W	MBtuh				
25	3.0	4.4	10.2	300	95.4	8.2	5.2	0.89	2.70														
				350	92.4	8.5	5.5	0.86	2.87														
				400	90.5	8.9	6.0	0.84	3.10														
30	1.5	1.6	3.6	300	95.6	8.3	5.3	0.89	2.73														
				350	92.5	8.5	5.6	0.86	2.90														
				400	90.7	8.9	6.1	0.84	3.13														
	2.3	2.8	6.5	300	96.4	8.6	5.5	0.90	2.78														
				350	93.3	8.8	5.8	0.87	2.96														
				400	91.4	9.2	6.3	0.85	3.20														
3.0	4.1	9.5	300	97.0	8.8	5.7	0.91	2.82															
			350	93.8	9.0	6.0	0.88	3.00															
			400	91.8	9.4	6.5	0.85	3.24															
40	1.5	1.4	3.3	300	99.1	9.4	6.3	0.93	2.98			300	56.6	11.9	7.6	14.0	0.63	18.9					
				350	95.6	9.7	6.6	0.90	3.17			350	58.5	12.3	8.1	14.5	0.63	19.6					
				400	93.5	10.1	7.2	0.87	3.41			400	60.1	12.9	8.6	15.1	0.64	20.3					
	2.3	2.6	6.0	300	100.0	9.7	6.5	0.94	3.04														
				350	96.4	10.0	6.9	0.91	3.23														
				400	94.2	10.5	7.5	0.88	3.49														
3.0	3.8	8.8	300	100.7	9.9	6.7	0.95	3.08															
			350	97.0	10.2	7.1	0.91	3.28															
			400	94.8	10.7	7.7	0.89	3.53															
50	1.5	1.3	3.1	300	102.8	10.6	7.3	0.97	3.22			300	56.5	12.0	7.6	14.4	0.69	17.5					
				350	98.9	10.9	7.7	0.93	3.43			350	58.4	12.5	8.2	14.9	0.69	18.1					
				400	96.5	11.5	8.4	0.91	3.70			400	60.0	13.1	8.6	15.5	0.70	18.8					
	2.3	2.4	5.6	300	103.8	11.0	7.6	0.98	3.29			300	56.4	12.1	7.6	14.3	0.65	18.6					
				350	99.8	11.3	8.0	0.94	3.50			350	58.3	12.6	8.2	14.8	0.65	19.2					
				400	97.4	11.8	8.7	0.92	3.78			400	59.9	13.2	8.7	15.4	0.66	20.0					
3.0	3.6	8.2	300	104.6	11.2	7.8	0.99	3.33			300	56.3	12.1	7.7	14.2	0.63	19.1						
			350	100.5	11.5	8.3	0.95	3.55			350	58.2	12.6	8.2	14.8	0.64	19.7						
			400	98.0	12.1	8.9	0.93	3.82			400	59.9	13.2	8.7	15.4	0.64	20.5						
60	1.5	1.3	2.9	300	106.4	11.8	8.4	1.00	3.45			300	57.3	11.6	7.3	14.2	0.76	15.3					
				350	102.1	12.1	8.8	0.97	3.67			350	59.2	12.0	7.9	14.6	0.76	15.8					
				400	99.5	12.7	9.5	0.94	3.96			400	60.7	12.6	8.3	15.2	0.77	16.4					
	2.3	2.3	5.3	300	107.6	12.2	8.7	1.01	3.52			300	57.3	11.6	7.4	14.1	0.72	16.2					
				350	103.1	12.5	9.2	0.98	3.75			350	59.1	12.1	7.9	14.6	0.72	16.8					
				400	100.4	13.1	9.9	0.95	4.04			400	60.7	12.7	8.4	15.2	0.73	17.4					
3.0	3.3	7.7	300	108.5	12.5	9.0	1.02	3.57			300	57.2	11.6	7.4	14.0	0.70	16.6						
			350	103.9	12.8	9.4	0.99	3.80			350	59.0	12.1	7.9	14.5	0.70	17.2						
			400	101.1	13.4	10.1	0.96	4.09			400	60.6	12.7	8.4	15.1	0.71	17.9						
70	1.5	1.2	2.7	300	109.7	12.9	9.3	1.04	3.64			300	58.2	11.0	7.1	13.9	0.84	13.2					
				350	104.9	13.2	9.8	1.00	3.87			350	59.9	11.5	7.6	14.4	0.84	13.6					
				400	102.1	13.9	10.5	0.97	4.17			400	61.4	12.0	8.0	14.9	0.85	14.2					
	2.3	2.2	5.0	300	110.9	13.3	9.7	1.05	3.71			300	58.1	11.1	7.1	13.8	0.79	14.0					
				350	106.0	13.6	10.2	1.01	3.95			350	59.9	11.5	7.6	14.3	0.80	14.5					
				400	103.1	14.3	10.9	0.98	4.26			400	61.4	12.1	8.1	14.8	0.80	15.0					
3.0	3.1	7.3	300	111.9	13.6	10.0	1.06	3.76			300	58.0	11.1	7.1	13.7	0.77	14.3						
			350	106.8	13.9	10.4	1.02	4.00			350	59.8	11.6	7.6	14.2	0.78	14.9						
			400	103.8	14.6	11.2	0.99	4.31			400	61.3	12.1	8.1	14.8	0.78	15.4						
80	1.5	1.1	2.6	300	112.1	13.6	10.0	1.06	3.78			300	58.6	10.6	6.9	13.7	0.93	11.4					
				350	107.1	14.0	10.5	1.02	4.02			350	60.4	11.0	7.4	14.2	0.93	11.8					
				400	104.0	14.7	11.3	0.99	4.34			400	61.8	11.5	7.8	14.7	0.94	12.3					
	2.3	2.0	4.7	300	113.5	14.1	10.4	1.07	3.86			300	58.6	10.6	6.9	13.6	0.88	12.1					
				350	108.3	14.5	10.9	1.03	4.10			350	60.3	11.1	7.4	14.1	0.88	12.5					
				400	105.1	15.2	11.7	1.01	4.43			400	61.8	11.6	7.9	14.6	0.89	13.0					
3.0	3.0	6.9	300	114.4	14.4	10.7	1.08	3.91			300	58.5	10.6	7.0	13.6	0.86	12.4						
			350	109.1	14.8	11.2	1.04	4.16			350	60.3	11.1	7.5	14.0	0.86	12.9						
			400	105.9	15.5	12.1	1.01	4.48			400	61.7	11.6	7.9	14.6	0.87	13.4						
90	1.5	1.1	2.5	300	113.4	14.1	10.4	1.07	3.87			300	58.9	10.2	6.8	13.7	1.03	10.0					
				350	108.2	14.5	10.9	1.03	4.11			350	60.6	10.6	7.3	14.2	1.03	10.3					
				400	105.1	15.2	11.7	1.00	4.44			400	62.1	11.1	7.7	14.7	1.04	10.7					
	2.3	1.9	4.5	300	114.8	14.5	10.8	1.08	3.94			300	58.8	10.3	6.9	13.6	0.97	10.6					
				350	109.5	14.9	11.4	1.04	4.20			350	60.6	10.7	7.4	14.0	0.98	10.9					
				400	106.2	15.7	12.2	1.01	4.52			400	62.0	11.2	7.8	14.6	0.99	11.4					
3.0	2.8	6.5	300	115.8	14.9	11.1	1.09	4.00			300	58.8	10.3	6.9	13.5	0.95	10.9						
			350	110.3	15.3	11.7	1.05	4.25			350	60.5	10.7	7.4	14.0	0.95	11.2						
			400	107.0	16.0	12.5	1.02	4.58			400	61.9	11.2	7.8	14.5	0.96	11.7						
100	1.5	1.0	2.2	300	112.1	13.6	10.0	1.06	3.78			300	59.2	9.8	6.7	13.7	1.14	8.6					
				350	107.1	14.0	10.5	1.02	4.02			350	60.9	10.2	7.2	14.1	1.14	9.0					
				400	104.0	14.7	11.3	0.99	4.34			400	62.3	10.7	7.6	14.6	1.15	9.3					
	2.3	1.8	4.1	300	113.5	14.1	10.4	1.07	3.86			300	59.2	9.9	6.8	13.5	1.07	9.2					
				350	108.3	14.5	10.9	1.03	4.10														

ZS Models Performance Tables

Model ZS015, 1.25 Ton, w/PSC, BPHE Full Load Performance Data

EWT	Flow °F GPM	WPD		BPHE PSC Unit - Heating							BPHE PSC Unit - Cooling										
		PSI	FT	Aiflow CFM	LAT (DB) °F	HC MBtuh	HE MBtuh	Power kW	COP WW	DH MBtuh	Aiflow CFM	LAT (DB) °F	TC MBtuh	SC MBtuh	HR MBtuh	Power kW	EER Btuh/W	DH MBtuh			
25	5.0	1.2	2.7	525	88.9	10.7	7.5	0.94	3.35	2.4	Operation Not Recommended	525	58.8	17.4	12.0	19.4	0.60	28.9	0.1		
				585	87.2	10.9	7.7	0.93	3.43	2.3											
				650	85.7	11.0	7.9	0.93	3.49	2.2											
30	3.8	0.8	1.8	525	89.8	11.2	8.0	0.95	3.48	2.5		Operation Not Recommended	650	61.1	18.1	13.3	20.2	0.62	29.5	0.1	
				585	88.1	11.4	8.2	0.94	3.56	2.4											
				650	86.5	11.6	8.4	0.94	3.63	2.3											
	4.5	1.0	2.3	525	90.2	11.4	8.2	0.95	3.54	2.5											
				585	88.4	11.6	8.4	0.94	3.62	2.4											
				650	86.8	11.8	8.6	0.94	3.68	2.3											
5.0	1.2	2.7	525	90.3	11.5	8.3	0.95	3.56	2.6												
			585	88.6	11.7	8.5	0.94	3.65	2.5												
			650	87.0	11.9	8.7	0.94	3.71	2.4												
40	3.8	0.8	1.7	525	92.7	12.9	9.6	0.97	3.89	2.8		Operation Not Recommended	525	58.8	17.4	12.0	19.4	0.60	28.9	0.1	
				585	90.8	13.1	9.8	0.97	3.98	2.7											
				650	89.0	13.3	10.0	0.96	4.05	2.6											
	4.5	1.0	2.2	525	93.2	13.1	9.8	0.97	3.95	2.9											
				585	91.2	13.4	10.1	0.97	4.05	2.8											
				650	89.3	13.6	10.3	0.97	4.12	2.7											
				525	93.3	13.2	9.9	0.98	3.98	2.9											
				585	91.3	13.5	10.2	0.97	4.08	2.8											
				650	89.5	13.7	10.4	0.97	4.15	2.7											
	50	3.8	0.7	1.7	525	95.7	14.6	11.2	1.00	4.28	3.2		Operation Not Recommended	525	58.5	17.6	12.2	19.8	0.66	26.7	0.5
					585	93.5	14.8	11.5	0.99	4.39	3.1										
					650	91.4	15.1	11.7	0.99	4.46	3.0										
4.5		0.9	2.1	525	96.2	14.9	11.4	1.00	4.36	3.3											
				585	93.9	15.1	11.7	0.99	4.47	3.2											
				650	91.9	15.3	12.0	0.99	4.54	3.0											
				525	96.4	15.0	11.6	1.00	4.38	3.3											
				585	94.1	15.2	11.9	1.00	4.49	3.2											
				650	92.0	15.5	12.1	0.99	4.57	3.1											
60		3.8	0.7	1.6	525	98.8	16.3	12.8	1.02	4.67	3.7	Operation Not Recommended		525	59.2	17.0	11.8	19.5	0.75	22.6	1.6
					585	96.3	16.6	13.1	1.02	4.79	3.6										
					650	94.0	16.8	13.4	1.01	4.87	3.4										
	4.5	0.9	2.1	525	99.3	16.6	13.1	1.03	4.75	3.8											
				585	96.8	16.9	13.5	1.02	4.87	3.6											
				650	94.5	17.2	13.7	1.02	4.95	3.5											
				525	99.6	16.8	13.3	1.03	4.78	3.8											
				585	97.0	17.1	13.6	1.02	4.90	3.7											
				650	94.7	17.3	13.8	1.02	4.98	3.5											
	70	3.8	0.7	1.6	525	101.9	18.1	14.5	1.05	5.05	4.2		Operation Not Recommended	525	60.0	16.2	11.4	19.1	0.85	19.0	2.5
					585	99.1	18.4	14.8	1.04	5.17	4.1										
					650	96.6	18.7	15.1	1.04	5.26	3.9										
4.5		0.9	2.0	525	102.5	18.4	14.8	1.05	5.13	4.3											
				585	99.7	18.8	15.2	1.05	5.26	4.1											
				650	97.1	19.0	15.5	1.04	5.35	4.0											
				525	102.8	18.6	15.0	1.05	5.17	4.4											
				585	99.9	18.9	15.3	1.05	5.29	4.2											
				650	97.3	19.2	15.6	1.04	5.39	4.1											
80		3.8	0.7	1.6	525	105.1	19.9	16.2	1.08	5.41	4.9	Operation Not Recommended		525	60.6	15.4	11.0	18.7	0.97	16.0	3.3
					585	102.0	20.2	16.6	1.07	5.54	4.7										
					650	99.3	20.5	16.9	1.07	5.64	4.5										
	4.5	0.9	2.0	525	105.7	20.3	16.6	1.08	5.51	4.9											
				585	102.7	20.6	17.0	1.07	5.64	4.8											
				650	99.8	20.9	17.3	1.07	5.74	4.6											
				525	106.0	20.4	16.7	1.08	5.54	5.0											
				585	102.9	20.8	17.1	1.07	5.68	4.8											
				650	100.1	21.1	17.4	1.07	5.77	4.7											
	90	3.8	0.7	1.6	525	108.3	21.7	18.0	1.10	5.77	5.6		Operation Not Recommended	525	61.2	14.6	10.7	18.3	1.09	13.4	4.1
					585	105.0	22.1	18.4	1.10	5.91	5.4										
					650	102.0	22.4	18.7	1.09	6.02	5.2										
4.5		0.8	2.0	525	109.1	22.1	18.4	1.11	5.87	5.7											
				585	105.7	22.6	18.8	1.10	6.01	5.4											
				650	102.6	22.9	19.1	1.10	6.12	5.3											
				525	109.4	22.3	18.5	1.11	5.91	5.7											
				585	106.0	22.7	19.0	1.10	6.05	5.5											
				650	102.8	23.1	19.3	1.10	6.16	5.3											
100		3.8	0.7	1.6	525	108.3	21.7	18.0	1.10	5.77	5.6	Operation Not Recommended		525	61.2	14.6	10.7	18.3	1.09	13.4	4.1
					585	105.0	22.1	18.4	1.10	5.91	5.4										
					650	102.0	22.4	18.7	1.09	6.02	5.2										
	4.5	0.9	2.0	525	109.1	22.1	18.4	1.11	5.87	5.7											
				585	105.7	22.6	18.8	1.10	6.01	5.4											
				650	102.6	22.9	19.1	1.10	6.12	5.3											
				525	109.4	22.3	18.5	1.11	5.91	5.7											
				585	106.0	22.7	19.0	1.10	6.05	5.5											
				650	102.8	23.1	19.3	1.10	6.16	5.3											
	110	3.8	0.7	1.6	525	108.3	21.7	18.0	1.10	5.77	5.6		Operation Not Recommended	525	61.2	14.6	10.7	18.3	1.09	13.4	4.1
					585	105.0	22.1	18.4	1.10	5.91	5.4										
					650	102.0	22.4	18.7	1.09	6.02	5.2										
4.5		0.9	2.0	525	109.1	22.1	18.4	1.11	5.87	5.7											
				585	105.7	22.6	18.8	1.10	6.01	5.4											
				650	102.6	22.9	19.1	1.10	6.12	5.3											
				525	109.4	22.3	18.5	1.11	5.91	5.7											
				585	106.0	22.7	19.0	1.10	6.05	5.5											
				650	102.8	23.1	19.3	1.10	6.16	5.3											
120		3.8	0.7	1.5	525	108.3	21.7	18.0	1.10	5.77	5.6	Operation Not Recommended		525	61.2	14.6	10.7	18.3	1.09	13.4	4.1
					585	105.0	22.1	18.4	1.10	5.91	5.4										
					650	102.0	22.4	18.7	1.09	6.02	5.2										
	4.5	0.8	1.9	525	109.1	22.1	18.4	1.11	5.87	5.7											
				585	105.7	22.6	18.8	1.10	6.01	5.4											
				650	102.6	22.9	19.1	1.10	6.12	5.3											
				525	109.4	22.3	18.5	1.11	5.91	5.7											
				585	106.0	22.7	19.0	1.10	6.05	5.5											
				650	102.8	23.1	19.3	1.10	6.16	5.3											

NOTE: See page 23 for performance data parameters and guidelines.

ENGINEERING SPECIFICATIONS

ZS Models Performance Tables

Model ZS015, 1.25 Ton, w/ECM, BPHE Full Load Performance Data

EWT	Flow	WPD		BPHE ECM Unit - Heating							BPHE ECM Unit - Cooling																																																																																										
		°F	GPM	PSI	FT	Aiflow CFM	LAT (DB) °F	HC MBtuh	HE MBtuh	Power kW	COP W/W	DH MBtuh	Aiflow CFM	LAT (DB) °F	TC MBtuh	SC MBtuh	HR MBtuh	Power kW	EER Btuh/W	DH MBtuh																																																																																	
25	5.0	1.2	2.8	430	91.1	9.8	6.9	0.85	3.40	2.5	Operation Not Recommended																																																																																										
				500	88.9	10.2	7.4	0.83	3.61	2.3																																																																																											
30	3.8	0.8	1.8	430	92.2	10.3	7.4	0.86	3.53	2.6											Operation Not Recommended																																																																																
				500	89.9	10.8	7.9	0.84	3.75	2.4																																																																																											
	4.5	1.0	2.3	430	92.6	10.5	7.6	0.86	3.58	2.6																					Operation Not Recommended																																																																						
				500	90.3	11.0	8.1	0.84	3.80	2.4																																																																																											
		5.0	1.1	2.7	430	92.8	10.6	7.7	0.86	3.60																																2.6	Operation Not Recommended																																																										
					500	90.5	11.0	8.2	0.85	3.83																																2.4																																																											
40	3.8	0.8	1.7	430	95.6	11.9	8.9	0.89	3.93	2.9																																430												56.0	16.9	11.2	18.6	0.49	34.6	0.1	Operation Not Recommended																																								
				500	92.9	12.4	9.4	0.87	4.18	2.7																																500												57.7	17.6	12.1	19.2	0.49	35.6	0.1																																									
	4.5	1.0	2.2	430	96.1	12.1	9.1	0.89	3.99	2.9																																Operation Not Recommended																																																											
				500	93.4	12.6	9.7	0.87	4.25	2.7																																																																																											
		5.0	1.1	2.6	430	96.3	12.2	9.2	0.89	4.02																																																											3.0	Operation Not Recommended																															
					500	93.6	12.7	9.7	0.87	4.28																																																											2.7																																
50	3.8	0.7	1.7	430	99.1	13.5	10.4	0.91	4.34	3.3																																																											430													55.6	17.1	11.3	19.0	0.55	30.9	0.6	Operation Not Recommended												
				500	96.1	14.1	11.0	0.89	4.61	3.0																																																											500													57.3	17.8	12.2	19.7	0.56	31.7	0.6													
	4.5	0.9	2.1	430	99.6	13.8	10.6	0.92	4.41	3.3																																																											430													55.5	17.1	11.4	19.0	0.55	31.4	0.5					Operation Not Recommended								
				500	96.6	14.3	11.3	0.90	4.69	3.1																																																											500													57.3	17.8	12.3	19.7	0.55	32.3	0.5													
		5.0	1.1	2.5	430	99.9	13.9	10.7	0.92	4.44																																																											3.4													430	55.5	17.2	11.4	19.0	0.54	31.8									0.5	Operation Not Recommended			
					500	96.8	14.5	11.4	0.90	4.72																																																											3.1													500	57.3	17.8	12.3	19.7	0.55	32.6									0.5				
60	3.8	0.7	1.6	430	102.7	15.2	12.0	0.94	4.74	3.8	430	56.3	16.5	11.0	18.7	0.64	25.9	1.6	Operation Not Recommended																																																																																		
				500	99.3	15.8	12.7	0.92	5.04	3.5	500	58.0	17.2	11.9	19.4	0.65	26.6	1.6																																																																																			
	4.5	0.9	2.1	430	103.3	15.5	12.2	0.94	4.82	3.8	430	56.3	16.5	11.0	18.7	0.63	26.4	1.5			Operation Not Recommended																																																																																
				500	99.8	16.1	13.0	0.92	5.12	3.5	500	58.0	17.2	11.9	19.4	0.64	27.1	1.5																																																																																			
		5.0	1.0	2.4	430	103.5	15.6	12.4	0.94	4.85	3.9	430	56.3	16.6	11.0	18.7	0.62	26.7							1.4	Operation Not Recommended																																																																											
					500	100.0	16.2	13.1	0.92	5.15	3.6	500	58.0	17.2	11.9	19.4	0.63	27.4							1.5																																																																												
70	3.8	0.7	1.6	430	106.3	16.9	13.6	0.96	5.12	4.3	430	57.2	15.8	10.6	18.3	0.74	21.4	2.4							Operation Not Recommended																																																																												
				500	102.5	17.6	14.3	0.95	5.45	4.0	500	58.8	16.4	11.4	18.9	0.75	22.0	2.5																																																																																			
	4.5	0.9	2.0	430	107.0	17.2	13.9	0.97	5.21	4.4	430	57.2	15.8	10.6	18.3	0.73	21.8	2.4															Operation Not Recommended																																																																				
				500	103.1	17.9	14.7	0.95	5.54	4.1	500	58.8	16.4	11.4	18.9	0.73	22.4	2.4																																																																																			
		5.0	1.0	2.4	430	107.3	17.3	14.0	0.97	5.24	4.4	430	57.2	15.8	10.6	18.3	0.72	22.0																			2.3	Operation Not Recommended																																																															
					500	103.4	18.0	14.8	0.95	5.58	4.1	500	58.8	16.4	11.4	18.9	0.73	22.6																			2.4																																																																
80	3.8	0.7	1.6	430	110.0	18.6	15.2	0.99	5.49	5.0	430	57.9	15.0	10.3	17.9	0.85	17.7	3.3																			Operation Not Recommended																																																																
				500	105.8	19.3	16.0	0.97	5.83	4.6	500	59.5	15.6	11.1	18.5	0.86	18.2	3.3																																																																																			
	4.5	0.9	2.0	430	110.7	18.9	15.5	0.99	5.58	5.0	430	57.9	15.0	10.3	17.9	0.84	18.0	3.2																											Operation Not Recommended																																																								
				500	106.5	19.7	16.4	0.97	5.93	4.7	500	59.5	15.6	11.1	18.5	0.85	18.5	3.3																																																																																			
		5.0	1.0	2.3	430	111.1	19.1	15.7	1.00	5.62	5.1	430	57.9	15.1	10.3	17.9	0.83	18.2																															3.1	Operation Not Recommended																																																			
					500	106.8	19.9	16.5	0.98	5.97	4.7	500	59.5	15.7	11.1	18.5	0.84	18.7																															3.2																																																				
90	3.8	0.7	1.6	430	113.7	20.3	16.8	1.02	5.82	5.7	430	58.5	14.2	10.0	17.5	0.97	14.6	4.1																															Operation Not Recommended																																																				
				500	109.2	21.2	17.7	1.00	6.19	5.3	500	60.1	14.8	10.8	18.2	0.99	15.0	4.2																																																																																			
	4.5	0.8	2.0	430	114.6	20.7	17.2	1.03	5.92	5.8	430	58.5	14.2	10.0	17.5	0.96	14.9	4.0	Operation Not Recommended																																																																																		
				500	109.9	21.6	18.1	1.00	6.29	5.3	500	60.0	14.8	10.8	18.1	0.97	15.3	4.1																																																																																			
		5.0	1.0	2.3	430	114.9	20.9	17.4	1.03	5.96	5.8	430	58.5	14.3	10.0	17.5	0.95	15.0			4.0	Operation Not Recommended																																																																															
					500	110.2	21.7	18.3	1.01	6.33	5.4	500	60.0	14.8	10.8	18.1	0.96	15.4			4.0																																																																																
100	3.8	0.7	1.6	430	113.7	20.3	16.8	1.02	5.82	5.7	430	58.5	14.2	10.0	17.5	0.97	14.6	4.1			Operation Not Recommended																																																																																
				500	109.2	21.2	17.7	1.00	6.19	5.3	500	60.1	14.8	10.8	18.2	0.99	15.0	4.2																																																																																			
	4.5	0.8	2.0	430	114.6	20.7	17.2	1.03	5.92	5.8	430	58.5	14.2	10.0	17.5	0.96	14.9	4.0							Operation Not Recommended																																																																												
				500	109.9	21.6	18.1	1.00	6.29	5.3	500	60.0	14.8	10.8	18.1	0.97	15.3	4.1																																																																																			
		5.0	1.0	2.3	430	114.9	20.9	17.4	1.03	5.96	5.8	430	58.5	14.3	10.0	17.5	0.95	15.0														4.0	Operation Not Recommended																																																																				
					500	110.2	21.7	18.3	1.01	6.33	5.4	500	60.0	14.8	10.8	18.1	0.96	15.4														4.0																																																																					
110	3.8	0.7	1.5	430	113.7	20.3	16.8	1.02	5.82	5.7	430	58.5	14.2	10.0	17.5	0.97	14.6	4.1														Operation Not Recommended																																																																					
				500	109.2	21.2	17.7	1.00	6.19	5.3	500	60.1	14.8	10.8	18.2	0.99	15.0	4.2																																																																																			
	4.5	0.8	1.9	430	114.6	20.7	17.2	1.03	5.92	5.8	430	58.5	14.2	10.0	17.5	0.96	14.9	4.0																			Operation Not Recommended																																																																
				500	109.9	21.6	18.1	1.00	6.29	5.3	500	60.0	14.8	10.8	18.1	0.97	15.3	4.1																																																																																			
		5.0	1.0	2.2	430	114.9	20.9	17.4	1.03	5.96	5.8	430	58.5	14.3	10.0	17.5	0.95	15.0																										4.0	Operation Not Recommended																																																								
					500	110.2	21.7	18.3	1.01	6.33	5.4	500	60.0	14.8	10.8	18.1	0.96	15.4																										4.0																																																									
120	3.8	0.7	1.5	430	113.7	20.3	16.8	1.02	5.82	5.7	430	58.5	14.2	10.0	17.5	0.97	14.6	4.1																										Operation Not Recommended																																																									
				500	109.2	21.2	17.7	1.00	6.19	5.3	500	60.1	14.8	10.8	18.2	0.99	15.0	4.2																																																																																			
	4.5	0.8	1.9	430	114.6	20.7	17.2	1.03	5.92	5.8	430	58.5	14.2	10.0	17.5	0.96	14.9	4.0																															Operation Not Recommended																																																				
				500	109.9	21.6	18.1	1.00	6.29	5.3	500	60.0	14.8	10.8	18.1	0.97	15.3	4.1																																																																																			
		5.0	1.0	2.2	430	114.9	20.9	17.4	1.03	5.96	5.8	430	58.5	14.3	10.0	17.5	0.95	15.0	4.0	Operation Not Recommended																																																																																	
					500	110.2	21.7	18.3	1.01	6.33	5.4	500	60.0	14.8	10.8	18.1	0.96	15.4	4.0																																																																																		

NOTE: See page 23 for performance data parameters and guidelines.

ZS Models Performance Tables

Model ZS015, 1.25 Ton, w/PSC, COAX Full Load Performance Data

EWT	Flow °F GPM	WPD		COAX PSC Unit - Heating						COAX PSC Unit - Cooling										
		PSI	FT	Aiflow CFM	LAT (DB) °F	HC MBtuh	HE MBtuh	Power kW	COP W/W	DH MBtuh	Aiflow CFM	LAT (DB) °F	TC MBtuh	SC MBtuh	HR MBtuh	Power kW	EER Btuh/W	DH MBtuh		
25	3.8	4.0	9.3	525	88.5	10.5	7.4	0.92	3.35	2.4	Operation Not Recommended	525	59.9	16.9	11.4	19.1	0.65	26.0	0.1	
				585	86.7	10.5	7.4	0.91	3.39	2.3										
				650	85.0	10.5	7.4	0.91	3.40	2.2										
30	1.9	1.4	3.2	525	88.7	10.6	7.5	0.92	3.38	2.5		Operation Not Recommended	650	62.0	17.5	12.6	19.8	0.67	26.2	0.1
				585	86.8	10.6	7.5	0.92	3.41	2.4										
				650	85.2	10.7	7.5	0.91	3.42	2.3										
	2.8	2.3	5.4	525	89.5	11.0	7.9	0.93	3.48	2.5										
				585	87.5	11.1	7.9	0.92	3.51	2.4										
				650	85.8	11.1	7.9	0.92	3.53	2.3										
3.8	3.6	8.4	525	90.1	11.4	8.2	0.93	3.58	2.6											
			585	88.1	11.4	8.3	0.93	3.61	2.5											
			650	86.3	11.4	8.3	0.92	3.63	2.4											
40	1.9	1.3	3.0	525	91.7	12.3	9.0	0.95	3.79	2.8		Operation Not Recommended	650	62.0	17.5	12.6	19.8	0.67	26.2	0.1
				585	89.5	12.3	9.1	0.94	3.82	2.7										
				650	87.6	12.3	9.1	0.94	3.84	2.6										
	2.8	2.1	5.0	525	92.5	12.8	9.5	0.96	3.90	2.9										
				585	90.2	12.8	9.5	0.95	3.94	2.8										
				650	88.3	12.8	9.6	0.95	3.96	2.7										
3.8	3.3	7.7	525	93.2	13.2	9.9	0.96	4.01	2.9											
			585	90.9	13.2	9.9	0.95	4.05	2.8											
			650	88.8	13.2	10.0	0.95	4.07	2.7											
50	1.9	1.2	2.7	525	94.6	14.0	10.6	0.98	4.18	3.2	Operation Not Recommended	650	62.0	17.5	12.6	19.8	0.67	26.2	0.1	
				585	92.1	14.0	10.7	0.97	4.22	3.1										
				650	90.0	14.0	10.7	0.97	4.25	3.0										
	2.8	2.0	4.6	525	95.6	14.5	11.1	0.99	4.31	3.3										
				585	93.0	14.5	11.2	0.98	4.35	3.2										
				650	90.7	14.6	11.2	0.98	4.37	3.0										
3.8	3.1	7.1	525	96.4	15.0	11.6	0.99	4.44	3.3											
			585	93.7	15.0	11.7	0.98	4.48	3.2											
			650	91.4	15.0	11.7	0.98	4.50	3.1											
60	1.9	1.1	2.5	525	97.6	15.6	12.2	1.00	4.57	3.7	Operation Not Recommended	650	62.0	17.5	12.6	19.8	0.67	26.2	0.1	
				585	94.8	15.7	12.3	0.99	4.62	3.6										
				650	92.4	15.7	12.3	0.99	4.64	3.4										
	2.8	1.8	4.2	525	98.7	16.3	12.8	1.01	4.71	3.8										
				585	95.8	16.3	12.9	1.00	4.76	3.6										
				650	93.3	16.3	12.9	1.00	4.78	3.5										
3.8	2.8	6.6	525	99.6	16.8	13.3	1.01	4.85	3.8											
			585	96.6	16.8	13.4	1.01	4.90	3.7											
			650	94.0	16.8	13.4	1.00	4.92	3.5											
70	1.9	1.0	2.3	525	100.6	17.4	13.9	1.03	4.96	4.2	Operation Not Recommended	650	62.0	17.5	12.6	19.8	0.67	26.2	0.1	
				585	97.5	17.4	13.9	1.02	5.01	4.1										
				650	94.8	17.4	13.9	1.02	5.03	3.9										
	2.8	1.7	3.9	525	101.8	18.0	14.5	1.04	5.11	4.3										
				585	98.6	18.1	14.6	1.03	5.16	4.1										
				650	95.8	18.1	14.6	1.02	5.18	4.0										
3.8	2.6	6.1	525	102.8	18.6	15.1	1.04	5.25	4.4											
			585	99.5	18.6	15.1	1.03	5.31	4.2											
			650	96.6	18.7	15.2	1.03	5.33	4.1											
80	1.9	1.0	2.2	525	103.6	19.1	15.5	1.05	5.34	4.9	Operation Not Recommended	650	62.0	17.5	12.6	19.8	0.67	26.2	0.1	
				585	100.2	19.1	15.6	1.04	5.39	4.7										
				650	97.3	19.1	15.6	1.04	5.42	4.5										
	2.8	1.6	3.7	525	105.0	19.8	16.2	1.06	5.50	4.9										
				585	101.4	19.9	16.3	1.05	5.56	4.8										
				650	98.3	19.9	16.3	1.05	5.58	4.6										
3.8	2.5	5.7	525	106.1	20.5	16.8	1.06	5.66	5.0											
			585	102.4	20.5	16.9	1.05	5.72	4.8											
			650	99.2	20.5	17.0	1.05	5.74	4.7											
90	1.9	0.9	2.1	525	106.7	20.8	17.2	1.07	5.72	5.6	Operation Not Recommended	650	62.0	17.5	12.6	19.8	0.67	26.2	0.1	
				585	103.0	20.8	17.2	1.06	5.78	5.4										
				650	99.7	20.9	17.3	1.05	5.80	5.2										
	2.8	1.5	3.5	525	108.1	21.6	18.0	1.08	5.89	5.7										
				585	104.3	21.7	18.0	1.07	5.95	5.4										
				650	100.9	21.7	18.1	1.06	5.98	5.3										
3.8	2.3	5.4	525	109.3	22.3	18.6	1.08	6.06	5.7											
			585	105.4	22.3	18.7	1.07	6.13	5.5											
			650	101.9	22.4	18.7	1.07	6.15	5.3											
100	1.9	0.8	1.9	525	63.0	12.8	9.6	17.4	1.35	9.5	5.0	Operation Not Recommended	650	62.0	17.5	12.6	19.8	0.67	26.2	0.1
				585	63.9	13.1	10.1	17.8	1.37	9.6	5.0									
				650	64.8	13.3	10.7	18.0	1.39	9.6	5.1									
	2.8	1.4	3.2	525	62.9	13.0	9.7	17.3	1.27	10.2	4.9									
				585	63.8	13.3	10.2	17.6	1.28	10.3	4.9									
				650	64.7	13.5	10.8	17.9	1.30	10.3	5.0									
3.8	2.2	5.0	525	62.8	13.1	9.7	17.2	1.22	10.7	4.8										
			585	63.7	13.4	10.3	17.6	1.24	10.8	4.9										
			650	64.6	13.6	10.8	17.9	1.26	10.8	4.9										
110	1.9	0.8	1.8	525	63.6	11.8	9.3	17.0	1.50	7.9	5.9	Operation Not Recommended	650	62.0	17.5	12.6	19.8	0.67	26.2	0.1
				585	64.4	12.1	9.8	17.3	1.52	8.0	5.9									
				650	65.2	12.3	10.4	17.6	1.54	8.0	6.0									
	2.8	1.3	3.0	525	63.4	12.0	9.4	16.8	1.41	8.5	5.8									
				585	64.3	12.3	9.9	17.1	1.43	8.6	5.9									
				650	65.1	12.5	10.4	17.4	1.45	8.6	5.9									
3.8	2.1	4.8	525	63.3	12.1	9.4	16.7	1.36	8.9	5.7										
			585	64.2	12.4	10.0	17.0	1.38	9.0	5.8										
			650	65.0	12.6	10.5	17.3	1.40	9.0	5.9										
120	1.9	0.7	1.7	525	64.2	10.9	8.9	16.5	1.66	6.5	6.8	Operation Not Recommended	650	62.0	17.5	12.6	19.8	0.67	26.2	0.1
				585	65.1	11.1	9.4	16.9	1.68	6.6	6.9									
				650	65.9	11.3	9.9	17.1	1.71	6.6	7.0									
	2.8	1.2	2.8	525	64.1	11.0	9.0	16.3	1.56	7.1	6.8									
				585	65.0	11.2	9.5	16.6	1.58	7.1	6.8									
				650	65.8	11.4	10.0	16.9	1.60	7.1	7.0									
3.8	1.9	4.5	525	64.0	11.1	9.0	16.2	1.50	7.4	6.7										
			585	64.9	11.3	9.5	16.5	1.52	7.4	6.8										
			650	65.7	11.5	10.1	16.8	1.55	7.5	6.9										

NOTE: See page 23 for performance data parameters and guidelines.

ENGINEERING SPECIFICATIONS

ZS Models Performance Tables

Model ZS015, 1.25 Ton, w/ECM, COAX Full Load Performance Data

EWT	Flow	WPD		COAX ECM Unit - Heating							COAX ECM Unit - Cooling																	
		PSI	FT	Aiflow CFM	LAT (DB) °F	HC MBtuh	HE MBtuh	Power kW	COP W/W	DH MBtuh	Aiflow CFM	LAT (DB) °F	TC MBtuh	SC MBtuh	HR MBtuh	Power kW	EER Btuh/W	DH MBtuh										
25	3.8	4.0	9.3	430	91.5	10.0	7.1	0.84	3.48	2.6	Operation Not Recommended	430	91.8	10.1	7.2	0.85	3.51	2.6	430	57.1	16.4	10.7	18.2	0.54	30.4	0.6		
				500	88.8	10.1	7.3	0.82	3.61	2.4																	500	58.8
30	1.9	1.4	3.2	430	91.8	10.1	7.2	0.85	3.51	2.6		Operation Not Recommended	430	92.7	10.5	7.6	0.85	3.62	2.7	430	93.4	10.9	8.0	0.86	3.72	2.7		
				500	89.0	10.3	7.4	0.83	3.64	2.4																	500	90.4
	2.8	2.3	5.4	430	92.7	10.5	7.6	0.85	3.62	2.7			430	97.2	12.6	9.6	0.89	4.17	3.1	430	97.2	12.6	9.6	0.89	4.17	3.1		
				500	89.8	10.7	7.8	0.84	3.75	2.5																	500	93.7
	3.8	3.6	8.4	430	93.4	10.9	8.0	0.86	3.72	2.7			430	97.2	12.6	9.6	0.89	4.17	3.1	430	97.2	12.6	9.6	0.89	4.17	3.1		
				500	90.4	11.0	8.2	0.84	3.86	2.6																	500	93.7
40	1.9	1.3	3.0	430	95.3	11.8	8.8	0.88	3.93	2.9		Operation Not Recommended	430	57.1	16.4	10.7	18.2	0.54	30.4	0.6	430	57.1	16.4	10.7	18.2	0.54	30.4	0.6
				500	92.1	11.9	9.0	0.86	4.08	2.7																		
	2.8	2.1	5.0	430	96.3	12.2	9.2	0.89	4.05	3.0			430	97.2	12.6	9.6	0.89	4.17	3.1	430	97.2	12.6	9.6	0.89	4.17	3.1		
				500	93.0	12.4	9.5	0.87	4.20	2.9																	500	93.7
	3.8	3.3	7.7	430	97.2	12.6	9.6	0.89	4.17	3.1			430	97.2	12.6	9.6	0.89	4.17	3.1	430	97.2	12.6	9.6	0.89	4.17	3.1		
				500	93.7	12.8	9.9	0.87	4.33	2.9																	500	93.7
50	1.9	1.2	2.7	430	98.9	13.4	10.3	0.90	4.35	3.3		Operation Not Recommended	430	57.2	16.1	10.6	18.2	0.62	25.9	1.4	430	57.2	16.1	10.6	18.2	0.62	25.9	1.4
				500	95.2	13.6	10.6	0.88	4.51	3.1																		
	2.8	2.0	4.6	430	100.0	13.9	10.8	0.91	4.48	3.5			430	57.0	16.3	10.7	18.3	0.58	28.2	1.0	430	57.0	16.3	10.7	18.3	0.58	28.2	1.0
				500	96.2	14.1	11.1	0.89	4.65	3.3																		
	3.8	3.1	7.1	430	101.0	14.4	11.3	0.92	4.61	3.6			430	56.9	16.5	10.7	18.4	0.56	29.7	0.7	430	56.9	16.5	10.7	18.4	0.56	29.7	0.7
				500	97.0	14.6	11.5	0.90	4.78	3.3																		
60	1.9	1.1	2.5	430	102.4	15.1	11.9	0.93	4.75	3.8	Operation Not Recommended	430	58.2	15.3	10.1	17.8	0.72	21.3	2.3	430	58.2	15.3	10.1	17.8	0.72	21.3	2.3	
				500	98.3	15.3	12.2	0.91	4.93	3.5																		500
	2.8	1.8	4.2	430	103.7	15.7	12.5	0.94	4.89	4.0		430	58.1	15.5	10.2	17.8	0.67	23.1	1.8	430	58.1	15.5	10.2	17.8	0.67	23.1	1.8	
				500	99.4	15.9	12.8	0.92	5.07	3.7																		500
	3.8	2.8	6.6	430	104.8	16.2	13.0	0.94	5.03	4.1		430	58.0	15.7	10.2	17.8	0.64	24.3	1.6	430	58.0	15.7	10.2	17.8	0.64	24.3	1.6	
				500	100.4	16.4	13.3	0.92	5.22	3.8																		500
70	1.9	1.0	2.3	430	106.0	16.7	13.5	0.95	5.15	4.3	Operation Not Recommended	430	59.2	14.5	9.7	17.3	0.83	17.4	3.1	430	59.2	14.5	9.7	17.3	0.83	17.4	3.1	
				500	101.4	17.0	13.8	0.93	5.34	4.0																		500
	2.8	1.7	3.9	430	107.5	17.4	14.1	0.96	5.30	4.5		430	59.1	14.7	9.7	17.3	0.77	19.0	2.7	430	59.1	14.7	9.7	17.3	0.77	19.0	2.7	
				500	102.7	17.7	14.4	0.94	5.50	4.3																		500
	3.8	2.6	6.1	430	108.7	18.0	14.7	0.97	5.45	4.7		430	58.9	14.8	9.8	17.4	0.74	20.0	2.4	430	58.9	14.8	9.8	17.4	0.74	20.0	2.4	
				500	103.8	18.2	15.0	0.95	5.66	4.4																		500
80	1.9	1.0	2.2	430	109.7	18.4	15.1	0.97	5.54	4.9	Operation Not Recommended	430	59.8	13.8	9.4	17.1	0.96	14.5	3.9	430	59.8	13.8	9.4	17.1	0.96	14.5	3.9	
				500	104.6	18.7	15.4	0.95	5.74	4.6																		500
	2.8	1.6	3.7	430	111.3	19.2	15.8	0.98	5.71	5.2		430	59.7	14.0	9.4	17.0	0.89	15.8	3.4	430	59.7	14.0	9.4	17.0	0.89	15.8	3.4	
				500	106.0	19.4	16.2	0.96	5.92	4.9																		500
	3.8	2.5	5.7	430	112.6	19.8	16.4	0.99	5.87	5.4		430	59.6	14.2	9.5	17.1	0.85	16.6	3.2	430	59.6	14.2	9.5	17.1	0.85	16.6	3.2	
				500	107.2	20.1	16.8	0.97	6.09	5.1																		500
90	1.9	0.9	2.1	430	113.3	20.1	16.7	0.99	5.93	5.6	Operation Not Recommended	430	60.2	13.2	9.2	17.0	1.09	12.1	4.7	430	60.2	13.2	9.2	17.0	1.09	12.1	4.7	
				500	107.8	20.4	17.1	0.97	6.15	5.2																		500
	2.8	1.5	3.5	430	115.1	20.9	17.5	1.00	6.11	5.9		430	60.0	13.4	9.3	16.9	1.02	13.2	4.2	430	60.0	13.4	9.3	16.9	1.02	13.2	4.2	
				500	109.3	21.2	17.9	0.98	6.34	5.6																		500
	3.8	2.3	5.4	430	116.5	21.6	18.2	1.01	6.28	6.2		430	59.9	13.5	9.3	16.9	0.97	13.9	4.0	430	59.9	13.5	9.3	16.9	0.97	13.9	4.0	
				500	110.6	21.9	18.6	0.99	6.52	5.8																		500
100	1.9	0.8	1.9	Operation Not Recommended	430	113.3	20.1	16.7	0.99	5.93	5.6	Operation Not Recommended	430	60.5	12.5	9.1	16.7	1.23	10.1	5.6								
					500	107.8	20.4	17.1	0.97	6.15	5.2		500	62.0	13.0	9.7	17.3	1.25	10.4	5.7								
	2.8	1.4	3.2		430	111.3	19.2	15.8	0.98	5.71	5.2		430	60.4	12.7	9.1	16.6	1.15	11.0	5.1	430	60.4	12.7	9.1	16.6	1.15	11.0	5.1
					500	106.0	19.4	16.2	0.96	5.92	4.9																	
	3.8	2.2	5.0		430	112.6	19.8	16.4	0.99	5.87	5.4		430	60.3	12.8	9.2	16.5	1.10	11.6	4.8	430	60.3	12.8	9.2	16.5	1.10	11.6	4.8
					500	107.2	20.1	16.8	0.97	6.09	5.1																	
110	1.9	0.8	1.8	Operation Not Recommended	430	113.3	20.1	16.7	0.99	5.93	5.6	Operation Not Recommended	430	61.1	11.6	8.8	16.3	1.39	8.4	6.5								
					500	107.8	20.4	17.1	0.97	6.15	5.2		500	62.5	12.0	9.4	16.8	1.41	8.6	6.7								
	2.8	1.3	3.0		430	115.1	20.9	17.5	1.00	6.11	5.9		430	61.0	11.7	8.8	16.1	1.29	9.1	6.0	430	61.0	11.7	8.8	16.1	1.29	9.1	6.0
					500	109.3	21.2	17.9	0.98	6.34	5.6																	
	3.8	2.1	4.8		430	116.5	21.6	18.2	1.01	6.28	6.2		430	60.8	11.8	8.9	16.1	1.24	9.6	5.7	430	60.8						

ZS Models Performance Tables

Model ZS017, 1.5 Ton, w/PSC, BPHE Full Load Performance Data

EWT	Flow *F GPM	WPD		BPHE PSC Unit - Heating							BPHE PSC Unit - Cooling									
		PSI	FT	Aiflow CFM	LAT (DB) *F	HC MBtuh	HE MBtuh	Power kW	COP W/W	DH MBtuh	Aiflow CFM	LAT (DB) *F	TC MBtuh	SC MBtuh	HR MBtuh	Power kW	EER Btuh/W	DH MBtuh		
25	5.0	1.3	3.0	500	92.0	11.9	7.8	1.20	2.91	3.6	Operation Not Recommended	500	57.7	18.5	12.0	21.1	0.77	24.2	1.1	
				600	88.9	12.2	8.2	1.17	3.07	3.2		600	59.7	19.3	13.2	22.0	0.78	24.9	1.1	
				685	86.8	12.4	8.5	1.15	3.17	3.0		685	61.1	19.7	14.0	22.4	0.78	25.2	1.1	
30	3.8	0.8	1.9	500	92.9	12.4	8.3	1.21	3.00	3.6		Operation Not Recommended	500	57.7	18.5	12.0	21.1	0.77	24.2	1.1
				600	89.7	12.7	8.7	1.18	3.17	3.3			600	59.7	19.3	13.2	22.0	0.78	24.9	1.1
				685	87.5	13.0	9.0	1.16	3.27	3.1			685	61.1	19.7	14.0	22.4	0.78	25.2	1.1
	4.5	1.0	2.4	500	93.4	12.7	8.5	1.21	3.05	3.6			500	57.7	18.5	12.0	21.1	0.77	24.2	1.1
				600	90.1	13.0	9.0	1.18	3.23	3.3			600	59.7	19.3	13.2	22.0	0.78	24.9	1.1
				685	87.9	13.2	9.3	1.17	3.33	3.1			685	61.1	19.7	14.0	22.4	0.78	25.2	1.1
5.0	1.2	2.8	500	93.7	12.8	8.6	1.22	3.08	3.7	500		57.7	18.5	12.0	21.1	0.77	24.2	1.1		
			600	90.3	13.2	9.1	1.18	3.26	3.4	600		59.7	19.3	13.2	22.0	0.78	24.9	1.1		
			685	88.1	13.4	9.4	1.17	3.36	3.2	685		61.1	19.7	14.0	22.4	0.78	25.2	1.1		
40	3.8	0.8	1.9	500	96.3	14.2	9.9	1.25	3.34	4.0		Operation Not Recommended	500	56.4	19.3	12.8	22.2	0.84	22.9	2.1
				600	92.5	14.6	10.5	1.21	3.53	3.6			600	58.5	20.2	13.9	23.1	0.85	23.6	2.1
				685	90.1	14.9	10.8	1.20	3.64	3.4			685	59.9	20.6	14.8	23.5	0.86	23.9	2.1
	4.5	1.0	2.3	500	96.9	14.5	10.2	1.25	3.40	4.1			500	56.4	19.4	12.8	22.2	0.83	23.3	2.0
				600	93.0	14.9	10.8	1.22	3.60	3.7			600	58.5	20.2	13.9	23.1	0.84	24.0	2.0
				685	90.5	15.2	11.1	1.20	3.70	3.5			685	59.9	20.7	14.8	23.6	0.85	24.3	2.0
5.0	1.2	2.7	500	97.2	14.7	10.4	1.25	3.43	4.1	500		56.4	19.4	12.8	22.2	0.83	23.5	1.9		
			600	93.3	15.1	10.9	1.22	3.63	3.7	600		58.5	20.2	13.9	23.1	0.84	24.2	1.9		
			685	90.8	15.4	11.3	1.20	3.74	3.5	685		59.9	20.7	14.8	23.6	0.84	24.5	1.9		
50	3.8	0.8	1.8	500	99.8	16.1	11.7	1.28	3.68	4.6	500	56.4	19.4	12.8	22.2	0.83	23.3	2.0		
				600	95.5	16.5	12.3	1.25	3.89	4.2	600	58.5	20.2	13.9	23.1	0.84	24.0	2.0		
				685	92.7	16.8	12.6	1.23	4.01	3.9	685	59.9	20.7	14.8	23.6	0.85	24.3	2.0		
	4.5	1.0	2.2	500	100.4	16.4	12.0	1.28	3.75	4.7	500	56.4	19.4	12.8	22.2	0.83	23.3	2.0		
				600	96.1	16.9	12.6	1.25	3.96	4.2	600	58.5	20.2	13.9	23.1	0.84	24.0	2.0		
				685	93.2	17.2	13.0	1.23	4.08	4.0	685	59.9	20.7	14.8	23.6	0.85	24.3	2.0		
5.0	1.1	2.6	500	100.8	16.6	12.2	1.29	3.78	4.8	500	56.4	19.4	12.8	22.2	0.83	23.5	1.9			
			600	96.4	17.1	12.8	1.25	4.00	4.3	600	58.5	20.2	13.9	23.1	0.84	24.2	1.9			
			685	93.5	17.4	13.2	1.24	4.12	4.0	685	59.9	20.7	14.8	23.6	0.84	24.5	1.9			
60	3.8	0.8	1.8	500	103.3	18.0	13.5	1.31	4.02	5.4	500	56.5	19.1	12.7	22.2	0.92	20.7	2.8		
				600	98.6	18.5	14.2	1.28	4.25	4.9	600	58.6	19.8	13.9	23.1	0.95	20.9	3.0		
				685	95.5	18.8	14.5	1.26	4.38	4.6	685	60.0	20.3	14.8	23.5	0.96	21.2	3.0		
	4.5	1.0	2.2	500	104.1	18.4	13.9	1.32	4.09	5.5	500	56.5	19.1	12.7	22.2	0.92	20.7	2.8		
				600	99.2	18.9	14.6	1.28	4.33	4.9	600	58.6	19.9	13.9	23.1	0.93	21.3	2.8		
				685	96.0	19.3	14.9	1.27	4.46	4.6	685	60.0	20.3	14.8	23.6	0.94	21.6	2.9		
5.0	1.1	2.5	500	104.5	18.6	14.1	1.32	4.13	5.5	500	56.5	19.1	12.7	22.2	0.92	20.8	2.7			
			600	99.5	19.1	14.8	1.28	4.37	5.0	600	58.6	19.9	13.9	23.1	0.93	21.5	2.8			
			685	96.3	19.5	15.2	1.27	4.51	4.7	685	60.0	20.3	14.8	23.5	0.94	21.7	2.8			
70	3.8	0.7	1.7	500	107.0	20.0	15.4	1.34	4.36	6.2	500	57.3	18.1	12.3	21.7	1.04	17.4	3.8		
				600	101.8	20.6	16.1	1.31	4.61	5.6	600	59.3	18.9	13.4	22.5	1.06	17.9	3.9		
				685	98.3	20.9	16.5	1.29	4.76	5.3	685	60.7	19.3	14.3	23.0	1.07	18.1	3.9		
	4.5	0.9	2.2	500	107.8	20.4	15.8	1.35	4.44	6.3	500	57.3	18.2	12.3	21.7	1.03	17.7	3.7		
				600	102.4	21.0	16.6	1.31	4.70	5.7	600	59.3	19.0	13.4	22.5	1.04	18.2	3.8		
				685	98.9	21.4	17.0	1.30	4.84	5.3	685	60.7	19.4	14.3	23.0	1.05	18.5	3.8		
5.0	1.1	2.5	500	108.3	20.7	16.1	1.35	4.48	6.4	500	57.3	18.2	12.3	21.7	1.02	17.8	3.6			
			600	102.8	21.3	16.8	1.32	4.74	5.8	600	59.3	19.0	13.4	22.5	1.03	18.4	3.7			
			685	99.3	21.6	17.2	1.30	4.89	5.4	685	60.7	19.4	14.3	23.0	1.05	18.6	3.7			
80	3.8	0.7	1.7	500	110.9	22.1	17.4	1.37	4.71	6.9	500	58.2	17.0	11.8	21.0	1.17	14.6	4.7		
				600	105.0	22.7	18.1	1.34	4.98	6.3	600	60.2	17.8	12.8	21.8	1.18	15.1	4.8		
				685	101.2	23.1	18.6	1.32	5.13	5.9	685	61.5	18.2	13.7	22.2	1.19	15.2	4.9		
	4.5	0.9	2.1	500	111.7	22.5	17.8	1.38	4.79	7.1	500	58.2	17.1	11.8	21.0	1.15	14.9	4.6		
				600	105.8	23.2	18.6	1.34	5.07	6.4	600	60.2	17.9	12.8	21.8	1.16	15.4	4.7		
				685	101.9	23.6	19.1	1.32	5.22	6.0	685	61.5	18.2	13.7	22.2	1.17	15.5	4.8		
5.0	1.1	2.5	500	112.2	22.8	18.1	1.38	4.84	7.2	500	58.2	17.1	11.8	21.0	1.14	15.0	4.5			
			600	106.2	23.5	18.9	1.34	5.12	6.5	600	60.2	17.9	12.8	21.8	1.16	15.5	4.6			
			685	102.3	23.9	19.3	1.33	5.27	6.1	685	61.5	18.2	13.7	22.2	1.17	15.6	4.7			
90	3.8	0.7	1.7	500	114.8	24.2	19.4	1.40	5.06	7.6	500	59.0	16.0	11.3	20.4	1.30	12.3	5.7		
				600	108.4	24.9	20.2	1.36	5.35	6.9	600	60.9	16.7	12.4	21.2	1.32	12.7	5.9		
				685	104.2	25.3	20.7	1.35	5.51	6.5	685	62.2	17.0	13.2	21.6	1.33	12.8	5.9		
	4.5	0.9	2.1	500	115.8	24.7	19.9	1.41	5.15	7.7	500	59.0	16.0	11.3	20.4	1.28	12.5	5.6		
				600	109.2	25.4	20.8	1.37	5.44	7.0	600	60.9	16.7	12.4	21.2	1.30	12.9	5.7		
				685	105.0	25.9	21.3	1.35	5.61	6.6	685	62.2	17.1	13.2	21.6	1.31	13.0	5.8		
5.0	1.1	2.4	500	116.3	25.0	20.2	1.41	5.20	7.8	500	59.0	16.0	11.3	20.4	1.27	12.6	5.5			
			600	109.7	25.7	21.0	1.37	5.49	7.1	600	60.9	16.7	12.4	21.1	1.29	13.0	5.6			
			685	105.4	26.2	21.5	1.36	5.66	6.7	685	62.2	17.1	13.2	21.5	1.30	13.1	5.7			
100	3.8	0.7	1.6	500	118.4	25.6	20.4	1.42	5.28	8.0	500	59.6	15.0	11.0	19.9	1.45	10.3	6.8		
				600	111.8	26.3	21.2	1.38	5.57	7.3	600	61.4	15.6	12.0	20.6	1.47	10.7	6.9		
				685	107.6	26.7	21.7	1.37	5.73	6.9	685	62.7	16.0	12.8	21.0	1.48	10.8	7.0		
	4.5	0.9	2.0	500	119.4	26.0	20.7	1.43	5.36	8.2	500	59.6	15.0	11.0	19.9	1.43	10.5	6.6		
				600	112.8	26.7	21.5	1.39	5.65	7.5	600	61.4	15.7	12.0	20.6	1.45	10.9	6.8		
				685	108.6	27.1	22.0	1.38	5.81	7.1	685	62.7	16.0	12.8	21.0	1.46	11.0	6.9		
5.0	1.0	2.3	500	120.9	26.3	21.0	1.44	5.40	8.4	500	59.6	15.0	11.0	19.9	1.42	10.6	6.5			
			600	114.3	27.0	21.8	1.40	5.69	7.7	600	61.4	15.7	12.0	20.6	1.44	10.9	6.6			
			685	110.1	27.4	22.3	1.39	5.85	7.3	685	62.7	16.0	12.8	21.0	1.45	11.1	6.7			
110	3.8	0.7	1.6	500	123.4	26.8	21.5	1.45	5.48	8.6	500	60.2	14.0	10.7	19.5	1.61	8.7	7.9		
				600	116.8	27.5	22.3	1.41	5.77	7.9	600	62.0	14.6	11.7	20.2	1.63	9.0	8.1		
				685	112.6	27.9</														

ENGINEERING SPECIFICATIONS

ZS Models Performance Tables

Model ZS017, 1.5 Ton, w/ECM, BPHE Full Load Performance Data

EWT	Flow °F	WPD		BPHE ECM Unit - Heating							BPHE ECM Unit - Cooling																		
		GPM	PSI	FT	Aiflow CFM	LAT (DB) °F	HC MBtuh	HE MBtuh	Power kW	COP W/W	DH MBtuh	Aiflow CFM	LAT (DB) °F	TC MBtuh	SC MBtuh	HR MBtuh	Power kW	EER Btuh/W	DH MBtuh										
25	5.0	1.3	3.0	500	91.0	11.4	7.8	1.04	3.20	3.3	Operation Not Recommended	500	56.7	19.0	12.6	21.1	0.61	31.2	1.3										
				620	87.6	11.8	8.3	1.01	3.41	3.2																			
30	3.8	0.8	1.9	500	91.9	11.9	8.3	1.05	3.30	3.4		500	59.3	19.9	13.9	22.1	0.63	31.6	1.3										
				620	88.4	12.3	8.8	1.02	3.52	3.2																			
	5.0	1.1	2.4	500	92.4	12.1	8.5	1.06	3.37	3.4		500	59.3	19.9	13.9	22.1	0.63	31.6	1.3										
				620	88.8	12.6	9.1	1.03	3.58	3.2																			
		1.2	2.8	500	92.7	12.3	8.7	1.06	3.40	3.5										500	59.3	19.9	13.9	22.1	0.63	31.6	1.3		
				620	89.0	12.7	9.2	1.03	3.62	3.3																			
40	3.8	0.8	1.9	500	95.3	13.7	10.0	1.09	3.69	3.8		Operation Not Recommended	500	56.7	19.0	12.6	21.1	0.61	31.2	1.3									
				620	91.2	14.2	10.6	1.06	3.92	3.6																			
	4.5	1.0	2.3	500	95.9	14.0	10.2	1.09	3.75	3.8			500	59.3	19.9	13.9	22.1	0.63	31.6	1.3									
				620	91.6	14.5	10.9	1.06	4.00	3.6																			
		1.2	2.7	500	96.2	14.1	10.4	1.09	3.79	3.9											500	59.3	19.9	13.9	22.1	0.63	31.6	1.3	
				620	91.9	14.7	11.0	1.06	4.04	3.7																			
50	3.8	0.8	1.8	500	98.7	15.5	11.7	1.12	4.07	4.3			Operation Not Recommended	500	55.4	19.8	13.3	22.2	0.69	28.8	2.1								
				620	94.0	16.1	12.4	1.09	4.32	4.1																			
	4.5	1.0	2.3	500	99.4	15.9	12.0	1.12	4.14	4.4				500	58.1	20.8	14.7	23.2	0.71	29.3	2.1								
				620	94.6	16.5	12.7	1.10	4.41	4.1																			
		1.1	2.6	500	99.7	16.1	12.2	1.13	4.18	4.5												500	55.4	19.9	13.3	22.2	0.67	29.6	1.9
				620	94.9	16.7	12.9	1.10	4.45	4.2																			
60	3.8	0.8	1.8	500	102.3	17.5	13.5	1.15	4.44	5.0	Operation Not Recommended			500	55.5	19.5	13.2	22.2	0.78	25.0	2.9								
				620	97.0	18.1	14.3	1.12	4.73	4.7																			
	4.5	1.0	2.2	500	103.0	17.8	13.9	1.16	4.52	5.1				500	58.2	20.5	14.6	23.2	0.81	25.4	3.0								
				620	97.6	18.5	14.7	1.13	4.81	4.8																			
		1.1	2.6	500	103.4	18.1	14.1	1.16	4.57	5.2												500	55.5	19.6	13.2	22.2	0.76	25.7	2.7
				620	98.0	18.7	14.9	1.13	4.86	4.9																			
70	3.8	0.7	1.7	500	106.0	19.4	15.4	1.18	4.82	5.8				Operation Not Recommended	500	56.3	18.6	12.8	21.7	0.89	21.0	3.9							
				620	100.1	20.2	16.2	1.15	5.12	5.5																			
	4.5	0.9	2.2	500	106.8	19.9	15.8	1.19	4.90	5.9		500			58.9	19.6	14.1	22.7	0.90	21.8	3.8								
				620	100.8	20.6	16.7	1.16	5.22	5.6																			
		1.1	2.5	500	107.3	20.1	16.1	1.19	4.95	6.0												500	56.3	18.7	12.8	21.7	0.87	21.6	3.6
				620	101.2	20.9	16.9	1.16	5.27	5.7																			
80	3.8	0.7	1.7	500	109.8	21.5	17.4	1.21	5.19	6.5		Operation Not Recommended			500	57.3	17.6	12.3	21.0	1.01	17.4	4.8							
				620	103.3	22.3	18.3	1.18	5.53	6.2																			
	4.5	0.9	2.1	500	110.7	22.0	17.8	1.22	5.29	6.7			500		59.8	18.4	13.5	21.9	1.04	17.7	4.9								
				620	104.0	22.8	18.7	1.19	5.63	6.3																			
		1.1	2.5	500	111.2	22.2	18.1	1.22	5.34	6.8												500	57.3	17.6	12.3	21.0	0.99	17.9	4.6
				620	104.4	23.1	19.0	1.19	5.68	6.4																			
90	3.8	0.7	1.7	500	113.7	23.6	19.4	1.24	5.57	7.1			Operation Not Recommended		500	58.1	16.5	11.8	20.4	1.14	14.4	5.8							
				620	106.6	24.5	20.4	1.21	5.93	6.7																			
	4.5	0.9	2.1	500	114.7	24.1	19.9	1.25	5.67	7.3	500				60.5	17.3	13.0	21.3	1.18	14.6	5.9								
				620	107.4	25.0	20.9	1.22	6.04	6.8																			
		1.1	2.5	500	115.2	24.4	20.2	1.25	5.73	7.4												500	58.1	16.5	11.8	20.4	1.12	14.8	5.6
				620	107.8	25.3	21.2	1.22	6.10	7.0																			
100	3.8	0.7	1.6	500	113.7	23.6	19.4	1.24	5.57	7.1	Operation Not Recommended				500	58.1	16.5	11.8	20.4	1.14	14.4	5.8							
				620	106.6	24.5	20.4	1.21	5.93	6.7																			
	4.5	0.9	2.0	500	114.7	24.1	19.9	1.25	5.67	7.3				500	60.5	17.3	13.0	21.3	1.18	14.6	5.9								
				620	107.4	25.0	20.9	1.22	6.04	6.8																			
		1.0	2.4	500	115.2	24.4	20.2	1.25	5.73	7.4												500	58.1	16.5	11.8	20.4	1.12	14.8	5.6
				620	107.8	25.3	21.2	1.22	6.10	7.0																			
110	3.8	0.7	1.6	500	113.7	23.6	19.4	1.24	5.57	7.1				Operation Not Recommended	500	58.1	16.5	11.8	20.4	1.14	14.4	5.8							
				620	106.6	24.5	20.4	1.21	5.93	6.7																			
	4.5	0.9	2.0	500	114.7	24.1	19.9	1.25	5.67	7.3		500			60.5	17.3	13.0	21.3	1.18	14.6	5.9								
				620	107.4	25.0	20.9	1.22	6.04	6.8																			
		1.0	2.4	500	115.2	24.4	20.2	1.25	5.73	7.4												500	58.1	16.5	11.8	20.4	1.12	14.8	5.6
				620	107.8	25.3	21.2	1.22	6.10	7.0																			
120	3.8	0.7	1.6	500	113.7	23.6	19.4	1.24	5.57	7.1		Operation Not Recommended			500	58.1	16.5	11.8	20.4	1.14	14.4	5.8							
				620	106.6	24.5	20.4	1.21	5.93	6.7																			
	4.5	0.9	2.0	500	114.7	24.1	19.9	1.25	5.67	7.3			500		60.5	17.3	13.0	21.3	1.18	14.6	5.9								
				620	107.4	25.0	20.9	1.22	6.04	6.8																			
		1.0	2.4	500	115.2	24.4	20.2	1.25	5.73	7.4												500	58.1	16.5	11.8	20.4	1.12	14.8	5.6
				620	107.8	25.3	21.2	1.22	6.10	7.0																			

NOTE: See page 23 for performance data parameters and guidelines.

ZS Models Performance Tables

Model ZS017, 1.5 Ton, w/PSC, COAX Full Load Performance Data

EWT °F	Flow GPM	WPD		COAX PSC Unit - Heating							COAX PSC Unit - Cooling																
		PSI	FT	Aiffow CFM	LAT (DB) °F	HC MBtuh	HE MBtuh	Power kW	COP WW	DH MBtuh	Aiffow CFM	LAT (DB) °F	TC MBtuh	SC MBtuh	HR MBtuh	Power kW	EER Btuh/W	DH MBtuh									
25	4.5	5.2	11.9	500	92.3	12.0	8.1	1.16	3.03	3.2	Operation Not Recommended	500	57.6	18.7	12.1	21.7	0.85	22.0	2.2								
				600	88.9	12.2	8.4	1.13	3.16	2.9		600	59.3	19.7	13.4	22.6	0.86	23.0	2.2								
				685	86.6	12.3	8.4	1.12	3.20	2.7		685	60.5	20.3	14.4	23.3	0.87	23.4	2.2								
30	2.3	1.6	3.7	500	92.5	12.2	8.2	1.17	3.06	3.2		Operation Not Recommended	500	57.6	18.7	12.1	21.7	0.85	22.0	2.2							
				600	89.1	12.4	8.5	1.14	3.19	2.9																	
				685	86.8	12.4	8.6	1.13	3.23	2.8																	
	3.4	3.0	6.9	500	93.4	12.7	8.7	1.17	3.16	3.3			600	59.3	19.7	13.4	22.6	0.86	23.0	2.2							
				600	89.8	12.9	9.0	1.14	3.29	3.1																	
				685	87.4	12.9	9.0	1.13	3.34	2.9																	
	4.5	4.8	11.0	500	94.1	13.0	9.0	1.18	3.23	3.4			685	60.5	20.3	14.4	23.3	0.87	23.4	2.2							
				600	90.4	13.2	9.3	1.15	3.38	3.1																	
				685	87.9	13.3	9.4	1.14	3.42	3.0																	
40	2.3	1.5	3.4	500	96.0	14.0	9.9	1.20	3.43	3.6		Operation Not Recommended	500	57.6	18.7	12.1	21.7	0.85	22.0	2.2							
				600	92.0	14.2	10.3	1.17	3.58	3.4			600	59.3	19.7	13.4	22.6	0.86	23.0	2.2							
				685	89.3	14.3	10.4	1.16	3.62	3.2			685	60.5	20.3	14.4	23.3	0.87	23.4	2.2							
	3.4	2.8	6.4	500	97.0	14.6	10.5	1.21	3.55	3.8			600	59.3	19.7	13.4	22.6	0.86	23.0	2.2							
				600	92.9	14.8	10.8	1.18	3.70	3.5																	
				685	90.1	14.9	10.9	1.16	3.75	3.4																	
	4.5	4.4	10.1	500	97.8	15.0	10.9	1.21	3.63	3.8			685	60.5	20.3	14.4	23.3	0.87	23.4	2.2							
				600	93.5	15.3	11.2	1.18	3.79	3.6																	
				685	90.7	15.3	11.3	1.17	3.84	3.4																	
50	2.3	1.4	3.2	500	99.5	15.9	11.7	1.23	3.79	4.0	Operation Not Recommended	500	57.1	18.9	12.4	22.1	0.95	20.0	2.6								
				600	95.0	16.2	12.1	1.20	3.95	3.8		600	58.9	19.9	13.7	23.1	0.95	20.8	2.6								
				685	91.9	16.2	12.2	1.19	4.01	3.6		685	60.0	20.5	14.8	23.8	0.97	21.2	2.6								
	3.4	2.6	5.9	500	100.7	16.6	12.4	1.24	3.92	4.2		600	56.9	19.2	12.5	22.3	0.89	21.6	2.3								
				600	96.0	16.8	12.7	1.21	4.09	3.9										600	58.7	20.2	13.8	23.3	0.90	22.6	2.3
				685	92.8	16.9	12.8	1.20	4.15	3.7										685	59.8	20.9	14.9	24.0	0.91	23.0	2.2
	4.5	4.1	9.4	500	101.6	17.0	12.8	1.24	4.02	4.3		600	56.9	19.3	12.5	22.2	0.86	22.4	2.1								
				600	96.7	17.3	13.2	1.21	4.19	4.0										600	58.7	20.3	13.8	23.3	0.87	23.3	2.1
				685	93.5	17.4	13.3	1.20	4.24	3.8										685	59.8	21.0	14.9	24.0	0.88	23.7	2.1
60	2.3	1.3	3.0	500	103.1	17.9	13.6	1.26	4.15	4.5	Operation Not Recommended	500	57.6	18.3	12.1	21.9	1.06	17.3	3.2								
				600	98.0	18.1	14.0	1.23	4.32	4.2		600	59.3	19.2	13.4	22.8	1.06	18.0	3.3								
				685	94.6	18.2	14.1	1.22	4.38	4.0		685	60.5	19.8	14.4	23.5	1.08	18.3	3.3								
	3.4	2.4	5.5	500	104.4	18.6	14.3	1.27	4.29	4.7		600	57.4	18.6	12.2	22.0	0.99	18.7	2.8								
				600	99.2	18.9	14.7	1.24	4.47	4.4										600	59.1	19.5	13.5	23.0	1.00	19.5	2.9
				685	95.6	19.0	14.8	1.23	4.53	4.2										685	60.3	20.2	14.6	23.6	1.02	19.9	2.9
	4.5	3.8	8.7	500	105.4	19.1	14.8	1.28	4.39	4.9		600	57.4	18.6	12.2	21.9	0.96	19.4	2.7								
				600	100.0	19.4	15.2	1.24	4.58	4.5										600	59.1	19.6	13.5	22.9	0.97	20.2	2.7
				685	96.3	19.5	15.3	1.23	4.64	4.3										685	60.3	20.2	14.6	23.6	0.99	20.5	2.7
70	2.3	1.2	2.8	500	106.7	19.8	15.4	1.29	4.50	5.1	Operation Not Recommended	500	58.4	17.4	11.7	21.4	1.18	14.7	4.0								
				600	101.1	20.2	15.9	1.26	4.69	4.8		600	60.1	18.3	12.9	22.3	1.19	15.4	4.1								
				685	97.3	20.2	16.0	1.25	4.75	4.6		685	61.2	18.9	13.9	23.0	1.21	15.6	4.1								
	3.4	2.2	5.2	500	108.2	20.7	16.2	1.30	4.65	5.4		600	58.2	17.7	11.8	21.5	1.11	16.0	3.6								
				600	102.4	21.0	16.6	1.27	4.85	5.0										600	59.9	18.6	13.0	22.4	1.12	16.6	3.6
				685	98.5	21.1	16.8	1.26	4.91	4.8										685	61.0	19.2	14.1	23.1	1.13	16.9	3.6
	4.5	3.6	8.2	500	109.3	21.2	16.8	1.31	4.76	5.5		600	58.2	17.7	11.8	21.4	1.08	16.5	3.4								
				600	103.3	21.6	17.2	1.27	4.96	5.2										600	59.9	18.6	13.0	22.3	1.08	17.2	3.4
				685	99.3	21.6	17.3	1.26	5.03	4.9										685	61.0	19.3	14.1	23.0	1.10	17.5	3.4
80	2.3	1.1	2.6	500	110.5	21.8	17.3	1.33	4.83	5.8	Operation Not Recommended	500	59.1	16.5	11.3	21.0	1.31	12.6	4.8								
				600	104.2	22.2	17.8	1.29	5.04	5.4		600	60.7	17.3	12.5	21.9	1.32	13.1	4.9								
				685	100.1	22.3	17.9	1.28	5.11	5.2		685	61.8	17.9	13.5	22.5	1.34	13.3	5.0								
	3.4	2.1	4.9	500	112.1	22.7	18.2	1.33	5.00	6.1		600	58.9	16.8	11.4	21.0	1.24	13.6	4.4								
				600	105.7	23.1	18.7	1.30	5.21	5.7										600	60.5	17.7	12.6	21.9	1.25	14.2	4.4
				685	101.3	23.2	18.8	1.29	5.28	5.4										685	61.6	18.2	13.6	22.5	1.26	14.4	4.5
	4.5	3.4	7.7	500	113.3	23.4	18.8	1.34	5.12	6.2		600	58.9	16.8	11.4	20.9	1.20	14.1	4.1								
				600	106.7	23.8	19.3	1.31	5.33	5.8										600	60.5	17.7	12.6	21.8	1.21	14.7	4.2
				685	102.2	23.8	19.4	1.29	5.41	5.5										685	61.6	18.3	13.6	22.5	1.23	14.9	4.2
90	2.3	1.1	2.5	500	114.2	23.9	19.3	1.36	5.16	6.4	Operation Not Recommended	500	59.6	15.7	11.0	20.6	1.46	10.8	5.7								
				600	107.5	24.3	19.8	1.32	5.38	6.0		600	61.2	16.5	12.2	21.5	1.47	11.2	5.8								
				685	102.9	24.4	19.9	1.31	5.45	5.8		685	62.2	17.0	13.2	22.1	1.49	11.4	5.9								
	3.4	2.0	4.6	500	116.1	24.9	20.2	1.37	5.34	6.6		600	59.4	16.0	11.1	20.5	1.33	12.0	4.9								
				600	109.0	25.3	20.7	1.33	5.56	6.2										600	61.0	16.8	12.3	21.5	1.38	12.2	5.3
				685	104.3	25.4	20.9	1.32	5.64	6.0										685	62.1	17.3	13.3	22.1	1.40	12.4	5.3
	4.5	3.2	7.3	500	117.4	25.6	20.9	1.37	5.47	6.6		600	59.4	16.0	11.1	20.5	1.33	12.0	4.9								
				600	110.1	26.0	21.4	1.34	5.70	6.3										600	61.0	16.8	12.3	21.4	1.34	12.6	5.0
				685	105.2	26.1	21.6	1.32	5.77	6.0										685	62.1	17.4	13.3	22.0	1.36	12.8	5.1
100	2.3	0.9	2.2	500	118.2	26.2	21.6	1.37	5.51	6.8	Operation Not Recommended	500	60.0	14.9	10.8	20.3	1.61	9.2	6.6								
				600	111.1	26.6	22.1	1.33	5.73	6.4		600	61.6	15.6	11.9	21.1	1.62	9.6	6.7								
				685	106.1	26.7	22.2	1.32	5.80	6.1		685	62.6	16.1	12.9	21.7	1.65	9.8	6.8								
	3.4	1.8	4.2	500	119.1	26.9	22.1	1.37	5.45	6.8		600	59.8	15.1	10.9	20.3	1.51	10.0	6.0								
				600	112.0	27.3	22.6	1.33	5.67	6.4										600	61.4	15.9	12.0	21.1	1.52	10.4	6.2
				685	107.0	27.4	22.7	1.32	5.74	6.1										685	62.4	16.4	13.0	21.7	1.55	10.6	6.2
	4.5	3.0	6.9	500	120.1	27.1	22.3	1.37	5.39	6.8		600	59.8	15.2	10.9	20.2	1.47	10.4	5.8								
				600	113.0	27.5	22.8	1.33	5.61	6.4										600	61.4	16.0	12.0	21.0	1.48	10.8	5.9
				685	108.0	27.6	22.9	1.32	5.68	6.1										685	62.4	16.5	13.0	21.6	1.50	11.0	6.0
110	2.3	0.9	2.0	500	121.1	27.2	22.4	1.37	5.43	6.9	Operation Not Recommended	500	60.5	13.9	10.5	19.9	1.76	7.9	7.5								
				600	114.0	27.6	22.9	1.33	5.65	6.5		600	62.1	14.6	11.6	20.7	1.78	8.2	7.6								
				685	109.0	27.7	23.0	1.32	5.72	6.2		685	63.0	15.1	12.5	21.3	1.80	8.4	7.7								
	3.4	1.7	3.9	500	122.1	27.3	22.5	1.37	5.47	6.9																	

ENGINEERING SPECIFICATIONS

ZS Models Performance Tables

Model ZS017, 1.5 Ton, w/ECM, COAX Full Load Performance Data

EWT	Flow °F	WPD		COAX ECM Unit - Heating							COAX ECM Unit - Cooling									
		GPM	PSI	FT	Aiflow CFM	LAT (DB) °F	HC MBtuh	HE MBtuh	Power kW	COP W/W	DH MBtuh	Aiflow CFM	LAT (DB) °F	TC MBtuh	SC MBtuh	HR MBtuh	Power kW	EER Btuh/W	DH MBtuh	
25	4.5	5.2	11.9	500	91.4	11.5	8.1	1.01	3.34	3.2	Operation Not Recommended	500	56.7	19.3	12.6	21.6	0.70	27.5	2.1	
				620	87.5	11.8	8.4	0.99	3.49	2.8		620	58.9	20.3	14.1	22.8	0.72	28.4	2.1	
30	2.3	1.6	3.7	500	91.6	11.7	8.2	1.02	3.36	3.2		Operation Not Recommended	Operation Not Recommended							
				620	87.8	11.9	8.5	0.99	3.52	2.9										
	3.4	3.0	6.9	500	92.5	12.2	8.7	1.02	3.48	3.3										
				620	88.5	12.4	9.0	1.00	3.65	3.0										
	4.5	4.8	11.0	500	93.2	12.5	9.0	1.03	3.57	3.4										
				620	89.0	12.8	9.3	1.00	3.73	3.1										
40	2.3	1.5	3.4	500	95.0	13.5	9.9	1.05	3.78	3.6		Operation Not Recommended								
				620	90.6	13.8	10.3	1.02	3.96	3.4										
	3.4	2.8	6.4	500	96.1	14.1	10.5	1.05	3.92	3.8										
				620	91.5	14.4	10.9	1.03	4.10	3.5										
	4.5	4.4	10.1	500	96.9	14.5	10.9	1.06	4.01	3.8										
				620	92.1	14.8	11.3	1.03	4.20	3.5										
50	2.3	1.4	3.2	500	98.5	15.4	11.7	1.08	4.19	4.0		500		56.1	19.4	12.9	22.1	0.79	24.5	2.5
				620	93.5	15.7	12.1	1.05	4.38	3.7		620		58.4	20.5	14.4	23.3	0.81	25.3	2.5
	3.4	2.6	5.9	500	99.8	16.1	12.4	1.09	4.34	4.2		500		55.9	19.8	13.0	22.3	0.74	26.7	2.1
				620	94.5	16.4	12.8	1.06	4.54	3.9		620		58.2	20.9	14.6	23.5	0.76	27.6	2.1
	4.5	4.1	9.4	500	100.6	16.5	12.8	1.09	4.44	4.3		500		55.9	19.8	13.0	22.3	0.71	27.8	2.0
				620	95.2	16.9	13.2	1.06	4.65	3.9		620		58.2	20.9	14.6	23.4	0.73	28.7	2.0
60	2.3	1.3	3.0	500	102.1	17.3	13.6	1.11	4.58	4.5	500	56.6		18.8	12.6	21.9	0.90	20.8	3.2	
				620	96.4	17.7	14.0	1.08	4.79	4.2	620	58.9		19.8	14.1	23.0	0.92	21.5	3.2	
	3.4	2.4	5.5	500	103.5	18.1	14.3	1.12	4.75	4.7	500	56.4	19.1	12.7	22.0	0.84	22.7	2.8		
				620	97.5	18.4	14.7	1.09	4.97	4.4	620	58.7	20.2	14.3	23.1	0.86	23.5	2.8		
	4.5	3.8	8.7	500	104.4	18.6	14.8	1.12	4.86	4.9	500	56.4	19.2	12.7	21.9	0.81	23.6	2.6		
				620	98.3	19.0	15.2	1.09	5.08	4.5	620	58.7	20.2	14.3	23.1	0.83	24.4	2.6		
70	2.3	1.2	2.8	500	105.7	19.3	15.4	1.14	4.96	5.1	500	57.4	17.9	12.2	21.4	1.03	17.4	4.0		
				620	99.4	19.7	15.9	1.11	5.19	4.7	620	59.6	18.9	13.6	22.5	1.05	18.0	4.1		
	3.4	2.2	5.2	500	107.3	20.1	16.2	1.15	5.14	5.4	500	57.2	18.2	12.3	21.5	0.96	19.0	3.5		
				620	100.6	20.5	16.7	1.12	5.38	5.0	620	59.4	19.2	13.8	22.6	0.98	19.7	3.6		
	4.5	3.6	8.2	500	108.3	20.7	16.8	1.15	5.26	5.5	500	57.2	18.3	12.3	21.4	0.92	19.8	3.3		
				620	101.5	21.1	17.3	1.12	5.51	5.1	620	59.4	19.3	13.8	22.5	0.94	20.4	3.4		
80	2.3	1.1	2.6	500	109.4	21.3	17.3	1.17	5.33	5.8	500	58.1	17.0	11.8	21.0	1.16	14.6	4.8		
				620	102.4	21.7	17.8	1.14	5.57	5.4	620	60.3	18.0	13.2	22.0	1.19	15.1	4.9		
	3.4	2.1	4.9	500	111.1	22.2	18.2	1.18	5.52	6.1	500	58.0	17.3	11.9	21.0	1.08	16.0	4.3		
				620	103.8	22.6	18.7	1.15	5.78	5.6	620	60.1	18.3	13.3	22.1	1.11	16.5	4.4		
	4.5	3.4	7.7	500	112.3	22.8	18.8	1.19	5.65	6.2	500	58.0	17.4	11.9	20.9	1.05	16.6	4.1		
				620	104.8	23.3	19.3	1.15	5.91	5.7	620	60.1	18.3	13.3	22.0	1.07	17.2	4.2		
90	2.3	1.1	2.5	500	113.2	23.3	19.2	1.20	5.68	6.4	500	58.7	16.2	11.5	20.6	1.31	12.4	5.7		
				620	105.5	23.8	19.8	1.17	5.95	6.0	620	60.7	17.1	12.9	21.6	1.34	12.8	5.8		
	3.4	2.0	4.6	500	115.0	24.3	20.2	1.21	5.89	6.6	500	58.5	16.5	11.6	20.6	1.22	13.5	5.2		
				620	107.0	24.8	20.8	1.18	6.16	6.2	620	60.6	17.4	13.0	21.6	1.25	14.0	5.3		
	4.5	3.2	7.3	500	116.3	25.0	20.9	1.22	6.03	6.6	500	58.5	16.5	11.6	20.5	1.18	14.1	4.9		
				620	108.1	25.5	21.5	1.19	6.31	6.2	620	60.6	17.4	13.0	21.5	1.20	14.5	5.0		
100	2.3	0.9	2.2	Operation Not Recommended	500	59.1	15.4	11.3	20.3	1.46	10.5	6.6								
					620	61.1	16.2	12.6	21.3	1.49	10.9	6.8								
	3.4	1.8	4.2		500	58.9	15.6	11.4	20.3	1.36	11.5	6.1								
					620	61.0	16.5	12.8	21.3	1.39	11.9	6.2								
	4.5	3.0	6.9		500	58.9	15.7	11.4	20.2	1.31	11.9	5.8								
					620	61.0	16.6	12.8	21.1	1.34	12.3	5.9								
110	2.3	0.9	2.0		Operation Not Recommended	500	59.6	14.4	11.0	19.9	1.62	8.9	7.6							
						620	61.6	15.2	12.3	20.9	1.65	9.2	7.7							
	3.4	1.7	3.9			500	59.4	14.7	11.1	19.8	1.51	9.8	7.0							
						620	61.4	15.5	12.4	20.8	1.54	10.1	7.1							
	4.5	2.8	6.5			500	59.4	14.7	11.1	19.7	1.45	10.1	6.7							
						620	61.4	15.6	12.4	20.6	1.49	10.5	6.8							
120	2.3	0.8	1.9			Operation Not Recommended	500	60.4	13.4	10.6	19.4	1.78	7.5	8.5						
							620	62.3	14.1	11.9	20.3	1.82	7.8	8.6						
	3.4	1.6	3.6				500	60.2	13.6	10.7	19.2	1.66	8.2	7.9						
							620	62.1	14.4	12.0	20.1	1.69	8.5	8.0						
	4.5	2.6	5.9				500	60.2	13.6	10.7	19.1	1.60	8.5	7.6						
							620	62.1	14.4	12.0	20.0	1.63	8.8	7.7						

NOTE: See page 23 for performance data parameters and guidelines.

ZS Models Performance Tables

Model ZS018, 1.5 Ton, w/PSC, BPHE Full Load Performance Data

EWT	Flow °F GPM	WPD		BPHE PSC Unit - Heating							BPHE PSC Unit - Cooling										
		PSI	FT	Aiflow CFM	LAT (DB) °F	HC MBtuh	HE MBtuh	Power kW	COP W/W	DH MBtuh	Aiflow CFM	LAT (DB) °F	TC MBtuh	SC MBtuh	HR MBtuh	Power kW	EER Btuh/W	DH MBtuh			
25	5.0	1.1	2.5	500	94.4	13.1	8.5	1.35	2.85	3.6	Operation Not Recommended	500	56.6	20.3	12.6	23.1	0.82	24.7	1.3		
				600	90.8	13.5	9.1	1.29	3.06	3.2											
				685	88.5	13.7	9.4	1.26	3.19	3.0											
30	3.8	0.7	1.7	500	95.0	13.5	8.9	1.34	2.96	3.6		Operation Not Recommended	600	58.6	21.2	13.9	24.1	0.83	25.5	1.3	
				600	91.4	13.9	9.5	1.28	3.17	3.3											
				685	89.0	14.1	9.8	1.25	3.31	3.1											
	4.5	0.9	2.1	500	95.6	13.8	9.2	1.35	3.00	3.6			600	58.6	21.2	13.9	24.1	0.83	25.5	1.3	
				600	91.9	14.2	9.8	1.29	3.22	3.3											
				685	89.4	14.4	10.1	1.25	3.36	3.1											
5.0	1.0	2.3	500	95.8	14.0	9.3	1.35	3.02	3.7	600		58.6	21.2	13.9	24.1	0.83	25.5	1.3			
			600	92.1	14.3	9.9	1.29	3.25	3.4												
			685	89.7	14.5	10.2	1.26	3.38	3.2												
40	3.8	0.7	1.6	500	98.6	15.4	10.8	1.36	3.32	4.0		Operation Not Recommended	500	56.6	20.3	12.6	23.1	0.82	24.7	1.3	
				600	94.4	15.8	11.4	1.30	3.57	3.6			600	58.6	21.2	13.9	24.1	0.83	25.5	1.3	
				685	91.7	16.1	11.8	1.26	3.73	3.4			685	60.0	21.8	14.8	24.7	0.84	25.9	1.3	
	4.5	0.9	2.0	500	99.2	15.8	11.1	1.37	3.37	4.1			Operation Not Recommended	500	55.1	21.3	13.4	24.4	0.90	23.7	2.1
				600	94.9	16.2	11.7	1.31	3.62	3.7				600	57.2	22.4	14.8	25.5	0.92	24.4	2.1
				685	92.2	16.4	12.1	1.27	3.78	3.5				685	58.7	22.9	15.7	26.1	0.93	24.8	2.1
5.0	1.0	2.2	500	99.5	15.9	11.2	1.38	3.40	4.1	Operation Not Recommended		500	55.1	21.4	13.4	24.4	0.88	24.2	2.0		
			600	95.2	16.3	11.9	1.31	3.65	3.7			600	57.2	22.4	14.8	25.5	0.90	25.0	2.0		
			685	92.4	16.6	12.2	1.28	3.81	3.5			685	58.7	23.0	15.7	26.1	0.91	25.3	2.0		
50	3.8	0.7	1.6	500	102.7	17.6	12.9	1.40	3.70	4.6	500	55.1	21.3	13.4	24.4	0.88	24.2	2.0			
				600	97.9	18.1	13.5	1.34	3.97	4.2	600	57.2	22.4	14.8	25.5	0.92	24.4	2.1			
				685	94.8	18.4	13.9	1.30	4.14	3.9	685	58.7	22.9	15.7	26.1	0.93	24.8	2.1			
	4.5	0.8	1.9	500	103.4	18.0	13.2	1.41	3.75	4.7	500	55.1	21.4	13.4	24.4	0.88	24.2	2.0			
				600	98.5	18.5	13.9	1.35	4.03	4.2	600	57.2	22.4	14.8	25.5	0.90	25.0	2.0			
				685	95.4	18.8	14.3	1.31	4.20	4.0	685	58.7	23.0	15.7	26.1	0.91	25.3	2.0			
60	3.8	0.7	1.5	500	103.7	18.2	13.4	1.41	3.78	4.8	500	55.1	21.4	13.4	24.4	0.88	24.4	1.9			
				600	98.8	18.7	14.1	1.35	4.06	4.3	600	57.2	22.4	14.8	25.5	0.89	25.2	1.9			
				685	95.7	19.0	14.5	1.31	4.23	4.0	685	58.7	23.0	15.7	26.1	0.90	25.5	1.9			
	4.5	0.8	1.8	500	107.0	20.0	15.0	1.45	4.05	5.4	500	54.8	21.4	13.6	24.8	1.00	21.5	2.9			
				600	101.6	20.5	15.8	1.38	4.35	4.9	600	56.9	22.4	15.0	25.8	0.99	22.6	2.8			
				685	98.1	20.8	16.2	1.35	4.53	4.6	685	58.4	23.0	16.0	26.5	1.02	22.5	3.0			
5.0	0.9	2.1	500	107.8	20.4	15.4	1.46	4.10	5.5	500	54.8	21.4	13.6	24.8	1.00	21.5	2.9				
			600	102.3	20.9	16.2	1.39	4.41	4.9	600	56.9	22.4	15.0	25.8	0.99	22.6	2.8				
			685	98.7	21.3	16.6	1.35	4.60	4.6	685	58.4	23.0	16.0	26.5	1.00	22.9	2.9				
70	3.8	0.7	1.5	500	108.2	20.6	15.6	1.46	4.13	5.5	500	54.8	21.4	13.6	24.8	1.00	21.5	2.9			
				600	102.7	21.2	16.4	1.40	4.44	5.0	600	56.9	22.4	15.0	25.8	0.98	22.8	2.8			
				685	99.1	21.5	16.9	1.36	4.63	4.7	685	58.4	23.0	16.0	26.4	1.00	23.1	2.8			
	4.5	0.8	1.8	500	111.2	22.3	17.1	1.50	4.35	6.2	500	55.1	20.8	13.4	24.5	1.11	18.8	3.8			
				600	105.2	22.8	17.9	1.43	4.68	5.6	600	57.2	21.8	14.7	25.6	1.12	19.4	3.9			
				685	101.3	23.2	18.4	1.39	4.88	5.3	685	58.7	22.3	15.7	26.2	1.14	19.7	3.9			
5.0	0.9	2.1	500	112.1	22.7	17.6	1.51	4.42	6.3	500	55.1	20.8	13.4	24.5	1.09	19.2	3.7				
			600	106.0	23.3	18.4	1.44	4.75	5.7	600	57.2	21.8	14.8	25.6	1.10	19.8	3.8				
			685	102.0	23.7	18.9	1.40	4.95	5.3	685	58.7	22.4	15.7	26.2	1.12	20.1	3.8				
80	3.8	0.6	1.5	500	112.6	23.0	17.8	1.51	4.45	6.4	500	55.1	20.8	13.4	24.5	1.08	19.3	3.6			
				600	106.4	23.6	18.6	1.45	4.78	5.8	600	57.2	21.8	14.8	25.5	1.09	19.9	3.7			
				685	102.4	23.9	19.1	1.41	4.99	5.4	685	58.7	22.4	15.7	26.2	1.11	20.2	3.7			
	4.5	0.8	1.8	500	115.0	24.3	19.0	1.54	4.62	6.9	500	55.9	19.8	13.0	24.1	1.24	16.0	4.7			
				600	108.4	24.9	19.9	1.47	4.96	6.3	600	57.9	20.8	14.3	25.1	1.26	16.6	4.8			
				685	104.2	25.3	20.4	1.43	5.17	5.9	685	59.4	21.3	15.3	25.7	1.27	16.8	4.9			
5.0	0.9	2.0	500	115.9	24.8	19.5	1.55	4.68	7.1	500	55.8	19.9	13.0	24.0	1.21	16.4	4.6				
			600	109.3	25.4	20.4	1.48	5.03	6.4	600	57.9	20.8	14.3	25.0	1.23	16.9	4.7				
			685	104.9	25.8	20.9	1.44	5.25	6.0	685	59.3	21.4	15.3	25.6	1.25	17.1	4.8				
90	3.8	0.6	1.4	500	116.5	25.1	19.8	1.56	4.72	7.2	500	55.8	19.9	13.0	24.0	1.21	16.5	4.5			
				600	109.7	25.7	20.6	1.49	5.06	6.5	600	57.9	20.8	14.3	25.0	1.22	17.0	4.6			
				685	105.3	26.1	21.2	1.45	5.28	6.1	685	59.3	21.4	15.3	25.6	1.24	17.3	4.7			
	4.5	0.8	1.8	500	118.0	25.9	20.5	1.57	4.83	7.6	500	56.7	18.8	12.6	23.5	1.39	13.5	5.7			
				600	111.0	26.6	21.4	1.50	5.18	6.9	600	58.6	19.7	13.8	24.5	1.41	14.0	5.9			
				685	106.5	27.0	22.0	1.46	5.41	6.5	685	60.0	20.2	14.8	25.1	1.43	14.2	5.9			
5.0	0.9	2.0	500	119.0	26.4	21.0	1.58	4.90	7.7	500	56.7	18.8	12.6	23.5	1.36	13.8	5.6				
			600	111.9	27.1	22.0	1.51	5.26	7.0	600	58.6	19.7	13.8	24.4	1.38	14.3	5.7				
			685	107.2	27.5	22.5	1.47	5.49	6.6	685	60.0	20.2	14.8	25.0	1.40	14.5	5.8				
100	3.8	0.6	1.4	500	119.5	26.7	21.3	1.59	4.93	7.8	500	56.6	18.8	12.6	23.4	1.35	13.9	5.5			
				600	112.3	27.4	22.3	1.52	5.30	7.1	600	58.6	19.7	13.9	24.4	1.37	14.4	5.6			
				685	107.6	27.9	22.8	1.48	5.53	6.7	685	60.0	20.2	14.8	25.0	1.39	14.6	5.7			
	4.5	0.8	1.7	500	57.5	17.7	12.2	23.1	1.57	11.3	6.8	500	57.4	17.7	12.2	23.0	1.54	11.5	6.6		
				600	59.4	18.6	13.4	24.0	1.59	11.7	6.9	600	59.4	18.6	13.4	23.9	1.56	11.9	6.8		
				685	60.7	19.0	14.3	24.5	1.61	11.8	7.0	685	60.7	19.1	14.3	24.5	1.58	12.1	6.9		
5.0	0.9	2.0	500	57.4	17.7	12.2	22.9	1.53	11.6	6.5	500	57.4	17.7	12.2	22.9	1.53	11.6	6.5			
			600	59.3	18.6	13.4	23.9	1.55	12.0	6.6	600	59.3	18.6	13.4	23.9	1.55	12.0	6.6			
			685	60.7	19.1	14.3	24.4	1.57	12.2	6.7	685	60.7	19.1	14.3	24.4	1.57	12.2	6.7			
110	3.8	0.6	1.4	500	58.3	16.6	11.7	22.6	1.77	9.4	7.9	500	58.3	16.6	11.7	22.6	1.77	9.4	7.9		
				600	60.1	17.4	12.9	23.5	1.80	9.7	8.1	600	60.1	17.4	12.9	23.5	1.80	9.7	8.1		
				685	61.4	17.8	13.7	24.0	1.82	9.8	8.3	685	61.4	17.8	13.7	24.0	1.82	9.8	8.3		
	4.5	0.7	1.7	500	58.3	16.6	11.7	22.5	1.74	9.6	7.8	500	58.3	16.6	11.7	22.5	1.74	9.6	7.8		
				600	60.1	17.4	12.9	23.4	1.76	9.9	8.0	600	60.1	17.4	12.9	23.4	1.76	9.9	8.0		
				685	61.4	17.9	13.8	23.9	1.79	10.0	8.1	685	61.4	17.9	13.8	23.9	1.79	10.0	8.1		
5.0	0.9	2.0	500	58.3	16.6	11.7	22.5	1.73	9.6	7.6	500	58.3	16.6	11.7	22.5	1.73	9.6	7.6			
			600	60.1	17.4	12.9	23.4	1.75</													

ENGINEERING SPECIFICATIONS

ZS Models Performance Tables

Model ZS018, 1.5 Ton, w/ECM, BPHE Full Load Performance Data

EWT	Flow °F	WPD		BPHE ECM Unit - Heating							BPHE ECM Unit - Cooling																					
		GPM	PSI	FT	Aiflow CFM	LAT (DB) °F	HC MBtuh	HE MBtuh	Power kW	COP W/W	DH MBtuh	Aiflow CFM	LAT (DB) °F	TC MBtuh	SC MBtuh	HR MBtuh	Power kW	EER Btuh/W	DH MBtuh													
25	5.0	1.1	2.5	560	91.2	12.8	8.9	1.15	3.26	3.3	Operation Not Recommended																					
				630	89.1	13.0	9.2	1.11	3.43	3.2																						
30	3.8	0.7	1.7	560	91.8	13.2	9.3	1.14	3.39	3.4																						
				630	89.7	13.4	9.6	1.10	3.56	3.2																						
	4.5	0.9	2.1	560	92.3	13.5	9.6	1.15	3.44	3.4																						
				630	90.1	13.7	9.9	1.11	3.61	3.2																						
5.0	1.0	2.3	560	92.5	13.6	9.7	1.15	3.47	3.5																							
			630	90.4	13.9	10.1	1.12	3.64	3.3																							
40	3.8	0.7	1.6	560	95.0	15.1	11.2	1.16	3.82	3.8								570	57.3	21.5	14.0	23.8	0.69	31.3	1.3							
				630	92.6	15.4	11.5	1.12	4.01	3.6								630	58.3	22.0	14.7	24.3	0.69	32.0	1.3							
	4.5	0.9	2.0	560	95.6	15.5	11.5	1.17	3.88	3.8								Operation Not Recommended														
				630	93.1	15.7	11.9	1.13	4.07	3.6																						
	5.0	1.0	2.2	560	95.9	15.6	11.6	1.17	3.90	3.9																						
				630	93.4	15.9	12.0	1.14	4.10	3.7																						
50	3.8	0.7	1.6	560	98.7	17.4	13.3	1.20	4.25	4.3															570	55.9	22.6	14.9	25.2	0.77	29.4	2.1
				630	96.0	17.7	13.7	1.16	4.46	4.1															630	57.0	23.1	15.6	25.8	0.77	30.0	2.1
	4.5	0.8	1.9	560	99.4	17.8	13.6	1.21	4.31	4.4								570	55.9	22.6	14.9	25.2	0.75	30.1	2.0							
				630	96.5	18.1	14.1	1.17	4.53	4.1								630	57.0	23.2	15.7	25.7	0.75	30.8	2.0							
	5.0	0.9	2.2	560	99.7	18.0	13.8	1.21	4.34	4.5	570	55.9	22.6	14.9	25.2	0.75	30.3	1.9														
				630	96.9	18.3	14.3	1.17	4.56	4.2	630	57.0	23.2	15.7	25.7	0.75	31.1	1.9														
60	3.8	0.7	1.5	560	102.6	19.7	15.5	1.25	4.65	5.0	570	55.5	22.6	15.1	25.6	0.86	26.2	2.9														
				630	99.5	20.1	16.0	1.21	4.88	4.7	630	56.7	23.2	15.9	26.1	0.87	26.8	3.0														
	4.5	0.8	1.8	560	103.4	20.2	15.9	1.25	4.71	5.1	570	55.5	22.6	15.1	25.5	0.85	26.8	2.8														
				630	100.2	20.5	16.4	1.21	4.95	4.8	630	56.7	23.2	15.9	26.1	0.85	27.4	2.9														
	5.0	0.9	2.1	560	103.7	20.4	16.1	1.26	4.75	5.2	570	55.5	22.7	15.1	25.5	0.84	27.0	2.7														
				630	100.5	20.8	16.6	1.22	4.99	4.9	630	56.7	23.2	15.9	26.1	0.84	27.6	2.8														
70	3.8	0.7	1.5	560	106.4	22.0	17.6	1.29	4.99	5.8	570	55.9	22.0	14.8	25.3	0.98	22.5	3.9														
				630	102.9	22.4	18.1	1.25	5.25	5.5	630	57.0	22.5	15.6	25.9	0.98	23.0	3.9														
	4.5	0.8	1.8	560	107.3	22.5	18.1	1.30	5.07	5.9	570	55.9	22.0	14.9	25.3	0.96	23.1	3.7														
				630	103.7	22.9	18.6	1.26	5.33	5.6	630	57.0	22.6	15.6	25.8	0.96	23.6	3.8														
	5.0	0.9	2.1	560	107.7	22.8	18.3	1.31	5.11	6.0	570	55.9	22.0	14.9	25.3	0.95	23.3	3.6														
				630	104.1	23.2	18.9	1.27	5.36	5.7	630	57.0	22.6	15.6	25.8	0.95	23.8	3.7														
80	3.8	0.6	1.5	560	109.8	24.1	19.5	1.34	5.29	6.5	570	56.6	21.0	14.4	24.8	1.11	19.0	4.8														
				630	106.0	24.5	20.1	1.29	5.55	6.2	630	57.7	21.5	15.2	25.3	1.11	19.4	4.9														
	4.5	0.8	1.8	560	110.7	24.6	20.0	1.35	5.37	6.7	570	56.5	21.1	14.4	24.7	1.08	19.4	4.7														
				630	106.8	25.1	20.6	1.30	5.63	6.3	630	57.6	21.6	15.2	25.3	1.09	19.9	4.7														
	5.0	0.9	2.0	560	111.2	24.9	20.3	1.35	5.41	6.8	570	56.5	21.1	14.4	24.7	1.08	19.6	4.6														
				630	107.3	25.3	20.9	1.31	5.68	6.4	630	57.6	21.6	15.2	25.3	1.08	20.0	4.6														
90	3.8	0.6	1.5	560	112.5	25.7	21.1	1.37	5.52	7.1	570	57.3	19.9	14.0	24.2	1.26	15.8	5.8														
				630	108.4	26.2	21.7	1.32	5.80	6.7	630	58.4	20.4	14.7	24.7	1.26	16.2	5.9														
	4.5	0.8	1.8	560	113.5	26.3	21.6	1.38	5.60	7.3	570	57.3	20.0	14.0	24.2	1.24	16.2	5.7														
				630	109.3	26.7	22.2	1.33	5.89	6.8	630	58.4	20.5	14.7	24.7	1.24	16.5	5.7														
	5.0	0.9	2.0	560	114.0	26.6	21.9	1.38	5.65	7.4	570	57.3	20.0	14.0	24.1	1.22	16.3	5.6														
				630	109.8	27.1	22.5	1.34	5.93	7.0	630	58.4	20.5	14.7	24.7	1.23	16.7	5.6														
100	3.8	0.6	1.4	Operation Not Recommended							570	58.1	18.8	13.5	23.7	1.44	13.1	6.9														
											630	59.1	19.3	14.2	24.2	1.44	13.4	7.0														
	4.5	0.8	1.7								570	58.0	18.8	13.5	23.7	1.41	13.4	6.7														
											630	59.1	19.3	14.2	24.1	1.41	13.7	6.8														
	5.0	0.9	2.0								570	58.0	18.9	13.5	23.6	1.40	13.5	6.6														
											630	59.1	19.3	14.2	24.1	1.40	13.8	6.7														
110	3.8	0.6	1.4								570	58.8	17.6	13.0	23.3	1.65	10.7	8.1														
											630	59.8	18.1	13.7	23.7	1.65	10.9	8.2														
	4.5	0.7	1.7								570	58.8	17.7	13.0	23.2	1.61	10.9	7.9														
											630	59.8	18.1	13.7	23.6	1.62	11.2	8.0														
	5.0	0.9	2.0								570	58.8	17.7	13.0	23.1	1.60	11.0	7.8														
											630	59.8	18.1	13.7	23.6	1.60	11.3	7.9														
120	3.8	0.6	1.4								570	59.8	16.2	12.4	22.7	1.89	8.6	9.4														
											630	60.8	16.6	13.1	23.1	1.89	8.8	9.5														
	4.5	0.7	1.7								570	59.8	16.3	12.4	22.6	1.85	8.8	9.2														
											630	60.8	16.7	13.1	23.0	1.85	9.0	9.4														
	5.0	0.8	1.9								570	59.8	16.3	12.4	22.5	1.83	8.9	9.1														
											630	60.8	16.7	13.1	22.9	1.84	9.1	9.2														

NOTE: See page 23 for performance data parameters and guidelines.

ZS Models Performance Tables

Model ZS018, 1.5 Ton, w/PSC, COAX Full Load Performance Data

EWT	Flow °F GPM	WPD		COAX PSC Unit - Heating							COAX PSC Unit - Cooling								
		PSI	FT	Aiflow CFM	LAT (DB) °F	HC MBtuh	HE MBtuh	Power kW	COP WW	DH MBtuh	Aiflow CFM	LAT (DB) °F	TC MBtuh	SC MBtuh	HR MBtuh	Power kW	EER Btuh/W	DH MBtuh	
25	4.5	3.7	8.5	500	94.0	13.0	8.4	1.34	2.84	3.6	Operation Not Recommended	500	58.6	18.9	11.5	22.2	0.95	20.0	2.5
				600	90.3	13.2	8.8	1.28	3.02	3.2									
				685	87.9	13.2	9.0	1.24	3.13	3.1									
30	2.3	1.5	3.4	500	94.1	13.0	8.5	1.33	2.88	3.5		600	60.1	20.2	12.9	23.5	0.96	21.0	2.7
				600	90.4	13.2	8.9	1.27	3.07	3.2									
				685	88.0	13.3	9.1	1.23	3.18	3.1									
	3.4	2.3	5.4	500	95.1	13.6	9.0	1.34	2.98	3.6		600	61.2	21.1	13.9	24.4	0.97	21.7	2.9
				600	91.3	13.8	9.4	1.28	3.17	3.3									
				685	88.8	13.9	9.7	1.24	3.29	3.1									
4.5	3.4	7.8	500	95.7	13.9	9.3	1.34	3.03	3.7	600		61.2	21.1	13.9	24.4	0.97	21.7	2.9	
			600	91.8	14.1	9.8	1.28	3.23	3.4										
			685	89.2	14.2	10.0	1.24	3.35	3.2										
40	2.3	1.3	3.1	500	97.9	15.1	10.5	1.35	3.27	3.9		500	57.3	19.8	12.2	23.3	1.04	19.0	3.0
				600	93.7	15.3	10.9	1.29	3.48	3.5									
				685	90.9	15.4	11.2	1.25	3.61	3.3									
	3.4	2.1	4.9	500	99.1	15.7	11.1	1.37	3.38	4.0		600	60.1	20.2	12.9	23.5	0.96	21.0	2.7
				600	94.7	16.0	11.5	1.30	3.60	3.6									
				685	91.7	16.1	11.8	1.26	3.73	3.4									
4.5	3.1	7.1	500	99.8	16.1	11.4	1.37	3.44	4.1	600		61.2	21.1	13.9	24.4	0.97	21.7	2.9	
			600	95.3	16.4	11.9	1.31	3.66	3.7										
			685	92.2	16.5	12.1	1.27	3.80	3.5										
50	2.3	1.2	2.8	500	102.2	17.4	12.6	1.40	3.63	4.4	500	57.3	19.8	12.2	23.3	1.04	19.0	3.0	
				600	97.3	17.7	13.1	1.34	3.87	4.0									
				685	94.0	17.8	13.3	1.30	4.02	3.8									
	3.4	1.9	4.5	500	103.5	18.1	13.3	1.41	3.76	4.6	600	60.1	20.2	12.9	23.5	0.96	21.0	2.7	
				600	98.4	18.4	13.8	1.35	4.00	4.2									
				685	95.0	18.5	14.0	1.31	4.15	3.9									
4.5	2.8	6.5	500	104.3	18.5	13.7	1.42	3.83	4.7	600	61.2	21.1	13.9	24.4	0.97	21.7	2.9		
			600	99.1	18.8	14.2	1.35	4.08	4.3										
			685	95.6	18.9	14.5	1.31	4.23	4.0										
60	2.3	1.1	2.6	500	106.4	19.7	14.7	1.46	3.96	5.0	500	56.9	19.9	12.5	23.8	1.16	17.2	3.6	
				600	100.8	20.0	15.2	1.39	4.22	4.6									
				685	97.2	20.1	15.5	1.35	4.38	4.3									
	3.4	1.8	4.1	500	107.9	20.5	15.5	1.47	4.09	5.3	600	58.5	21.2	13.9	25.2	1.18	18.0	3.7	
				600	102.1	20.8	16.0	1.40	4.36	4.8									
				685	98.3	20.9	16.3	1.36	4.52	4.6									
4.5	2.6	6.0	500	108.8	21.0	15.9	1.48	4.17	5.5	600	59.7	22.1	15.0	26.1	1.19	18.6	4.0		
			600	102.9	21.3	16.5	1.41	4.44	5.0										
			685	99.0	21.4	16.8	1.36	4.61	4.7										
70	2.3	1.1	2.4	500	110.3	21.7	16.6	1.51	4.22	5.8	500	56.9	19.5	12.5	23.9	1.29	15.1	4.3	
				600	104.1	22.1	17.2	1.44	4.50	5.3									
				685	100.1	22.2	17.5	1.40	4.67	5.0									
	3.4	1.7	3.9	500	112.0	22.7	17.5	1.52	4.37	6.1	600	58.5	20.1	14.0	25.1	1.22	17.2	4.0	
				600	105.5	23.0	18.1	1.45	4.65	5.6									
				685	101.3	23.2	18.4	1.41	4.82	5.3									
4.5	2.4	5.6	500	113.0	23.2	18.0	1.53	4.45	6.3	600	59.5	21.9	15.1	26.1	1.23	17.8	4.2		
			600	106.4	23.6	18.6	1.46	4.74	5.8										
			685	102.1	23.7	18.9	1.41	4.92	5.5										
80	2.3	1.0	2.3	500	113.4	23.4	18.1	1.55	4.43	6.5	500	57.3	18.8	12.2	23.8	1.45	13.0	5.3	
				600	106.7	23.8	18.8	1.48	4.72	6.0									
				685	102.4	23.9	19.1	1.43	4.89	5.7									
	3.4	1.6	3.6	500	115.2	24.4	19.1	1.56	4.58	6.9	600	58.9	20.1	13.7	25.1	1.47	13.7	5.5	
				600	108.3	24.8	19.7	1.49	4.87	6.3									
				685	103.7	24.9	20.0	1.45	5.06	6.0									
4.5	2.3	5.3	500	116.3	25.0	19.6	1.57	4.66	7.1	600	60.1	20.9	14.8	26.0	1.49	14.1	5.7		
			600	109.2	25.4	20.3	1.50	4.97	6.6										
			685	104.5	25.5	20.6	1.45	5.16	6.2										
90	2.3	0.9	2.2	500	115.3	24.5	19.1	1.57	4.57	7.1	500	58.0	17.9	11.9	23.5	1.63	11.0	6.4	
				600	108.4	24.9	19.8	1.50	4.87	6.5									
				685	103.8	25.0	20.1	1.45	5.05	6.2									
	3.4	1.5	3.5	500	117.2	25.5	20.1	1.58	4.73	7.6	600	59.5	19.1	13.3	24.7	1.65	11.6	6.6	
				600	110.0	25.9	20.8	1.51	5.03	7.0									
				685	105.2	26.1	21.1	1.46	5.22	6.6									
4.5	2.2	5.0	500	118.4	26.1	20.7	1.59	4.81	7.8	600	60.5	20.1	14.4	25.4	1.55	13.0	6.1		
			600	111.0	26.6	21.4	1.52	5.13	7.2										
			685	106.1	26.7	21.7	1.47	5.32	6.9										
100	2.3	0.9	2.0	500	58.8	16.8	11.5	23.1	1.84	9.2	7.6	500	58.8	16.8	11.5	23.1	1.84	9.2	7.6
				600	60.3	17.9	12.8	24.3	1.86	9.6	7.8								
				685	61.3	18.7	13.8	25.1	1.88	9.9	8.1								
	3.4	1.4	3.1	500	58.7	17.0	11.5	22.8	1.71	10.0	6.8	600	60.2	18.1	12.8	24.0	1.73	10.5	7.0
				600	60.2	18.1	12.8	24.0	1.73	10.5	7.0								
				685	61.3	18.9	13.9	24.9	1.75	10.8	7.3								
4.5	2.0	4.6	500	58.6	17.1	11.5	22.7	1.65	10.3	6.4	600	61.2	19.0	13.9	24.8	1.69	11.2	7.0	
			600	60.1	18.2	12.9	23.9	1.67	10.9	6.7									
			685	61.2	19.0	13.9	24.8	1.69	11.2	7.0									
110	2.3	0.8	1.9	500	59.6	15.6	11.0	22.6	2.07	7.5	8.9	500	59.6	15.6	11.0	22.6	2.07	7.5	8.9
				600	61.0	16.6	12.3	23.7	2.11	7.9	9.2								
				685	62.1	17.3	13.3	24.6	2.13	8.1	9.5								
	3.4	1.3	3.0	500	59.5	15.7	11.1	22.3	1.93	8.2	8.0	600	61.0	16.7	12.3	23.4	1.96	8.6	8.3
				600	61.0	16.7	12.3	23.4	1.96	8.6	8.3								
				685	62.0	17.5	13.3	24.2	1.98	8.8	8.6								
4.5	1.9	4.4	500	59.5	15.8	11.1	22.1	1.86	8.5	7.6	600	60.9	16.8	12.4	23.3	1.89	8.9	7.9	
			600	60.9	16.8	12.4	23.3	1.89	8.9	7.9									
			685	62.0	17.5	13.3	24.1	1.91	9.2	8.2									
120	2.3	0.8	1.8	500	60.3	14.3	10.6	22.3	2.35	6.1	10.3	500	60.3	14.3	10.6	22.3	2.35	6.1	10.3
				600	61.7	15.2	11.9	23.4	2.38	6.4	10.6								
				685	62.7	15.9	12.8	24.1	2.41	6.6	10.9								
	3.4	1.3	2.9	500	60.2	14.4	10.7	21.9	2.18	6.6	9.3	600	61.6	15.4	11.9	22.9	2.21	7.0	9.7
				600	61.6	15.4	11.9	22.9	2.21	7.0	9.7								
				685	62.6	16.1	12.9	23.7	2.24	7.2	10.0								
4.5	1.8	4.2	500	60.2	14.5	10.7	21.7	2.11	6.9	8.9	600	61.6	15.5	11.9	22.8	2.14	7.2	9.2	
			600	61.6	15.5	11.9	22.8	2.14	7.2	9.2									
			685	62.6	16.1	12.9	23.5	2.16	7.5	9.5									

NOTE: See page 23 for performance data parameters and guidelines.

ENGINEERING SPECIFICATIONS

ZS Models Performance Tables

Model ZS018, 1.5 Ton, w/ECM, COAX Full Load Performance Data

EWT °F	Flow GPM	WPD		COAX ECM Unit - Heating							COAX ECM Unit - Cooling							
		PSI	FT	Aiflow CFM	LAT (DB) °F	HC MBtuh	HE MBtuh	Power kW	COP W/W	DH MBtuh	Aiflow CFM	LAT (DB) °F	TC MBtuh	SC MBtuh	HR MBtuh	Power kW	EER Btu/W	DH MBtuh
25	4.5	3.7	8.5	560	90.7	12.5	8.7	1.13	3.27	3.4	Operation Not Recommended							
				630	88.5	12.6	8.9	1.09	3.39	3.2								
30	2.3	1.5	3.4	560	90.9	12.6	8.8	1.11	3.32	3.3								
				630	88.6	12.7	9.0	1.08	3.45	3.2								
	3.4	2.3	5.4	560	91.8	13.2	9.3	1.12	3.43	3.4								
				630	89.4	13.2	9.5	1.09	3.57	3.2								
	4.5	3.4	7.8	560	92.3	13.5	9.6	1.13	3.50	3.5								
				630	89.9	13.6	9.8	1.09	3.64	3.3								
40	2.3	1.3	3.1	560	94.3	14.7	10.8	1.14	3.77	3.6								
				630	91.7	14.8	11.0	1.11	3.92	3.4								
	3.4	2.1	4.9	560	95.4	15.3	11.4	1.15	3.90	3.8								
				630	92.7	15.4	11.6	1.12	4.05	3.6								
	4.5	3.1	7.1	560	96.0	15.7	11.8	1.16	3.98	3.8								
				630	93.2	15.8	12.0	1.12	4.13	3.6								
50	2.3	1.2	2.8	560	98.1	17.0	13.0	1.19	4.20	4.1								
				630	95.1	17.1	13.2	1.15	4.36	3.9								
	3.4	1.9	4.5	560	99.3	17.7	13.7	1.20	4.34	4.3								
				630	96.2	17.8	13.9	1.16	4.51	4.1								
	4.5	2.8	6.5	560	100.1	18.2	14.1	1.21	4.42	4.4								
				630	96.9	18.3	14.3	1.17	4.59	4.2								
60	2.3	1.1	2.6	560	102.0	19.3	15.1	1.24	4.56	4.7								
				630	98.5	19.4	15.3	1.20	4.74	4.5								
	3.4	1.8	4.1	560	103.3	20.2	15.9	1.25	4.71	5.0								
				630	99.8	20.3	16.1	1.21	4.90	4.7								
	4.5	2.6	6.0	560	104.2	20.7	16.4	1.26	4.80	5.1								
				630	100.5	20.8	16.6	1.22	4.99	4.8								
70	2.3	1.1	2.4	560	105.4	21.4	17.0	1.29	4.85	5.5								
				630	101.7	21.5	17.3	1.25	5.04	5.2								
	3.4	1.7	3.9	560	107.0	22.4	17.9	1.31	5.02	5.8								
				630	103.0	22.5	18.2	1.26	5.21	5.5								
	4.5	2.4	5.6	560	107.9	22.9	18.4	1.31	5.11	6.0								
				630	103.8	23.0	18.7	1.27	5.31	5.6								
80	2.3	1.0	2.3	560	108.2	23.1	18.6	1.33	5.08	6.2								
				630	104.2	23.2	18.8	1.29	5.28	5.8								
	3.4	1.6	3.6	560	109.9	24.1	19.5	1.35	5.25	6.5								
				630	105.6	24.2	19.8	1.30	5.45	6.2								
	4.5	2.3	5.3	560	110.9	24.7	20.1	1.36	5.35	6.8								
				630	106.5	24.9	20.4	1.31	5.56	6.4								
90	2.3	0.9	2.2	560	110.0	24.2	19.6	1.35	5.24	6.8								
				630	105.7	24.3	19.8	1.31	5.44	6.4								
	3.4	1.5	3.5	560	111.7	25.2	20.6	1.37	5.41	7.2								
				630	107.3	25.4	20.9	1.32	5.62	6.8								
	4.5	2.2	5.0	560	112.8	25.9	21.2	1.37	5.52	7.4								
				630	108.2	26.0	21.5	1.33	5.73	7.1								
100	2.3	0.9	2.0	Operation Not Recommended							570	58.9	18.2	13.0	24.1	1.73	10.5	7.8
											630	59.9	18.7	13.7	24.7	1.75	10.7	7.9
	3.4	1.4	3.1								570	58.9	18.4	13.0	23.8	1.60	11.5	7.0
											630	59.8	18.9	13.8	24.4	1.61	11.8	7.1
	4.5	2.0	4.6								570	58.8	18.4	13.0	23.7	1.56	11.8	6.6
											630	59.7	19.0	13.8	24.4	1.57	12.1	6.7
110	2.3	0.8	1.9								570	59.7	16.8	12.5	23.6	1.97	8.5	9.1
											630	60.6	17.4	13.2	24.2	1.99	8.7	9.3
	3.4	1.3	3.0								570	59.7	17.0	12.5	23.2	1.82	9.3	8.2
											630	60.5	17.6	13.2	23.8	1.84	9.5	8.4
	4.5	1.9	4.4								570	59.6	17.1	12.5	23.1	1.78	9.6	7.8
											630	60.5	17.6	13.3	23.8	1.80	9.8	8.0
120	2.3	0.8	1.8								570	60.4	15.5	12.1	23.2	2.25	6.9	10.6
											630	61.3	16.0	12.8	23.8	2.28	7.0	10.7
	3.4	1.3	2.9								570	60.3	15.7	12.1	22.8	2.08	7.5	9.6
											630	61.2	16.2	12.8	23.4	2.10	7.7	9.7
	4.5	1.8	4.2								570	60.3	15.7	12.1	22.7	2.03	7.8	9.1
											630	61.2	16.2	12.8	23.2	2.05	7.9	9.3

NOTE: See page 23 for performance data parameters and guidelines.

ZS Models Performance Tables
Model ZS024, 2 Ton, w/PSC, BPHE Full Load Performance Data

EWT °F	Flow GPM	WPD		BPHE PSC Unit - Heating						BPHE PSC Unit - Cooling												
		PSI	FT	Aiflow CFM	LAT (DB) °F	HC MBtu/h	HE MBtu/h	Power kW	COP W/W	DH MBtu/h	Aiflow CFM	LAT (DB) °F	TC MBtu/h	SC MBtu/h	HR MBtu/h	Power kW	EER Btu/h/W	DH MBtu/h				
25	6.0	1.4	3.2	650	94.7	17.3	11.6	1.67	3.03	4.3	Operation Not Recommended	650	57.8	25.7	15.6	29.4	1.07	24.1	1.6			
				750	91.9	17.7	12.2	1.62	3.21	4.0												
				950	87.6	18.0	12.6	1.59	3.32	3.6												
30	3.8	0.8	1.7	650	94.9	17.5	11.8	1.65	3.10	4.3		Operation Not Recommended	650	57.8	25.7	15.6	29.4	1.07	24.1	1.6		
				750	92.1	17.9	12.4	1.60	3.27	4.0												
				950	87.7	18.2	12.8	1.57	3.39	3.5												
	5.0	1.0	2.4	650	95.8	18.1	12.4	1.67	3.17	4.4			Operation Not Recommended	650	57.8	25.7	15.6	29.4	1.07	24.1	1.6	
				750	92.8	18.5	13.0	1.62	3.35	4.1												
				950	88.3	18.8	13.4	1.59	3.47	3.6												
	6.0	1.3	3.0	650	96.3	18.5	12.7	1.69	3.21	4.6				Operation Not Recommended	650	57.8	25.7	15.6	29.4	1.07	24.1	1.6
				750	93.3	18.9	13.3	1.63	3.39	4.3												
				950	88.7	19.2	13.7	1.60	3.52	3.7												
40	3.8	0.7	1.7	650	98.5	20.0	14.2	1.69	3.46	4.8		Operation Not Recommended			650	57.8	25.7	15.6	29.4	1.07	24.1	1.6
				750	95.2	20.4	14.8	1.64	3.66	4.5												
				950	90.2	20.8	15.3	1.61	3.79	3.9												
	5.0	1.0	2.3	650	99.5	20.7	14.8	1.71	3.54	5.0			Operation Not Recommended		650	57.8	25.7	15.6	29.4	1.07	24.1	1.6
				750	96.1	21.2	15.5	1.66	3.74	4.6												
				950	91.0	21.5	16.0	1.63	3.87	4.1												
	6.0	1.3	2.9	650	100.1	21.1	15.2	1.72	3.59	5.2	Operation Not Recommended			650	57.8	25.7	15.6	29.4	1.07	24.1	1.6	
				750	96.7	21.6	15.9	1.67	3.79	4.8												
				950	91.4	22.0	16.4	1.64	3.93	4.2												
50	3.8	0.7	1.6	650	102.4	22.8	16.8	1.74	3.83	5.5		Operation Not Recommended		650	57.8	25.7	15.6	29.4	1.07	24.1	1.6	
				750	98.8	23.3	17.5	1.69	4.05	5.1												
				950	93.1	23.7	18.0	1.66	4.19	4.5												
	5.0	0.9	2.2	650	103.6	23.6	17.6	1.77	3.91	5.8			Operation Not Recommended	650	57.8	25.7	15.6	29.4	1.07	24.1	1.6	
				750	99.8	24.1	18.3	1.71	4.13	5.3												
				950	93.9	24.5	18.8	1.68	4.28	4.7												
	6.0	1.2	2.8	650	104.3	24.1	18.0	1.78	3.97	6.0	Operation Not Recommended			650	57.8	25.7	15.6	29.4	1.07	24.1	1.6	
				750	100.4	24.6	18.8	1.72	4.19	5.6												
				950	94.4	25.0	19.3	1.69	4.34	4.9												
60	3.8	0.7	1.5	650	106.6	25.7	19.5	1.81	4.17	6.4		Operation Not Recommended		650	57.8	25.7	15.6	29.4	1.07	24.1	1.6	
				750	102.5	26.3	20.3	1.75	4.40	5.9												
				950	96.1	26.7	20.9	1.72	4.56	5.2												
	5.0	0.9	2.1	650	107.9	26.6	20.4	1.83	4.26	6.7			Operation Not Recommended	650	57.8	25.7	15.6	29.4	1.07	24.1	1.6	
				750	103.6	27.2	21.2	1.77	4.50	6.2												
				950	97.0	27.7	21.8	1.74	4.66	5.4												
	6.0	1.2	2.7	650	108.7	27.2	20.9	1.84	4.32	7.0	Operation Not Recommended			650	57.8	25.7	15.6	29.4	1.07	24.1	1.6	
				750	104.3	27.8	21.7	1.79	4.57	6.5												
				950	97.6	28.3	22.3	1.75	4.73	5.7												
70	3.8	0.6	1.5	650	110.8	28.6	22.2	1.88	4.47	7.3		Operation Not Recommended		650	57.8	25.7	15.6	29.4	1.07	24.1	1.6	
				750	106.2	29.3	23.1	1.82	4.72	6.8												
				950	99.0	29.8	23.7	1.79	4.89	6.0												
	5.0	0.9	2.0	650	112.2	29.7	23.2	1.90	4.56	7.6			Operation Not Recommended	650	57.8	25.7	15.6	29.4	1.07	24.1	1.6	
				750	107.4	30.3	24.0	1.84	4.82	7.1												
				950	100.1	30.8	24.7	1.81	5.00	6.3												
	6.0	1.1	2.6	650	113.1	30.3	23.7	1.92	4.63	8.0	Operation Not Recommended			650	57.8	25.7	15.6	29.4	1.07	24.1	1.6	
				750	108.2	31.0	24.6	1.86	4.89	7.4												
				950	100.7	31.5	25.3	1.82	5.07	6.6												
80	3.8	0.6	1.5	650	114.7	31.4	24.7	1.95	4.71	8.3		Operation Not Recommended		650	57.8	25.7	15.6	29.4	1.07	24.1	1.6	
				750	109.6	32.1	25.6	1.89	4.98	7.7												
				950	101.8	32.6	26.3	1.86	5.15	6.8												
	5.0	0.9	2.0	650	116.3	32.5	25.7	1.98	4.81	8.7			Operation Not Recommended	650	57.8	25.7	15.6	29.4	1.07	24.1	1.6	
				750	111.0	33.2	26.7	1.91	5.09	8.1												
				950	102.9	33.8	27.4	1.88	5.27	7.1												
	6.0	1.1	2.6	650	117.2	33.2	26.4	1.99	4.88	9.1	Operation Not Recommended			650	57.8	25.7	15.6	29.4	1.07	24.1	1.6	
				750	111.9	33.9	27.3	1.93	5.15	8.4												
				950	103.6	34.5	28.0	1.89	5.34	7.5												
90	3.8	0.6	1.4	650	118.1	33.7	26.8	2.02	4.89	9.2		Operation Not Recommended		650	57.8	25.7	15.6	29.4	1.07	24.1	1.6	
				750	112.6	34.5	27.8	1.96	5.16	8.6												
				950	104.2	35.1	28.5	1.92	5.35	7.6												
	5.0	0.9	2.0	650	119.8	34.9	27.9	2.05	4.99	9.6			Operation Not Recommended	650	57.8	25.7	15.6	29.4	1.07	24.1	1.6	
				750	114.1	35.7	29.0	1.98	5.28	9.0												
				950	105.4	36.3	29.7	1.95	5.47	8.0												
	6.0	1.1	2.5	650	120.8	35.7	28.6	2.06	5.06	10.1	Operation Not Recommended			650	57.8	25.7	15.6	29.4	1.07	24.1	1.6	
				750	115.0	36.5	29.7	2.00	5.35	9.4												
				950	106.2	37.1	30.4	1.96	5.54	8.3												
100	3.8	0.6	1.4	650	118.1	33.7	26.8	2.02	4.89	9.2		Operation Not Recommended		650	57.8	25.7	15.6	29.4	1.07	24.1	1.6	
				750	112.6	34.5	27.8	1.96	5.16	8.6												
				950	104.2	35.1	28.5	1.92	5.35	7.6												
	5.0	0.8	1.9	650	119.8	34.9	27.9	2.05	4.99	9.6			Operation Not Recommended	650	57.8	25.7	15.6	29.4	1.07	24.1	1.6	
				750	114.1	35.7	29.0	1.98	5.28	9.0												
				950	105.4	36.3	29.7	1.95	5.47	8.0												
	6.0	1.1	2.5	650	120.8	35.7	28.6	2.06	5.06	10.1	Operation Not Recommended			650	57.8	25.7	15.6	29.4	1.07	24.1	1.6	
				750	115.0	36.5	29.7	2.00	5.35	9.4												
				950	106.2	37.1	30.4	1.96	5.54	8.3												
110	3.8	0.6	1.4	650	118.1	33.7	26.8	2.02	4.89	9.2		Operation Not Recommended		650	57.8	25.7	15.6	29.4	1.07	24.1	1.6	
				750	112.6	34.5	27.8	1.96	5.16	8.6												
				950	104.2	35.1	28.5	1.92	5.35	7.6												
	5.0	0.8	1.9	650	119.8	34.9	27.9	2.05	4.99	9.6			Operation Not Recommended	650	57.8	25.7	15.6	29.4	1.07	24.1	1.6	
				750	114.1	35.7	29.0	1.98	5.28	9.0												
				950	105.4	36.3	29.7	1.95	5.47	8.0												
	6.0	1.1	2.4	650	120.8	35.7	28.6	2.06	5.06	10.1	Operation Not Recommended			650	57.8	25.7	15.6	29.4	1.07	24.1	1.6	
				750	115.0	36.5	29.7	2.00	5.35	9.4												
				950	106.2	37.1	30.4	1.96	5.54	8.3												
120	3.8	0.6	1.4	650	118.1	33.7	26.8	2.02	4.89	9.2		Operation Not Recommended		650	57.8	25.7	15.6	29.4	1.07	24.1	1.6	
				750	112.6	34.5	27.8	1.96	5.16	8.6												
				950	104.2	35.1	28.5	1.92	5.35	7.6												
	5.0	0.8	1.9	650	119.8	34.9	27.9	2.05	4.99	9.6			Operation Not Recommended	650	57.8	25.7	15.6	29.4	1.07	24.1	1.6	
				750	114.1	35.7	29.0	1.98	5.28	9.0												
				950	105.4	36.3	29.7	1.95	5.47	8.0												
	6.0	1.0	2.4	650	120.8	35.7	28.6	2.06	5.06	10.1	Operation Not Recommended			650	57.8	25.7	15.6	29.4	1.07	24.1	1.6	
				750	115.0	36.5	29.7	2.00	5.35	9.4												
				950	106.2	37.1	30.4	1.96	5.54	8.3												

NOTE: See page 23 for performance data parameters and guidelines.

ENGINEERING SPECIFICATIONS

ZS Models Performance Tables

Model ZS024, 2 Ton, w/ECM, BPHE Full Load Performance Data

EWT	Flow	WPD		BPHE ECM Unit - Heating							BPHE ECM Unit - Cooling											
		PSI	FT	Aiflow	LAT (DB)	HC	HE	Power	COP	DH	Aiflow	LAT (DB)	TC	SC	HR	Power	EER	DH				
°F	GPM			CFM	°F	MBtuh	MBtuh	KW	W/W	MBtuh	CFM	°F	MBtuh	MBtuh	MBtuh	KW	Btuh/W	MBtuh				
25	6.0	1.4	3.2	780	90.2	17.0	12.3	1.39	3.59	4.0	Operation Not Recommended											
				850	88.6	17.1	12.4	1.36	3.69	3.8												
30	3.8	0.8	1.7	780	90.4	17.2	12.5	1.37	3.68	3.9												
				850	88.8	17.2	12.7	1.34	3.78	3.7												
	5.0	1.0	2.4	780	91.1	17.8	13.0	1.39	3.76	4.0												
				850	89.4	17.8	13.2	1.36	3.85	3.8												
6.0	1.3	3.0	780	91.6	18.2	13.4	1.40	3.81	4.2													
			850	89.8	18.2	13.6	1.37	3.90	4.0													
40	3.8	0.7	1.7	780	93.4	19.7	14.9	1.40	4.12	4.4		780	59.0	27.5	17.7	30.5	0.88	31.3	1.5			
				850	91.5	19.8	15.1	1.37	4.22	4.2		860	60.3	27.6	18.3	30.7	0.90	30.9	1.5			
	5.0	1.0	2.3	780	94.2	20.4	15.5	1.42	4.20	4.5		Operation Not Recommended										
				850	92.3	20.5	15.7	1.39	4.31	4.3												
6.0	1.3	2.9	780	94.7	20.8	15.9	1.44	4.26	4.7													
			850	92.8	20.9	16.1	1.40	4.37	4.5													
50	3.8	0.7	1.6	780	96.8	22.6	17.6	1.45	4.55	5.0			780	57.5	28.9	18.9	32.3	0.99	29.1	2.5		
				850	94.7	22.6	17.8	1.42	4.67	4.8			860	58.9	29.0	19.6	32.5	1.01	28.7	2.5		
	5.0	0.9	2.2	780	97.7	23.4	18.3	1.47	4.65	5.2			780	57.4	28.9	19.0	32.2	0.95	30.4	2.2		
				850	95.6	23.5	18.5	1.44	4.76	5.0			860	58.8	29.1	19.7	32.4	0.97	30.0	2.2		
6.0	1.2	2.8	780	98.3	23.9	18.8	1.49	4.71	5.5	780	57.4	29.0	19.0	32.1	0.93	31.3	1.9					
			850	96.1	24.0	19.0	1.45	4.83	5.2	860	58.8	29.1	19.7	32.3	0.94	30.9	1.9					
60	3.8	0.7	1.5	780	100.4	25.6	20.4	1.51	4.95	5.8	780	57.0	28.9	19.4	32.8	1.12	25.7	3.6				
				850	98.0	25.7	20.6	1.48	5.08	5.5	860	58.4	29.1	20.0	33.0	1.15	25.4	3.7				
	5.0	0.9	2.1	780	101.5	26.5	21.3	1.54	5.06	6.1	780	56.9	29.0	19.4	32.6	1.07	27.0	3.3				
				850	99.0	26.6	21.5	1.50	5.19	5.8	860	58.4	29.1	20.1	32.8	1.09	26.6	3.3				
6.0	1.2	2.7	780	102.1	27.1	21.8	1.55	5.13	6.3	780	56.9	29.0	19.5	32.6	1.05	27.7	3.0					
			850	99.6	27.2	22.0	1.52	5.26	6.0	860	58.3	29.2	20.1	32.8	1.07	27.4	3.0					
70	3.8	0.6	1.5	780	103.9	28.6	23.2	1.58	5.30	6.7	780	57.2	28.2	19.2	32.6	1.28	22.2	4.8				
				850	101.2	28.7	23.4	1.55	5.44	6.3	860	58.6	28.4	19.9	32.8	1.30	21.9	4.9				
	5.0	0.9	2.0	780	105.2	29.6	24.1	1.60	5.41	7.0	780	57.1	28.3	19.3	32.4	1.22	23.2	4.5				
				850	102.4	29.7	24.4	1.57	5.55	6.6	860	58.5	28.4	20.0	32.7	1.24	22.9	4.5				
6.0	1.1	2.6	780	105.9	30.2	24.7	1.62	5.48	7.3	780	57.0	28.3	19.4	32.4	1.19	23.9	4.1					
			850	103.1	30.4	25.0	1.58	5.62	6.9	860	58.4	28.5	20.0	32.6	1.21	23.5	4.1					
80	3.8	0.6	1.5	780	107.3	31.4	25.8	1.65	5.58	7.6	780	57.6	27.2	18.8	32.1	1.45	18.7	6.1				
				850	104.3	31.5	26.0	1.61	5.72	7.2	860	59.0	27.3	19.5	32.4	1.48	18.5	6.2				
	5.0	0.9	2.0	780	108.6	32.5	26.8	1.68	5.69	7.9	780	57.5	27.2	18.9	32.0	1.39	19.6	5.7				
				850	105.5	32.6	27.0	1.64	5.83	7.5	860	58.9	27.4	19.6	32.2	1.41	19.4	5.8				
6.0	1.1	2.6	780	109.4	33.2	27.5	1.69	5.77	8.3	780	57.5	27.3	18.9	31.9	1.35	20.2	5.3					
			850	106.3	33.3	27.7	1.65	5.91	7.9	860	58.9	27.4	19.6	32.1	1.38	19.9	5.3					
90	3.8	0.6	1.4	780	110.1	33.8	28.0	1.72	5.77	8.4	780	58.2	25.9	18.3	31.6	1.66	15.6	7.4				
				850	107.0	33.9	28.2	1.68	5.92	8.0	860	59.6	26.1	19.0	31.8	1.69	15.4	7.5				
	5.0	0.9	2.0	780	111.6	35.0	29.1	1.74	5.89	8.8	780	58.2	26.0	18.4	31.4	1.59	16.4	7.0				
				850	108.3	35.2	29.3	1.71	6.04	8.4	860	59.5	26.1	19.0	31.6	1.62	16.2	7.1				
6.0	1.1	2.5	780	112.5	35.8	29.8	1.76	5.97	9.2	780	58.1	26.0	18.4	31.3	1.55	16.8	6.6					
			850	109.1	35.9	30.1	1.72	6.12	8.8	860	59.5	26.2	19.1	31.5	1.57	16.6	6.6					
100	3.8	0.6	1.4	Operation Not Recommended	780	58.9	24.6	17.8	31.1	1.90	12.9	8.9										
					860	60.2	24.7	18.4	31.3	1.94	12.8	9.0										
	5.0	0.8	1.9		780	58.8	24.6	17.9	30.8	1.82	13.6	8.4										
					860	60.1	24.8	18.5	31.1	1.85	13.4	8.5										
6.0	1.1	2.5	780		58.8	24.7	17.9	30.7	1.77	13.9	7.9											
			860		60.1	24.8	18.5	30.9	1.80	13.8	8.0											
110	3.8	0.6	1.4		780	59.5	23.1	17.2	30.6	2.18	10.6	10.5										
					860	60.8	23.2	17.8	30.8	2.22	10.4	10.6										
	5.0	0.8	1.9		780	59.5	23.1	17.3	30.3	2.09	11.1	10.0										
					860	60.7	23.3	17.9	30.5	2.13	10.9	10.1										
6.0	1.1	2.4	780		59.4	23.2	17.3	30.1	2.03	11.4	9.4											
			860		60.7	23.3	17.9	30.4	2.07	11.3	9.5											
120	3.8	0.6	1.4		780	60.4	21.3	16.5	29.9	2.51	8.5	12.1										
					860	61.6	21.5	17.1	30.2	2.56	8.4	12.3										
	5.0	0.8	1.9		780	60.4	21.4	16.6	29.6	2.40	8.9	11.6										
					860	61.6	21.5	17.1	29.8	2.44	8.8	11.7										
6.0	1.0	2.4	780		60.3	21.4	16.6	29.4	2.34	9.2	11.0											
			860		61.5	21.5	17.2	29.6	2.38	9.0	11.1											

NOTE: See page 23 for performance data parameters and guidelines.

ZS Models Performance Tables
Model ZS024, 2 Ton, w/PSC, COAX Full Load Performance Data

EWT °F	Flow GPM	WPD		COAX PSC Unit - Heating						COAX PSC Unit - Cooling															
		PSI	FT	Aiflow CFM	LAT (DB) °F	HC MBtuh	HE MBtuh	Power kW	COP W/W	DH MBtuh	Aiflow CFM	LAT (DB) °F	TC MBtuh	SC MBtuh	HR MBtuh	Power kW	EER Btuh/W	DH MBtuh							
25	6.0	5.7	13.2	650	93.7	16.7	11.0	1.65	2.96	4.2	Operation Not Recommended														
				750	91.1	17.1	11.6	1.60	3.13	3.9															
				950	87.0	17.4	12.1	1.57	3.26	3.5															
30	3.0	2.0	4.6	650	94.2	17.0	11.4	1.64	3.04	4.3															
				750	91.4	17.4	12.0	1.59	3.21	4.0															
				950	87.3	17.7	12.4	1.55	3.35	3.5															
	4.5	3.5	8.0	650	95.0	17.6	11.9	1.66	3.11	4.4															
				750	92.2	18.0	12.5	1.61	3.28	4.1															
				950	87.9	18.4	13.0	1.57	3.43	3.6															
6.0	5.2	12.0	650	95.6	18.0	12.3	1.67	3.16	4.5																
			750	92.7	18.4	12.9	1.62	3.33	4.2																
			950	88.3	18.8	13.4	1.58	3.48	3.7																
40	3.0	1.8	4.1	650	98.0	19.6	13.9	1.69	3.41	4.8								650	56.7	26.4	16.4	30.4	1.16	22.9	2.7
				750	94.8	20.1	14.5	1.64	3.60	4.5								750	58.0	27.7	17.8	31.7	1.18	23.4	2.8
				950	90.0	20.5	15.1	1.60	3.76	3.9								950	60.7	28.6	19.8	32.9	1.25	22.9	2.8
	4.5	3.1	7.2	650	99.0	20.3	14.5	1.71	3.49	5.0								Operation Not Recommended							
				750	95.7	20.8	15.2	1.66	3.69	4.6															
				950	90.7	21.3	15.8	1.62	3.85	4.1															
	6.0	4.7	10.9	650	99.7	20.8	15.0	1.72	3.55	5.1															
				750	96.3	21.3	15.6	1.67	3.74	4.7															
				950	91.2	21.8	16.2	1.63	3.91	4.2															
50	3.0	1.6	3.8	650	102.0	22.5	16.5	1.75	3.77	5.5	650	55.7	27.0	17.0	31.4	1.28	21.1								3.2
				750	98.4	23.0	17.2	1.69	3.98	5.1	750	57.1	28.3	18.5	32.8	1.31	21.6								3.3
				950	92.9	23.5	17.9	1.66	4.16	4.5	950	59.9	29.3	20.6	34.0	1.38	21.2								3.4
	4.5	2.9	6.6	650	103.2	23.3	17.2	1.77	3.86	5.7	650	55.6	27.2	17.1	31.3	1.20	22.7	2.7							
				750	99.4	23.8	18.0	1.72	4.07	5.3	750	57.0	28.5	18.7	32.7	1.23	23.3	2.8							
				950	93.7	24.3	18.6	1.68	4.25	4.6	950	59.8	29.5	20.8	34.0	1.30	22.8	2.8							
	6.0	4.3	10.0	650	104.0	23.8	17.8	1.78	3.92	5.9	650	55.5	27.4	17.2	31.3	1.16	23.7	2.4							
				750	100.1	24.4	18.5	1.73	4.14	5.4	750	56.9	28.7	18.7	32.7	1.18	24.3	2.5							
				950	94.3	24.9	19.2	1.69	4.32	4.8	950	59.7	29.7	20.8	33.9	1.25	23.8	2.6							
60	3.0	1.5	3.5	650	106.2	25.4	19.2	1.82	4.10	6.2	650	55.9	26.6	16.9	31.4	1.43	18.6	4.1							
				750	102.1	26.0	20.0	1.76	4.32	5.8	750	57.2	27.8	18.4	32.8	1.46	19.1	4.2							
				950	95.9	26.5	20.7	1.72	4.51	5.1	950	60.0	28.8	20.5	34.1	1.54	18.7	4.3							
	4.5	2.7	6.1	650	107.4	26.3	20.0	1.84	4.19	6.5	650	55.7	26.8	17.1	31.3	1.34	20.0	3.5							
				750	103.2	26.9	20.8	1.78	4.42	6.1	750	57.1	28.0	18.6	32.7	1.37	20.5	3.6							
				950	96.8	27.5	21.5	1.74	4.62	5.3	950	59.9	29.0	20.6	33.9	1.44	20.1	3.7							
	6.0	4.0	9.2	650	108.3	26.9	20.6	1.85	4.26	6.7	650	55.6	26.9	17.1	31.3	1.29	20.9	3.2							
				750	104.0	27.5	21.4	1.80	4.49	6.3	750	57.0	28.2	18.6	32.7	1.31	21.4	3.3							
				950	97.4	28.1	22.1	1.76	4.69	5.5	950	59.8	29.2	20.7	33.9	1.39	21.0	3.3							
70	3.0	1.4	3.3	650	110.2	28.3	21.8	1.89	4.38	7.1	650	56.4	25.6	16.5	31.0	1.59	16.0	5.2							
				750	105.7	28.9	22.7	1.83	4.62	6.6	750	57.8	26.8	18.0	32.3	1.63	16.4	5.3							
				950	98.8	29.5	23.4	1.79	4.83	5.8	950	60.5	27.7	20.0	33.6	1.72	16.1	5.4							
	4.5	2.5	5.7	650	111.7	29.3	22.7	1.91	4.48	7.5	650	56.3	25.8	16.7	30.9	1.49	17.3	4.5							
				750	107.0	29.9	23.6	1.85	4.73	7.0	750	57.6	27.0	18.1	32.2	1.53	17.7	4.7							
				950	99.8	30.6	24.4	1.81	4.94	6.1	950	60.3	27.9	20.2	33.5	1.61	17.3	4.7							
	6.0	3.7	8.6	650	112.7	30.0	23.4	1.93	4.55	7.7	650	56.2	25.9	16.7	30.8	1.44	18.0	4.2							
				750	107.9	30.7	24.3	1.87	4.81	7.2	750	57.5	27.1	18.2	32.1	1.47	18.5	4.3							
				950	100.5	31.3	25.1	1.83	5.02	6.4	950	60.3	28.1	20.2	33.4	1.55	18.1	4.4							
80	3.0	1.3	3.1	650	114.2	31.0	24.3	1.97	4.62	8.0	650	57.1	24.4	16.1	30.5	1.79	13.7	6.5							
				750	109.2	31.7	25.2	1.91	4.88	7.5	750	58.4	25.6	17.5	31.8	1.83	14.0	6.6							
				950	101.6	32.4	26.1	1.87	5.10	6.6	950	61.1	26.5	19.4	33.1	1.93	13.7	6.8							
	4.5	2.3	5.4	650	115.8	32.1	25.3	1.99	4.73	8.5	650	57.0	24.6	16.2	30.3	1.67	14.7	5.7							
				750	110.6	32.9	26.3	1.93	4.99	7.9	750	58.3	25.8	17.6	31.6	1.71	15.1	5.9							
				950	102.7	33.6	27.1	1.89	5.21	7.0	950	60.9	26.7	19.6	32.8	1.81	14.7	6.0							
	6.0	3.5	8.1	650	116.9	32.9	26.1	2.01	4.81	8.8	650	56.9	24.7	16.2	30.2	1.61	15.3	5.3							
				750	111.6	33.7	27.0	1.95	5.07	8.2	750	58.2	25.9	17.7	31.5	1.65	15.7	5.5							
				950	103.5	34.4	27.9	1.90	5.30	7.3	950	60.9	26.8	19.6	32.7	1.74	15.4	5.6							
90	3.0	1.3	2.9	650	117.8	33.6	26.6	2.04	4.82	9.0	650	57.8	23.2	15.6	30.0	2.01	11.5	7.9							
				750	112.4	34.4	27.6	1.98	5.09	8.4	750	59.1	24.3	16.9	31.3	2.05	11.8	8.0							
				950	104.2	35.1	28.5	1.94	5.31	7.5	950	61.6	25.1	18.8	32.5	2.17	11.6	8.2							
	4.5	2.2	5.1	650	119.5	34.8	27.7	2.07	4.93	9.6	650	57.7	23.4	15.7	29.8	1.88	12.4	7.0							
				750	113.9	35.6	28.8	2.00	5.21	8.9	750	58.9	24.5	17.1	31.0	1.92	12.7	7.2							
				950	105.4	36.4	29.7	1.96	5.44	7.9	950	61.5	25.3	19.0	32.3	2.03	12.5	7.4							
	6.0	3.3	7.7	650	120.7	35.6	28.5	2.08	5.01	10.0	650	57.6	23.5	15.7	29.6	1.81	13.0	6.6							
				750	115.0	36.5	29.6	2.02	5.29	9.3	750	58.9	24.6	17.1	30.9	1.85	13.3	6.7							
				950	106.3	37.2	30.5	1.98	5.52	8.3	950	61.5	25.5	19.0	32.1	1.96	13.0	6.9							
100	3.0	1.1	2.6	Operation Not Recommended							650	58.6	21.9	15.0	29.6	2.26	9.7	9.3							
											750	59.8	22.9	16.4	30.8	2.31	10.0	9.5							
	4.5	2.0	4.6								650	58.4	22.1	15.1	29.3	2.11	10.4	8.4							
											750	59.6	23.1	16.5	30.5	2.16	10.7	8.6							
	6.0	3.1	7.1								650	62.1	23.9	18.3	31.7	2.28	10.5	8.8							
											750	62.1	24.0	18.4	31.5	2.20	10.9	8.3							
110	3.0	1.1	2.5								650	59.4	20.5	14.5	29.2	2.54	8.1	10.8							
											750	60.6	21.5	15.8	30.3	2.59	8.3	11.0							
	4.5	1.9	4.5								650	59.2	20.7	14.6	28.8	2.38	8.7	9.8							
											750	60.4	21.6	15.9	29.9	2.43	8.9	10.0							
	6.0	2.9	6.8								650	62.8	22.4	17.6	31.2	2.57	8.7	10.3							
											750	62.8	22.5	17.7	30.9	2.47	9.1	9.7							
120	3.0	1.0	2.4								650	60.3	18.9	13.9	28.7	2.85	6.6	12.4							
											750	61.4	19.8	15.1	29.8	2.91	6.8	12.7							
	4.5	1.8	4.3								650	61.2	20.0	15.2	29.3	2.73	7.3	11.5							
											750	63.5	20.7	16.9	30.5	2.88	7.2	11.8							
	6.0	2.8	6.5								650	60.1	19.2	14.0	27.9	2.57	7.5	10.7							
											750	61.2	20.1	15.2	29.0	2.63	7.7	10.9							
950	63.5	20.8	16.9	30.3	2.78	7.5	11.2																		

NOTE: See page 23 for performance data parameters and guidelines.

ENGINEERING SPECIFICATIONS

ZS Models Performance Tables

Model ZS024, 2 Ton, w/ECM, COAX Full Load Performance Data

EWT	Flow	WPD		COAX ECM Unit - Heating							COAX ECM Unit - Cooling																																																															
		PSI	FT	Aiflow	LAT (DB)	HC	HE	Power	COP	DH	Aiflow	LAT (DB)	TC	SC	HR	Power	EER	DH																																																								
°F	GPM			CFM	°F	MBtuh	MBtuh	kW	W/W	MBtuh	CFM	°F	MBtuh	MBtuh	MBtuh	kW	Btuh/W	MBtuh																																																								
25	6.0	5.7	13.2	780	89.4	16.4	11.7	1.36	3.52	3.8	Operation Not Recommended																																																															
				850	87.9	16.4	11.9	1.33	3.61	3.7																																																																
30	3.0	2.0	4.6	780	89.8	16.7	12.1	1.35	3.61	3.9										Operation Not Recommended																																																						
				850	88.3	16.8	12.2	1.32	3.71	3.7																																																																
	4.5	3.5	8.0	780	90.5	17.3	12.6	1.37	3.70	4.0																			Operation Not Recommended																																													
				850	88.9	17.4	12.8	1.34	3.80	3.8																																																																
	6.0	5.2	12.0	780	91.0	17.7	13.0	1.38	3.75	4.1																												Operation Not Recommended																																				
				850	89.4	17.8	13.2	1.35	3.86	3.9																																																																
40	3.0	1.8	4.1	780	93.1	19.4	14.6	1.40	4.06	4.4																																						780	57.6	28.6	18.9	31.9	0.97	29.6	2.8																			
				850	91.3	19.5	14.8	1.37	4.18	4.2																																						860	58.9	29.0	19.6	32.3	0.99	29.4	2.8																			
	4.5	3.1	7.2	780	93.9	20.1	15.3	1.42	4.16	4.5																																						Operation Not Recommended																										
				850	92.0	20.2	15.5	1.39	4.27	4.3																																																																
	6.0	4.7	10.9	780	94.5	20.6	15.8	1.43	4.22	4.6																																															Operation Not Recommended																	
				850	92.6	20.7	16.0	1.40	4.34	4.4																																																																
50	3.0	1.6	3.8	780	96.5	22.3	17.4	1.46	4.48	5.0																																																									780	56.8	29.3	19.6	33.0	1.10	26.7	3.3
				850	94.4	22.4	17.6	1.43	4.61	4.7																																																									860	58.1	29.6	20.3	33.4	1.12	26.5	3.3
	4.5	2.9	6.6	780	97.5	23.2	18.1	1.48	4.58	5.2																																																									780	56.6	29.5	19.7	32.9	1.02	29.0	2.8
				850	95.3	23.3	18.3	1.45	4.71	4.9																																																									860	58.0	29.9	20.5	33.4	1.04	28.8	2.8
	6.0	4.3	10.0	780	98.2	23.7	18.6	1.49	4.66	5.3																																																									780	56.5	29.6	19.8	32.9	0.97	30.4	2.5
				850	96.0	23.8	18.9	1.46	4.79	5.1																																																									860	57.9	30.0	20.5	33.4	0.99	30.3	2.5
60	3.0	1.5	3.5	780	100.0	25.3	20.1	1.53	4.86	5.7	780	56.9	28.8	19.5	33.0	1.25	23.0	4.2																																																								
				850	97.7	25.4	20.3	1.49	4.99	5.4	860	58.2	29.1	20.2	33.5	1.27	22.9	4.2																																																								
	4.5	2.7	6.1	780	101.1	26.2	21.0	1.55	4.97	5.9	780	56.7	29.0	19.6	32.9	1.16	25.0	3.6																																																								
				850	98.7	26.4	21.2	1.51	5.11	5.7	860	58.1	29.3	20.4	33.4	1.18	24.9	3.6																																																								
	6.0	4.0	9.2	780	101.9	26.9	21.6	1.56	5.05	6.1	780	56.6	29.1	19.7	32.9	1.11	26.3	3.3																																																								
				850	99.4	27.0	21.8	1.53	5.19	5.9	860	58.0	29.5	20.4	33.3	1.13	26.1	3.3																																																								
70	3.0	1.4	3.3	780	103.5	28.3	22.8	1.60	5.19	6.5	780	57.4	27.7	19.0	32.6	1.42	19.5	5.4																																																								
				850	100.9	28.4	23.1	1.56	5.33	6.2	860	58.7	28.1	19.8	33.0	1.45	19.3	5.4																																																								
	4.5	2.5	5.7	780	104.8	29.3	23.8	1.62	5.30	6.8	780	57.2	27.9	19.2	32.4	1.32	21.2	4.7																																																								
				850	102.1	29.4	24.0	1.58	5.45	6.5	860	58.6	28.3	19.9	32.9	1.35	21.0	4.7																																																								
	6.0	3.7	8.6	780	105.6	30.0	24.5	1.63	5.39	7.1	780	57.2	28.1	19.2	32.4	1.26	22.2	4.3																																																								
				850	102.9	30.2	24.7	1.60	5.54	6.8	860	58.5	28.4	20.0	32.8	1.29	22.1	4.3																																																								
80	3.0	1.3	3.1	780	106.9	31.1	25.4	1.67	5.46	7.3	780	58.0	26.5	18.5	32.0	1.63	16.3	6.7																																																								
				850	104.0	31.2	25.7	1.63	5.61	7.0	860	59.3	26.8	19.2	32.5	1.66	16.2	6.7																																																								
	4.5	2.3	5.4	780	108.3	32.2	26.5	1.69	5.58	7.8	780	57.9	26.7	18.6	31.8	1.51	17.7	5.9																																																								
				850	105.3	32.4	26.7	1.66	5.73	7.4	860	59.2	27.0	19.4	32.3	1.54	17.6	5.9																																																								
	6.0	3.5	8.1	780	109.2	33.0	27.2	1.71	5.67	8.1	780	57.8	26.8	18.7	31.7	1.44	18.6	5.5																																																								
				850	106.2	33.2	27.5	1.67	5.82	7.7	860	59.1	27.2	19.4	32.2	1.47	18.5	5.5																																																								
90	3.0	1.3	2.9	780	110.0	33.7	27.8	1.74	5.67	8.3	780	58.7	25.2	17.9	31.5	1.86	13.6	8.1																																																								
				850	106.9	33.9	28.1	1.70	5.83	7.9	860	59.9	25.5	18.6	32.0	1.89	13.5	8.2																																																								
	4.5	2.2	5.1	780	111.5	35.0	28.9	1.77	5.80	8.8	780	58.5	25.4	18.1	31.2	1.72	14.8	7.2																																																								
				850	108.3	35.1	29.2	1.73	5.96	8.4	860	59.8	25.7	18.8	31.7	1.75	14.7	7.3																																																								
	6.0	3.3	7.7	780	112.5	35.8	29.7	1.78	5.89	9.1	780	58.5	25.5	18.1	31.1	1.64	15.5	6.8																																																								
				850	109.2	36.0	30.1	1.74	6.06	8.8	860	59.7	25.8	18.8	31.6	1.68	15.4	6.8																																																								
100	3.0	1.1	2.6	Operation Not Recommended							780	59.4	23.8	17.4	31.1	2.12	11.3	9.6																																																								
											860	60.6	24.1	18.0	31.5	2.16	11.2	9.7																																																								
	4.5	2.0	4.6								780	59.2	24.0	17.5	30.7	1.96	12.3	8.6																																																								
											860	60.4	24.3	18.2	31.1	2.00	12.2	8.7																																																								
	6.0	3.1	7.1								780	59.2	24.1	17.6	30.5	1.88	12.9	8.1																																																								
											860	60.4	24.5	18.2	31.0	1.91	12.8	8.2																																																								
110	3.0	1.1	2.5								Operation Not Recommended							780	60.1	22.4	16.7	30.6	2.41	9.3	11.1																																																	
																		860	61.3	22.7	17.4	31.0	2.46	9.2	11.2																																																	
	4.5	1.9	4.5															780	60.0	22.5	16.9	30.2	2.23	10.1	10.1																																																	
																		860	61.1	22.8	17.5	30.6	2.27	10.0	10.2																																																	
	6.0	2.9	6.8															780	59.9	22.6	16.9	29.9	2.14	10.6	9.5																																																	
																		860	61.1	22.9	17.6	30.4	2.18	10.5	9.6																																																	
120	3.0	1.0	2.4															Operation Not Recommended							780	60.9	20.7	16.1	30.1	2.74	7.6	12.7																																										
																									860	62.0	21.0	16.7	30.5	2.79	7.5	12.8																																										
	4.5	1.8	4.3																						780	60.8	20.9	16.2	29.5	2.54	8.2	11.6																																										
																									860	61.9	21.1	16.8	30.0	2.58	8.2	11.7																																										
	6.0	2.8	6.5																						780	60.7	21.0	16.2	29.2	2.43	8.6	11.0																																										
																									860	61.9	21.2	16.9	29.7	2.47	8.6	11.1																																										

NOTE: See page 23 for performance data parameters and guidelines.

ZS Models Performance Tables

Model ZS030, 2.5 Ton, w/PSC, BPHE Full Load Performance Data

EWT °F	Flow GPM	WPD		BPHE PSC Unit - Heating						BPHE PSC Unit - Cooling																															
		PSI	FT	Aiflow CFM	LAT (DB) °F	HC MBtuh	HE MBtuh	Power kW	COP W/W	DH MBtuh	Aiflow CFM	LAT (DB) °F	TC MBtuh	SC MBtuh	HR MBtuh	Power kW	EER Btuh/W	DH MBtuh																							
25	7.5	1.9	4.3	950	89.7	20.3	13.8	1.90	3.12	4.8	Operation Not Recommended																														
				1000	88.9	20.4	13.9	1.90	3.15	4.7																															
				1050	88.0	20.5	14.0	1.89	3.17	4.6																															
30	5.8	1.3	2.9	950	90.7	21.2	14.7	1.91	3.26	5.0																															
				1000	89.8	21.3	14.9	1.90	3.29	4.8																															
				1050	88.9	21.4	15.0	1.90	3.31	4.7																															
30	6.5	1.5	3.4	950	91.0	21.6	15.1	1.92	3.30	5.1																															
				1000	90.1	21.7	15.2	1.91	3.34	4.9																															
				1050	89.2	21.8	15.3	1.91	3.36	4.8																															
30	7.5	1.8	4.2	950	91.5	22.1	15.5	1.93	3.35	5.1																															
				1000	90.5	22.2	15.6	1.92	3.38	5.0																															
				1050	89.7	22.3	15.7	1.92	3.41	4.9																															
40	5.8	1.2	2.8	950	94.0	24.6	17.9	1.96	3.68	5.6											950	61.3	30.1	19.2	34.6	1.32	22.9	2.0													
				1000	92.9	24.7	18.1	1.95	3.71	5.5											1000	61.8	30.3	19.7	34.9	1.33	22.7	2.0													
				1050	91.9	24.8	18.2	1.95	3.74	5.3											1050	62.3	30.5	20.1	35.1	1.35	22.6	2.0													
40	6.5	1.4	3.3	950	94.4	25.0	18.3	1.97	3.72	5.7											Operation Not Recommended																				
				1000	93.3	25.2	18.5	1.96	3.76	5.6																															
				1050	92.3	25.3	18.6	1.96	3.78	5.4																															
40	7.5	1.7	4.0	950	94.9	25.6	18.8	1.99	3.77	5.8																															
				1000	93.8	25.7	19.0	1.98	3.81	5.6																															
				1050	92.8	25.8	19.1	1.97	3.84	5.5																															
50	5.8	1.2	2.7	950	97.1	27.9	21.0	2.02	4.04	6.3																					950	59.5	32.0	21.0	36.9	1.44	22.2	3.0			
				1000	95.9	28.0	21.1	2.01	4.08	6.2																					1000	60.1	32.2	21.5	37.2	1.46	22.1	3.0			
				1050	94.8	28.1	21.3	2.01	4.11	6.0																					1050	60.7	32.4	21.9	37.5	1.48	21.9	3.1			
50	6.5	1.4	3.2	950	97.6	28.4	21.4	2.03	4.09	6.4																					950	59.5	32.1	21.0	37.0	1.43	22.5	2.9			
				1000	96.4	28.5	21.6	2.02	4.13	6.3																					1000	60.1	32.3	21.5	37.3	1.44	22.4	2.9			
				1050	95.3	28.6	21.8	2.02	4.16	6.1																					1050	60.6	32.5	21.9	37.5	1.46	22.2	2.9			
50	7.5	1.7	3.8	950	98.2	29.0	22.0	2.05	4.15	6.5																					950	59.5	32.2	21.1	37.0	1.41	22.8	2.8			
				1000	97.0	29.1	22.2	2.04	4.19	6.4																					1000	60.1	32.4	21.5	37.3	1.43	22.7	2.8			
				1050	95.8	29.3	22.3	2.03	4.22	6.2																					1050	60.6	32.6	22.0	37.6	1.45	22.5	2.8			
60	5.8	1.1	2.6	950	100.2	31.0	23.9	2.09	4.36	7.1																					950	58.9	32.4	21.7	37.8	1.58	20.5	4.2			
				1000	98.9	31.2	24.1	2.08	4.40	6.9																					1000	59.5	32.6	22.2	38.1	1.60	20.4	4.2			
				1050	97.6	31.3	24.3	2.07	4.43	6.8																					1050	60.0	32.8	22.7	38.4	1.62	20.2	4.2			
60	6.5	1.3	3.1	950	100.8	31.6	24.4	2.10	4.41	7.3																					950	58.8	32.5	21.7	37.8	1.56	20.8	4.0			
				1000	99.4	31.7	24.6	2.09	4.46	7.1																					1000	59.4	32.7	22.2	38.1	1.58	20.7	4.0			
				1050	98.1	31.9	24.8	2.08	4.49	6.9																					1050	60.0	32.9	22.7	38.4	1.60	20.5	4.0			
60	7.5	1.6	3.7	950	101.4	32.2	25.0	2.11	4.48	7.4																					950	58.8	32.6	21.8	37.8	1.55	21.1	3.9			
				1000	100.0	32.4	25.2	2.10	4.52	7.2																					1000	59.4	32.8	22.3	38.1	1.56	21.0	3.9			
				1050	98.7	32.6	25.4	2.10	4.55	7.0																					1050	60.0	33.0	22.7	38.4	1.59	20.8	3.9			
70	5.8	1.1	2.6	950	103.2	34.0	26.7	2.15	4.64	8.0																					950	59.0	31.7	21.6	37.6	1.74	18.2	5.4			
				1000	101.7	34.2	26.9	2.14	4.69	7.8																					1000	59.6	31.9	22.1	37.9	1.76	18.1	5.4			
				1050	100.3	34.4	27.1	2.14	4.72	7.6																					1050	60.1	32.1	22.5	38.2	1.79	18.0	5.4			
70	6.5	1.3	3.0	950	103.8	34.7	27.3	2.16	4.70	8.1																					950	58.9	31.8	21.6	37.6	1.72	18.5	5.2			
				1000	102.3	34.9	27.5	2.15	4.75	7.9																					1000	59.5	32.0	22.1	37.9	1.74	18.4	5.2			
				1050	100.9	35.0	27.7	2.15	4.78	7.7																					1050	60.1	32.2	22.6	38.2	1.76	18.3	5.2			
70	7.5	1.6	3.7	950	104.5	35.4	28.0	2.18	4.77	8.2																					950	58.9	31.8	21.7	37.6	1.70	18.8	5.1			
				1000	103.0	35.6	28.2	2.17	4.82	8.0																					1000	59.5	32.1	22.2	37.9	1.72	18.6	5.1			
				1050	101.5	35.8	28.4	2.16	4.85	7.8																					1050	60.1	32.3	22.6	38.2	1.74	18.5	5.1			
80	5.8	1.1	2.5	950	106.1	37.0	29.4	2.21	4.90	8.8																					950	59.5	30.3	21.0	36.9	1.92	15.7	6.7			
				1000	104.5	37.2	29.7	2.20	4.95	8.6																					1000	60.1	30.5	21.5	37.2	1.95	15.7	6.7			
				1050	103.0	37.4	29.9	2.20	4.98	8.4																					1050	60.7	30.7	21.9	37.4	1.98	15.5	6.8			
80	6.5	1.3	2.9	950	106.7	37.7	30.1	2.23	4.96	9.0																					950	59.5	30.4	21.0	36.9	1.90	16.0	6.5			
				1000	105.1	37.9	30.3	2.22	5.01	8.8																					1000	60.1	30.6	21.5	37.2	1.93	15.9	6.5			
				1050	103.6	38.1	30.5	2.21	5.04	8.6																					1050	60.6	30.8	22.0	37.5	1.95	15.8	6.5			
80	7.5	1.6	3.6	950	107.5	38.5	30.8	2.24	5.03	9.2																					950	59.5	30.5	21.1	36.9	1.88	16.2	6.4			
				1000	105.8	38.7	31.1	2.23	5.08	8.9																					1000	60.0	30.7	21.6	37.2	1.90	16.1	6.4			
				1050	104.3	38.9	31.3	2.23	5.12	8.7																					1050	60.6	30.9	22.0	37.5	1.93	16.0	6.4			
90	5.8	1.1	2.5	950	108.9	39.9	32.1	2.28	5.14	9.7																					950	60.3	28.7	20.3	36.0	2.15	13.4	8.1			
				1000	107.1	40.1	32.4	2.27	5.19	9.5																					1000	60.8	28.9	20.7	36.3	2.17	13.3	8.2			
				1050	105.5	40.3	32.6	2.26	5.22	9.3																					1050	61.4	29.1	21.1	36.6	2.20	13.2	8.2			
90	6.5	1.3	2.9	950	109.6	40.6	32.8	2.29	5.20	9.9																					950	60.2	28.8	20.3	36.0	2.12	13.6	7.9			
				1000	107.8	40.8	33.1	2.28	5.25	9.7																					1000	60.8	29.0	20.7	36.3	2.15	13.5	7.9			
				1050	106.2	41.0	33.3	2.27	5.29	9.5																					1050	61.3	29.2	21.2	36.6	2.18	13.4	8.0			
90	7.5	1.5	3.5	950	110.4	41.5	33.6	2.30	5.28	10.1																					950	60.2	28.9	20.3	36.0	2.10	13.8	7.8			
				1000	108.6	41.7	33.9	2.29	5.33	9.8																					1000	60.8	29.1	20.8	36.3	2.12	13.7	7.8			
				1050	106.9	41.9	34.1	2.29	5.36	9.6																					1050	61.3	29.2	21.2	36.6	2.15	13.6	7.8			
100	5.8	1.1	2.5	Operation Not Recommended																																					
																															950	60.9	27.1	19.6	35.3	2.41	11.2	9.7			
																															1000	61.5	27.3	20.0	35.6	2.44	11.2	9.8			
1050	62.0	27.4	20.4																												35.9	2.48	11.1	9.8							
100	6.5	1.2	2.9																												950	60.9	27.2	19.6	35.3	2.38	11.4	9.4			
																															1000	61.4	27.3	20.0	35.6	2.41	11.3	9.5			
																															1050	62.0	27.5	20.5	35.9	2.45	11.2	9.5			
100	7.5	1.5	3.5																												950	60.9	27.2	19.6	35.3	2.36	11.6	9.3			
																															1000	61.4	27.4	20.1	35.6	2.39	11.5	9.3			
																															1050	61.9	27.6	20.5	35.8	2.42	11.4	9.4			
110	5.8	1.1	2.5																												950	61.6	25.4	18.9	34.7	2.73	9.3	11.4			
																															1000	62.1	25.6	19.4	35.0	2.77	9.2	11.5			
																															1050	62.6	25.7	19.8	35.3	2.81	9.2	11.5			
110	6.5	1.2	2.8																												950	61.5	25.5	19.0	34.7	2.70	9.4	11.2			
																															1000	62.1	25.6	19.4	35.0	2.74	9.4	11.2			
																															1050	62.5	25.8	19.8	35.3	2.77	9.3	11.3			
110	7.5	1.5	3.4																												950	61.5	25.5	19.0	34.6	2.67	9.6	11.0			
																															1000	62.0	25.7	19.4	34.9	2.70	9.5	11.0			
																															1050	62.5	25.9	19.8	35.2	2.74	9.4	11.1			
120	5.8	1.0	2.4																												950	62.4	23.2	18.0	33.9	3.12	7.5	13.3			
																															1000	62.9	23.4	18.4	34.2	3.16	7.4	13.4			
																															1050	63.4	23.5	18.8	34.5	3.20	7.4	13.4			
120	6.5	1.2	2.8																												950	62.4	23.3	18.1	33.8	3.08	7.6	13.0			
																															1000	62.9	23.5	18.5	34.1	3.12	7.5	13.0			
																															1050	63.4	23.6	18.8	34.4	3.16	7.5	13.1			
120	7.5	1.5	3.3																												950	62.4	23.4	18.1	33.7	3.04	7.7	12.8			
																															1000	62.9	23.5	18.5	34.0	3.08	7.6	12.9			
																															1050	63.4	23.7	18.9	34.3	3.12	7.6	12.9			

NOTE: See page 23 for performance data parameters and guidelines.

ENGINEERING SPECIFICATIONS

ZS Models Performance Tables

Model ZS030, 2.5 Ton, w/ECM, BPHE Full Load Performance Data

EWT	Flow	WPD		BPHE ECM Unit - Heating							BPHE ECM Unit - Cooling																									
		°F	GPM	PSI	FT	Aiflow CFM	LAT (DB) °F	HC MBtuh	HE MBtuh	Power kW	COP W/W	DH MBtuh	Aiflow CFM	LAT (DB) °F	TC MBtuh	SC MBtuh	HR MBtuh	Power kW	EER Btuh/W	DH MBtuh																
25	7.5	1.9	4.3	1050	87.2	19.5	14.0	1.62	3.54	4.6	Operation Not Recommended																									
				1070	86.9	19.5	14.0	1.61	3.55	4.6																										
30	5.8	1.3	2.9	1050	88.1	20.5	15.0	1.62	3.71	4.7																										
				1070	87.8	20.5	15.0	1.62	3.72	4.7																										
	6.5	1.5	3.4	1050	88.4	20.9	15.3	1.63	3.76	4.8																										
				1070	88.1	20.9	15.4	1.63	3.77	4.8																										
	7.5	1.8	4.2	1050	88.8	21.4	15.7	1.64	3.81	4.9																										
				1070	88.5	21.4	15.8	1.64	3.82	4.9																										
40	5.8	1.2	2.8	1050	91.1	23.9	18.2	1.67	4.19	5.3										830	59.0	30.2	18.8	33.8	1.05	28.6	1.9									
				1070	90.7	23.9	18.2	1.67	4.20	5.3										960	60.6	30.9	20.1	34.7	1.09	28.4	1.9									
	6.5	1.4	3.3	1050	91.5	24.4	18.6	1.69	4.24	5.4										Operation Not Recommended																
				1070	91.1	24.4	18.7	1.68	4.25	5.4																										
	7.5	1.7	4.0	1050	92.0	24.9	19.1	1.70	4.30	5.5																										
				1070	91.6	24.9	19.2	1.69	4.31	5.5																										
50	5.8	1.2	2.7	1050	94.0	27.2	21.3	1.73	4.60	6.0																			830	57.2	32.0	20.5	36.0	1.18	27.3	3.0
				1070	93.6	27.2	21.3	1.73	4.61	6.0																			960	58.9	32.9	21.9	37.0	1.21	27.1	3.0
	6.5	1.4	3.2	1050	94.4	27.7	21.8	1.75	4.65	6.1										830	57.1	32.1	20.5	36.1	1.16	27.7	2.8									
				1070	94.0	27.7	21.8	1.74	4.67	6.1										960	58.9	33.0	21.9	37.0	1.20	27.5	2.9									
	7.5	1.7	3.8	1050	95.0	28.3	22.3	1.76	4.72	6.2										830	57.1	32.2	20.5	36.1	1.14	28.2	2.7									
				1070	94.5	28.4	22.4	1.76	4.74	6.2										960	58.8	33.0	21.9	37.1	1.18	28.0	2.8									
60	5.8	1.1	2.6	1050	96.8	30.4	24.2	1.80	4.95	6.8	830	56.4	32.4	21.1	36.9	1.31	24.8	4.1																		
				1070	96.3	30.4	24.3	1.79	4.97	6.7	960	58.2	33.2	22.6	37.8	1.35	24.6	4.1																		
	6.5	1.3	3.1	1050	97.3	30.9	24.8	1.81	5.02	6.9	830	56.4	32.5	21.2	36.9	1.29	25.2	3.9																		
				1070	96.8	31.0	24.8	1.80	5.04	6.9	960	58.2	33.3	22.6	37.9	1.33	25.0	4.0																		
	7.5	1.6	3.7	1050	97.9	31.6	25.4	1.82	5.09	7.0	830	56.3	32.6	21.2	36.9	1.27	25.6	3.8																		
				1070	97.4	31.7	25.5	1.82	5.11	7.0	960	58.1	33.4	22.7	37.9	1.31	25.4	3.9																		
70	5.8	1.1	2.6	1050	99.5	33.4	27.1	1.86	5.27	7.6	830	56.5	31.7	21.0	36.7	1.46	21.7	5.3																		
				1070	99.0	33.5	27.2	1.86	5.29	7.5	960	58.3	32.5	22.5	37.7	1.51	21.6	5.4																		
	6.5	1.3	3.0	1050	100.0	34.1	27.7	1.87	5.33	7.8	830	56.5	31.8	21.1	36.7	1.44	22.1	5.1																		
				1070	99.5	34.1	27.7	1.87	5.35	7.7	960	58.3	32.6	22.5	37.7	1.49	21.9	5.2																		
	7.5	1.6	3.7	1050	100.7	34.8	28.4	1.89	5.41	7.9	830	56.4	31.9	21.1	36.7	1.42	22.4	5.0																		
				1070	100.2	34.9	28.5	1.88	5.43	7.8	960	58.2	32.7	22.6	37.7	1.47	22.3	5.1																		
80	5.8	1.1	2.5	1050	102.1	36.4	29.9	1.92	5.55	8.4	830	57.1	30.4	20.5	36.0	1.64	18.5	6.6																		
				1070	101.6	36.5	29.9	1.92	5.57	8.4	960	58.9	31.1	21.9	36.9	1.69	18.4	6.7																		
	6.5	1.3	2.9	1050	102.7	37.1	30.5	1.94	5.62	8.6	830	57.1	30.5	20.5	36.0	1.62	18.8	6.4																		
				1070	102.1	37.1	30.6	1.93	5.64	8.5	960	58.8	31.2	21.9	36.9	1.67	18.7	6.5																		
	7.5	1.6	3.6	1050	103.5	37.9	31.3	1.95	5.70	8.7	830	57.1	30.5	20.6	36.0	1.59	19.2	6.3																		
				1070	102.9	38.0	31.3	1.95	5.72	8.7	960	58.8	31.3	22.0	36.9	1.65	19.0	6.3																		
90	5.8	1.1	2.5	1050	104.7	39.3	32.6	1.98	5.81	9.3	830	57.9	28.8	19.8	35.1	1.85	15.5	8.0																		
				1070	104.1	39.4	32.6	1.98	5.83	9.2	960	59.6	29.5	21.1	36.1	1.92	15.4	8.1																		
	6.5	1.3	2.9	1050	105.3	40.1	33.2	2.00	5.88	9.5	830	57.9	28.9	19.8	35.1	1.83	15.8	7.8																		
				1070	104.7	40.1	33.3	1.99	5.91	9.4	960	59.6	29.6	21.2	36.1	1.89	15.7	7.9																		
	7.5	1.5	3.5	1050	106.1	40.9	34.1	2.01	5.96	9.6	830	57.9	29.0	19.9	35.1	1.80	16.1	7.6																		
				1070	105.5	41.0	34.1	2.01	5.99	9.5	960	59.5	29.7	21.2	36.1	1.86	15.9	7.7																		
100	5.8	1.1	2.5	Operation Not Recommended							830	58.7	27.2	19.1	34.4	2.11	12.9	9.6																		
											960	60.3	27.9	20.4	35.4	2.18	12.8	9.7																		
	6.5	1.2	2.9								830	58.6	27.3	19.2	34.4	2.08	13.1	9.3																		
											960	60.2	28.0	20.5	35.3	2.15	13.0	9.4																		
	7.5	1.5	3.5								830	58.6	27.4	19.2	34.4	2.06	13.3	9.1																		
											960	60.2	28.1	20.5	35.3	2.12	13.2	9.3																		
110	5.8	1.1	2.5								830	59.3	25.6	18.5	33.8	2.42	10.5	11.3																		
											960	60.9	26.2	19.8	34.8	2.50	10.5	11.4																		
	6.5	1.2	2.8								830	59.3	25.6	18.6	33.8	2.39	10.7	11.0																		
											960	60.9	26.3	19.8	34.7	2.47	10.7	11.1																		
	7.5	1.5	3.4								830	59.3	25.7	18.6	33.8	2.36	10.9	10.8																		
											960	60.8	26.4	19.9	34.7	2.44	10.8	11.0																		
120	5.8	1.0	2.4								830	60.3	23.5	17.7	33.0	2.80	8.4	13.1																		
											960	61.8	24.1	18.9	33.9	2.89	8.3	13.3																		
	6.5	1.2	2.8								830	60.2	23.5	17.7	32.9	2.76	8.5	12.8																		
											960	61.7	24.1	18.9	33.8	2.85	8.5	13.0																		
	7.5	1.5	3.3								830	60.2	23.6	17.7	32.9	2.72	8.7	12.6																		
											960	61.7	24.2	19.0	33.8	2.81	8.6	12.8																		

NOTE: See page 23 for performance data parameters and guidelines.

ZS Models Performance Tables

Model ZS030, 2.5 Ton, w/PSC, COAX Full Load Performance Data

EWT °F	Flow GPM	WPD		COAX PSC Unit - Heating						COAX PSC Unit - Cooling																									
		PSI	FT	Aiflow CFM	LAT (DB) °F	HC MBtuh	HE MBtuh	Power kW	COP WW	DH MBtuh	Aiflow CFM	LAT (DB) °F	TC MBtuh	SC MBtuh	HR MBtuh	Power kW	EER Btuh/W	DH MBtuh																	
25	7.5	7.5	17.2	950	91.4	21.9	15.1	2.02	3.19	5.2	Operation Not Recommended																								
				1000	90.3	22.0	15.1	2.00	3.22	5.0																									
				1050	89.4	22.0	15.2	1.99	3.24	4.9																									
30	3.8	2.7	6.3	950	91.6	22.2	15.3	2.02	3.21	5.3																									
				1000	90.5	22.2	15.3	2.00	3.24	5.1																									
				1050	89.6	22.2	15.4	1.99	3.26	5.0																									
	5.6	4.5	10.5	950	92.4	23.0	16.1	2.02	3.34	5.3																									
				1000	91.3	23.0	16.2	2.00	3.37	5.2																									
				1050	90.3	23.0	16.2	1.99	3.39	5.0																									
	7.5	6.8	15.7	950	92.9	23.5	16.6	2.01	3.41	5.4																									
				1000	91.7	23.5	16.7	2.00	3.45	5.2																									
				1050	90.7	23.5	16.7	1.99	3.47	5.1																									
40	3.8	2.5	5.7	950	94.4	25.1	18.1	2.03	3.61	5.7									950	61.3	29.5	19.2	34.4	1.44	20.5	4.0									
				1000	93.2	25.1	18.2	2.02	3.65	5.5									1000	61.8	29.7	19.7	34.7	1.46	20.4	4.0									
				1050	92.1	25.1	18.2	2.01	3.67	5.4									1050	62.3	29.9	20.1	34.9	1.48	20.3	4.1									
	5.6	4.1	9.5	950	95.3	26.0	19.1	2.03	3.76	5.8									Operation Not Recommended																
				1000	94.1	26.0	19.1	2.01	3.79	5.6																									
				1050	93.0	26.0	19.2	2.00	3.82	5.5																									
	7.5	6.2	14.4	950	95.9	26.5	19.6	2.03	3.84	5.9																									
				1000	94.6	26.5	19.7	2.01	3.88	5.7																									
				1050	93.4	26.6	19.8	2.00	3.90	5.5																									
	50	3.8	2.3	5.3	950	97.3	28.0	21.0	2.07	3.97																	6.3	950	59.9	30.8	20.6	36.2	1.58	19.5	4.5
					1000	96.0	28.0	21.0	2.05	4.01																	6.1	1000	60.4	31.1	21.1	36.5	1.60	19.5	4.6
					1050	94.7	28.1	21.1	2.04	4.03																	5.9	1050	60.9	31.3	21.6	36.8	1.62	19.4	4.6
5.6		3.8	8.8	950	98.3	29.1	22.0	2.06	4.13	6.4	950	59.8	31.2	20.7	36.3	1.49	21.0	4.0																	
				1000	96.9	29.1	22.1	2.04	4.17	6.2	1000	60.3	31.5	21.2	36.6	1.51	20.9	4.1																	
				1050	95.7	29.1	22.2	2.03	4.20	6.1	1050	60.8	31.7	21.7	36.9	1.53	20.8	4.2																	
7.5		5.8	13.3	950	98.9	29.7	22.6	2.06	4.22	6.5	950	59.8	31.4	20.8	36.3	1.45	21.7	3.8																	
				1000	97.5	29.7	22.7	2.04	4.26	6.3	1000	60.3	31.6	21.3	36.6	1.46	21.6	3.9																	
				1050	96.2	29.7	22.8	2.03	4.29	6.1	1050	60.8	31.8	21.8	36.8	1.48	21.4	4.0																	
60		3.8	2.1	4.9	950	100.2	31.0	23.8	2.12	4.29	7.0	950	59.3	31.0	21.3	36.9	1.73	18.0	5.2																
					1000	98.7	31.0	23.9	2.10	4.34	6.7	1000	59.8	31.2	21.8	37.2	1.74	17.9	5.3																
					1050	97.4	31.1	23.9	2.09	4.36	6.6	1050	60.3	31.4	22.3	37.4	1.77	17.8	5.3																
	5.6	3.6	8.2	950	101.4	32.2	25.0	2.11	4.47	7.2	950	59.2	31.4	21.4	36.9	1.63	19.3	4.6																	
				1000	99.8	32.2	25.1	2.09	4.51	7.0	1000	59.7	31.6	21.9	37.2	1.65	19.2	4.7																	
				1050	98.4	32.2	25.1	2.08	4.54	6.8	1050	60.2	31.8	22.4	37.5	1.67	19.1	4.7																	
	7.5	5.4	12.4	950	102.0	32.8	25.7	2.11	4.57	7.3	950	59.1	31.5	21.4	36.9	1.58	19.9	4.4																	
				1000	100.4	32.9	25.7	2.09	4.61	7.1	1000	59.7	31.7	21.9	37.2	1.60	19.8	4.4																	
				1050	99.0	32.9	25.8	2.08	4.64	6.9	1050	60.2	31.9	22.5	37.4	1.62	19.7	4.5																	
	70	3.8	2.0	4.6	950	103.2	34.0	26.6	2.18	4.58	7.8	950	59.3	30.3	21.3	36.8	1.89	16.0	6.2																
					1000	101.5	34.1	26.7	2.16	4.63	7.5	1000	59.8	30.5	21.8	37.0	1.91	16.0	6.2																
					1050	100.1	34.1	26.8	2.15	4.65	7.3	1050	60.3	30.7	22.3	37.3	1.93	15.9	6.3																
5.6		3.4	7.7	950	104.4	35.3	27.9	2.17	4.77	8.0	950	59.2	30.7	21.4	36.8	1.79	17.2	5.5																	
				1000	102.7	35.3	28.0	2.15	4.82	7.8	1000	59.7	30.9	21.9	37.1	1.80	17.1	5.5																	
				1050	101.2	35.4	28.1	2.14	4.84	7.6	1050	60.2	31.1	22.4	37.3	1.83	17.0	5.6																	
7.5		5.0	11.6	950	105.1	36.0	28.7	2.17	4.87	8.2	950	59.1	30.8	21.4	36.7	1.73	17.8	5.2																	
				1000	103.4	36.1	28.7	2.15	4.92	8.0	1000	59.7	31.0	21.9	37.0	1.75	17.7	5.2																	
				1050	101.8	36.1	28.8	2.14	4.95	7.7	1050	60.2	31.2	22.4	37.2	1.77	17.6	5.3																	
80		3.8	1.9	4.4	950	106.1	37.1	29.4	2.24	4.85	8.7	950	59.7	29.1	20.8	36.2	2.08	14.0	7.4																
					1000	104.3	37.1	29.5	2.22	4.89	8.4	1000	60.3	29.3	21.3	36.5	2.10	13.9	7.5																
					1050	102.7	37.1	29.6	2.21	4.92	8.2	1050	60.8	29.5	21.8	36.7	2.13	13.8	7.5																
	5.6	3.2	7.3	950	107.5	38.5	30.8	2.23	5.05	9.0	950	59.6	29.5	20.9	36.2	1.97	15.0	6.6																	
				1000	105.6	38.5	30.9	2.21	5.09	8.8	1000	60.1	29.7	21.4	36.5	1.99	14.9	6.7																	
				1050	104.0	38.5	31.0	2.20	5.12	8.5	1050	60.6	29.9	21.9	36.7	2.01	14.8	6.7																	
	7.5	4.8	11.0	950	108.3	39.3	31.6	2.23	5.15	9.2	950	59.6	29.6	21.0	36.1	1.91	15.5	6.2																	
				1000	106.4	39.3	31.7	2.21	5.21	9.0	1000	60.1	29.8	21.5	36.4	1.93	15.4	6.3																	
				1050	104.7	39.3	31.8	2.20	5.24	8.7	1050	60.6	30.0	22.0	36.6	1.95	15.3	6.4																	
	90	3.8	1.8	4.1	950	109.1	40.1	32.2	2.31	5.10	9.7	950	60.3	27.6	20.2	35.5	2.31	12.0	8.9																
					1000	107.1	40.1	32.3	2.28	5.15	9.4	1000	60.9	27.8	20.7	35.8	2.33	11.9	9.0																
					1050	105.4	40.1	32.4	2.27	5.18	9.1	1050	61.4	28.0	21.1	36.0	2.36	11.9	9.0																
5.6		3.0	6.9	950	110.5	41.6	33.8	2.30	5.31	10.1	950	60.2	28.0	20.3	35.4	2.18	12.8	8.0																	
				1000	108.5	41.6	33.8	2.28	5.36	9.8	1000	60.8	28.2	20.8	35.7	2.20	12.8	8.1																	
				1050	106.7	41.7	33.9	2.27	5.39	9.5	1050	61.3	28.3	21.3	35.9	2.23	12.7	8.1																	
7.5		4.5	10.3	950	111.4	42.4	34.6	2.29	5.42	10.3	950	60.2	28.1	20.3	35.3	2.12	13.3	7.6																	
				1000	109.3	42.5	34.7	2.27	5.48	10.0	1000	60.7	28.3	20.8	35.6	2.14	13.2	7.6																	
				1050	107.5	42.5	34.8	2.26	5.51	9.8	1050	61.2	28.4	21.3	35.8	2.17	13.1	7.7																	
100		3.8	1.7	3.9	Operation Not Recommended						950	61.0	26.0	19.5	34.8	2.58	10.1	10.5																	
											1000	61.5	26.2	20.0	35.1	2.61	10.1	10.6																	
											1050	62.0	26.4	20.4	35.4	2.64	10.0	10.7																	
	5.6	2.8	6.4	950							60.9	26.4	19.6	34.7	2.43	10.8	9.5																		
				1000							61.4	26.5	20.1	34.9	2.46	10.8	9.6																		
				1050							61.9	26.7	20.5	35.2	2.49	10.7	9.7																		
	7.5	4.2	9.8	950							60.9	26.4	19.6	34.5	2.36	11.2	9.1																		
				1000							61.4	26.6	20.1	34.8	2.39	11.2	9.1																		
				1050							61.9	26.8	20.6	35.0	2.42	11.1	9.2																		
110	3.8	1.6	3.7	950							61.6	24.4	18.9	34.2	2.90	8.4	12.3																		
				1000							62.1	24.5	19.3	34.5	2.93	8.4	12.4																		
				1050							62.6	24.7	19.8	34.8	2.97	8.3	12.4																		
	5.6	2.7	6.2	950							61.5	24.7	19.0	34.0	2.74	9.0	11.2																		
				1000							62.0	24.8	19.4	34.3	2.77	9.0	11.3																		
				1050							62.5	25.0	19.9	34.5	2.80	8.9	11.3																		
	7.5	4.1	9.4	950							61.5	24.8	19.0	33.8	2.66	9.3	10.7																		
				1000							62.0	24.9	19.5	34.1	2.69	9.3	10.8																		
				1050							62.4	25.1	19.9	34.4	2.72	9.2	10.8																		
	120	3.8	1.6	3.6	950	62.2	22.6	18.2	33.7	3.28	6.9	14.1																							
					1000	62.7	22.7	18.7	34.0	3.31	6.9	14.2																							
					1050	63.1	22.9	19.1	34.3	3.36	6.8	14.3																							
5.6		2.6	6.0	950	62.1	22.8	18.3	33.4	3.10	7.4	13.0																								
				1000	62.6	23.0	18.8	33.7	3.13	7.4	13.1																								
				1050	63.0	23.1	19.2	33.9	3.17	7.3	13.1																								
7.5		4.0	9.2	950	62.1	22.9	18.4	33.2	3.01	7.6	12.4																								
				1000	62.6	23.1	18.8	33.4	3.04	7.6	12.5																								
				1050	63.0	23.2	19.3	33.7	3.08	7.6	12.5																								

NOTE: See page 23 for performance data parameters and guidelines.

ENGINEERING SPECIFICATIONS

ZS Models Performance Tables

Model ZS030, 2.5 Ton, w/ECM, COAX Full Load Performance Data

EWT	Flow	WPD		COAX ECM Unit - Heating							COAX ECM Unit - Cooling																																																																													
		°F	GPM	PSI	FT	Aiflow CFM	LAT (DB) °F	HC MBtuh	HE MBtuh	Power kW	COP W/W	DH MBtuh	Aiflow CFM	LAT (DB) °F	TC MBtuh	SC MBtuh	HR MBtuh	Power kW	EER Btuh/W	DH MBtuh																																																																				
25	7.5	7.5	17.2	1050	88.6	21.0	15.2	1.71	3.60	4.9	Operation Not Recommended																																																																													
				1070	88.2	21.0	15.2	1.71	3.61	4.9																																																																														
30	3.8	2.7	6.3	1050	88.7	21.3	15.4	1.72	3.62	5.0											Operation Not Recommended																																																																			
				1070	88.4	21.3	15.4	1.71	3.64	4.9																																																																														
	5.6	4.5	10.5	1050	89.5	22.1	16.2	1.71	3.78	5.0																					Operation Not Recommended																																																									
				1070	89.1	22.1	16.3	1.71	3.79	5.0																																																																														
	7.5	6.8	15.7	1050	89.9	22.6	16.7	1.71	3.87	5.1																															Operation Not Recommended																																															
				1070	89.5	22.6	16.7	1.71	3.88	5.0																																																																														
40	3.8	2.5	5.7	1050	91.3	24.2	18.3	1.73	4.09	5.4																																										830	59.0	29.6	18.9	33.5	1.16	25.4	3.8	Operation Not Recommended																												
				1070	90.9	24.2	18.3	1.73	4.11	5.3																																										960	60.6	30.3	20.1	34.5	1.20	25.2	4.0																													
	5.6	4.1	9.5	1050	92.1	25.1	19.2	1.72	4.27	5.5																																										Operation Not Recommended																																				
				1070	91.7	25.1	19.2	1.72	4.28	5.4																																																																														
	7.5	6.2	14.4	1050	92.6	25.6	19.8	1.72	4.36	5.5																																																						Operation Not Recommended																								
				1070	92.2	25.6	19.8	1.72	4.38	5.5																																																																														
50	3.8	2.3	5.3	1050	93.9	27.1	21.1	1.76	4.51	5.9																																																																	830	57.4	30.9	20.2	35.3	1.30	23.8	4.4	Operation Not Recommended					
				1070	93.5	27.1	21.1	1.76	4.52	5.8																																																																	960	59.2	31.7	21.5	36.3	1.34	23.6	4.5						
	5.6	3.8	8.8	1050	94.8	28.2	22.2	1.76	4.70	6.1																																																																	830	57.3	31.3	20.3	35.4	1.21	25.8	3.9			Operation Not Recommended			
				1070	94.4	28.2	22.2	1.75	4.71	6.0																																																																	960	59.1	32.1	21.6	36.4	1.26	25.6	4.1						
	7.5	5.8	13.3	1050	95.4	28.8	22.8	1.76	4.81	6.1																																																																	830	57.3	31.4	20.4	35.4	1.17	26.8	3.7					Operation Not Recommended	
				1070	94.9	28.8	22.8	1.75	4.82	6.1																																																																	960	59.1	32.2	21.7	36.3	1.21	26.5	3.8						
60	3.8	2.1	4.9	1050	96.6	30.1	23.9	1.81	4.87	6.6	830	56.8	31.0	20.8	35.9	1.44	21.6	5.1	Operation Not Recommended																																																																					
				1070	96.1	30.1	24.0	1.81	4.89	6.5	960	58.6	31.8	22.2	36.9	1.49	21.4	5.2																																																																						
	5.6	3.6	8.2	1050	97.6	31.3	25.1	1.81	5.08	6.8	830	56.6	31.4	21.0	36.0	1.35	23.3	4.5			Operation Not Recommended																																																																			
				1070	97.1	31.3	25.2	1.80	5.10	6.7	960	58.5	32.2	22.3	37.0	1.40	23.1	4.6																																																																						
	7.5	5.4	12.4	1050	98.2	32.0	25.8	1.80	5.20	6.9	830	56.6	31.5	21.0	36.0	1.30	24.2	4.3					Operation Not Recommended																																																																	
				1070	97.7	32.0	25.8	1.80	5.21	6.8	960	58.5	32.4	22.3	37.0	1.35	24.0	4.4																																																																						
70	3.8	2.0	4.6	1050	99.2	33.1	26.8	1.87	5.19	7.3	830	56.8	30.4	20.8	35.8	1.60	19.0	6.0							Operation Not Recommended																																																															
				1070	98.7	33.1	26.8	1.86	5.21	7.3	960	58.6	31.2	22.2	36.8	1.66	18.8	6.2																																																																						
	5.6	3.4	7.7	1050	100.4	34.4	28.1	1.86	5.41	7.6	830	56.6	30.7	20.9	35.8	1.50	20.5	5.4									Operation Not Recommended																																																													
				1070	99.8	34.4	28.1	1.86	5.43	7.5	960	58.5	31.5	22.3	36.8	1.55	20.3	5.5																																																																						
	7.5	5.0	11.6	1050	101.0	35.2	28.8	1.86	5.54	7.7	830	56.6	30.8	21.0	35.8	1.45	21.3	5.1											Operation Not Recommended																																																											
				1070	100.4	35.2	28.8	1.86	5.56	7.7	960	58.5	31.6	22.3	36.8	1.50	21.1	5.2																																																																						
80	3.8	1.9	4.4	1050	101.9	36.2	29.6	1.93	5.48	8.2	830	57.2	29.2	20.4	35.3	1.79	16.3	7.3													Operation Not Recommended																																																									
				1070	101.3	36.2	29.6	1.93	5.50	8.1	960	59.0	29.9	21.7	36.3	1.85	16.2	7.4																																																																						
	5.6	3.2	7.3	1050	103.1	37.6	31.0	1.93	5.72	8.5	830	57.1	29.5	20.5	35.3	1.67	17.7	6.5															Operation Not Recommended																																																							
				1070	102.5	37.6	31.0	1.92	5.74	8.5	960	58.9	30.3	21.8	36.2	1.73	17.5	6.6																																																																						
	7.5	4.8	11.0	1050	103.8	38.4	31.8	1.92	5.85	8.7	830	57.1	29.6	20.6	35.2	1.62	18.3	6.1																	Operation Not Recommended																																																					
				1070	103.2	38.4	31.8	1.92	5.87	8.7	960	58.9	30.4	21.9	36.1	1.67	18.2	6.3																																																																						
90	3.8	1.8	4.1	1050	104.5	39.2	32.3	1.99	5.75	9.1	830	57.9	27.7	19.8	34.6	2.01	13.8	8.7																			Operation Not Recommended																																																			
				1070	103.9	39.2	32.4	1.99	5.77	9.1	960	59.7	28.5	21.1	35.6	2.08	13.7	8.9																																																																						
	5.6	3.0	6.9	1050	105.9	40.7	33.9	1.99	6.00	9.5	830	57.8	28.1	19.9	34.5	1.88	14.9	7.8	Operation Not Recommended																																																																					
				1070	105.2	40.7	33.9	1.98	6.02	9.5	960	59.6	28.8	21.2	35.5	1.95	14.8	8.0																																																																						
	7.5	4.5	10.3	1050	106.6	41.6	34.8	1.98	6.14	9.8	830	57.8	28.2	19.9	34.4	1.82	15.5	7.4			Operation Not Recommended																																																																			
				1070	106.0	41.6	34.8	1.98	6.16	9.7	960	59.5	28.9	21.2	35.3	1.88	15.4	7.6																																																																						
100	3.8	1.7	3.9	1050	104.5	39.2	32.3	1.99	5.75	9.1	830	57.9	27.7	19.8	34.6	2.01	13.8	8.7					Operation Not Recommended																																																																	
				1070	103.9	39.2	32.4	1.99	5.77	9.1	960	59.7	28.5	21.1	35.6	2.08	13.7	8.9																																																																						
	5.6	2.8	6.4	1050	105.9	40.7	33.9	1.99	6.00	9.5	830	57.8	28.1	19.9	34.5	1.88	14.9	7.8							Operation Not Recommended																																																															
				1070	105.2	40.7	33.9	1.98	6.02	9.5	960	59.6	28.8	21.2	35.5	1.95	14.8	8.0																																																																						
	7.5	4.2	9.8	1050	106.6	41.6	34.8	1.98	6.14	9.8	830	57.8	28.2	19.9	34.4	1.82	15.5	7.4									Operation Not Recommended																																																													
				1070	106.0	41.6	34.8	1.98	6.16	9.7	960	59.5	28.9	21.2	35.3	1.88	15.4	7.6																																																																						
110	3.8	1.6	3.7	1050	104.5	39.2	32.3	1.99	5.75	9.1	830	57.9	27.7	19.8	34.6	2.01	13.8	8.7											Operation Not Recommended																																																											
				1070	103.9	39.2	32.4	1.99	5.77	9.1	960	59.7	28.5	21.1	35.6	2.08	13.7	8.9																																																																						
	5.6	2.7	6.2	1050	105.9	40.7	33.9	1.99	6.00	9.5	830	57.8	28.1	19.9	34.5	1.88	14.9	7.8													Operation Not Recommended																																																									
				1070	105.2	40.7	33.9	1.98	6.02	9.5	960	59.6	28.8	21.2	35.5	1.95	14.8	8.0																																																																						
	7.5	4.1	9.4	1050	106.6	41.6	34.8	1.98	6.14	9.8	830	57.8	28.2	19.9	34.4	1.82	15.5	7.4															Operation Not Recommended																																																							
				1070	106.0	41.6	34.8	1.98	6.16	9.7	960	59.5	28.9	21.2	35.3	1.88	15.4	7.6																																																																						
120	3.8	1.6	3.6	1050	104.5	39.2	32.3	1.99	5.75	9.1	830	57.9	27.7	19.8	34.6	2.01	13.8	8.7																	Operation Not Recommended																																																					
				1070	103.9	39.2	32.4	1.99	5.77	9.1	960	59.7	28.5	21.1	35.6	2.08	13.7	8.9																																																																						
	5.6	2.6	6.0	1050	105.9	40.7	33.9	1.99	6.00	9.5	830	57.8	28.1	19.9	34.5	1.88	14.9	7.8																			Operation Not Recommended																																																			
				1070	105.2	40.7	33.9	1.98	6.02	9.5	960	59.6	28.8	21.2	35.5	1.95	14.8	8.0																																																																						
	7.5	4.0	9.2	1050	106.6	41.6	34.8	1.98	6.14	9.8	830	57.8	28.2	19.9	34.4	1.82	15.5	7.4	Operation Not Recommended																																																																					
				1070	106.0	41.6	34.8	1.98	6.16	9.7	960	59.5	28.9	21.2	35.3	1.88	15.4	7.6																																																																						

NOTE: See page 23 for performance data parameters and guidelines.

ZS Models Performance Tables

Model ZS036, 3 Ton, w/PSC, BPHE Full Load Performance Data:

EWT °F	Flow GPM	WPD		BPHE PSC Unit - Heating						BPHE PSC Unit - Cooling										
		PSI	FT	Aiffow CFM	LAT (DB) °F	HC MBtuh	HE MBtuh	Power kW	COP W/W	DH MBtuh	Aiffow CFM	LAT (DB) °F	TC MBtuh	SC MBtuh	HR MBtuh	Power kW	EER Btuh/W	DH MBtuh		
25	9.0	1.6	3.8	875	96.4	24.9	16.5	2.48	2.95	6.6	Operation Not Recommended	875	57.0	36.3	21.7	41.7	1.58	23.0	1.8	
				1100	91.2	25.2	17.1	2.36	3.13	5.8		1100	60.0	37.4	23.7	43.0	1.65	22.7	1.9	
				1200	90.0	25.9	17.9	2.35	3.24	5.6		1200	60.8	38.5	24.9	44.2	1.68	22.8	1.9	
30	8.0	1.4	3.1	875	97.9	26.3	17.8	2.51	3.07	6.9		Operation Not Recommended	875	57.0	36.3	21.7	41.7	1.58	23.0	1.8
				1100	92.4	26.6	18.5	2.39	3.27	6.0										
				1200	91.1	27.4	19.3	2.38	3.38	5.8										
	8.5	1.5	3.4	875	98.1	26.5	17.9	2.52	3.08	6.9										
				1100	92.5	26.8	18.6	2.39	3.28	6.0										
				1200	91.3	27.6	19.4	2.38	3.39	5.9										
9.0	1.6	3.6	875	98.2	26.7	18.1	2.53	3.09	7.0											
			1100	92.7	26.9	18.8	2.40	3.29	6.1											
			1200	91.4	27.7	19.6	2.39	3.40	5.9											
40	8.0	1.3	3.0	875	102.0	30.2	21.2	2.63	3.37	7.8		Operation Not Recommended	875	57.0	36.3	21.7	41.7	1.58	23.0	1.8
				1100	95.7	30.5	22.0	2.50	3.58	6.8			1100	60.0	37.4	23.7	43.0	1.65	22.7	1.9
				1200	94.2	31.4	22.9	2.49	3.70	6.6			1200	60.8	38.5	24.9	44.2	1.68	22.8	1.9
	8.5	1.4	3.2	875	102.2	30.4	21.4	2.64	3.38	7.8										
				1100	95.9	30.7	22.2	2.50	3.60	6.8										
				1200	94.4	31.6	23.1	2.49	3.72	6.6										
9.0	1.5	3.5	875	102.4	30.6	21.6	2.64	3.39	7.9											
			1100	96.0	30.9	22.4	2.51	3.61	6.9											
			1200	94.6	31.8	23.3	2.50	3.73	6.7											
50	8.0	1.3	2.9	875	106.5	34.5	25.0	2.76	3.66	8.9	875	55.3	38.4	23.3	44.4	1.76	21.8	3.1		
				1100	99.3	34.8	25.9	2.62	3.89	7.8	1100	58.6	39.5	25.4	45.8	1.84	21.5	3.3		
				1200	97.7	35.8	26.9	2.61	4.02	7.5	1200	59.4	40.6	26.7	47.0	1.88	21.6	3.3		
	8.5	1.4	3.1	875	106.7	34.7	25.3	2.77	3.67	9.0	875	55.3	38.4	23.3	44.3	1.75	21.9	3.1		
				1100	99.5	35.1	26.1	2.63	3.90	7.8	1100	58.6	39.5	25.4	45.8	1.83	21.6	3.2		
				1200	97.8	36.1	27.1	2.62	4.03	7.6	1200	59.4	40.6	26.7	47.0	1.87	21.7	3.2		
9.0	1.5	3.4	875	107.0	34.9	25.4	2.78	3.68	9.0	875	55.3	38.4	23.3	44.3	1.74	22.0	3.0			
			1100	99.7	35.3	26.3	2.64	3.92	7.9	1100	58.6	39.5	25.5	45.7	1.82	21.7	3.1			
			1200	98.0	36.3	27.3	2.63	4.05	7.7	1200	59.4	40.6	26.7	47.0	1.86	21.8	3.2			
60	8.0	1.2	2.9	875	111.1	38.9	29.0	2.90	3.92	10.2	875	54.9	38.5	23.7	45.2	1.95	19.7	4.5		
				1100	103.0	39.3	29.9	2.76	4.17	8.9	1100	58.2	39.7	25.9	46.6	2.04	19.4	4.7		
				1200	101.2	40.4	31.0	2.74	4.31	8.7	1200	59.1	40.8	27.1	47.9	2.09	19.5	4.7		
	8.5	1.3	3.1	875	111.4	39.1	29.2	2.91	3.94	10.3	875	54.9	38.5	23.7	45.2	1.94	19.8	4.4		
				1100	103.3	39.5	30.1	2.76	4.19	9.0	1100	58.2	39.7	25.9	46.6	2.03	19.5	4.6		
				1200	101.4	40.7	31.3	2.75	4.33	8.7	1200	59.0	40.8	27.2	47.9	2.08	19.7	4.6		
9.0	1.4	3.3	875	111.7	39.4	29.4	2.92	3.95	10.4	875	54.9	38.5	23.7	45.1	1.93	19.9	4.4			
			1100	103.5	39.8	30.3	2.77	4.20	9.1	1100	58.2	39.7	25.9	46.6	2.02	19.6	4.5			
			1200	101.6	40.9	31.5	2.76	4.35	8.8	1200	59.0	40.8	27.2	47.8	2.07	19.8	4.6			
70	8.0	1.2	2.8	875	115.6	43.1	32.8	3.03	4.17	11.6	875	55.2	37.5	23.4	44.9	2.16	17.4	5.9		
				1100	106.7	43.6	33.7	2.88	4.44	10.2	1100	58.5	38.6	25.6	46.3	2.26	17.1	6.1		
				1200	104.6	44.8	35.1	2.87	4.58	9.9	1200	59.3	39.7	26.8	47.6	2.31	17.2	6.1		
	8.5	1.3	3.0	875	116.0	43.4	33.1	3.04	4.18	11.7	875	55.2	37.5	23.5	44.9	2.15	17.5	5.8		
				1100	106.9	43.9	34.0	2.89	4.45	10.3	1100	58.4	38.7	25.6	46.3	2.24	17.2	6.0		
				1200	104.8	45.2	35.3	2.88	4.60	10.0	1200	59.3	39.8	26.8	47.6	2.29	17.3	6.1		
9.0	1.4	3.2	875	116.2	43.7	33.3	3.05	4.20	11.8	875	55.2	37.6	23.5	44.8	2.14	17.6	5.7			
			1100	107.2	44.1	34.3	2.90	4.47	10.4	1100	58.4	38.7	25.6	46.3	2.23	17.3	5.9			
			1200	105.1	45.4	35.6	2.88	4.62	10.1	1200	59.3	39.8	26.8	47.6	2.28	17.4	6.0			
80	8.0	1.2	2.7	875	119.8	47.1	36.3	3.14	4.39	13.0	875	55.9	36.0	22.8	44.1	2.39	15.1	7.3		
				1100	110.0	47.5	37.4	2.98	4.67	11.4	1100	59.0	37.1	24.9	45.6	2.50	14.9	7.6		
				1200	107.7	48.9	38.8	2.97	4.83	11.1	1200	59.9	38.1	26.1	46.8	2.55	14.9	7.6		
	8.5	1.3	2.9	875	120.1	47.4	36.6	3.15	4.41	13.1	875	55.9	36.0	22.8	44.1	2.38	15.2	7.2		
				1100	110.3	47.9	37.7	2.99	4.69	11.5	1100	59.0	37.1	24.9	45.5	2.48	14.9	7.5		
				1200	108.0	49.3	39.1	2.98	4.85	11.2	1200	59.9	38.1	26.1	46.8	2.54	15.0	7.6		
9.0	1.4	3.1	875	120.4	47.7	36.9	3.16	4.42	13.2	875	55.8	36.0	22.8	44.1	2.36	15.2	7.1			
			1100	110.5	48.2	37.9	3.00	4.71	11.6	1100	59.0	37.1	24.9	45.5	2.47	15.0	7.4			
			1200	108.2	49.6	39.4	2.99	4.86	11.3	1200	59.8	38.1	26.1	46.7	2.53	15.1	7.5			
90	8.0	1.2	2.7	875	123.3	50.4	39.4	3.21	4.60	14.2	875	56.7	34.3	22.1	43.3	2.65	12.9	8.8		
				1100	112.8	50.9	40.5	3.05	4.89	12.6	1100	59.7	35.3	24.1	44.7	2.77	12.7	9.2		
				1200	110.4	52.4	42.0	3.04	5.05	12.2	1200	60.5	36.3	25.2	45.9	2.83	12.8	9.2		
	8.5	1.3	2.9	875	123.7	50.7	39.7	3.22	4.61	14.4	875	56.7	34.3	22.1	43.3	2.63	13.0	8.7		
				1100	113.1	51.2	40.8	3.06	4.91	12.7	1100	59.7	35.3	24.1	44.7	2.75	12.8	9.0		
				1200	110.7	52.7	42.3	3.05	5.07	12.3	1200	60.5	36.3	25.2	45.9	2.81	12.9	9.1		
9.0	1.3	3.1	875	124.0	51.0	40.0	3.23	4.63	14.5	875	56.6	34.3	22.1	43.2	2.62	13.1	8.6			
			1100	113.4	51.5	41.1	3.07	4.93	12.8	1100	59.7	35.3	24.1	44.6	2.74	12.9	9.0			
			1200	110.9	53.1	42.6	3.05	5.09	12.4	1200	60.5	36.3	25.2	45.8	2.80	13.0	9.0			
100	8.0	1.1	2.6	875	57.5	32.5	21.3	42.5	2.95	11.0	10.4	Operation Not Recommended	875	57.5	32.5	21.3	42.5	2.93	11.1	10.3
				1100	60.4	33.5	23.2	44.0	3.08	10.9	10.8		1100	60.4	33.5	23.3	43.9	3.06	10.9	10.7
				1200	61.2	34.4	24.4	45.1	3.15	10.9	10.9		1200	61.2	34.4	24.4	45.1	3.13	11.0	10.8
	8.5	1.2	2.8	875	57.5	32.5	21.3	42.5	2.93	11.1	10.3									
				1100	60.4	33.5	23.3	43.9	3.05	11.0	10.6									
				1200	61.2	34.4	24.4	45.0	3.12	11.0	10.7									
9.0	1.3	3.0	875	57.4	32.5	21.3	42.5	2.92	11.1	10.2										
			1100	60.4	33.5	23.3	43.9	3.05	11.0	10.6										
			1200	61.2	34.4	24.4	45.0	3.12	11.0	10.7										
110	8.0	1.1	2.6	875	58.3	30.6	20.5	41.8	3.29	9.3	12.2		875	58.3	30.6	20.5	41.8	3.28	9.3	12.1
				1100	61.1	31.5	22.4	43.2	3.44	9.2	12.7		1100	61.1	31.5	22.4	43.2	3.42	9.2	12.6
				1200	61.9	32.4	23.5	44.4	3.52	9.2	12.8		1200	61.9	32.4	23.5	44.3	3.50	9.3	12.6
	8.5	1.2	2.8	875	58.2	30.6	20.6	41.7	3.26	9.4	12.0									
				1100	61.1	31.5	22.4	43.1	3.41	9.3	12.5									
				1200	61.8	32.4	23.5	44.3	3.48	9.3	12.5									
9.0	1.3	3.0	875	59.2	28.3	19.7	40.8	3.68	7.7	14.1										
			1100	61.9	29.1	21.5	42.3	3.86	7.5	14.8										
			1200	62.6	30.0	22.5	43.4	3.95	7.6	14.9										
120	8.0	1.1	2.6	875	59.1	28.3	19.7	40.8	3.66	7.7	14.0		875	59.1	28.3	19.7	40.8	3.66	7.7	14.0
				1100	61.9	29.2	21.5	42.2	3.82	7.6	14.5		1100	61.9	29.2	21.5	42.2	3.82	7.6	14.5
				1200	62.6	30.0	22.6	43.3	3.91	7.7	14.6		1200	62.6	30.0	22.6	43.3	3.9		

ENGINEERING SPECIFICATIONS

ZS Models Performance Tables

Model ZS036, 3 Ton, w/ECM, BPHE Full Load Performance Data:

EWT	Flow	WPD		BPHE ECM Unit - Heating							BPHE ECM Unit - Cooling							
		PSI	FT	Aiflow	LAT (DB)	HC	HE	Power	COP	DH	Aiflow	LAT (DB)	TC	SC	HR	Power	EER	DH
°F	GPM			CFM	°F	MBtuh	MBtuh	kW	W/W	MBtuh	CFM	°F	MBtuh	MBtuh	MBtuh	kW	Btuh/W	MBtuh
25	9.0	1.6	3.8	1090	90.5	24.2	17.1	2.08	3.42	5.8	Operation Not Recommended							
				1230	88.9	25.1	18.1	2.05	3.59	5.6								
30	8.0	1.4	3.1	1090	91.7	25.6	18.4	2.11	3.56	6.1								
				1230	90.0	26.6	19.5	2.08	3.75	5.9								
	8.5	1.5	3.4	1090	91.9	25.8	18.6	2.11	3.57	6.1								
				1230	90.2	26.8	19.7	2.09	3.76	5.9								
	9.0	1.6	3.6	1090	92.0	25.9	18.7	2.12	3.59	6.1								
				1230	90.3	27.0	19.8	2.10	3.77	5.9								
40	8.0	1.3	3.0	1090	95.1	29.5	21.9	2.22	3.90	6.8								
				1230	93.1	30.7	23.2	2.19	4.11	6.6								
	8.5	1.4	3.2	1090	95.2	29.7	22.1	2.22	3.92	6.9								
				1230	93.3	30.9	23.4	2.20	4.12	6.7								
	9.0	1.5	3.5	1090	95.4	29.9	22.3	2.23	3.93	6.9								
				1230	93.4	31.1	23.6	2.20	4.14	6.7								
50	8.0	1.3	2.9	1090	98.7	33.8	25.8	2.34	4.23	7.8								
				1230	96.5	35.1	27.2	2.31	4.45	7.6								
	8.5	1.4	3.1	1090	98.9	34.0	26.0	2.35	4.25	7.9								
				1230	96.6	35.4	27.5	2.32	4.47	7.6								
	9.0	1.5	3.4	1090	99.1	34.2	26.2	2.36	4.26	8.0								
				1230	96.8	35.6	27.7	2.33	4.48	7.7								
60	8.0	1.2	2.9	1090	102.5	38.2	29.8	2.47	4.53	9.0								
				1230	99.9	39.7	31.4	2.44	4.77	8.7								
	8.5	1.3	3.1	1090	102.7	38.5	30.0	2.48	4.55	9.1								
				1230	100.1	40.0	31.7	2.45	4.78	8.8								
	9.0	1.4	3.3	1090	102.9	38.7	30.2	2.49	4.56	9.2								
				1230	100.3	40.3	31.9	2.46	4.80	8.8								
70	8.0	1.2	2.8	1090	106.1	42.5	33.7	2.59	4.80	10.3								
				1230	103.3	44.2	35.5	2.56	5.06	9.9								
	8.5	1.3	3.0	1090	106.4	42.8	33.9	2.60	4.82	10.4								
				1230	103.5	44.5	35.7	2.57	5.07	10.0								
	9.0	1.4	3.2	1090	106.6	43.1	34.2	2.61	4.84	10.4								
				1230	103.7	44.8	36.0	2.58	5.09	10.1								
80	8.0	1.2	2.7	1090	109.5	46.5	37.3	2.70	5.05	11.5								
				1230	106.4	48.3	39.2	2.66	5.32	11.1								
	8.5	1.3	2.9	1090	109.7	46.8	37.6	2.71	5.07	11.6								
				1230	106.6	48.7	39.5	2.67	5.34	11.2								
	9.0	1.4	3.1	1090	110.0	47.1	37.8	2.71	5.09	11.7								
				1230	106.9	49.0	39.8	2.68	5.35	11.3								
90	8.0	1.2	2.7	1090	112.3	49.8	40.4	2.76	5.28	12.7								
				1230	109.0	51.8	42.5	2.73	5.56	12.3								
	8.5	1.3	2.9	1090	112.6	50.2	40.7	2.77	5.30	12.8								
				1230	109.3	52.2	42.8	2.74	5.58	12.4								
	9.0	1.3	3.1	1090	112.9	50.5	41.0	2.78	5.32	12.9								
				1230	109.5	52.5	43.1	2.75	5.60	12.5								
100	8.0	1.1	2.6	Operation Not Recommended							1100	59.6	34.4	24.2	44.0	2.81	12.3	10.9
											1260	60.7	35.7	26.3	45.7	2.92	12.3	10.9
	8.5	1.2	2.8								1100	59.6	34.4	24.2	43.9	2.79	12.3	10.8
											1260	60.6	35.7	26.3	45.6	2.90	12.3	10.8
	9.0	1.3	3.0								1100	59.6	34.4	24.2	43.9	2.77	12.4	10.7
											1260	60.6	35.8	26.3	45.6	2.88	12.4	10.7
110	8.0	1.1	2.6								1100	60.3	32.5	23.4	43.3	3.17	10.2	12.7
											1260	61.3	33.7	25.4	45.0	3.29	10.2	12.8
	8.5	1.2	2.8								1100	60.3	32.5	23.4	43.2	3.15	10.3	12.6
											1260	61.3	33.7	25.4	44.9	3.27	10.3	12.6
	9.0	1.3	3.0								1100	60.3	32.5	23.4	43.2	3.13	10.4	12.5
											1260	61.3	33.7	25.5	44.8	3.26	10.4	12.5
120	8.0	1.1	2.6								1100	61.1	30.1	22.4	42.3	3.59	8.4	14.8
											1260	62.1	31.2	24.4	44.0	3.73	8.4	14.8
	8.5	1.2	2.8								1100	61.1	30.1	22.4	42.3	3.57	8.4	14.7
											1260	62.0	31.3	24.4	43.9	3.71	8.4	14.7
	9.0	1.3	3.0								1100	61.1	30.1	22.5	42.2	3.55	8.5	14.5
											1260	62.0	31.3	24.4	43.8	3.69	8.5	14.6

NOTE: See page 23 for performance data parameters and guidelines.

ZS Models Performance Tables

Model ZS036, 3 Ton, w/PSC, COAX Full Load Performance Data:

EWT	Flow *F	WPD		COAX PSC Unit - Heating							COAX PSC Unit - Cooling											
		Flow GPM	PSI	FT	Aiflow CFM	LAT (DB) *F	HC MBtuh	HE MBtuh	Power kW	COP W/W	DH MBtuh	Aiflow CFM	LAT (DB) *F	TC MBtuh	SC MBtuh	HR MBtuh	Power kW	EER Btu/W	DH MBtuh			
25	9.0	4.6	10.7	875	98.1	26.6	17.8	2.56	3.04	7.2	Operation Not Recommended	875	56.1	37.2	22.6	43.0	1.68	22.1	3.8			
				1100	92.1	26.3	18.2	2.38	3.24	6.2												
				1200	90.2	26.2	18.3	2.33	3.30	5.8												
30	4.5	1.8	4.2	875	97.3	25.8	17.2	2.52	3.00	7.0		Operation Not Recommended	1100	58.7	39.3	25.2	45.2	1.75	22.5	4.1		
				1100	91.5	25.5	17.6	2.34	3.20	6.0												
				1200	89.6	25.4	17.6	2.28	3.26	5.7												
	6.8	3.0	6.9	875	98.7	27.1	18.4	2.55	3.12	7.3			Operation Not Recommended	1100	60.3	39.7	25.6	45.7	1.78	22.3	4.1	
				1100	92.6	26.8	18.8	2.37	3.33	6.2												
				1200	90.6	26.7	18.9	2.31	3.39	5.9												
	9.0	4.4	10.1	875	99.6	27.9	19.2	2.57	3.19	7.4				Operation Not Recommended	1100	57.4	38.3	23.6	44.7	1.87	20.5	5.0
				1100	93.3	27.7	19.5	2.39	3.40	6.3												
				1200	91.3	27.6	19.6	2.33	3.46	6.0												
40	4.5	1.7	3.9	875	100.7	29.1	20.3	2.57	3.31	7.6		Operation Not Recommended			1100	57.8	39.3	25.2	45.2	1.75	22.5	4.1
				1100	94.2	28.8	20.6	2.39	3.53	6.5												
				1200	92.1	28.7	20.7	2.34	3.60	6.2												
	6.8	2.8	6.5	875	102.3	30.6	21.7	2.61	3.44	7.9			Operation Not Recommended		1100	59.4	40.8	26.7	47.5	1.98	20.6	5.3
				1100	95.5	30.2	22.0	2.42	3.66	6.8												
				1200	93.3	30.1	22.1	2.37	3.73	6.4												
	9.0	4.1	9.4	875	103.3	31.5	22.5	2.63	3.51	8.1				Operation Not Recommended	1100	57.6	38.7	23.8	44.5	1.70	22.8	4.0
				1100	96.2	31.2	22.8	2.44	3.74	6.9												
				1200	94.0	31.1	22.9	2.39	3.81	6.6												
50	4.5	1.6	3.6	875	105.0	33.1	23.9	2.68	3.62	8.6	Operation Not Recommended	1100			55.0	38.3	23.6	44.7	1.87	20.5	5.0	
				1100	97.6	32.7	24.2	2.49	3.85	7.3												
				1200	95.2	32.6	24.3	2.43	3.93	6.9												
	6.8	2.6	6.1	875	106.8	34.8	25.5	2.72	3.75	8.9		Operation Not Recommended	1100		57.4	41.2	26.9	47.5	1.85	22.2	4.6	
				1100	99.0	34.4	25.8	2.52	4.00	7.7												
				1200	96.5	34.3	25.9	2.47	4.08	7.2												
	9.0	3.8	8.8	875	107.9	35.8	26.5	2.74	3.83	9.2			Operation Not Recommended	1100	59.3	41.2	26.9	47.5	1.85	22.2	4.6	
				1100	99.9	35.5	26.8	2.54	4.09	7.9												
				1200	97.3	35.4	26.9	2.49	4.17	7.4												
60	4.5	1.5	3.4	875	109.7	37.5	27.9	2.83	3.90	9.8	Operation Not Recommended			1100	57.6	40.9	26.6	46.9	1.76	23.2	4.3	
				1100	101.3	37.2	28.2	2.62	4.15	8.4												
				1200	98.6	37.0	28.3	2.57	4.23	8.0												
	6.8	2.5	5.7	875	111.8	39.5	29.7	2.86	4.04	10.2		Operation Not Recommended		1100	57.7	40.0	26.4	47.3	2.15	18.6	6.1	
				1100	102.9	39.1	30.0	2.66	4.31	8.8												
				1200	100.1	38.9	30.1	2.60	4.39	8.4												
	9.0	3.6	8.3	875	113.1	40.7	30.8	2.89	4.13	10.5			Operation Not Recommended	1100	59.2	40.7	26.9	47.7	2.05	19.8	5.4	
				1100	103.9	40.3	31.1	2.68	4.40	9.1												
				1200	101.0	40.1	31.2	2.62	4.49	8.6												
70	4.5	1.4	3.3	875	114.7	42.2	32.0	3.00	4.13	11.3	Operation Not Recommended			1100	55.5	36.7	23.2	44.5	1.90	20.5	5.0	
				1100	105.2	41.8	32.3	2.78	4.40	9.7												
				1200	102.1	41.6	32.4	2.72	4.49	9.2												
	6.8	2.4	5.4	875	117.0	44.4	34.0	3.03	4.29	11.8		Operation Not Recommended		1100	58.2	38.7	25.9	46.8	2.38	16.3	7.4	
				1100	107.0	43.9	34.3	2.82	4.57	10.2												
				1200	103.8	43.8	34.4	2.76	4.66	9.7												
	9.0	3.4	7.9	875	118.4	45.7	35.3	3.06	4.38	12.2			Operation Not Recommended	1100	57.8	39.4	26.3	47.2	2.28	17.3	6.5	
				1100	108.1	45.3	35.6	2.84	4.67	10.5												
				1200	104.8	45.1	35.6	2.78	4.76	10.0												
80	4.5	1.3	3.1	875	119.5	46.8	35.9	3.18	4.31	12.9	Operation Not Recommended			1100	59.6	39.5	26.4	47.0	2.20	17.9	6.1	
				1100	109.0	46.3	36.2	2.95	4.59	11.2												
				1200	105.6	46.1	36.3	2.89	4.68	10.6												
	6.8	2.2	5.2	875	122.0	49.2	38.2	3.22	4.47	13.6		Operation Not Recommended		1100	56.3	35.1	22.4	43.8	2.55	13.8	8.6	
				1100	111.0	48.7	38.5	2.99	4.77	11.8												
				1200	107.4	48.5	38.5	2.92	4.86	11.2												
	9.0	3.3	7.5	875	123.6	50.7	39.6	3.25	4.57	14.0			Operation Not Recommended	1100	60.4	37.3	25.4	46.5	2.69	13.9	9.0	
				1100	112.2	50.2	39.9	3.02	4.87	12.2												
				1200	108.6	50.0	39.9	2.95	4.97	11.6												
90	4.5	1.3	3.0	875	123.9	50.9	39.4	3.37	4.43	14.6	Operation Not Recommended			1100	58.1	39.2	26.1	46.5	2.16	18.1	6.1	
				1100	112.4	50.4	39.7	3.13	4.73	12.7												
				1200	108.8	50.2	39.8	3.06	4.82	12.1												
	6.8	2.1	4.9	875	126.7	53.5	41.9	3.41	4.60	15.4		Operation Not Recommended		1100	59.6	39.5	26.4	47.0	2.20	17.9	6.1	
				1100	114.6	53.0	42.2	3.17	4.91	13.5												
				1200	110.8	52.8	42.3	3.10	5.00	12.8												
	9.0	3.1	7.2	875	128.4	55.2	43.5	3.44	4.70	15.9			Operation Not Recommended	1100	57.1	33.3	21.6	43.0	2.84	11.7	10.3	
				1100	116.0	54.6	43.7	3.19	5.01	13.9												
				1200	112.0	54.4	43.8	3.12	5.11	13.2												
100	4.5	1.2	2.9	875	128.4	55.2	43.5	3.44	4.70	15.9	Operation Not Recommended			1100	59.7	35.1	24.1	45.1	2.94	12.0	10.7	
				1100	112.4	50.4	39.7	3.13	4.73	12.7												
				1200	108.8	50.2	39.8	3.06	4.82	12.1												
	6.8	2.1	4.9	875	126.7	53.5	41.9	3.41	4.60	15.4		Operation Not Recommended		1100	61.1	35.4	24.5	45.7	2.99	11.8	10.8	
				1100	114.6	53.0	42.2	3.17	4.91	13.5												
				1200	110.8	52.8	42.3	3.10	5.00	12.8												
	9.0	3.1	7.2	875	128.4	55.2	43.5	3.44	4.70	15.9			Operation Not Recommended	1100	57.0	33.7	21.8	42.5	2.58	13.1	8.7	
				1100	116.0	54.6	43.7	3.19	5.01	13.9												
				1200	112.0	54.4	43.8	3.12	5.11	13.2												
110	4.5	1.2	2.8	875	126.7	53.5	41.9	3.41	4.60	15.4	Operation Not Recommended			1100	59.5	35.5	24.3	44.6	2.67	13.3	9.1	
				1100	112.4	50.4	39.7	3.13	4.73	12.7												
				1200	108.8	50.2	39.8	3.06	4.82	12.1												
	6.8	1.9	4.5	875	126.7	53.5	41.9	3.41	4.60	15.4		Operation Not Recommended		1100	61.0	35.8	24.6	45.4	2.81	12.7	9.6	
				1100	114.6	53.0	42.2	3.17	4.91	13.5												
				1200	110.8	52.8	42.3	3.10	5.00	12.8												
	9.0	2.8	6.5	875	128.4	55.2	43.5	3.44	4.70	15.9			Operation Not Recommended	1100	57.0	33.7	21.8	42.5	2.58	13.1	8.7	
				1100	116.0	54.6	43.7	3.19	5.01	13.9												
				1200	112.0	54.4	43.8	3.12	5.11	13.2												
120	4.5	1.2	2.7	875	126.7	53.5	41.9	3.41	4.60	15.4	Operation Not Recommended			1100	59.5	35.5	24.3	44.6	2.67	13.3	9.1	
				1100	112.4	50.4	39.7	3.13	4.73	12.7												
				1200	108.8	50.2	39.8	3.06	4.82	12.1												
	6.8	1.9	4.3	875	126.7	53.5	41.9	3.41	4.60	15.4		Operation Not Recommended		1100	60.3	37.7	25.5	46.3	2.53	14.9	8.0	
				1100	111.0	48.7	38.5	2.99	4.77	11.8												
				1200	107.4	48.5	38.5	2.92	4.86	11.2												
	9.0	2.7	6.3	875	123.6	50.7	39.6	3.25	4.57	14.0			Operation Not Recommended	1100	58.1	39.2	26.1	46.5	2.16	18.1	6.1	
				1100	112.2	50.2	39.9	3.02	4.87	12.2												
				1200	108.6	50.0	39.9	2.95	4.97	11.6												
120	4.5	1.2	2.7	875	123.9	50.9	39.4	3.37	4.43	14.6	Operation Not Recommended			1100	59.6	39.5	26.4	47.0	2.20	17.9	6.1	
				1100	112.4	50.4	39.7	3.13	4.73	12.7												
				1200	108.8	50.2	39.8	3.06	4.82	12.1												
	6.8	1.9	4.3	875	126.7	53.5	41.9	3.41	4.60	15.4		Operation Not Recommended		1100	57.8	39.4	26.3	47.2	2.28	17.3	6.5	
				1100	114.6	53.0	42.2	3.17	4.91	13.5												
				1200	110.8	52.8	42.3	3.10	5.00	12.												

ENGINEERING SPECIFICATIONS

ZS Models Performance Tables

Model ZS036, 3 Ton, w/ECM, COAX Full Load Performance Data:

EWT	Flow °F	WPD		COAX ECM Unit - Heating							COAX ECM Unit - Cooling																					
		GPM	PSI	FT	Aiflow CFM	LAT (DB) °F	HC MBtuh	HE MBtuh	Power kW	COP W/W	DH MBtuh	Aiflow CFM	LAT (DB) °F	TC MBtuh	SC MBtuh	HR MBtuh	Power kW	EER Btuh/W	DH MBtuh													
25	9.0	4.6	10.7	1090	91.6	25.4	18.2	2.12	3.51	6.2	Operation Not Recommended																					
				1230	89.0	25.3	18.4	2.03	3.66	5.7																						
30	4.5	1.8	4.2	1090	91.0	24.7	17.6	2.08	3.48	6.1																						
				1230	88.5	24.5	17.8	1.98	3.63	5.6																						
	6.8	3.0	6.9	1090	92.1	26.0	18.8	2.11	3.61	6.3																						
				1230	89.4	25.8	19.0	2.01	3.76	5.8																						
	9.0	4.4	10.1	1090	92.8	26.8	19.5	2.13	3.69	6.4																						
				1230	90.1	26.6	19.7	2.03	3.84	5.9																						
40	4.5	1.7	3.9	1090	93.7	27.9	20.6	2.13	3.84	6.6								1100	58.0	40.2	26.1	45.2	1.48	27.2	4.1							
				1230	90.9	27.7	20.8	2.03	4.00	6.1								1260	60.8	40.4	26.1	45.6	1.53	26.4	4.1							
	6.8	2.8	6.5	1090	94.9	29.4	22.0	2.16	3.98	6.8								Operation Not Recommended														
				1230	92.0	29.2	22.2	2.06	4.15	6.3																						
	9.0	4.1	9.4	1090	95.7	30.3	22.8	2.18	4.07	7.0																						
				1230	92.7	30.1	23.0	2.09	4.24	6.5																						
50	4.5	1.6	3.6	1090	97.1	31.9	24.2	2.23	4.19	7.4															1100	57.1	41.3	27.3	47.0	1.67	24.7	5.2
				1230	93.9	31.7	24.4	2.13	4.36	6.8															1260	60.0	41.5	27.3	47.4	1.73	24.0	5.2
	6.8	2.6	6.1	1090	98.5	33.5	25.8	2.26	4.34	7.7								1100	56.9	41.7	27.4	47.0	1.56	26.8	4.6							
				1230	95.1	33.4	26.0	2.16	4.53	7.1								1260	59.9	41.8	27.4	47.3	1.61	26.0	4.6							
	9.0	3.8	8.8	1090	99.4	34.6	26.8	2.29	4.44	7.9	1100	56.9	41.7	27.4	46.9	1.50	27.8	4.3														
				1230	95.9	34.4	27.0	2.18	4.62	7.3	1260	59.8	41.9	27.4	47.2	1.55	27.0	4.3														
60	4.5	1.5	3.4	1090	100.8	36.3	28.2	2.36	4.50	8.5	1100	57.0	40.9	27.3	47.3	1.89	21.7	6.1														
				1230	97.2	36.1	28.4	2.26	4.69	7.8	1260	59.9	41.1	27.3	47.7	1.95	21.1	6.1														
	6.8	2.5	5.7	1090	102.4	38.2	30.0	2.40	4.67	8.9	1100	56.9	41.2	27.5	47.2	1.75	23.5	5.4														
				1230	98.6	38.0	30.2	2.29	4.86	8.2	1260	59.8	41.4	27.4	47.6	1.81	22.9	5.3														
	9.0	3.6	8.3	1090	103.5	39.4	31.1	2.42	4.77	9.1	1100	56.8	41.3	27.5	47.1	1.69	24.4	5.0														
				1230	99.5	39.2	31.3	2.31	4.97	8.5	1260	59.8	41.5	27.5	47.5	1.75	23.8	5.0														
70	4.5	1.4	3.3	1090	104.7	40.9	32.3	2.52	4.75	9.8	1100	57.5	39.6	26.8	46.8	2.12	18.7	7.4														
				1230	100.6	40.7	32.4	2.41	4.95	9.0	1260	60.3	39.8	26.8	47.3	2.19	18.1	7.4														
	6.8	2.4	5.4	1090	106.6	43.0	34.3	2.56	4.93	10.3	1100	57.4	40.0	26.9	46.7	1.97	20.3	6.5														
				1230	102.2	42.8	34.5	2.44	5.14	9.5	1260	60.2	40.1	26.9	47.1	2.04	19.7	6.5														
	9.0	3.4	7.9	1090	107.7	44.4	35.6	2.58	5.04	10.6	1100	57.3	40.0	26.9	46.5	1.90	21.1	6.1														
				1230	103.2	44.2	35.7	2.47	5.25	9.8	1260	60.2	40.2	26.9	46.9	1.97	20.5	6.1														
80	4.5	1.3	3.1	1090	108.5	45.4	36.2	2.69	4.94	11.2	1100	58.2	37.9	25.9	46.0	2.39	15.9	8.9														
				1230	104.0	45.1	36.4	2.57	5.15	10.4	1260	61.0	38.1	25.9	46.5	2.46	15.4	8.9														
	6.8	2.2	5.2	1090	110.6	47.8	38.5	2.73	5.13	11.9	1100	58.1	38.2	26.0	45.8	2.22	17.2	7.9														
				1230	105.8	47.5	38.6	2.61	5.34	11.0	1260	60.9	38.4	26.0	46.2	2.29	16.8	7.9														
	9.0	3.3	7.5	1090	111.9	49.3	39.9	2.76	5.24	12.2	1100	58.0	38.3	26.1	45.6	2.14	17.9	7.5														
				1230	106.9	49.0	40.0	2.63	5.46	11.4	1260	60.8	38.5	26.1	46.0	2.21	17.4	7.5														
90	4.5	1.3	3.0	1090	112.0	49.5	39.7	2.86	5.07	12.8	1100	58.9	36.0	25.0	45.2	2.68	13.4	10.7														
				1230	107.0	49.2	39.9	2.73	5.28	11.9	1260	61.6	36.2	25.0	45.6	2.77	13.0	10.7														
	6.8	2.1	4.9	1090	114.2	52.1	42.2	2.90	5.26	13.5	1100	58.8	36.3	25.1	44.9	2.50	14.6	9.6														
				1230	109.0	51.8	42.4	2.77	5.48	12.6	1260	61.5	36.5	25.1	45.3	2.58	14.1	9.6														
	9.0	3.1	7.2	1090	115.6	53.7	43.7	2.93	5.37	14.0	1100	58.8	36.4	25.2	44.6	2.41	15.1	9.1														
				1230	110.2	53.4	43.9	2.80	5.60	13.0	1260	61.5	36.6	25.2	45.1	2.49	14.7	9.1														
100	4.5	1.2	2.9	Operation Not Recommended							1100	59.6	34.1	24.2	44.4	3.03	11.3	12.6														
											1260	62.2	34.2	24.2	44.9	3.13	10.9	12.6														
	6.8	2.0	4.7								1100	59.5	34.4	24.3	44.0	2.81	12.2	11.3														
											1260	62.1	34.5	24.3	44.4	2.91	11.9	11.4														
	9.0	2.9	6.8								1100	59.5	34.4	24.4	43.7	2.71	12.7	10.7														
											1260	62.1	34.6	24.4	44.2	2.80	12.3	10.8														
110	4.5	1.2	2.8								1100	60.3	32.0	23.4	43.7	3.42	9.4	14.6														
											1260	62.8	32.2	23.4	44.2	3.53	9.1	14.6														
	6.8	1.9	4.5								1100	60.2	32.3	23.6	43.2	3.18	10.2	13.2														
											1260	62.7	32.5	23.5	43.7	3.28	9.9	13.2														
	9.0	2.8	6.5								1100	60.1	32.4	23.6	42.8	3.06	10.6	12.5														
											1260	62.7	32.5	23.6	43.3	3.17	10.3	12.6														
120	4.5	1.2	2.7								1100	61.1	29.9	22.5	43.1	3.86	7.7	16.8														
											1260	63.5	30.0	22.5	43.6	3.99	7.5	16.9														
	6.8	1.9	4.3								1100	61.0	30.2	22.6	42.4	3.59	8.4	15.3														
											1260	63.4	30.3	22.6	43.0	3.71	8.2	15.3														
	9.0	2.7	6.3								1100	61.0	30.2	22.6	42.0	3.46	8.7	14.5														
											1260	63.4	30.4	22.6	42.6	3.58	8.5	14.6														

NOTE: See page 23 for performance data parameters and guidelines.

ZS Models Performance Tables
Model ZS042, 3.5 Ton, w/PSC, BPHE Full Load Performance Data

EWT °F	Flow GPM	WPD		BPHE PSC Unit - Heating						BPHE PSC Unit - Cooling										
		PSI	FT	Aiflow CFM	LAT (DB) °F	HC MBtu/h	HE MBtu/h	Power kW	COP W/W	DH MBtu/h	Aiflow CFM	LAT (DB) °F	TC MBtu/h	SC MBtu/h	HR MBtu/h	Power kW	EER Btu/h/W	DH MBtu/h		
25	10.5	1.9	4.4	1050	95.9	29.4	19.9	2.77	3.11	7.4	Operation Not Recommended	1050	57.9	42.5	25.0	48.2	1.69	25.1	2.3	
				1400	89.7	29.8	20.9	2.61	3.35	6.4										
				1600	87.4	30.1	21.2	2.61	3.39	6.0										
30	9.3	1.6	3.7	1050	97.5	31.2	21.7	2.80	3.27	7.6		Operation Not Recommended	1400	61.1	44.3	28.6	50.3	1.78	24.9	2.4
				1400	91.0	31.7	22.7	2.64	3.52	6.6										
				1600	88.5	32.0	23.0	2.63	3.56	6.2										
	10.0	1.7	4.0	1050	97.7	31.4	21.8	2.81	3.28	7.7			1400	62.4	44.7	30.5	51.0	1.85	24.2	2.4
				1400	91.1	31.9	22.9	2.65	3.53	6.6										
				1600	88.6	32.2	23.2	2.64	3.58	6.2										
10.5	1.9	4.3	1050	97.8	31.5	21.9	2.81	3.29	7.7	1400		62.4	44.7	30.5	51.0	1.85	24.2	2.4		
			1400	91.2	32.0	23.0	2.65	3.54	6.6											
			1600	88.7	32.3	23.3	2.64	3.58	6.3											
40	9.3	1.5	3.6	1050	101.4	35.6	25.7	2.89	3.61	8.4		Operation Not Recommended	1050	56.3	44.8	26.9	51.2	1.86	24.1	3.6
				1400	93.9	36.1	26.8	2.72	3.89	7.2										
				1600	91.1	36.5	27.2	2.72	3.94	6.8										
	10.0	1.7	3.9	1050	101.6	35.8	25.9	2.90	3.63	8.5			1400	59.7	46.7	30.7	53.4	1.95	24.0	3.6
				1400	94.1	36.4	27.1	2.73	3.91	7.3										
				1600	91.2	36.7	27.4	2.72	3.95	6.8										
10.5	1.8	4.2	1050	101.7	36.0	26.1	2.90	3.63	8.5	1400		61.0	47.2	32.8	54.1	2.01	23.5	3.7		
			1400	94.1	36.5	27.2	2.73	3.92	7.3											
			1600	91.3	36.9	27.6	2.73	3.96	6.9											
50	9.3	1.5	3.5	1050	105.4	40.2	30.0	2.99	3.94	9.5	Operation Not Recommended	1050	56.3	44.8	26.9	51.2	1.86	24.1	3.6	
				1400	97.0	40.8	31.2	2.81	4.25	8.1										
				1600	93.8	41.1	31.6	2.81	4.30	7.7										
	10.0	1.7	3.9	1050	105.6	40.4	30.2	2.99	3.96	9.5		1400	59.7	46.8	30.7	53.4	1.94	24.1	3.6	
				1400	97.1	41.0	31.4	2.82	4.26	8.2										
				1600	94.0	41.4	31.8	2.81	4.32	7.7										
10.5	1.8	4.1	1050	105.8	40.6	30.4	3.00	3.97	9.6	1400	61.0	47.2	32.8	54.1	2.01	23.5	3.7			
			1400	97.2	41.2	31.6	2.83	4.27	8.2											
			1600	94.1	41.6	32.0	2.82	4.33	7.7											
60	9.3	1.5	3.4	1050	109.6	44.9	34.4	3.09	4.25	10.7	Operation Not Recommended	1050	55.8	44.9	27.4	51.8	2.04	22.0	4.9	
				1400	100.1	45.6	35.6	2.92	4.58	9.2										
				1600	96.6	46.0	36.1	2.91	4.64	8.7										
	10.0	1.6	3.8	1050	109.9	45.2	34.6	3.10	4.27	10.8		1400	58.3	46.8	31.3	54.1	2.13	22.0	4.9	
				1400	100.3	45.9	35.9	2.92	4.60	9.3										
				1600	96.8	46.3	36.4	2.91	4.66	8.8										
10.5	1.8	4.0	1050	110.0	45.4	34.8	3.11	4.28	10.9	1400	60.7	47.2	33.4	54.8	2.22	21.2	5.1			
			1400	100.5	46.1	36.1	2.93	4.61	9.3											
			1600	96.9	46.5	36.5	2.92	4.67	8.8											
70	9.3	1.5	3.4	1050	114.0	49.8	38.9	3.21	4.55	12.2	Operation Not Recommended	1050	55.8	44.9	27.4	51.8	2.04	22.0	4.9	
				1400	103.5	50.6	40.3	3.03	4.90	10.5										
				1600	99.6	51.1	40.8	3.02	4.96	9.9										
	10.0	1.6	3.7	1050	114.2	50.2	39.2	3.22	4.57	12.3		1400	59.5	45.3	30.9	53.3	2.34	19.4	6.3	
				1400	103.7	50.9	40.6	3.03	4.92	10.6										
				1600	99.7	51.4	41.1	3.02	4.98	10.0										
10.5	1.7	4.0	1050	114.4	50.4	39.4	3.22	4.58	12.3	1400	60.9	45.8	33.0	54.1	2.43	18.8	6.5			
			1400	103.8	51.1	40.8	3.04	4.93	10.6											
			1600	99.9	51.6	41.3	3.03	4.99	10.0											
80	9.3	1.5	3.4	1050	118.5	55.0	43.6	3.34	4.82	13.8	Operation Not Recommended	1050	56.7	41.4	26.4	49.9	2.49	16.7	7.9	
				1400	106.9	55.8	45.0	3.15	5.20	11.9										
				1600	102.6	56.3	45.6	3.14	5.26	11.2										
	10.0	1.6	3.7	1050	118.8	55.3	43.9	3.35	4.84	13.9		1400	60.1	43.2	30.1	52.1	2.59	16.7	7.9	
				1400	107.1	56.1	45.4	3.15	5.22	12.0										
				1600	102.8	56.7	45.9	3.15	5.28	11.3										
10.5	1.7	4.0	1050	119.0	55.5	44.1	3.35	4.86	13.9	1400	61.4	43.6	32.2	52.8	2.69	16.2	8.1			
			1400	107.3	56.4	45.6	3.16	5.23	12.0											
			1600	102.9	56.9	46.2	3.15	5.29	11.4											
90	9.3	1.4	3.3	1050	123.1	60.3	48.4	3.48	5.08	15.4	Operation Not Recommended	1050	57.4	39.3	25.6	48.8	2.77	14.2	9.5	
				1400	110.5	61.2	50.0	3.28	5.47	13.3										
				1600	105.7	61.7	50.6	3.27	5.54	12.6										
	10.0	1.6	3.7	1050	123.5	60.6	48.8	3.49	5.10	15.5		1400	62.0	41.4	31.1	51.6	2.99	13.8	9.9	
				1400	110.7	61.6	50.4	3.29	5.49	13.4										
				1600	106.0	62.1	51.0	3.28	5.56	12.7										
10.5	1.7	3.9	1050	123.7	60.9	49.0	3.49	5.11	15.5	1400	62.0	41.4	31.1	51.6	2.98	13.9	9.8			
			1400	110.9	61.8	50.6	3.29	5.51	13.4											
			1600	106.1	62.4	51.2	3.28	5.57	12.7											
100	9.3	1.4	3.3	1050	123.5	60.6	48.8	3.49	5.10	15.5	Operation Not Recommended	1050	58.2	37.4	24.7	47.8	3.07	12.2	11.2	
				1400	110.7	61.6	50.4	3.29	5.49	13.4										
				1600	106.0	62.1	51.0	3.28	5.56	12.7										
	10.0	1.6	3.6	1050	123.7	60.9	49.0	3.49	5.11	15.5		1400	62.0	41.4	31.1	51.6	2.99	13.8	9.9	
				1400	110.9	61.8	50.6	3.29	5.51	13.4										
				1600	106.1	62.4	51.2	3.28	5.57	12.7										
10.5	1.7	3.8	1050	123.9	61.2	49.3	3.50	5.12	15.6	1400	62.0	41.4	31.1	51.6	2.98	13.9	9.8			
			1400	111.1	62.0	50.8	3.30	5.52	13.5											
			1600	106.3	62.5	51.4	3.29	5.58	12.8											
110	9.3	1.4	3.3	1050	123.5	60.6	48.8	3.49	5.10	15.5	Operation Not Recommended	1050	59.1	35.3	23.8	47.1	3.47	10.2	13.4	
				1400	110.7	61.6	50.4	3.29	5.49	13.4										
				1600	106.0	62.1	51.0	3.28	5.56	12.7										
	10.0	1.5	3.6	1050	123.7	60.9	49.0	3.49	5.11	15.5		1400	62.0	41.4	31.1	51.6	2.99	13.8	9.9	
				1400	110.9	61.8	50.6	3.29	5.51	13.4										
				1600	106.1	62.4	51.2	3.28	5.57	12.7										
10.5	1.6	3.8	1050	123.9	61.2	49.3	3.50	5.12	15.6	1400	62.0	41.4	31.1	51.6	2.98	13.9	9.8			
			1400	111.1	62.0	50.8	3.30	5.52	13.5											
			1600	106.3	62.5	51.4	3.29	5.58	12.8											
120	9.3	1.4	3.2	1050	123.5	60.6	48.8	3.49	5.10	15.5	Operation Not Recommended	1050	60.2	32.4	22.5	45.7	3.91	8.3	15.5	
				1400	110.7	61.6	50.4	3.29	5.49	13.4										
				1600	106.0	62.1	51.0	3.28	5.56	12.7										
	10.0	1.5	3.5	1050	123.7	60.9	49.0	3.49	5.11	15.5		1400	63.0	33.7	25.6	47.7	4.11	8.2	15.9	
				1400	110.9	61.8	50.6	3.29	5.51	13.4										
				1600	106.1	62.4	51.2	3.28	5.57	12.7										
10.5	1.6	3.8	1050	123.9	61.2	49.3	3.50	5.12	15.6	1400	64.2	34.1	27.4	48.5	4.22	8.1	16.0			
			1400	111.1	62.0	50.8	3.30	5.52	13.5											
			1600	106.3	62.5	51.4	3.29	5.58	12.8											

NOTE: See page 23 for performance data parameters and guidelines.

ENGINEERING SPECIFICATIONS

ZS Models Performance Tables

Model ZS042, 3.5 Ton, w/ECM, BPHE Full Load Performance Data

EWT	Flow °F	WPD		BPHE ECM Unit - Heating							BPHE ECM Unit - Cooling																																																													
		Flow GPM	PSI	FT	Aiflow CFM	LAT (DB) °F	HC MBtuh	HE MBtuh	Power kW	COP W/W	DH MBtuh	Aiflow CFM	LAT (DB) °F	TC MBtuh	SC MBtuh	HR MBtuh	Power kW	EER Btuh/W	DH MBtuh																																																					
25	10.5	1.9	4.4	1140	93.1	28.5	20.2	2.43	3.43	7.1	Operation Not Recommended																																																													
				1270	90.9	28.6	20.6	2.37	3.54	6.7																																																														
30	9.3	1.6	3.7	1140	94.6	30.3	21.9	2.46	3.61	7.3										Operation Not Recommended																																																				
				1270	92.2	30.5	22.3	2.40	3.72	6.9																																																														
	10.0	1.7	4.0	1140	94.8	30.5	22.1	2.47	3.62	7.3																			Operation Not Recommended																																											
				1270	92.4	30.7	22.5	2.41	3.74	6.9																																																														
30	10.5	1.9	4.3	1140	94.9	30.6	22.2	2.47	3.63	7.4																												Operation Not Recommended																																		
				1270	92.5	30.8	22.6	2.41	3.75	6.9																																																														
	9.3	1.5	3.6	1140	98.2	34.7	26.0	2.55	3.99	8.0																																					1270	59.6	44.0	28.0	49.2	1.52	28.9	2.4																		
				1270	95.4	34.9	26.4	2.48	4.12	7.6																																					1410	60.7	45.1	29.5	50.4	1.54	29.2	2.4																		
40	10.0	1.7	3.9	1140	98.3	34.9	26.2	2.55	4.00	8.1																																					Operation Not Recommended																									
				1270	95.6	35.1	26.6	2.49	4.13	7.6																																																														
	10.5	1.8	4.2	1140	98.5	35.0	26.3	2.56	4.02	8.1																																														Operation Not Recommended																
				1270	95.7	35.2	26.7	2.49	4.14	7.6																																																														
50	9.3	1.5	3.5	1140	101.9	39.2	30.2	2.64	4.35	9.0																																																							1270	58.1	46.4	30.1	52.2	1.69	27.5	3.7
				1270	98.8	39.5	30.7	2.57	4.49	8.5																																																							1410	59.2	47.6	31.6	53.5	1.72	27.8	3.7
	10.0	1.7	3.9	1140	102.1	39.5	30.5	2.65	4.37	9.1																																																							1270	58.1	46.4	30.1	52.2	1.68	27.7	3.6
				1270	99.0	39.7	30.9	2.58	4.51	8.6																																																							1410	59.2	47.6	31.6	53.4	1.70	28.0	3.6
50	10.5	1.8	4.1	1140	102.2	39.6	30.6	2.65	4.38	9.1																																																							1270	58.0	46.5	30.1	52.2	1.67	27.8	3.5
				1270	99.1	39.9	31.1	2.59	4.52	8.6																																																							1410	59.2	47.6	31.6	53.4	1.70	28.1	3.6
	9.3	1.5	3.4	1140	105.7	44.0	34.6	2.75	4.69	10.3	1270	57.7	46.5	30.6	52.9	1.88	24.7	5.0																																																						
				1270	102.2	44.2	35.1	2.68	4.84	9.7	1410	58.9	47.6	32.2	54.2	1.91	25.0	5.0																																																						
60	10.0	1.6	3.8	1140	105.9	44.3	34.9	2.75	4.71	10.3	1270	57.6	46.5	30.7	52.9	1.87	24.9	4.9																																																						
				1270	102.5	44.5	35.4	2.68	4.86	9.7	1410	58.9	47.7	32.2	54.1	1.89	25.2	5.0																																																						
	10.5	1.8	4.0	1140	106.1	44.4	35.0	2.76	4.72	10.4	1270	57.6	46.5	30.7	52.8	1.86	25.0	4.9																																																						
				1270	102.6	44.7	35.5	2.69	4.88	9.8	1410	58.9	47.7	32.2	54.1	1.88	25.3	4.9																																																						
70	9.3	1.5	3.4	1140	109.7	48.9	39.1	2.86	5.01	11.7	1270	57.9	45.0	30.3	52.2	2.10	21.5	6.4																																																						
				1270	105.9	49.2	39.7	2.79	5.17	11.0	1410	59.1	46.2	31.8	53.4	2.12	21.7	6.5																																																						
	10.0	1.6	3.7	1140	110.0	49.2	39.4	2.87	5.03	11.7	1270	57.9	45.1	30.3	52.2	2.08	21.7	6.4																																																						
				1270	106.1	49.5	40.0	2.79	5.19	11.1	1410	59.1	46.2	31.9	53.4	2.11	21.9	6.4																																																						
70	10.5	1.7	4.0	1140	110.1	49.4	39.6	2.87	5.04	11.8	1270	57.9	45.1	30.3	52.1	2.07	21.8	6.3																																																						
				1270	106.2	49.7	40.2	2.80	5.20	11.1	1410	59.1	46.2	31.9	53.4	2.10	22.0	6.4																																																						
	9.3	1.5	3.4	1140	113.9	54.0	43.8	2.98	5.30	13.2	1270	58.5	43.0	29.6	51.0	2.34	18.3	8.0																																																						
				1270	109.6	54.3	44.4	2.91	5.47	12.4	1410	59.6	44.1	31.0	52.2	2.38	18.5	8.1																																																						
80	10.0	1.6	3.7	1140	114.2	54.4	44.1	2.99	5.32	13.3	1270	58.4	43.0	29.6	50.9	2.33	18.5	7.9																																																						
				1270	109.9	54.7	44.7	2.92	5.49	12.5	1410	59.6	44.1	31.0	52.1	2.36	18.7	8.0																																																						
	10.5	1.7	4.0	1140	114.3	54.6	44.4	3.00	5.34	13.3	1270	58.4	43.0	29.6	50.9	2.32	18.5	7.8																																																						
				1270	110.0	54.9	44.9	2.92	5.51	12.6	1410	59.6	44.1	31.1	52.1	2.35	18.8	7.9																																																						
90	9.3	1.4	3.3	1140	118.2	59.3	48.7	3.12	5.57	14.7	1270	59.1	40.8	28.6	49.8	2.64	15.5	9.7																																																						
				1270	113.5	59.6	49.3	3.04	5.75	13.9	1410	60.2	41.8	30.1	51.0	2.67	15.7	9.8																																																						
	10.0	1.6	3.7	1140	118.5	59.7	49.0	3.13	5.60	14.8	1270	59.1	40.8	28.6	49.7	2.62	15.6	9.6																																																						
				1270	113.8	60.0	49.6	3.05	5.78	14.0	1410	60.2	41.9	30.1	50.9	2.65	15.8	9.7																																																						
90	10.5	1.7	3.9	1140	118.7	59.9	49.2	3.13	5.61	14.9	1270	59.1	40.8	28.7	49.7	2.61	15.7	9.5																																																						
				1270	113.9	60.3	49.9	3.05	5.79	14.1	1410	60.2	41.9	30.1	50.9	2.64	15.8	9.6																																																						
	9.3	1.4	3.3	Operation Not Recommended	1270	59.8	38.8	27.7	48.9	2.97	13.0	11.6																																																												
					1410	60.9	39.8	29.1	50.1	3.02	13.2	11.7																																																												
10.0	1.6	3.6	1270		59.8	38.8	27.7	48.9	2.95	13.1	11.4																																																													
			1410		60.9	39.8	29.1	50.0	3.00	13.3	11.6																																																													
100	10.5	1.7	3.8		1270	59.8	38.8	27.7	48.8	2.94	13.2	11.4																																																												
					1410	60.9	39.8	29.1	50.0	2.98	13.3	11.5																																																												
	9.3	1.4	3.3		1270	60.6	36.7	26.6	48.2	3.37	10.9	13.6																																																												
					1410	61.6	37.6	28.0	49.3	3.42	11.0	13.7																																																												
110	10.0	1.5	3.6		1270	60.6	36.7	26.7	48.1	3.35	11.0	13.5																																																												
					1410	61.6	37.6	28.0	49.2	3.39	11.1	13.6																																																												
	10.5	1.6	3.8		1270	60.6	36.7	26.7	48.1	3.33	11.0	13.4																																																												
					1410	61.6	37.6	28.0	49.2	3.38	11.1	13.5																																																												
120	9.3	1.4	3.2		1270	61.6	33.7	25.2	46.8	3.83	8.8	15.8																																																												
					1410	62.6	34.6	26.5	47.8	3.88	8.9	16.0																																																												
	10.0	1.5	3.5		1270	61.6	33.7	25.3	46.7	3.80	8.9	15.7																																																												
					1410	62.6	34.6	26.5	47.7	3.85	9.0	15.8																																																												
10.5	1.6	3.8	1270		61.6	33.7	25.3	46.6	3.78	8.9	15.6																																																													
			1410		62.6	34.6	26.5	47.7	3.84	9.0	15.7																																																													

NOTE: See page 23 for performance data parameters and guidelines.

ZS Models Performance Tables

Model ZS042, 3.5 Ton, w/PSC, COAX Full Load Performance Data

EWT °F	Flow GPM	WPD		COAX PSC Unit - Heating							COAX PSC Unit - Cooling								
		PSI	FT	Aiflow CFM	LAT (DB) °F	HC MBtuh	HE MBtuh	Power kW	COP W/W	DH MBtuh	Aiflow CFM	LAT (DB) °F	TC MBtuh	SC MBtuh	HR MBtuh	Power kW	EER Btuh/W	DH MBtuh	
25	10.5	5.7	13.2	1050	94.1	27.3	17.9	2.75	2.92	7.3	Operation Not Recommended	1050	58.1	39.8	24.8	46.2	1.89	21.0	4.8
				1400	88.3	27.7	18.7	2.62	3.09	6.4									
				1600	86.5	28.6	19.5	2.66	3.15	6.0									
30	5.3	2.1	4.9	1050	94.5	27.7	18.4	2.72	2.98	7.2	Operation Not Recommended	1050	61.7	42.0	27.7	48.8	2.00	21.0	5.1
				1400	88.6	28.1	19.2	2.60	3.17	6.2									
				1600	86.8	29.0	20.0	2.64	3.22	5.9									
	7.9	3.6	8.2	1050	95.5	28.9	19.5	2.75	3.07	7.4		1050	63.3	43.1	28.9	50.2	2.07	20.8	5.3
				1400	89.3	29.3	20.3	2.63	3.26	6.4									
				1600	87.5	30.2	21.1	2.67	3.32	6.1									
	10.5	5.4	12.4	1050	96.0	29.5	20.0	2.78	3.11	7.6		1050	60.1	44.5	30.0	51.5	2.06	21.6	5.1
				1400	89.7	29.8	20.8	2.65	3.30	6.6									
				1600	87.8	30.8	21.6	2.69	3.36	6.2									
40	5.3	2.0	4.6	1050	98.0	31.8	22.3	2.79	3.34	7.8	Operation Not Recommended	1050	56.4	41.7	26.8	48.8	2.07	20.2	5.4
				1400	91.3	32.2	23.1	2.67	3.54	6.8									
				1600	89.2	33.3	24.0	2.71	3.60	6.4									
	7.9	3.3	7.7	1050	99.2	33.1	23.5	2.82	3.44	8.0		1050	60.3	44.0	29.8	51.5	2.19	20.1	5.7
				1400	92.2	33.5	24.3	2.69	3.65	7.0									
				1600	90.0	34.6	25.3	2.74	3.71	6.6									
	10.5	5.0	11.5	1050	99.8	33.8	24.0	2.85	3.48	8.3		1050	62.0	45.3	31.1	53.0	2.27	19.9	5.8
				1400	92.6	34.2	24.9	2.72	3.69	7.2									
				1600	90.4	35.3	25.9	2.76	3.75	6.7									
50	5.3	1.9	4.3	1050	101.6	35.9	26.1	2.87	3.66	8.6	Operation Not Recommended	1050	56.4	41.7	26.8	48.8	2.07	20.2	5.4
				1400	94.0	36.3	27.0	2.74	3.88	7.5									
				1600	91.7	37.6	28.1	2.78	3.95	7.0									
	7.9	3.1	7.2	1050	103.0	37.4	27.5	2.90	3.77	8.9		1050	60.3	44.0	29.8	51.5	2.19	20.1	5.7
				1400	95.0	37.8	28.4	2.77	4.00	7.8									
				1600	92.6	39.1	29.5	2.81	4.07	7.3									
	10.5	4.7	10.8	1050	103.6	38.1	28.1	2.93	3.81	9.2		1050	61.9	45.8	31.3	52.9	2.08	22.1	5.0
				1400	95.5	38.6	29.1	2.79	4.05	8.0									
				1600	93.1	39.9	30.2	2.84	4.12	7.5									
60	5.3	1.7	4.0	1050	105.3	40.0	29.9	2.97	3.96	9.6	Operation Not Recommended	1050	55.7	41.7	27.5	49.5	2.27	18.4	6.2
				1400	96.8	40.5	30.9	2.83	4.20	8.4									
				1600	94.2	41.9	32.1	2.87	4.27	7.9									
	7.9	2.9	6.7	1050	106.8	41.7	31.5	3.00	4.08	10.0		1050	59.7	44.0	30.7	52.2	2.40	18.4	6.4
				1400	97.9	42.2	32.5	2.86	4.33	8.7									
				1600	95.2	43.6	33.7	2.90	4.40	8.2									
	10.5	4.4	10.1	1050	107.5	42.5	32.2	3.02	4.12	10.3		1050	61.5	45.3	32.0	53.7	2.49	18.2	6.6
				1400	98.5	43.0	33.2	2.88	4.37	9.0									
				1600	95.7	44.5	34.5	2.93	4.45	8.5									
70	5.3	1.6	3.8	1050	109.0	44.2	33.7	3.07	4.22	10.8	Operation Not Recommended	1050	55.8	40.7	27.4	49.2	2.49	16.3	7.3
				1400	99.6	44.8	34.8	2.93	4.48	9.4									
				1600	96.8	46.3	36.1	2.98	4.56	8.8									
	7.9	2.8	6.3	1050	110.6	46.1	35.5	3.10	4.35	11.3		1050	59.8	42.9	30.6	51.9	2.64	16.3	7.6
				1400	100.8	46.6	36.5	2.96	4.62	9.9									
				1600	97.9	48.2	37.9	3.01	4.70	9.3									
	10.5	4.1	9.5	1050	111.4	47.0	36.3	3.13	4.40	11.7		1050	61.4	44.6	32.1	53.4	2.57	17.3	6.9
				1400	101.5	47.6	37.4	2.99	4.67	10.2									
				1600	98.4	49.1	38.8	3.03	4.75	9.6									
80	5.3	1.6	3.6	1050	112.7	48.5	37.6	3.19	4.46	12.1	Operation Not Recommended	1050	55.6	42.2	27.7	49.3	2.07	20.4	5.1
				1400	102.5	49.1	38.7	3.04	4.73	10.6									
				1600	99.3	50.7	40.2	3.09	4.81	10.0									
	7.9	2.6	6.0	1050	114.5	50.5	39.5	3.22	4.59	12.7		1050	59.6	44.5	30.9	52.0	2.19	20.3	5.4
				1400	103.8	51.1	40.6	3.07	4.87	11.1									
				1600	100.6	52.8	42.2	3.12	4.96	10.5									
	10.5	3.9	9.1	1050	115.4	51.5	40.4	3.25	4.64	13.1		1050	61.4	45.8	32.2	53.6	2.28	20.1	5.5
				1400	104.5	52.1	41.5	3.10	4.93	11.5									
				1600	101.2	53.8	43.1	3.15	5.01	10.8									
90	5.3	1.5	3.4	1050	116.5	52.8	41.4	3.32	4.66	13.5	Operation Not Recommended	1050	55.6	42.2	27.7	49.3	2.07	20.4	5.1
				1400	105.3	53.4	42.6	3.17	4.95	11.8									
				1600	101.9	55.2	44.2	3.22	5.03	11.1									
	7.9	2.5	5.7	1050	118.4	54.9	43.5	3.35	4.80	14.2		1050	59.6	44.5	30.9	52.0	2.19	20.3	5.4
				1400	106.8	55.6	44.7	3.20	5.10	12.5									
				1600	103.3	57.5	46.4	3.25	5.19	11.8									
	10.5	3.7	8.6	1050	119.4	56.0	44.5	3.38	4.86	14.6		1050	61.4	44.6	32.1	53.2	2.50	17.8	6.5
				1400	107.5	56.7	45.7	3.23	5.15	12.9									
				1600	103.9	58.6	47.4	3.28	5.24	12.2									
100	5.3	1.4	3.3	1050	112.7	48.5	37.6	3.19	4.46	12.1	Operation Not Recommended	1050	57.7	37.4	26.1	47.8	3.06	12.2	10.6
				1400	102.5	49.1	38.7	3.04	4.73	10.6									
				1600	99.3	50.7	40.2	3.09	4.81	10.0									
	7.9	2.3	5.4	1050	114.5	50.5	39.5	3.22	4.59	12.7		1050	60.7	42.9	31.5	52.6	2.85	15.1	8.1
				1400	103.8	51.1	40.6	3.07	4.87	11.1									
				1600	100.6	52.8	42.2	3.12	4.96	10.5									
	10.5	3.5	8.1	1050	115.4	51.5	40.4	3.25	4.64	13.1		1050	61.8	45.8	32.2	53.6	2.28	20.1	5.5
				1400	104.5	52.1	41.5	3.10	4.93	11.5									
				1600	101.2	53.8	43.1	3.15	5.01	10.8									
110	5.3	1.4	3.1	1050	116.5	52.8	41.4	3.32	4.66	13.5	Operation Not Recommended	1050	55.8	40.7	27.4	49.2	2.49	16.3	7.3
				1400	105.3	53.4	42.6	3.17	4.95	11.8									
				1600	101.9	55.2	44.2	3.22	5.03	11.1									
	7.9	2.2	5.2	1050	118.4	54.9	43.5	3.35	4.80	14.2		1050	59.8	42.9	30.6	51.9	2.64	16.3	7.6
				1400	106.8	55.6	44.7	3.20	5.10	12.5									
				1600	103.3	57.5	46.4	3.25	5.19	11.8									
	10.5	3.4	7.8	1050	119.4	56.0	44.5	3.38	4.86	14.6		1050	61.4	44.6	32.1	53.2	2.50	17.8	6.5
				1400	107.5	56.7	45.7	3.23	5.15	12.9									
				1600	103.9	58.6	47.4	3.28	5.24	12.2									
120	5.3	1.3	3.0	1050	112.7	48.5	37.6	3.19	4.46	12.1	Operation Not Recommended	1050	55.6	42.2	27.7	49.3	2.07	20.4	5.1
				1400	102.5	49.1	38.7	3.04	4.73	10.6									
				1600	99.3	50.7	40.2	3.09	4.81	10.0									
	7.9	2.2	5.0	1050	114.5	50.5	39.5	3.22	4.59	12.7		1050	59.6	44.5	30.9	52.0	2.19	20.3	5.4
				1400	103.8	51.1	40.6	3.07	4.87	11.1									
				1600	100.6	52.8	42.2	3.12	4.96	10.5									
	10.5	3.3	7.5	1050	115.4	51.5	40.4	3.25	4.64	13.1		1050	61.4	45.8	32.2	53.6	2.28	20.1	5.5
				1400	104.5	52.1	41.5	3.10	4.93	11.5									
				1600	101.2	53.8	43.1	3.15	5.01	10.8									
120	5.3	1.3	3.0	1050	116.5	52.8	41.4	3.32	4.66	13.5	Operation Not Recommended	1050	55.6	42.2	27.7	49.3	2.07	20.4	5.1
				1400	105.3	53.4	42.6	3.17	4.95	11.8									
				1600	101.9	55.2	44.2	3.22	5.03	11.1									
	7.9	2.2	5.0	1050	118.4	54.9	43.5	3.35	4.80	14.2		1050	59.6	44.5	30.9	52.0	2.19	20.3	5.4
				1400	106.8	55.6	44.7	3.20	5.10	12.5									
				1600	103.3	57.5	46.4	3.25	5.19	11.8									
	10.5	3.3	7.5	1050	119.4	56.0	44.5	3.38	4.86	14.6		1050	61.4	44.6	32.1	53.2	2.50	17.8	6.5
				1400															

ENGINEERING SPECIFICATIONS

ZS Models Performance Tables

Model ZS042, 3.5 Ton, w/ECM, COAX Full Load Performance Data

EWT	Flow °F	WPD		COAX ECM Unit - Heating							COAX ECM Unit - Cooling																					
		PSI	FT	Aiflow CFM	LAT (DB) °F	HC MBtuh	HE MBtuh	Power kW	COP W/W	DH MBtuh	Aiflow CFM	LAT (DB) °F	TC MBtuh	SC MBtuh	HR MBtuh	Power kW	EER Btuh/W	DH MBtuh														
25	10.5	5.7	13.2	1140	91.6	26.6	18.3	2.43	3.21	7.0	Operation Not Recommended																					
				1270	89.4	26.6	18.6	2.36	3.30	6.7																						
30	5.3	2.1	4.9	1140	91.9	27.0	18.8	2.40	3.29	6.9																						
				1270	89.7	27.1	19.1	2.34	3.38	6.5																						
	7.9	3.6	8.2	1140	92.9	28.2	19.9	2.43	3.39	7.1																						
				1270	90.6	28.2	20.1	2.37	3.49	6.7																						
	10.5	5.4	12.4	1140	93.3	28.7	20.3	2.46	3.43	7.3																						
				1270	91.0	28.8	20.6	2.39	3.52	6.9																						
40	5.3	2.0	4.6	1140	95.2	31.1	22.6	2.47	3.69	7.5								1270	60.1	42.3	27.3	48.1	1.72	24.6	5.0							
				1270	92.7	31.1	22.9	2.41	3.79	7.1								1410	61.2	42.9	28.6	48.8	1.74	24.6	5.1							
	7.9	3.3	7.7	1140	96.3	32.4	23.9	2.50	3.80	7.7								Operation Not Recommended														
				1270	93.7	32.5	24.1	2.44	3.90	7.3																						
	10.5	5.0	11.5	1140	96.8	33.1	24.4	2.53	3.84	7.9																						
				1270	94.1	33.1	24.7	2.46	3.94	7.5																						
50	5.3	1.9	4.3	1140	98.6	35.2	26.5	2.55	4.04	8.3															1270	58.6	44.3	29.4	50.8	1.91	23.2	5.6
				1270	95.7	35.3	26.8	2.49	4.15	7.8															1410	59.8	44.9	30.8	51.5	1.93	23.3	5.7
	7.9	3.1	7.2	1140	99.8	36.7	27.9	2.58	4.17	8.6								1270	58.5	44.7	29.5	50.8	1.78	25.1	5.0							
				1270	96.8	36.8	28.2	2.52	4.28	8.1								1410	59.7	45.4	31.0	51.6	1.81	25.2	5.1							
	10.5	4.7	10.8	1140	100.4	37.4	28.5	2.61	4.21	8.8	1270	58.4	44.8	29.6	50.7	1.73	25.9	4.7														
				1270	97.3	37.5	28.8	2.54	4.33	8.4	1410	59.6	45.5	31.0	51.4	1.75	26.0	4.8														
60	5.3	1.7	4.0	1140	102.0	39.4	30.4	2.64	4.37	9.2	1270	58.0	44.3	30.2	51.5	2.12	20.9	6.4														
				1270	98.7	39.4	30.6	2.58	4.49	8.8	1410	59.2	44.9	31.6	52.3	2.14	21.0	6.4														
	7.9	2.9	6.7	1140	103.3	41.0	31.9	2.67	4.50	9.6	1270	57.9	44.7	30.3	51.5	1.98	22.6	5.6														
				1270	100.0	41.1	32.2	2.61	4.62	9.2	1410	59.1	45.4	31.8	52.2	2.00	22.7	5.7														
	10.5	4.4	10.1	1140	104.0	41.9	32.7	2.70	4.55	9.9	1270	57.9	44.8	30.4	51.3	1.92	23.4	5.3														
				1270	100.6	41.9	33.0	2.63	4.67	9.4	1410	59.1	45.5	31.9	52.1	1.94	23.4	5.4														
70	5.3	1.6	3.8	1140	105.4	43.6	34.2	2.75	4.65	10.4	1270	58.1	43.2	30.1	51.2	2.35	18.4	7.5														
				1270	101.8	43.6	34.5	2.68	4.78	9.8	1410	59.3	43.8	31.6	52.0	2.39	18.4	7.6														
	7.9	2.8	6.3	1140	106.9	45.4	36.0	2.78	4.79	10.9	1270	57.9	43.6	30.3	51.2	2.20	19.8	6.6														
				1270	103.2	45.5	36.3	2.71	4.93	10.3	1410	59.2	44.3	31.7	51.9	2.23	19.9	6.7														
	10.5	4.1	9.5	1140	107.6	46.3	36.8	2.80	4.84	11.2	1270	57.9	43.7	30.3	51.0	2.13	20.5	6.2														
				1270	103.8	46.4	37.1	2.73	4.98	10.7	1410	59.1	44.4	31.8	51.7	2.16	20.5	6.3														
80	5.3	1.6	3.6	1140	108.9	47.8	38.1	2.86	4.90	11.6	1270	58.5	41.6	29.5	50.6	2.63	15.8	9.0														
				1270	104.9	47.9	38.4	2.79	5.04	11.0	1410	59.7	42.2	31.0	51.3	2.67	15.8	9.1														
	7.9	2.6	6.0	1140	110.5	49.9	40.0	2.89	5.05	12.2	1270	58.3	42.0	29.7	50.4	2.46	17.1	8.0														
				1270	106.4	50.0	40.3	2.82	5.19	11.6	1410	59.5	42.7	31.1	51.2	2.49	17.1	8.1														
	10.5	3.9	9.1	1140	111.3	50.9	40.9	2.92	5.10	12.6	1270	58.3	42.1	29.7	50.2	2.38	17.7	7.6														
				1270	107.1	51.0	41.2	2.85	5.25	12.0	1410	59.5	42.7	31.2	51.0	2.41	17.7	7.6														
90	5.3	1.5	3.4	1140	112.4	52.1	42.0	2.99	5.12	13.0	1270	59.1	39.8	28.7	49.9	2.95	13.5	10.9														
				1270	108.1	52.2	42.3	2.91	5.26	12.3	1410	60.2	40.4	30.1	50.6	2.99	13.5	11.0														
	7.9	2.5	5.7	1140	114.2	54.4	44.1	3.02	5.27	13.7	1270	58.9	40.2	28.9	49.4	2.68	15.0	9.2														
				1270	109.7	54.4	44.4	2.94	5.42	13.0	1410	60.1	40.8	30.3	50.3	2.80	14.6	9.8														
	10.5	3.7	8.6	1140	115.0	55.5	45.0	3.05	5.33	14.1	1270	58.9	40.2	28.9	49.4	2.68	15.0	9.2														
				1270	110.5	55.5	45.4	2.97	5.47	13.5	1410	60.1	40.8	30.3	50.1	2.71	15.1	9.3														
100	5.3	1.4	3.3	Operation Not Recommended							1270	59.7	37.8	27.8	49.1	3.33	11.3	12.9														
											1410	60.8	38.3	29.2	49.8	3.37	11.4	13.0														
	7.9	2.3	5.4								1270	59.6	38.1	28.0	48.8	3.11	12.3	11.6														
											1410	60.7	38.7	29.4	49.5	3.15	12.3	11.7														
10.5	3.5	8.1	1270								59.6	38.2	28.0	48.5	3.02	12.7	11.0															
			1410								60.7	38.8	29.4	49.2	3.06	12.7	11.2															
110	5.3	1.4	3.1								1270	60.4	35.5	26.9	48.3	3.77	9.4	15.0														
											1410	61.4	36.0	28.3	49.0	3.82	9.4	15.1														
	7.9	2.2	5.2								1270	60.2	35.8	27.1	47.8	3.52	10.2	13.6														
											1410	61.3	36.4	28.4	48.5	3.57	10.2	13.7														
	10.5	3.4	7.8								1270	60.2	35.9	27.1	47.5	3.41	10.5	13.0														
											1410	61.3	36.4	28.4	48.2	3.46	10.5	13.1														
120	5.3	1.3	3.0	1270	61.1	32.8	25.9	47.4	4.28	7.7	17.2																					
				1410	62.1	33.3	27.2	48.1	4.34	7.7	17.3																					
	7.9	2.2	5.0	1270	61.0	33.1	26.1	46.8	4.00	8.3	15.7																					
				1410	62.0	33.6	27.4	47.5	4.05	8.3	15.8																					
	10.5	3.3	7.5	1270	61.0	33.2	26.1	46.4	3.88	8.6	15.0																					
				1410	62.0	33.7	27.4	47.1	3.93	8.6	15.1																					

NOTE: See page 23 for performance data parameters and guidelines.

ZS Models Performance Tables
Model ZS048, 4 Ton, w/PSC, BPHE Full Load Performance Data

EWT °F	Flow GPM	WPD		BPHE PSC Unit - Heating						BPHE PSC Unit - Cooling										
		PSI	FT	Aiflow CFM	LAT (DB) °F	HC MBtuh	HE MBtuh	Power kW	COP WW	DH MBtuh	Aiflow CFM	LAT (DB) °F	TC MBtuh	SC MBtuh	HR MBtuh	Power kW	EER Btuh/W	DH MBtuh		
25	12.0	2.4	5.5	1350	94.9	36.3	24.9	3.35	3.18	8.8	Operation Not Recommended	1350	58.4	50.8	31.5	58.1	2.13	23.9	2.9	
				1500	92.6	36.7	25.5	3.28	3.28	7.9										
				1900	88.1	37.1	26.2	3.20	3.40	7.2										
30	9.3	1.7	3.8	1350	96.3	38.4	26.7	3.41	3.30	9.0		Operation Not Recommended	1500	59.6	52.2	33.1	59.6	2.18	23.9	2.9
				1500	93.9	38.8	27.4	3.34	3.41	8.1										
				1900	89.1	39.3	28.1	3.26	3.53	7.4										
	11.0	2.1	4.7	1350	96.7	38.9	27.2	3.42	3.33	9.1			1500	59.6	52.2	33.1	59.6	2.18	23.9	2.9
				1500	94.3	39.3	27.9	3.35	3.44	8.3										
				1900	89.4	39.8	28.6	3.27	3.56	7.5										
	12.0	2.3	5.3	1350	96.8	39.1	27.4	3.43	3.34	9.2			1500	59.6	52.2	33.1	59.6	2.18	23.9	2.9
				1500	94.4	39.5	28.0	3.35	3.45	8.3										
				1900	89.5	40.0	28.8	3.28	3.57	7.5										
40	9.3	1.6	3.7	1350	100.1	43.8	31.7	3.56	3.61	10.0		Operation Not Recommended	1350	58.4	50.8	31.5	58.1	2.13	23.9	2.9
				1500	97.3	44.3	32.4	3.49	3.72	9.1										
				1900	91.9	44.8	33.2	3.41	3.86	8.2										
	11.0	2.0	4.5	1350	100.5	44.4	32.2	3.58	3.64	10.2			1500	59.6	52.2	33.1	59.6	2.18	23.9	2.9
				1500	97.7	44.9	33.0	3.50	3.76	9.2										
				1900	92.1	45.4	33.8	3.42	3.89	8.4										
	12.0	2.2	5.1	1350	100.6	44.6	32.4	3.58	3.65	10.3			1500	59.6	52.2	33.1	59.6	2.18	23.9	2.9
				1500	97.8	45.1	33.1	3.50	3.77	9.3										
				1900	92.2	45.7	34.0	3.42	3.91	8.4										
50	9.3	1.5	3.5	1350	103.8	49.3	36.6	3.71	3.89	11.4	Operation Not Recommended	1350	57.5	52.4	32.8	60.4	2.33	22.5	4.2	
				1500	100.8	49.8	37.4	3.63	4.02	10.3										
				1900	94.6	50.4	38.3	3.55	4.17	9.3										
	11.0	1.9	4.3	1350	104.3	50.0	37.2	3.72	3.93	11.6		1500	58.7	53.9	34.5	61.9	2.39	22.5	4.3	
				1500	101.2	50.5	38.1	3.64	4.06	10.5										
				1900	94.9	51.1	39.0	3.56	4.20	9.5										
	12.0	2.1	4.9	1350	104.4	50.2	37.5	3.73	3.94	11.7		1500	58.7	53.9	34.6	61.8	2.33	23.1	4.0	
				1500	101.3	50.7	38.3	3.65	4.07	10.6										
				1900	95.0	51.3	39.2	3.57	4.22	9.6										
60	9.3	1.4	3.3	1350	107.5	54.7	41.6	3.85	4.16	12.9	Operation Not Recommended	1350	57.5	51.9	32.8	60.6	2.55	20.4	5.7	
				1500	104.1	55.3	42.5	3.77	4.30	11.7										
				1900	97.3	56.0	43.4	3.68	4.46	10.6										
	11.0	1.8	4.1	1350	108.0	55.5	42.3	3.87	4.20	13.1		1500	58.7	53.3	34.5	62.1	2.57	20.1	5.7	
				1500	104.6	56.1	43.2	3.78	4.34	11.9										
				1900	97.7	56.8	44.1	3.70	4.50	10.8										
	12.0	2.0	4.6	1350	108.2	55.7	42.5	3.87	4.22	13.2		1500	58.7	53.3	34.5	62.1	2.55	20.9	5.5	
				1500	104.8	56.3	43.4	3.79	4.36	12.0										
				1900	97.8	57.0	44.4	3.70	4.51	10.9										
70	9.3	1.4	3.2	1350	111.3	60.2	46.6	3.99	4.42	14.5	Operation Not Recommended	1350	58.0	50.2	32.1	59.6	2.75	18.3	7.0	
				1500	107.5	60.8	47.5	3.90	4.57	13.1										
				1900	100.0	61.6	48.5	3.82	4.73	11.9										
	11.0	1.7	4.0	1350	111.8	61.0	47.3	4.00	4.46	14.7		1500	59.2	51.5	33.7	61.3	2.87	18.0	7.4	
				1500	108.0	61.6	48.3	3.92	4.61	13.3										
				1900	100.4	62.4	49.3	3.83	4.77	12.1										
	12.0	1.9	4.5	1350	112.0	61.3	47.6	4.01	4.48	14.8		1500	59.2	51.6	33.7	61.2	2.82	18.3	7.1	
				1500	108.2	61.9	48.5	3.92	4.62	13.4										
				1900	100.5	62.7	49.6	3.84	4.79	12.2										
80	9.3	1.3	3.1	1350	115.0	65.6	51.5	4.12	4.67	15.9	Operation Not Recommended	1350	58.8	47.9	30.9	58.4	3.08	15.6	9.0	
				1500	110.9	66.3	52.5	4.03	4.82	14.4										
				1900	102.7	67.1	53.7	3.94	4.99	13.2										
	11.0	1.7	3.9	1350	115.6	66.5	52.4	4.14	4.71	16.2		1500	59.9	49.2	32.5	60.0	3.16	15.5	9.2	
				1500	111.5	67.2	53.4	4.05	4.87	14.7										
				1900	103.1	68.0	54.5	3.96	5.04	13.4										
	12.0	1.9	4.3	1350	115.8	66.8	52.7	4.14	4.73	16.3		1500	59.9	49.3	32.6	59.8	3.09	15.9	8.7	
				1500	111.7	67.5	53.7	4.05	4.88	14.8										
				1900	103.3	68.3	54.8	3.96	5.06	13.5										
90	9.3	1.3	3.1	1350	118.7	71.0	56.5	4.24	4.90	17.1	Operation Not Recommended	1350	59.6	46.6	29.8	57.2	3.42	13.3	10.9	
				1500	114.3	71.8	57.6	4.15	5.06	15.5										
				1900	105.4	72.7	58.8	4.06	5.24	14.2										
	11.0	1.6	3.8	1350	119.4	72.0	57.4	4.26	4.95	17.4		1500	60.7	46.8	31.3	58.8	3.52	13.3	11.1	
				1500	114.9	72.7	58.5	4.17	5.11	15.8										
				1900	105.9	73.6	59.7	4.08	5.29	14.4										
	12.0	1.9	4.3	1350	119.6	72.3	57.7	4.27	4.97	17.5		1500	60.7	46.8	31.3	58.6	3.43	13.6	10.6	
				1500	115.1	73.1	58.8	4.18	5.13	15.9										
				1900	106.0	74.0	60.0	4.08	5.31	14.5										
100	9.3	1.3	3.0	1350	120.0	72.0	57.0	4.20	4.80	17.0	Operation Not Recommended	1350	60.3	43.2	28.7	56.2	3.83	11.3	13.0	
				1500	114.3	71.8	57.6	4.15	5.06	15.5										
				1900	105.4	72.7	58.8	4.06	5.24	14.2										
	11.0	1.6	3.7	1350	120.0	72.0	57.0	4.20	4.80	17.0		1500	60.7	46.8	31.3	58.6	3.46	13.6	10.7	
				1500	114.9	72.7	58.5	4.17	5.11	15.8										
				1900	105.9	73.6	59.7	4.08	5.29	14.4										
	12.0	1.8	4.1	1350	119.6	72.3	57.7	4.27	4.97	17.5		1500	60.7	46.8	31.3	58.6	3.43	13.6	10.6	
				1500	115.1	73.1	58.8	4.18	5.13	15.9										
				1900	106.0	74.0	60.0	4.08	5.31	14.5										
110	9.3	1.3	3.0	1350	120.0	72.0	57.0	4.20	4.80	17.0	Operation Not Recommended	1350	60.3	43.2	28.7	56.2	3.83	11.3	13.0	
				1500	114.3	71.8	57.6	4.15	5.06	15.5										
				1900	105.4	72.7	58.8	4.06	5.24	14.2										
	11.0	1.6	3.7	1350	120.0	72.0	57.0	4.20	4.80	17.0		1500	60.7	46.8	31.3	58.6	3.46	13.6	10.7	
				1500	114.9	72.7	58.5	4.17	5.11	15.8										
				1900	105.9	73.6	59.7	4.08	5.29	14.4										
	12.0	1.8	4.1	1350	119.6	72.3	57.7	4.27	4.97	17.5		1500	60.7	46.8	31.3	58.6	3.43	13.6	10.6	
				1500	115.1	73.1	58.8	4.18	5.13	15.9										
				1900	106.0	74.0	60.0	4.08	5.31	14.5										
120	9.3	1.3	3.0	1350	120.0	72.0	57.0	4.20	4.80	17.0	Operation Not Recommended	1350	60.3	43.2	28.7	56.2	3.83	11.3	13.0	
				1500	114.3	71.8	57.6	4.15	5.06	15.5										
				1900	105.4	72.7	58.8	4.06	5.24	14.2										
	11.0	1.6	3.7	1350	120.0	72.0	57.0	4.20	4.80	17.0		1500	60.7	46.8	31.3	58.6	3.46	13.6	10.7	
				1500	114.9	72.7	58.5	4.17	5.11	15.8										
				1900	105.9	73.6	59.7	4.08	5.29	14.4										
	12.0	1.8	4.1	1350	119.6	72.3	57.7	4.27	4.97	17.5		1500	60.7	46.8	31.3	58.6	3.43	13.6	10.6	
				1500	115.1	73.1	58.8	4.18	5.13	15.9										
				1900	106.0	74.0	60.0	4.08	5.31	14.5										

NOTE: See page 23 for performance data parameters and guidelines.

ENGINEERING SPECIFICATIONS

ZS Models Performance Tables

Model ZS048, 4 Ton, w/ECM, BPHE Full Load Performance Data

EWT °F	Flow GPM	WPD		BPHE ECM Unit - Heating							BPHE ECM Unit - Cooling																																																																																																																																						
		PSI	FT	Aiflow CFM	LAT (DB) °F	HC MBtuh	HE MBtuh	Power kW	COP W/W	DH MBtuh	Aiflow CFM	LAT (DB) °F	TC MBtuh	SC MBtuh	HR MBtuh	Power kW	EER Btuh/W	DH MBtuh																																																																																																																															
25	12.0	2.4	5.5	1420	93.1	35.4	25.2	3.01	3.45	8.5	Operation Not Recommended																																																																																																																																						
				1580	91.0	35.8	25.7	2.95	3.56	8.0																																																																																																																																							
30	9.3	1.7	3.8	1420	94.5	37.5	27.1	3.06	3.59	8.7										Operation Not Recommended																																																																																																																													
				1580	92.2	37.9	27.7	3.00	3.70	8.2																																																																																																																																							
	11.0	2.1	4.7	1420	94.8	38.0	27.5	3.08	3.62	8.9																			Operation Not Recommended																																																																																																																				
				1580	92.5	38.4	28.1	3.02	3.73	8.3																																																																																																																																							
	12.0	2.3	5.3	1420	94.9	38.2	27.7	3.09	3.63	8.9																												Operation Not Recommended																																																																																																											
				1580	92.6	38.6	28.3	3.03	3.74	8.4																																																																																																																																							
40	9.3	1.6	3.7	1420	98.0	43.0	32.0	3.21	3.92	9.7																																						Operation Not Recommended		1580	59.5	53.8	34.9	60.3	1.91	28.1	2.9																																																																																								
				1580	95.5	43.4	32.7	3.15	4.04	9.1																																								1710	60.4	54.6	36.2	61.3	1.97	27.7	2.9																																																																																								
	11.0	2.0	4.5	1420	98.4	43.6	32.6	3.23	3.95	9.9																																								Operation Not Recommended																																																																																															
				1580	95.8	44.0	33.2	3.17	4.07	9.3																																																																																																																																							
	12.0	2.2	5.1	1420	98.6	43.8	32.7	3.24	3.96	10.0																																																	Operation Not Recommended																																																																																						
				1580	95.9	44.2	33.4	3.18	4.08	9.4																																																																																																																																							
50	9.3	1.5	3.5	1420	101.6	48.5	37.0	3.36	4.23	11.0																																																											Operation Not Recommended		1580	58.6	55.4	36.4	62.7	2.12	26.1	4.3																																																																			
				1580	98.7	49.0	37.7	3.29	4.36	10.4																																																													1710	59.5	56.3	37.8	63.7	2.19	25.7	4.4																																																																			
	11.0	1.9	4.3	1420	102.1	49.2	37.6	3.38	4.26	11.2																																																													Operation Not Recommended		1580	58.6	55.5	36.5	62.6	2.08	26.7	4.1																																																																	
				1580	99.1	49.6	38.3	3.31	4.39	10.6																																																															1710	59.5	56.3	37.8	63.6	2.15	26.3	4.2																																																																	
	12.0	2.1	4.9	1420	102.2	49.4	37.8	3.39	4.27	11.3																																																															Operation Not Recommended		1580	58.6	55.5	36.5	62.6	2.07	26.9	4.0																																																															
				1580	99.2	49.9	38.5	3.32	4.40	10.6																																																																	1710	59.5	56.3	37.8	63.6	2.13	26.4	4.1																																																															
60	9.3	1.4	3.3	1420	105.2	54.0	42.0	3.50	4.52	12.5	Operation Not Recommended		1580	58.7	54.9	36.4	62.9	2.35	23.4																																																								5.8																																																																						
				1580	101.9	54.5	42.8	3.43	4.66	11.8			1710	59.5	55.7	37.8	64.0	2.42	23.0																																																								5.9																																																																						
	11.0	1.8	4.1	1420	105.7	54.7	42.7	3.52	4.56	12.7			Operation Not Recommended		1580	58.6	55.0	36.5	62.8	2.30	23.9	5.6																																																																																																																											
				1580	102.4	55.2	43.5	3.45	4.69	12.0					1710	59.5	55.8	37.8	63.9	2.38	23.5	5.6																																																																																																																											
	12.0	2.0	4.6	1420	105.8	55.0	42.9	3.53	4.56	12.8					Operation Not Recommended		1580	58.6	55.0	36.5	62.8	2.29	24.0	5.5																																																																																																																									
				1580	102.5	55.5	43.7	3.46	4.70	12.1							1710	59.5	55.8	37.8	63.8	2.36	23.7	5.5																																																																																																																									
70	9.3	1.4	3.2	1420	108.7	59.4	47.0	3.63	4.80	14.0							Operation Not Recommended		1580	59.1	53.1	35.6	62.0	2.61	20.4	7.5																																																																																																																							
				1580	105.2	60.0	47.8	3.56	4.94	13.2									1710	60.0	53.9	36.9	63.1	2.69	20.0	7.5																																																																																																																							
	11.0	1.7	4.0	1420	109.3	60.2	47.8	3.65	4.83	14.3									Operation Not Recommended		1580	59.1	53.2	35.6	61.9	2.56	20.8	7.2																																																																																																																					
				1580	105.6	60.8	48.6	3.58	4.98	13.4											1710	60.0	54.0	36.9	63.0	2.64	20.5	7.2																																																																																																																					
	12.0	1.9	4.5	1420	109.5	60.5	48.0	3.66	4.84	14.4											Operation Not Recommended		1580	59.1	53.2	35.6	61.9	2.54	20.9	7.1																																																																																																																			
				1580	105.8	61.1	48.9	3.59	4.99	13.5													1710	60.0	54.0	37.0	62.9	2.62	20.6	7.1																																																																																																																			
80	9.3	1.3	3.1	1420	112.3	64.9	52.0	3.76	5.06	15.4													Operation Not Recommended		1580	59.9	50.8	34.4	60.7	2.91	17.4	9.2																																																																																																																	
				1580	108.4	65.5	52.9	3.68	5.21	14.5															1710	60.7	51.5	35.7	61.8	3.00	17.2	9.3																																																																																																																	
	11.0	1.7	3.9	1420	112.9	65.8	52.9	3.78	5.10	15.7															Operation Not Recommended		1580	59.8	50.8	34.4	60.6	2.86	17.8	8.9																																																																																																															
				1580	108.9	66.4	53.8	3.70	5.25	14.8																	1710	60.7	51.6	35.7	61.6	2.95	17.5	9.0																																																																																																															
	12.0	1.9	4.3	1420	113.1	66.1	53.1	3.79	5.11	15.8																	Operation Not Recommended		1580	59.8	50.9	34.4	60.5	2.84	17.9	8.8																																																																																																													
				1580	109.1	66.7	54.0	3.71	5.26	14.9																			1710	60.7	51.6	35.7	61.6	2.93	17.6	8.8																																																																																																													
90	9.3	1.3	3.1	1420	115.8	70.3	57.1	3.87	5.32	16.6																			Operation Not Recommended		1580	60.6	48.3	33.1	59.5	3.27	14.8	11.1																																																																																																											
				1580	111.6	71.0	58.0	3.80	5.48	15.6																					1710	61.4	49.0	34.4	60.5	3.37	14.5	11.2																																																																																																											
	11.0	1.6	3.8	1420	116.5	71.3	58.0	3.90	5.36	16.9	Operation Not Recommended																				1580	60.6	48.4	33.2	59.3	3.21	15.1	10.8																																																																																																											
				1580	112.2	72.0	58.9	3.82	5.52	15.9																					1710	61.4	49.1	34.4	60.4	3.31	14.8	10.9																																																																																																											
	12.0	1.9	4.3	1420	116.7	71.6	58.3	3.91	5.37	17.0			Operation Not Recommended																		1580	60.6	48.4	33.2	59.3	3.19	15.2	10.6																																																																																																											
				1580	112.4	72.3	59.2	3.83	5.53	16.0																					1710	61.4	49.1	34.4	60.3	3.29	14.9	10.7																																																																																																											
100	9.3	1.3	3.0	Operation Not Recommended																																1580	61.3	45.8	31.9	58.4	3.70	12.4	13.3																																																																																																						
																																				1710	62.1	46.5	33.1	59.5	3.81	12.2	13.4																																																																																																						
	11.0	1.6	3.7														Operation Not Recommended																																1580	61.3	45.9	32.0	58.3	3.63	12.7	12.9																																																																																									
																																																	1710	62.1	46.6	33.1	59.3	3.74	12.5	13.0																																																																																									
	12.0	1.8	4.1																Operation Not Recommended																																											1580	61.3	45.9	32.0	58.2	3.60	12.7	12.7																																																																												
																																																														1710	62.0	46.6	33.2	59.3	3.71	12.5	12.8																																																																												
110	9.3	1.3	3.0																		Operation Not Recommended																																																					1580	62.0	43.1	30.7	57.4	4.20	10.3	15.6																																																																
																																																																										1710	62.8	43.7	31.8	58.5	4.33	10.1	15.7																																																																
	11.0	1.6	3.7																				Operation Not Recommended																																																																1580	62.0	43.1	30.7	57.2	4.12	10.5	15.1																																																			
																																																																																							1710	62.8	43.8	31.8	58.3	4.25	10.3	15.3																																																			
	12.0	1.8	4.1																						Operation Not Recommended																																																																											1580	62.0	43.2	30.7	57.1	4.09	10.6	15.0																																						
																																																																																																				1710	62.8	43.8	31.8	58.2	4.22	10.4	15.1																																						
120	9.3	1.3	3.0																								Operation Not Recommended																																																																																					1580	63.0	39.5	29.0	55.8	4.79	8.2	18.1																										
																																																																																																																1710	63.7	40.1	30.0	56.9	4.94	8.1	18.3																										
	11.0	1.6	3.7																										Operation Not Recommended																																																																																																1580	63.0	39.5	29.0	55.6	4.70	8.4	17.6													
																																																																																																																													1710	63.7	40.1	30.1	56.7	4.85	8.3	17.8													
	12.0	1.8	4.1								Operation Not Recommended																																																																																																																															1580	63.0	39.6	29.0	55.5	4.67	8.5	17.4
																																																																																																																																										1710	63.7	40.1	30.1	56.6	4.81	8.3	17.6

NOTE: See page 23 for performance data parameters and guidelines.

ZS Models Performance Tables
Model ZS048, 4 Ton, w/PSC, COAX Full Load Performance Data

EWT °F	Flow GPM	WPD		COAX PSC Unit - Heating						COAX PSC Unit - Cooling													
		PSI	FT	Aiflow CFM	LAT (DB) °F	HC MBtuh	HE MBtuh	Power kW	COP W/W	DH MBtuh	Aiflow CFM	LAT (DB) °F	TC MBtuh	SC MBtuh	HR MBtuh	Power kW	EER Btuh/W	DH MBtuh					
25	12.0	7.2	16.6	1350	93.3	34.0	22.7	3.33	2.99	8.3	Operation Not Recommended	1350	58.5	50.2	31.4	58.4	2.40	20.9	6.0				
				1500	91.3	34.5	23.2	3.29	3.07	7.9													
				1900	87.4	35.7	24.5	3.31	3.17	7.2													
30	6.0	2.4	5.5	1350	93.3	33.9	22.7	3.29	3.02	8.1		Operation Not Recommended	1500	59.8	51.2	32.7	59.7	2.47	20.7	6.2			
				1500	91.2	34.3	23.3	3.25	3.10	7.8													
				1900	87.4	35.6	24.5	3.26	3.20	7.1													
	9.0	4.3	10.0	1350	94.4	35.6	24.2	3.34	3.13	8.4			1900	62.6	52.6	35.7	61.7	2.67	19.7	6.3			
				1500	92.3	36.1	24.8	3.30	3.21	8.0													
				1900	88.2	37.4	26.1	3.31	3.31	7.3													
	12.0	6.7	15.4	1350	95.0	36.5	25.0	3.37	3.18	8.6			1500	59.8	51.2	32.7	59.7	2.47	20.7	6.2			
				1500	92.8	36.9	25.6	3.32	3.26	8.2													
				1900	88.7	38.3	26.9	3.34	3.36	7.4													
40	6.0	2.2	5.1	1350	96.4	38.5	27.0	3.39	3.33	8.8		Operation Not Recommended	1500	59.8	51.2	32.7	59.7	2.47	20.7	6.2			
				1500	94.1	39.0	27.6	3.35	3.42	8.4													
				1900	89.7	40.5	29.0	3.36	3.53	7.6													
	9.0	4.0	9.2	1350	97.8	40.5	28.8	3.44	3.45	9.2			1900	64.3	55.6	38.0	64.6	3.21	16.7	7.7			
				1500	95.3	41.0	29.4	3.40	3.54	8.7													
				1900	90.7	42.5	30.9	3.41	3.65	7.9													
	12.0	6.2	14.3	1350	98.4	41.5	29.6	3.47	3.50	9.4	1500		60.6	52.5	33.3	60.7	2.41	21.8	5.7				
				1500	95.9	42.0	30.3	3.42	3.59	8.9													
				1900	91.2	43.5	31.8	3.44	3.71	8.1													
50	6.0	2.1	4.8	1350	99.7	43.2	31.2	3.52	3.60	9.8	Operation Not Recommended	1500	61.5	55.0	37.9	64.1	2.67	20.6	5.8				
				1500	97.0	43.8	31.9	3.47	3.70	9.3													
				1900	92.1	45.4	33.5	3.49	3.81	8.4													
	9.0	3.7	8.6	1350	101.2	45.4	33.3	3.57	3.73	10.2		1900	66.1	58.6	40.0	66.1	2.95	20.9	6.0				
				1500	98.4	46.0	34.0	3.53	3.82	9.7													
				1900	93.3	47.7	35.6	3.54	3.95	8.8													
	12.0	5.8	13.3	1350	101.9	46.5	34.2	3.60	3.79	10.4		1500	61.5	55.0	37.9	64.1	2.67	20.6	5.8				
				1500	99.1	47.1	35.0	3.55	3.88	10.0													
				1900	93.8	48.8	36.7	3.57	4.01	9.0													
60	6.0	1.9	4.5	1350	102.9	48.0	35.5	3.66	3.85	10.9	Operation Not Recommended	1500	61.5	55.0	37.9	64.1	2.67	20.6	5.8				
				1500	100.0	48.6	36.3	3.61	3.94	10.3													
				1900	94.6	50.4	38.0	3.63	4.07	9.3													
	9.0	3.5	8.1	1350	104.6	50.5	37.8	3.72	3.98	11.4		1900	66.1	58.6	40.0	66.1	2.95	20.9	6.0				
				1500	101.6	51.1	38.6	3.67	4.08	10.9													
				1900	95.8	53.0	40.4	3.69	4.21	9.8													
	12.0	5.4	12.5	1350	105.4	51.7	38.9	3.75	4.04	11.7		1500	61.3	54.6	38.4	64.6	2.93	18.6	6.4				
				1500	102.3	52.3	39.7	3.70	4.15	11.2													
				1900	96.4	54.2	41.6	3.71	4.28	10.1													
70	6.0	1.8	4.2	1350	106.3	52.9	39.9	3.80	4.08	12.1	Operation Not Recommended	1500	61.3	54.6	38.4	64.6	2.93	18.6	6.4				
				1500	103.1	53.6	40.8	3.75	4.18	11.5													
				1900	97.1	55.6	42.7	3.77	4.32	10.4													
	9.0	3.3	7.6	1350	108.1	55.6	42.4	3.86	4.22	12.7		1900	66.1	58.6	40.0	66.1	2.95	20.9	6.0				
				1500	104.8	56.3	43.3	3.81	4.33	12.1													
				1900	98.5	58.4	45.3	3.83	4.47	11.0													
	12.0	5.1	11.7	1350	109.0	56.9	43.6	3.89	4.29	13.1		1500	61.3	54.6	38.4	64.6	2.93	18.6	6.4				
				1500	105.6	57.6	44.5	3.84	4.40	12.5													
				1900	99.1	59.8	46.6	3.86	4.54	11.3													
80	6.0	1.7	4.0	1350	109.7	57.9	44.5	3.92	4.32	13.3	Operation Not Recommended	1500	61.3	54.6	38.4	64.6	2.93	18.6	6.4				
				1500	106.2	58.6	45.4	3.87	4.44	12.7													
				1900	99.6	60.8	47.5	3.89	4.58	11.4													
	9.0	3.1	7.2	1350	111.7	60.8	47.2	3.99	4.47	14.0		1900	66.1	58.6	40.0	66.1	2.95	20.9	6.0				
				1500	108.0	61.6	48.2	3.93	4.59	13.4													
				1900	101.1	63.9	50.4	3.95	4.74	12.1													
	12.0	4.8	11.1	1350	112.7	62.3	48.6	4.02	4.54	14.4		1500	61.3	54.6	38.4	64.6	2.93	18.6	6.4				
				1500	108.9	63.1	49.5	3.96	4.66	13.8													
				1900	101.9	65.4	51.8	3.98	4.81	12.5													
90	6.0	1.6	3.8	1350	113.2	62.9	49.2	4.01	4.60	14.4	Operation Not Recommended	1500	61.3	54.6	38.4	64.6	2.93	18.6	6.4				
				1500	109.3	63.7	50.2	3.96	4.72	13.7													
				1900	102.2	66.1	52.5	3.98	4.87	12.4													
	9.0	3.0	6.8	1350	115.4	66.2	52.2	4.08	4.76	15.3		1900	66.1	58.6	40.0	66.1	2.95	20.9	6.0				
				1500	111.4	67.0	53.3	4.02	4.88	14.6													
				1900	103.8	69.4	55.7	4.04	5.04	13.2													
	12.0	4.6	10.6	1350	116.4	67.7	53.7	4.11	4.83	15.7		1500	61.3	54.6	38.4	64.6	2.93	18.6	6.4				
				1500	112.3	68.6	54.7	4.05	4.96	15.0													
				1900	104.6	71.1	57.2	4.07	5.12	13.6													
100	6.0	1.5	3.5	Operation Not Recommended	1350	59.2	43.1	30.4	57.8	4.33	10.0	14.7											
													9.0	2.7	6.3	1500	60.4	43.9	31.7	59.1	4.45	9.9	14.9
	1350	59.0	43.6		30.6	57.4	4.06	10.7	13.2														
										1500	60.3	44.4	31.9	58.7	4.17	10.7	13.4						
																		1900	63.0	45.6	34.8	60.9	4.50
	1350	59.0	43.8		30.7	57.3	3.95	11.1	12.6														
										1500	60.2	44.7	32.0	58.6	4.06	11.0	12.8						
																		1900	63.0	45.9	34.9	60.8	4.38
1350	59.9	40.4	29.3	57.0	4.85	8.3	17.0																
								1500	61.1	41.2	30.6	58.2	4.99	8.3	17.2								
																1900	63.7	42.3	33.4	60.7	5.38	7.9	17.4
1350	59.8	40.9	29.5	56.4	4.55	9.0	15.4																
								1500	61.0	41.7	30.8	57.7	4.68	8.9	15.5								
																1900	63.6	42.8	33.6	60.0	5.04	8.5	15.8
1350	59.7	41.1	29.6	56.3	4.43	9.3	14.7																
								1500	60.9	42.0	30.9	57.5	4.55	9.2	14.9								
																1900	63.6	43.1	33.7	59.8	4.91	8.8	15.1
1350	60.7	37.6	28.1	56.3	5.48	6.9	19.4																
								1500	61.9	38.4	29.3	57.6	5.63	6.8	19.7								
																1900	64.4	39.4	32.0	60.1	6.07	6.5	20.0
1350	60.6	38.1	28.3	55.6	5.13	7.4	17.7																
								1500	61.8	38.8	29.5	56.8	5.28	7.4	17.9								
																1900	64.3	39.9	32.2	59.3	5.69	7.0	18.2
1350	60.5	38.3	28.4	55.4	5.00	7.7	17.0																
								1500	61.7	39.1	29.6	56.6	5.14	7.6	17.2								
																1900	64.3	40.1	32.3	59.0	5.54	7.2	17.4

NOTE: See page 23 for performance data parameters and guidelines.

ENGINEERING SPECIFICATIONS

ZS Models Performance Tables

Model ZS048, 4 Ton, w/ECM, COAX Full Load Performance Data

EWT	Flow °F	WPD		COAX ECM Unit - Heating							COAX ECM Unit - Cooling																					
		PSI	FT	Aiflow CFM	LAT (DB) °F	HC MBtuh	HE MBtuh	Power kW	COP W/W	DH MBtuh	Aiflow CFM	LAT (DB) °F	TC MBtuh	SC MBtuh	HR MBtuh	Power kW	EER Btuh/W	DH MBtuh														
25	12.0	7.2	16.6	1420	91.6	33.2	22.9	2.99	3.25	8.1	Operation Not Recommended																					
				1580	89.8	33.7	23.6	2.97	3.32	7.7																						
30	6.0	2.4	5.5	1420	91.6	33.1	23.0	2.95	3.29	7.9																						
				1580	89.7	33.6	23.6	2.93	3.37	7.6																						
	9.0	4.3	10.0	1420	92.7	34.8	24.5	3.00	3.40	8.2																						
				1580	90.7	35.4	25.2	2.98	3.48	7.8																						
	12.0	6.7	15.4	1420	93.2	35.6	25.3	3.03	3.44	8.4																						
				1580	91.2	36.2	25.9	3.01	3.53	8.0																						
40	6.0	2.2	5.1	1420	94.6	37.7	27.3	3.05	3.62	8.6								1580	59.9	52.8	34.3	60.4	2.22	23.8	6.2							
				1580	92.5	38.3	28.0	3.03	3.71	8.2								1710	61.0	53.1	35.1	60.9	2.29	23.2	6.2							
	9.0	4.0	9.2	1420	95.9	39.7	29.1	3.10	3.74	9.0								Operation Not Recommended														
				1580	93.6	40.3	29.8	3.08	3.83	8.6																						
	12.0	6.2	14.3	1420	96.5	40.6	29.9	3.14	3.79	9.2																						
				1580	94.2	41.3	30.7	3.12	3.88	8.7																						
50	6.0	2.1	4.8	1420	97.7	42.4	31.6	3.18	3.91	9.5															1580	58.9	54.1	36.1	62.5	2.46	22.0	6.8
				1580	95.3	43.1	32.4	3.16	4.01	9.1															1710	60.0	54.4	36.9	63.1	2.54	21.4	6.8
	9.0	3.7	8.6	1420	99.1	44.6	33.6	3.23	4.04	10.0								1580	58.7	54.6	36.3	62.5	2.29	23.8	6.0							
				1580	96.6	45.4	34.4	3.21	4.14	9.5								1710	59.9	54.9	37.2	63.0	2.37	23.2	6.1							
	12.0	5.8	13.3	1420	99.8	45.7	34.5	3.27	4.10	10.2	1580	58.7	54.7	36.4	62.3	2.23	24.6	5.8														
				1580	97.2	46.5	35.4	3.25	4.20	9.7	1710	59.8	55.0	37.3	62.8	2.30	23.9	5.8														
60	6.0	1.9	4.5	1420	100.8	47.2	35.9	3.32	4.17	10.6	1580	58.6	53.6	36.5	62.9	2.73	19.6	7.6														
				1580	98.1	48.0	36.8	3.29	4.27	10.1	1710	59.7	53.9	37.4	63.5	2.82	19.1	7.6														
	9.0	3.5	8.1	1420	102.4	49.7	38.2	3.38	4.31	11.1	1580	58.5	54.1	36.8	62.8	2.54	21.3	6.7														
				1580	99.6	50.5	39.1	3.35	4.42	10.6	1710	59.6	54.4	37.7	63.4	2.62	20.7	6.7														
	12.0	5.4	12.5	1420	103.2	50.9	39.2	3.41	4.37	11.4	1580	58.4	54.2	36.9	62.6	2.47	22.0	6.4														
				1580	100.3	51.7	40.2	3.39	4.47	10.9	1710	59.6	54.5	37.8	63.2	2.55	21.4	6.4														
70	6.0	1.8	4.2	1420	104.0	52.1	40.3	3.45	4.42	11.8	1580	58.8	52.1	36.1	62.5	3.03	17.2	8.9														
				1580	101.1	53.0	41.3	3.43	4.53	11.2	1710	60.0	52.4	37.0	63.1	3.13	16.8	8.9														
	9.0	3.3	7.6	1420	105.7	54.8	42.8	3.51	4.57	12.4	1580	58.7	52.7	36.4	62.3	2.82	18.7	7.8														
				1580	102.7	55.8	43.9	3.49	4.69	11.9	1710	59.8	52.9	37.3	62.9	2.91	18.2	7.8														
	12.0	5.1	11.7	1420	106.6	56.1	44.0	3.55	4.63	12.8	1580	58.6	52.7	36.5	62.1	2.74	19.3	7.4														
				1580	103.5	57.1	45.1	3.53	4.75	12.2	1710	59.8	53.0	37.4	62.6	2.83	18.8	7.4														
80	6.0	1.7	4.0	1420	107.2	57.1	44.9	3.57	4.69	13.0	1580	59.3	50.2	35.3	61.7	3.37	14.9	10.6														
				1580	104.0	58.1	46.0	3.54	4.80	12.4	1710	60.4	50.4	36.2	62.3	3.48	14.5	10.6														
	9.0	3.1	7.2	1420	109.2	60.1	47.7	3.63	4.85	13.7	1580	59.2	50.7	35.6	61.4	3.14	16.1	9.4														
				1580	105.8	61.1	48.8	3.61	4.96	13.1	1710	60.3	50.9	36.4	62.0	3.24	15.7	9.4														
	12.0	4.8	11.1	1420	110.1	61.5	49.0	3.67	4.91	14.1	1580	59.1	50.7	35.7	61.1	3.05	16.6	8.9														
				1580	106.7	62.5	50.1	3.65	5.03	13.5	1710	60.2	51.0	36.5	61.7	3.15	16.2	8.9														
90	6.0	1.6	3.8	1420	110.5	62.1	49.7	3.65	4.98	14.1	1580	59.9	47.9	34.3	60.8	3.77	12.7	12.6														
				1580	107.0	63.2	50.8	3.63	5.10	13.4	1710	61.0	48.1	35.2	61.4	3.90	12.4	12.7														
	9.0	3.0	6.8	1420	112.6	65.4	52.7	3.72	5.15	14.9	1580	59.7	48.4	34.6	60.3	3.51	13.8	11.3														
				1580	109.0	66.5	53.9	3.69	5.28	14.3	1710	60.8	48.6	35.4	61.0	3.63	13.4	11.3														
	12.0	4.6	10.6	1420	113.7	67.0	54.1	3.76	5.22	15.4	1580	59.7	48.4	34.7	60.1	3.41	14.2	10.8														
				1580	109.9	68.1	55.4	3.73	5.35	14.7	1710	60.8	48.7	35.5	60.7	3.52	13.8	10.8														
100	6.0	1.5	3.5	Operation Not Recommended							1580	60.5	45.4	33.2	59.9	4.24	10.7	14.9														
											1710	61.6	45.6	34.1	60.6	4.38	10.4	14.9														
	9.0	2.7	6.3								1580	60.4	45.8	33.5	59.3	3.95	11.6	13.4														
											1710	61.4	46.1	34.3	60.0	4.08	11.3	13.4														
12.0	4.3	9.8	1580								60.3	45.9	33.6	59.0	3.83	12.0	12.8															
			1710								61.4	46.1	34.4	59.7	3.96	11.7	12.8															
110	6.0	1.5	3.4								1580	61.2	42.7	32.1	59.1	4.80	8.9	17.2														
											1710	62.2	42.9	32.9	59.8	4.96	8.7	17.3														
	9.0	2.6	6.1								1580	61.0	43.1	32.3	58.3	4.47	9.6	15.6														
											1710	62.1	43.3	33.1	59.1	4.61	9.4	15.6														
	12.0	4.1	9.5								1580	61.0	43.2	32.4	57.9	4.34	10.0	14.9														
											1710	62.0	43.4	33.2	58.7	4.48	9.7	15.0														
120	6.0	1.4	3.3	1580	61.9	39.8	30.8	58.4	5.45	7.3	19.7																					
				1710	62.9	40.0	31.6	59.2	5.63	7.1	19.8																					
	9.0	2.5	5.8	1580	61.8	40.2	31.0	57.5	5.08	7.9	17.9																					
				1710	62.8	40.4	31.8	58.3	5.24	7.7	18.0																					
	12.0	4.0	9.1	1580	61.8	40.3	31.1	57.1	4.93	8.2	17.2																					
				1710	62.7	40.5	31.9	57.8	5.09	8.0	17.3																					

NOTE: See page 23 for performance data parameters and guidelines.

ZS Models Performance Tables

Model ZS060, 5 Ton, w/PSC, BPHE Full Load Performance Data

EWT °F	Flow GPM	WPD		BPHE PSC Unit - Heating						BPHE PSC Unit - Cooling										
		PSI	FT	Aiflow CFM	LAT (DB) °F	HC MBtuh	HE MBtuh	Power kW	COP WW	DH MBtuh	Aiflow CFM	LAT (DB) °F	TC MBtuh	SC MBtuh	HR MBtuh	Power kW	EER Btuh/W	DH MBtuh		
25	15.0	2.7	6.2	1600	95.7	44.4	30.2	4.17	3.12	9.9	Operation Not Recommended	1600	58.9	59.8	36.4	68.8	2.62	22.9	3.9	
				1900	92.0	45.2	31.3	4.08	3.25	9.0										
				2000	91.0	45.3	31.5	4.05	3.28	8.8										
30	11.7	1.8	4.0	1600	97.0	46.6	32.3	4.18	3.27	10.0		Operation Not Recommended	1900	61.1	61.8	38.8	71.1	2.74	22.6	3.9
				1900	93.4	47.4	33.5	4.08	3.41	9.1										
				2000	92.0	47.5	33.7	4.05	3.44	8.9										
	13.0	2.1	4.8	1600	97.3	47.2	32.9	4.19	3.30	10.2			1900	61.8	62.1	39.2	71.5	2.78	22.3	3.9
				1900	93.4	48.0	34.1	4.10	3.44	9.2										
				2000	92.3	48.1	34.3	4.07	3.47	9.0										
	15.0	2.6	6.0	1600	97.7	47.9	33.5	4.22	3.33	10.3			1900	61.8	62.1	39.2	71.5	2.78	22.3	3.9
				1900	93.8	48.8	34.7	4.12	3.47	9.4										
				2000	92.6	48.9	34.9	4.09	3.50	9.1										
40	11.7	1.7	3.9	1600	100.9	53.4	38.6	4.33	3.62	11.1		Operation Not Recommended	1600	57.7	62.4	38.6	72.2	2.86	21.8	5.3
				1900	96.5	54.3	39.9	4.23	3.77	10.1										
				2000	95.2	54.5	40.1	4.20	3.80	9.8										
	13.0	2.0	4.7	1600	101.3	54.1	39.3	4.35	3.65	11.3			1900	60.0	64.4	41.0	74.6	3.00	21.5	5.4
				1900	96.8	55.1	40.6	4.25	3.80	10.3										
				2000	95.6	55.2	40.8	4.22	3.83	10.0										
	15.0	2.5	5.9	1600	101.8	55.0	40.0	4.38	3.68	11.5			1900	60.0	64.4	41.0	74.6	3.00	21.5	5.4
				1900	97.2	55.9	41.3	4.27	3.83	10.4										
				2000	95.9	56.0	41.6	4.25	3.87	10.1										
50	11.7	1.7	3.9	1600	104.9	60.3	44.8	4.54	3.89	12.6	Operation Not Recommended	1600	57.7	62.4	38.6	72.2	2.86	21.8	5.3	
				1900	99.9	61.3	46.2	4.44	4.05	11.4										
				2000	98.5	61.5	46.4	4.41	4.09	11.1										
	13.0	2.0	4.5	1600	105.3	61.1	45.5	4.56	3.92	12.8		1900	60.0	64.4	41.0	74.6	3.00	21.5	5.4	
				1900	100.3	62.1	46.9	4.46	4.09	11.6										
				2000	98.8	62.3	47.2	4.43	4.12	11.3										
	15.0	2.5	5.7	1600	105.9	62.0	46.4	4.59	3.96	13.0		1900	60.0	64.4	41.0	74.6	3.00	21.5	5.4	
				1900	100.7	63.1	47.8	4.48	4.13	11.8										
				2000	99.3	63.2	48.0	4.45	4.16	11.5										
60	11.7	1.6	3.8	1600	108.9	67.2	50.9	4.78	4.12	14.3	Operation Not Recommended	1600	57.3	62.5	39.2	73.2	3.13	20.0	6.9	
				1900	103.3	68.3	52.4	4.67	4.29	13.0										
				2000	101.7	68.5	52.7	4.64	4.33	12.6										
	13.0	1.9	4.5	1600	109.4	68.1	51.7	4.80	4.15	14.5		1900	59.7	64.6	41.7	75.8	3.28	19.7	7.0	
				1900	103.7	69.2	53.2	4.69	4.33	13.2										
				2000	102.1	69.4	53.5	4.66	4.37	12.8										
	15.0	2.4	5.6	1600	110.0	69.1	52.6	4.83	4.19	14.7		1900	59.7	64.6	41.7	75.8	3.28	19.7	7.0	
				1900	104.3	70.3	54.2	4.72	4.37	13.4										
				2000	102.6	70.5	54.5	4.69	4.41	13.1										
70	11.7	1.6	3.7	1600	112.9	74.1	57.0	5.01	4.34	16.0	Operation Not Recommended	1600	57.4	61.3	39.1	72.8	3.36	18.2	8.3	
				1900	106.7	75.4	58.7	4.89	4.52	14.6										
				2000	105.0	75.6	59.0	4.86	4.56	14.2										
	13.0	1.9	4.4	1600	113.5	75.1	57.9	5.03	4.37	16.2		1900	59.7	64.6	41.7	75.8	3.28	19.7	7.0	
				1900	107.2	76.4	59.6	4.92	4.56	14.8										
				2000	105.5	76.6	59.9	4.88	4.59	14.4										
	15.0	2.4	5.5	1600	114.1	76.2	59.0	5.06	4.41	16.5		1900	59.7	64.6	41.7	75.8	3.28	19.7	7.0	
				1900	107.8	77.6	60.7	4.94	4.60	15.1										
				2000	106.0	77.8	61.0	4.91	4.64	14.7										
80	11.7	1.6	3.7	1600	116.9	81.1	63.3	5.20	4.57	17.6	Operation Not Recommended	1600	57.7	59.4	38.5	72.3	3.79	15.7	10.7	
				1900	110.2	82.5	65.2	5.08	4.76	16.1										
				2000	108.3	82.7	65.5	5.05	4.80	15.7										
	13.0	1.9	4.3	1600	117.5	82.1	64.3	5.23	4.61	17.8		1900	60.1	61.3	40.9	74.7	3.93	15.6	10.6	
				1900	110.7	83.6	66.2	5.10	4.80	16.3										
				2000	108.8	83.8	66.5	5.07	4.84	15.9										
	15.0	2.4	5.5	1600	118.3	83.4	65.5	5.26	4.65	18.2		1900	60.1	61.3	40.9	74.7	3.93	15.6	10.6	
				1900	111.4	84.9	67.4	5.13	4.84	16.6										
				2000	109.4	85.1	67.7	5.10	4.89	16.2										
90	11.7	1.6	3.6	1600	121.0	88.1	69.9	5.33	4.85	18.9	Operation Not Recommended	1600	58.1	57.3	37.8	71.6	4.20	13.6	12.9	
				1900	113.7	89.6	71.9	5.20	5.05	17.3										
				2000	111.6	89.8	72.2	5.17	5.09	16.8										
	13.0	1.9	4.3	1600	121.7	89.3	71.0	5.35	4.89	19.2		1900	60.4	59.1	40.2	74.1	4.40	13.4	13.0	
				1900	114.3	90.8	73.0	5.22	5.09	17.5										
				2000	112.1	91.0	73.3	5.19	5.14	17.1										
	15.0	2.4	5.4	1600	122.4	90.6	72.3	5.38	4.94	19.5		1900	61.2	59.4	40.7	74.5	4.42	13.4	12.8	
				1900	114.9	92.2	74.3	5.26	5.14	17.9										
				2000	112.8	92.4	74.6	5.22	5.19	17.4										
100	11.7	1.5	3.5	1600	125.0	95.0	75.0	5.50	5.00	20.0	Operation Not Recommended	1600	58.5	55.0	37.2	71.0	4.68	11.8	15.3	
				1900	117.0	96.0	76.0	5.40	4.90	19.0										
				2000	115.0	96.0	76.0	5.40	4.90	19.0										
	13.0	1.8	4.2	1600	125.0	95.0	75.0	5.50	5.00	20.0		1900	60.7	56.8	39.6	73.4	4.85	11.7	15.1	
				1900	117.0	96.0	76.0	5.40	4.90	19.0										
				2000	115.0	96.0	76.0	5.40	4.90	19.0										
	15.0	2.3	5.3	1600	125.0	95.0	75.0	5.50	5.00	20.0		1900	61.5	57.1	40.1	73.9	4.93	11.6	15.2	
				1900	117.0	96.0	76.0	5.40	4.90	19.0										
				2000	115.0	96.0	76.0	5.40	4.90	19.0										
110	11.7	1.5	3.5	1600	125.0	95.0	75.0	5.50	5.00	20.0	Operation Not Recommended	1600	58.5	55.1	37.2	70.9	4.63	11.9	15.0	
				1900	117.0	96.0	76.0	5.40	4.90	19.0										
				2000	115.0	96.0	76.0	5.40	4.90	19.0										
	13.0	1.8	4.2	1600	125.0	95.0	75.0	5.50	5.00	20.0		1900	60.7	56.8	39.6	73.4	4.85	11.7	15.1	
				1900	117.0	96.0	76.0	5.40	4.90	19.0										
				2000	115.0	96.0	76.0	5.40	4.90	19.0										
	15.0	2.3	5.3	1600	125.0	95.0	75.0	5.50	5.00	20.0		1900	61.5	57.1	40.1	73.9	4.93	11.6	15.2	
				1900	117.0	96.0	76.0	5.40	4.90	19.0										
				2000	115.0	96.0	76.0	5.40	4.90	19.0										
120	11.7	1.5	3.5	1600	125.0	95.0	75.0	5.50	5.00	20.0	Operation Not Recommended	1600	58.5	55.1	37.2	70.9	4.63	11.9	15.0	
				1900	117.0	96.0	76.0	5.40	4.90	19.0										
				2000	115.0	96.0	76.0	5.40	4.90	19.0										
	13.0	1.8	4.2	1600	125.0	95.0	75.0	5.50	5.00	20.0		1900	60.7	56.8	39.6	73.4	4.85	11.7	15.1	
				1900	117.0	96.0	76.0	5.40	4.90	19.0										
				2000	115.0	96.0	76.0	5.40	4.90	19.0										
	15.0	2.3	5.3	1600	125.0	95.0	75.0	5.50	5.00	20.0		1900	61.5	57.1	40.1	73.9	4.93	11.6	15.2	
				1900	117.0	96.0	76.0	5.40	4.90	19.0										
				2000	115.0	96.0	76.0	5.40	4.90	19.0										

NOTE: See page 23 for performance data parameters and guidelines.

ENGINEERING SPECIFICATIONS

ZS Models Performance Tables

Model ZS060, 5 Ton, w/ECM, BPHE Full Load Performance Data

EWT °F	Flow GPM	WPD		BPHE ECM Unit - Heating							BPHE ECM Unit - Cooling															
		PSI	FT	Aiflow CFM	LAT (DB) °F	HC MBtuh	HE MBtuh	Power kW	COP W/W	DH MBtuh	Aiflow CFM	LAT (DB) °F	TC MBtuh	SC MBtuh	HR MBtuh	Power kW	EER Btuh/W	DH MBtuh								
25	15.0	2.7	6.2	1870	91.6	43.5	31.2	3.60	3.55	9.1	Operation Not Recommended															
				2000	90.2	43.7	31.5	3.57	3.59	8.8																
30	11.7	1.8	4.0	1870	92.6	45.7	33.4	3.61	3.71	9.2																
				2000	91.2	45.9	33.7	3.58	3.76	8.9																
	13.0	2.1	4.8	1870	92.9	46.3	34.0	3.62	3.75	9.3																
				2000	91.5	46.5	34.3	3.59	3.80	9.0																
	15.0	2.6	6.0	1870	93.3	47.1	34.6	3.64	3.79	9.5																
				2000	91.9	47.2	34.9	3.61	3.84	9.1																
40	11.7	1.7	3.9	1870	96.1	52.6	39.8	3.76	4.11	10.2		1730	59.0	62.5	39.3	70.0	2.20	28.4	4.0							
				2000	94.5	52.8	40.1	3.73	4.16	9.8		1900	60.3	63.4	40.4	71.1	2.26	28.0	4.0							
	13.0	2.0	4.7	1870	96.4	53.4	40.5	3.77	4.14	10.4		Operation Not Recommended														
				2000	94.8	53.5	40.8	3.74	4.20	10.0																
	15.0	2.5	5.9	1870	96.8	54.2	41.3	3.80	4.19	10.5																
				2000	95.2	54.4	41.6	3.76	4.24	10.1																
50	11.7	1.7	3.9	1870	99.5	59.6	46.1	3.97	4.41	11.6									1730	57.8	65.1	41.5	73.5	2.45	26.6	5.4
				2000	97.7	59.8	46.4	3.93	4.46	11.1									1900	59.2	66.0	42.6	74.6	2.52	26.2	5.4
	13.0	2.0	4.5	1870	99.9	60.4	46.8	3.98	4.45	11.7		1730	57.8	65.1	41.5	73.4	2.42	26.9	5.2							
				2000	98.1	60.6	47.2	3.95	4.50	11.3		1900	59.2	66.1	42.7	74.6	2.49	26.6	5.3							
	15.0	2.5	5.7	1870	100.4	61.4	47.7	4.00	4.49	12.0		1730	57.8	65.2	41.5	73.3	2.39	27.3	5.1							
				2000	98.5	61.6	48.1	3.97	4.55	11.5		1900	59.2	66.1	42.7	74.5	2.46	26.9	5.1							
60	11.7	1.6	3.8	1870	103.0	66.6	52.3	4.20	4.65	13.1	1730	57.4	65.3	42.2	74.6	2.72	24.0	7.0								
				2000	100.9	66.8	52.7	4.16	4.71	12.6	1900	58.9	66.2	43.4	75.7	2.80	23.7	7.1								
	13.0	1.9	4.5	1870	103.4	67.5	53.1	4.21	4.70	13.3	1730	57.4	65.3	42.2	74.5	2.69	24.3	6.8								
				2000	101.4	67.7	53.5	4.18	4.75	12.8	1900	58.9	66.2	43.4	75.7	2.76	24.0	6.9								
	15.0	2.4	5.6	1870	104.0	68.6	54.1	4.24	4.74	13.6	1730	57.4	65.3	42.2	74.4	2.66	24.6	6.7								
				2000	101.9	68.8	54.5	4.20	4.80	13.1	1900	58.9	66.2	43.4	75.6	2.73	24.3	6.7								
70	11.7	1.6	3.7	1870	106.5	73.6	58.6	4.42	4.88	14.7	1730	57.5	64.0	42.0	74.3	3.03	21.1	8.8								
				2000	104.2	73.9	58.9	4.38	4.94	14.2	1900	59.0	64.9	43.2	75.5	3.12	20.8	8.9								
	13.0	1.9	4.4	1870	107.0	74.6	59.5	4.44	4.93	15.0	1730	57.5	64.0	42.0	74.2	3.00	21.4	8.6								
				2000	104.7	74.9	59.9	4.40	4.99	14.4	1900	59.0	64.9	43.2	75.4	3.08	21.1	8.7								
	15.0	2.4	5.5	1870	107.5	75.8	60.6	4.46	4.98	15.2	1730	57.5	64.0	42.0	74.1	2.96	21.6	8.4								
				2000	105.2	76.1	61.0	4.42	5.04	14.7	1900	58.9	64.9	43.2	75.3	3.04	21.4	8.4								
80	11.7	1.6	3.7	1870	110.0	80.7	65.0	4.61	5.13	16.2	1730	57.8	62.0	41.4	73.6	3.39	18.3	10.8								
				2000	107.5	81.0	65.4	4.57	5.20	15.7	1900	59.3	62.9	42.6	74.8	3.49	18.0	10.9								
	13.0	1.9	4.3	1870	110.5	81.8	66.0	4.63	5.18	16.5	1730	57.8	62.1	41.4	73.5	3.35	18.5	10.6								
				2000	108.0	82.1	66.4	4.59	5.25	15.9	1900	59.3	62.9	42.6	74.7	3.44	18.3	10.6								
	15.0	2.4	5.5	1870	111.1	83.1	67.2	4.65	5.24	16.8	1730	57.8	62.1	41.4	73.4	3.31	18.8	10.3								
				2000	108.6	83.4	67.7	4.61	5.30	16.2	1900	59.3	63.0	42.6	74.6	3.40	18.5	10.4								
90	11.7	1.6	3.6	1870	113.5	87.8	71.7	4.72	5.45	17.5	1730	58.2	59.9	40.7	72.9	3.81	15.7	13.0								
				2000	110.8	88.1	72.2	4.68	5.52	16.8	1900	59.6	60.7	41.9	74.1	3.92	15.5	13.1								
	13.0	1.9	4.3	1870	114.1	89.0	72.8	4.74	5.50	17.7	1730	58.2	59.9	40.7	72.8	3.77	15.9	12.7								
				2000	111.4	89.3	73.3	4.70	5.57	17.1	1900	59.6	60.8	41.9	74.0	3.87	15.7	12.8								
	15.0	2.4	5.4	1870	114.8	90.4	74.1	4.77	5.56	18.0	1730	58.2	59.9	40.8	72.6	3.72	16.1	12.4								
				2000	112.0	90.7	74.6	4.73	5.63	17.4	1900	59.6	60.8	41.9	73.8	3.82	15.9	12.5								
100	11.7	1.5	3.5	Operation Not Recommended							1730	58.5	57.6	40.1	72.3	4.31	13.4	15.4								
											1900	59.9	58.5	41.2	73.6	4.43	13.2	15.5								
	13.0	1.8	4.2								1730	58.5	57.7	40.1	72.2	4.26	13.6	15.1								
											1900	59.9	58.5	41.2	73.4	4.37	13.4	15.2								
	15.0	2.3	5.3								1730	58.5	57.7	40.1	72.0	4.20	13.7	14.8								
											1900	59.9	58.5	41.2	73.2	4.32	13.6	14.8								
110	11.7	1.5	3.5								Operation Not Recommended							1730	58.9	54.9	39.3	71.6	4.89	11.2	18.0	
																		1900	60.3	55.7	40.4	72.8	5.02	11.1	18.1	
	13.0	1.8	4.2															1730	58.9	54.9	39.4	71.4	4.83	11.4	17.6	
																		1900	60.3	55.7	40.5	72.6	4.96	11.2	17.7	
	15.0	2.3	5.3															1730	58.9	54.9	39.4	71.2	4.77	11.5	17.3	
																		1900	60.3	55.7	40.5	72.4	4.90	11.4	17.4	
120	11.7	1.5	3.5	Operation Not Recommended														1730	59.7	50.7	37.9	69.7	5.56	9.1	20.8	
																		1900	61.0	51.5	38.9	71.0	5.72	9.0	20.9	
	13.0	1.8	4.2															1730	59.7	50.8	37.9	69.5	5.50	9.2	20.4	
																		1900	61.0	51.5	38.9	70.7	5.65	9.1	20.5	
	15.0	2.3	5.3															1730	59.7	50.8	37.9	69.3	5.43	9.4	20.0	
																		1900	61.0	51.5	38.9	70.5	5.58	9.2	20.1	

NOTE: See page 23 for performance data parameters and guidelines.

ZS Models Performance Tables
Model ZS060, 5 Ton, w/PSC, COAX Full Load Performance Data

EWT °F	Flow GPM	WPD		COAX PSC Unit - Heating							COAX PSC Unit - Cooling														
		PSI	FT	Aiffow CFM	LAT (DB) °F	HC MBtuh	HE MBtuh	Power kW	COP W/W	DH MBtuh	Aiffow CFM	LAT (DB) °F	TC MBtuh	SC MBtuh	HR MBtuh	Power kW	EER Btuh/W	DH MBtuh							
25	15.0	10.9	25.1	1600	96.4	45.6	31.1	4.23	3.15	10.5	Operation Not Recommended	1600	58.9	59.4	36.5	69.4	2.94	20.2	6.4						
				1900	92.5	46.1	31.9	4.16	3.25	9.5		1900	61.1	61.6	38.8	72.2	3.09	20.0	6.7						
				2000	91.6	46.6	32.2	4.21	3.25	9.3		2000	61.9	62.0	39.0	72.7	3.13	19.8	6.8						
30	7.5	3.8	8.7	1600	96.2	45.3	30.9	4.21	3.15	10.4		Operation Not Recommended	1600	58.9	59.4	36.5	69.4	2.94	20.2	6.4					
				1900	92.3	45.8	31.7	4.14	3.25	9.4															
				2000	91.4	46.3	32.0	4.19	3.24	9.2															
	11.3	6.6	15.3	1600	97.3	47.2	32.7	4.24	3.26	10.6			Operation Not Recommended	1600	58.9	59.4	36.5	69.4	2.94	20.2	6.4				
				1900	93.3	47.7	33.5	4.16	3.36	9.6															
				2000	92.3	48.2	33.9	4.22	3.35	9.4															
	15.0	10.0	23.1	1600	98.0	48.3	33.7	4.28	3.31	10.8				Operation Not Recommended	1600	58.9	59.4	36.5	69.4	2.94	20.2	6.4			
				1900	93.8	48.9	34.6	4.20	3.41	9.8															
				2000	92.9	49.4	34.9	4.25	3.40	9.6															
40	7.5	3.5	8.0	1600	99.3	50.7	35.8	4.35	3.42	11.2					Operation Not Recommended	1600	58.9	59.4	36.5	69.4	2.94	20.2	6.4		
				1900	95.0	51.3	36.7	4.27	3.52	10.2															
				2000	94.0	51.8	37.1	4.32	3.52	9.9															
	11.3	6.1	14.0	1600	100.5	52.8	37.9	4.37	3.54	11.5						Operation Not Recommended	1600	58.9	59.4	36.5	69.4	2.94	20.2	6.4	
				1900	96.0	53.4	38.8	4.29	3.65	10.4															
				2000	95.0	54.0	39.2	4.35	3.64	10.2															
	15.0	9.2	21.2	1600	101.3	54.1	39.0	4.41	3.59	11.7							Operation Not Recommended	1600	58.9	59.4	36.5	69.4	2.94	20.2	6.4
				1900	96.7	54.7	40.0	4.33	3.70	10.7															
				2000	95.6	55.3	40.3	4.39	3.69	10.4															
50	7.5	3.2	7.4	1600	102.6	56.4	41.0	4.52	3.66	12.3	Operation Not Recommended	1600						57.7	61.6	38.5	72.6	3.21	19.2	6.8	
				1900	97.8	57.1	42.0	4.44	3.77	11.2		1900						60.1	64.0	40.9	75.5	3.37	19.0	6.9	
				2000	96.7	57.7	42.4	4.49	3.76	10.9		2000						60.9	64.4	41.2	76.1	3.43	18.8	7.1	
	11.3	5.6	12.9	1600	104.0	58.8	43.2	4.55	3.79	12.6		Operation Not Recommended	1600					57.7	62.2	38.6	72.6	3.03	20.6	6.0	
				1900	99.0	59.5	44.2	4.46	3.91	11.5			1900					60.0	64.6	41.0	75.5	3.18	20.3	6.1	
				2000	97.8	60.1	44.7	4.52	3.90	11.2			2000					60.9	65.0	41.3	76.0	3.23	20.1	6.3	
	15.0	8.5	19.5	1600	104.8	60.2	44.5	4.59	3.84	13.0			Operation Not Recommended	1600				57.6	62.4	38.6	72.5	2.95	21.2	5.7	
				1900	99.7	60.9	45.6	4.51	3.96	11.8				1900				60.0	64.8	41.1	75.4	3.10	20.9	5.8	
				2000	98.5	61.6	46.0	4.56	3.96	11.5				2000				60.9	65.2	41.3	75.9	3.15	20.7	6.0	
60	7.5	3.0	6.8	1600	106.1	62.5	46.4	4.72	3.88	13.6				Operation Not Recommended	1600			57.4	61.4	39.0	73.3	3.49	17.6	7.7	
				1900	100.8	63.2	47.4	4.63	4.00	12.4					1900			59.8	63.8	41.4	76.3	3.67	17.4	7.9	
				2000	99.6	63.9	47.9	4.69	3.99	12.1					2000			60.7	64.2	41.7	76.9	3.73	17.2	8.0	
	11.3	5.2	12.0	1600	107.7	65.1	48.9	4.75	4.02	14.1					Operation Not Recommended	1600		57.4	62.0	39.1	73.3	3.29	18.9	6.7	
				1900	102.1	65.9	50.0	4.66	4.14	12.8						1900		59.7	64.4	41.6	76.2	3.46	18.6	6.9	
				2000	100.8	66.6	50.5	4.72	4.13	12.5						2000		60.6	64.8	41.8	76.8	3.51	18.5	7.0	
	15.0	7.9	18.2	1600	108.6	66.7	50.3	4.79	4.08	14.5						Operation Not Recommended	1600	57.4	62.2	39.1	73.2	3.21	19.4	6.4	
				1900	102.9	67.5	51.4	4.70	4.21	13.2							1900	59.7	64.6	41.6	76.1	3.37	19.2	6.5	
				2000	101.6	68.2	51.9	4.76	4.20	12.9							2000	60.6	65.0	41.9	76.7	3.42	19.0	6.6	
70	7.5	2.8	6.4	1600	109.8	68.9	52.1	4.92	4.10	15.1	Operation Not Recommended						1600	57.9	62.4	39.3	73.3	3.79	15.7	9.5	
				1900	104.0	69.7	53.2	4.83	4.23	13.8							1900	60.2	61.7	40.7	75.3	3.98	15.5	9.6	
				2000	102.6	70.4	53.8	4.89	4.22	13.5							2000	61.0	62.1	40.9	75.9	4.05	15.3	9.8	
	11.3	4.9	11.3	1600	111.5	71.7	54.8	4.95	4.25	15.6		Operation Not Recommended					1600	57.8	62.0	38.4	72.2	3.58	16.8	8.3	
				1900	105.4	72.6	56.0	4.86	4.38	14.3							1900	60.1	62.3	40.8	75.1	3.76	16.6	8.5	
				2000	104.0	73.4	56.6	4.92	4.37	13.9							2000	61.0	62.7	41.1	75.7	3.82	16.4	8.6	
	15.0	7.4	17.1	1600	112.5	73.5	56.4	5.00	4.31	16.1			Operation Not Recommended				1600	57.8	62.2	38.4	72.1	3.48	17.3	7.9	
				1900	106.3	74.4	57.6	4.91	4.44	14.7							1900	60.1	62.5	40.9	75.0	3.66	17.1	8.0	
				2000	104.8	75.2	58.2	4.97	4.44	14.4							2000	61.0	62.9	41.1	75.6	3.72	16.9	8.2	
80	7.5	2.6	6.1	1600	113.7	75.6	58.1	5.11	4.33	16.6				Operation Not Recommended			1600	58.6	63.3	37.0	70.4	4.13	13.6	11.7	
				1900	107.3	76.5	59.4	5.02	4.47	15.2							1900	60.8	63.4	39.3	73.2	4.34	13.5	12.0	
				2000	105.8	77.3	60.0	5.08	4.46	14.8							2000	61.7	63.8	39.6	73.8	4.41	13.3	12.2	
	11.3	4.6	10.7	1600	115.6	78.7	61.2	5.14	4.49	17.2					Operation Not Recommended		1600	58.5	63.8	37.1	70.1	3.90	14.6	10.5	
				1900	108.8	79.7	62.5	5.05	4.63	15.7							1900	60.8	63.9	39.4	73.0	4.09	14.4	10.7	
				2000	107.3	80.5	63.1	5.11	4.62	15.4							2000	61.6	64.2	39.7	73.6	4.16	14.3	10.9	
	15.0	7.0	16.2	1600	116.7	80.6	62.9	5.19	4.55	17.7						Operation Not Recommended	1600	58.5	63.7	37.1	70.0	3.80	15.0	10.0	
				1900	109.8	81.6	64.3	5.09	4.70	16.2							1900	60.8	63.9	39.5	72.8	3.99	14.8	10.2	
				2000	108.2	82.5	64.9	5.16	4.69	15.9							2000	61.6	64.2	39.7	73.4	4.05	14.7	10.3	
90	7.5	2.5	5.8	1600	117.8	82.6	64.6	5.27	4.59	18.0	Operation Not Recommended						1600	59.4	63.8	35.7	68.3	4.53	11.7	14.2	
				1900	110.8	83.6	66.0	5.17	4.74	16.4							1900	61.5	64.9	37.9	71.1	4.76	11.5	14.5	
				2000	109.1	84.5	66.6	5.24	4.73	16.0							2000	62.3	65.2	38.2	71.7	4.83	11.4	14.7	
	11.3	4.4	10.3	1600	119.8	86.1	68.0	5.30	4.76	18.7		Operation Not Recommended					1600	59.3	63.4	35.8	67.9	4.27	12.5	12.8	
				1900	112.5	87.1	69.4	5.20	4.91	17.1							1900	61.5	65.4	38.0	70.7	4.49	12.4	13.1	
				2000	110.8	88.0	70.1	5.27	4.90	16.7							2000	62.3	65.8	38.3	71.3	4.56	12.2	13.2	
	15.0	6.7	15.5	1600	121.0	88.2	69.9	5.35	4.83	19.3			Operation Not Recommended				1600	59.3	63.5	35.8	67.7	4.16	12.9	12.2	
				1900	113.5	89.3	71.3	5.25	4.98	17.7							1900	61.4	65.6	38.1	70.5	4.37	12.7	12.5	
				2000	111.8	90.2	72.0	5.32	4.97	17.2							2000	62.3	65.9	38.3	71.1	4.44	12.6	12.7	
100	7.5	2.3	5.3	1600	119.8	86.1	68.0	5.30	4.76	18.7				Operation Not Recommended			1600	59.9	49.8	34.8	66.8	5.00	10.0	16.5	
				1900	110.8	83.6	66.0	5.17	4.74	16.4							1900	62.0	51.7	37.0	69.6	5.25	9.8	16.9	
				2000	108.2	82.5	64.9	5.16	4.69	15.9							2000	62.8	52.0	37.2	70.2	5.33	9.8	17.1	
	11.3	4.1	9.4	1600	117.8	82.6	64.6	5.27	4.59	18.0					Operation Not Recommended		1600	59.8	50.3	34.9	66.4	4.71	10.7	15.0	
				1900	110.8	83.6	66.0	5.17	4.74	16.4							1900	61.9	52.2	37.1	69.1	4.95	10.6	15.3	
				2000	109.1	84.5	66.6	5.24	4.73	16.0							2000	62.7	52.5	37.4	69.7	5.03	10.5	15.5	
	15.0	6.2	14.4	1600	119.8	86.1	68.0	5.30	4.76	18.7						Operation Not Recommended	1600	59.8	50.4	35.0	66.1	4.59	11.0	14.3	
				1900	110.8	83.6	66.0	5.17	4.74	16.4							1900	61.9	52.4	37.2	68.8	4.82	10.9	14.6	
				2000	108.2	82.5	64.9	5.16	4.69	15.9							2000	62.7	52.7	37.4	69.4	4.90	10.8	14.8	
110	7.5	2.2	5.1	1600	121.0	88.2	69.9	5.35	4.83	19.3	Operation Not Recommended						1600	60.1	47.5	34.5	66.5	5.55	8.6	18.7	
				1900	110.8	83.6	66.0	5.17	4.74	16.4							1900	62.1	49.4	36.6	69.2	5.83	8.5	19.1	
				2000	108.2	82.5	64.9	5.16	4.69	15.9							2000	62.9	49.7	36.9	69.9	5.92	8.4	19.3	
	11.3																								

ENGINEERING SPECIFICATIONS

ZS Models Performance Tables

Model ZS060, 5 Ton, w/ECM, COAX Full Load Performance Data

EWT	Flow °F	WPD		COAX ECM Unit - Heating							COAX ECM Unit - Cooling																					
		PSI	FT	Aiflow CFM	LAT (DB) °F	HC MBtuh	HE MBtuh	Power kW	COP W/W	DH MBtuh	Aiflow CFM	LAT (DB) °F	TC MBtuh	SC MBtuh	HR MBtuh	Power kW	EER Btuh/W	DH MBtuh														
25	15.0	10.9	25.1	1870	92.0	44.4	31.9	3.67	3.55	9.6	Operation Not Recommended																					
				2000	90.7	44.7	32.3	3.64	3.60	9.3																						
30	7.5	3.8	8.7	1870	91.8	44.1	31.7	3.64	3.55	9.5																						
				2000	90.6	44.5	32.1	3.62	3.60	9.2																						
	11.3	6.6	15.3	1870	92.8	46.0	33.5	3.67	3.72	9.7																						
				2000	91.5	46.4	33.9	3.65	3.67	9.4																						
	15.0	10.0	23.1	1870	93.3	47.1	34.5	3.71	3.73	9.9																						
				2000	92.0	47.5	35.0	3.69	3.78	9.6																						
40	7.5	3.5	8.0	1870	94.5	49.5	36.7	3.77	3.85	10.2								1730	59.1	62.1	39.1	70.7	2.52	24.7	6.5							
				2000	93.1	49.9	37.1	3.75	3.91	9.9								1900	60.3	63.3	40.4	72.1	2.59	24.4	6.7							
	11.3	6.1	14.0	1870	95.6	51.7	38.7	3.80	3.99	10.5								Operation Not Recommended														
				2000	94.1	52.1	39.2	3.77	4.05	10.2																						
	15.0	9.2	21.2	1870	96.2	52.9	39.9	3.83	4.05	10.7																						
				2000	94.7	53.4	40.4	3.81	4.11	10.4																						
50	7.5	3.2	7.4	1870	97.4	55.3	41.9	3.93	4.12	11.3															1730	58.0	64.5	41.2	74.0	2.80	23.0	6.9
				2000	95.8	55.7	42.4	3.91	4.18	10.9															1900	59.2	65.6	42.6	75.5	2.88	22.8	6.9
	11.3	5.6	12.9	1870	98.6	57.7	44.1	3.96	4.26	11.6								1730	57.9	65.1	41.3	74.0	2.62	24.9	6.1							
				2000	96.9	58.1	44.7	3.94	4.33	11.3								1900	59.2	66.3	42.7	75.5	2.69	24.6	6.1							
	15.0	8.5	19.5	1870	99.3	59.1	45.5	4.00	4.33	11.9	1730	57.9	65.3	41.3	73.9	2.54	25.7	5.8														
				2000	97.6	59.6	46.0	3.98	4.39	11.6	1900	59.2	66.5	42.7	75.4	2.61	25.4	5.8														
60	7.5	3.0	6.8	1870	100.4	61.4	47.3	4.12	4.36	12.5	1730	57.7	64.3	41.7	74.8	3.09	20.8	7.8														
				2000	98.7	61.9	47.9	4.10	4.42	12.1	1900	59.0	65.5	43.1	76.3	3.17	20.6	7.9														
	11.3	5.2	12.0	1870	101.7	64.0	49.9	4.15	4.52	12.9	1730	57.6	64.9	41.8	74.8	2.89	22.5	6.8														
				2000	99.9	64.5	50.5	4.13	4.58	12.5	1900	58.9	66.1	43.2	76.2	2.97	22.3	6.9														
	15.0	7.9	18.2	1870	102.5	65.6	51.3	4.20	4.58	13.3	1730	57.6	65.1	41.8	74.7	2.81	23.2	6.4														
				2000	100.6	66.2	51.9	4.17	4.65	12.9	1900	58.9	66.3	43.3	76.1	2.88	23.0	6.5														
70	7.5	2.8	6.4	1870	103.6	67.8	53.1	4.32	4.60	13.9	1730	58.1	62.2	40.9	73.8	3.40	18.3	9.5														
				2000	101.7	68.4	53.7	4.29	4.67	13.5	1900	59.4	63.3	42.4	75.3	3.49	18.1	9.6														
	11.3	4.9	11.3	1870	105.0	70.7	55.9	4.35	4.76	14.4	1730	58.0	62.8	41.1	73.7	3.18	19.8	8.4														
				2000	103.0	71.3	56.6	4.33	4.83	14.0	1900	59.3	64.0	42.5	75.1	3.27	19.6	8.5														
	15.0	7.4	17.1	1870	105.9	72.5	57.5	4.40	4.83	14.8	1730	58.0	63.0	41.1	73.5	3.09	20.4	8.0														
				2000	103.8	73.1	58.2	4.37	4.90	14.4	1900	59.3	64.1	42.5	75.0	3.18	20.2	8.0														
80	7.5	2.6	6.1	1870	106.9	74.6	59.2	4.50	4.85	15.3	1730	58.8	59.0	39.6	71.8	3.75	15.7	11.9														
				2000	104.8	75.2	59.9	4.48	4.92	14.8	1900	60.0	60.1	41.0	73.2	3.85	15.6	12.0														
	11.3	4.6	10.7	1870	108.5	77.8	62.3	4.54	5.02	15.8	1730	58.7	59.6	39.7	71.5	3.51	17.0	10.6														
				2000	106.3	78.4	63.0	4.51	5.10	15.4	1900	60.0	60.7	41.1	73.0	3.61	16.8	10.7														
	15.0	7.0	16.2	1870	109.5	79.7	64.1	4.58	5.10	16.3	1730	58.7	59.7	39.7	71.4	3.41	17.5	10.1														
				2000	107.2	80.4	64.8	4.56	5.17	15.9	1900	60.0	60.8	41.1	72.8	3.50	17.4	10.2														
90	7.5	2.5	5.8	1870	110.4	81.7	65.8	4.66	5.14	16.5	1730	59.5	55.5	38.3	69.7	4.16	13.4	14.3														
				2000	108.1	82.3	66.5	4.63	5.21	16.1	1900	60.7	56.5	39.6	71.1	4.27	13.2	14.5														
	11.3	4.4	10.3	1870	112.2	85.2	69.2	4.69	5.32	17.2	1730	59.5	56.1	38.4	69.3	3.89	14.4	12.9														
				2000	109.8	85.9	70.0	4.66	5.40	16.7	1900	60.6	57.1	39.7	70.7	4.00	14.3	13.1														
	15.0	6.7	15.5	1870	113.2	87.3	71.1	4.74	5.40	17.8	1730	59.4	56.2	38.4	69.1	3.78	14.9	12.3														
				2000	110.8	88.0	72.0	4.71	5.48	17.3	1900	60.6	57.2	39.7	70.5	3.88	14.7	12.5														
100	7.5	2.3	5.3	Operation Not Recommended							1730	60.0	52.4	37.4	68.2	4.64	11.3	16.7														
											1900	61.1	53.4	38.7	69.6	4.77	11.2	16.9														
	11.3	4.1	9.4								1730	59.9	52.9	37.5	67.7	4.34	12.2	15.1														
											1900	61.1	53.9	38.8	69.1	4.46	12.1	15.3														
	15.0	6.2	14.4								1730	59.9	53.1	37.5	67.5	4.22	12.6	14.4														
											1900	61.1	54.0	38.8	68.8	4.33	12.5	14.6														
110	7.5	2.2	5.1								Operation Not Recommended							1730	60.2	50.2	37.1	67.9	5.21	9.6	18.9							
																		1900	61.3	51.1	38.4	69.3	5.35	9.5	19.1							
	11.3	3.9	9.1															1730	60.1	50.6	37.2	67.2	4.87	10.4	17.1							
																		1900	61.3	51.6	38.5	68.6	5.00	10.3	17.3							
	15.0	6.0	13.9															1730	60.1	50.8	37.2	66.9	4.73	10.7	16.4							
																		1900	61.2	51.7	38.5	68.3	4.86	10.6	16.6							
120	7.5	2.1	4.9	Operation Not Recommended														1730	60.3	48.7	36.8	68.7	5.88	8.3	21.2							
																		1900	61.5	49.6	38.0	70.2	6.04	8.2	21.5							
	11.3	3.8	8.8															1730	60.3	49.2	36.9	67.9	5.50	8.9	19.4							
																		1900	61.4	50.0	38.2	69.3	5.65	8.9	19.6							
	15.0	5.8	13.4															1730	60.3	49.3	36.9	67.5	5.34	9.2	18.6							
																		1900	61.4	50.2	38.2	68.9	5.49	9.1	18.7							

NOTE: See page 23 for performance data parameters and guidelines.

ZS Models Performance Tables
Model ZS072, 6 Ton, w/PSC, BPHE Full Load Performance Data

EWT °F	Flow GPM	WPD		BPHE PSC Unit - Heating						BPHE PSC Unit - Cooling										
		PSI	FT	Aiffow CFM	LAT (DB) °F	HC MBtuh	HE MBtuh	Power kW	COP WW	DH MBtuh	Aiffow CFM	LAT (DB) °F	TC MBtuh	SC MBtuh	HR MBtuh	Power kW	EER Btuh/W	DH MBtuh		
25	18.0	3.8	8.7	1950	95.1	52.8	34.7	5.31	2.91	12.7										
				2200	92.4	53.3	35.4	5.24	2.98	12.0										
				2500	90.1	54.4	35.9	5.42	2.94	11.3										
30	11.7	1.8	4.2	1950	95.6	54.0	35.9	5.29	2.99	12.7	Operation Not Recommended									
				2200	92.9	54.5	36.7	5.22	3.06	12.0										
				2500	90.6	55.6	37.2	5.40	3.02	11.3										
	15.0	2.7	6.3	1950	96.5	55.7	37.5	5.33	3.07	12.9										
				2200	93.7	56.3	38.3	5.25	3.14	12.1										
				2500	91.3	57.4	38.8	5.44	3.09	11.4										
	18.0	3.7	8.5	1950	96.9	56.7	38.4	5.36	3.10	13.1										
				2200	94.1	57.3	39.2	5.29	3.18	12.3										
				2500	91.6	58.4	39.8	5.47	3.13	11.6										
40	11.7	1.8	4.1	1950	99.2	61.4	43.1	5.38	3.35	13.4	Operation Not Recommended	1950	60.9	65.4	40.2	76.8	3.34	19.6	4.3	
				2200	96.1	62.1	44.0	5.30	3.43	12.6										
				2500	93.5	63.3	44.6	5.49	3.38	11.8										
	15.0	2.7	6.2	1950	100.1	63.4	45.0	5.41	3.43	13.6										
				2200	97.0	64.1	45.8	5.34	3.52	12.8										
				2500	94.2	65.4	46.5	5.53	3.47	12.0										
	18.0	3.6	8.3	1950	100.7	64.6	46.0	5.45	3.47	13.8										
				2200	97.5	65.2	46.9	5.37	3.56	13.0										
				2500	94.7	66.6	47.6	5.56	3.51	12.2										
50	11.7	1.8	4.0	1950	102.7	68.9	49.9	5.56	3.63	14.5	Operation Not Recommended	1950	59.3	69.8	43.6	82.3	3.65	19.1	6.4	
				2200	99.3	69.6	50.9	5.49	3.72	13.6										
				2500	96.3	71.0	51.6	5.68	3.66	12.8										
	15.0	2.6	6.0	1950	103.8	71.2	52.1	5.60	3.72	14.8										
				2200	100.2	71.9	53.0	5.52	3.81	13.9										
				2500	97.2	73.3	53.8	5.72	3.76	13.1										
	18.0	3.5	8.1	1950	104.4	72.4	53.2	5.64	3.77	15.0										
				2200	100.8	73.2	54.2	5.56	3.86	14.1										
				2500	97.7	74.7	55.0	5.76	3.80	13.3										
60	11.7	1.7	4.0	1950	106.3	76.4	56.5	5.84	3.83	16.2	Operation Not Recommended	1950	58.3	71.1	45.7	84.7	3.99	17.8	8.4	
				2200	102.5	77.2	57.5	5.76	3.92	15.3										
				2500	99.2	78.7	58.4	5.97	3.87	14.4										
	15.0	2.6	5.9	1950	107.5	78.9	58.8	5.88	3.93	16.5										
				2200	103.5	79.7	59.9	5.80	4.02	15.5										
				2500	100.1	81.3	60.8	6.01	3.97	14.6										
	18.0	3.5	8.0	1950	108.1	80.3	60.1	5.92	3.98	16.8										
				2200	104.1	81.1	61.2	5.84	4.07	15.8										
				2500	100.6	82.7	62.1	6.05	4.01	14.9										
70	11.7	1.7	3.9	1950	109.8	83.9	62.9	6.14	4.00	18.1	Operation Not Recommended	1950	58.0	70.5	46.4	85.4	4.35	16.2	10.6	
				2200	105.6	84.7	64.0	6.06	4.10	17.0										
				2500	102.0	86.4	65.0	6.27	4.04	16.1										
	15.0	2.5	5.8	1950	111.1	86.6	65.5	6.18	4.10	18.4										
				2200	106.8	87.4	66.6	6.10	4.20	17.3										
				2500	103.0	89.2	67.7	6.31	4.14	16.4										
	18.0	3.4	7.8	1950	111.9	88.1	66.9	6.22	4.15	18.7										
				2200	107.5	89.0	68.1	6.14	4.25	17.6										
				2500	103.6	90.8	69.1	6.36	4.19	16.7										
80	11.7	1.7	3.8	1950	113.4	91.3	69.5	6.39	4.19	19.7	Operation Not Recommended	1950	58.2	69.1	46.0	85.4	4.77	14.5	12.9	
				2200	108.8	92.2	70.7	6.31	4.29	18.6										
				2500	104.9	94.1	71.8	6.53	4.22	17.5										
	15.0	2.5	5.7	1950	114.8	94.3	72.3	6.44	4.29	20.0										
				2200	110.1	95.2	73.5	6.35	4.40	18.9										
				2500	106.0	97.1	74.7	6.57	4.33	17.9										
	18.0	3.4	7.7	1950	115.6	96.0	73.9	6.48	4.34	20.4										
				2200	110.8	96.9	75.1	6.39	4.45	19.2										
				2500	106.6	98.9	76.3	6.62	4.38	18.2										
90	11.7	1.6	3.8	1950	116.9	98.8	76.2	6.62	4.37	21.2	Operation Not Recommended	1950	58.6	68.9	45.2	84.9	5.25	12.8	15.4	
				2200	112.0	99.7	77.5	6.53	4.48	20.0										
				2500	107.7	101.8	78.7	6.76	4.41	19.0										
	15.0	2.5	5.7	1950	118.4	102.0	79.2	6.67	4.48	21.6										
				2200	113.3	103.0	80.5	6.58	4.59	20.4										
				2500	108.9	105.1	81.8	6.81	4.52	19.3										
	18.0	3.3	7.6	1950	119.3	103.8	80.9	6.71	4.53	22.0										
				2200	114.1	104.8	82.3	6.62	4.64	20.8										
				2500	109.6	107.0	83.6	6.85	4.58	19.7										
100	11.7	1.6	3.7	1950	59.0	64.1	44.1	83.9	5.81	11.0	17.9	Operation Not Recommended	1950	59.0	64.2	44.1	83.5	5.65	11.4	17.1
				2200	60.8	64.6	45.7	85.0	6.00	10.8	18.0									
				2500	63.1	64.6	45.7	86.2	6.34	10.2	18.0									
	15.0	2.4	5.6	1950	59.0	64.2	44.1	83.5	5.65	11.4	17.1									
				2200	60.8	64.7	45.7	84.6	5.84	11.1	17.2									
				2500	63.1	64.7	45.7	85.8	6.17	10.5	17.2									
	18.0	3.3	7.6	1950	59.0	64.2	44.1	83.2	5.58	11.5	16.7									
				2200	60.8	64.7	45.7	84.4	5.77	11.2	16.7									
				2500	63.1	64.7	45.7	85.5	6.10	10.6	16.8									
110	11.7	1.6	3.7	1950	59.7	60.3	42.8	82.3	6.46	9.3	20.7	Operation Not Recommended	1950	59.7	60.4	42.8	81.9	6.29	9.6	19.7
				2200	61.4	60.8	44.3	83.6	6.67	9.1	20.8									
				2500	63.6	60.8	44.3	84.9	7.06	8.6	20.8									
	15.0	2.4	5.6	1950	59.7	60.4	42.8	81.9	6.29	9.6	19.7									
				2200	61.4	60.9	44.3	83.1	6.49	9.4	19.8									
				2500	63.6	60.9	44.3	84.3	6.87	8.9	19.8									
	18.0	3.3	7.5	1950	59.7	60.4	42.8	81.6	6.21	9.7	19.3									
				2200	61.4	60.9	44.3	82.8	6.42	9.5	19.4									
				2500	63.6	60.9	44.3	84.1	6.79	9.0	19.4									
120	11.7	1.6	3.7	1950	61.0	55.7	40.0	80.3	7.23	7.7	23.7	Operation Not Recommended	1950	61.0	55.8	40.0	79.5	6.95	8.0	22.2
				2200	62.6	56.1	41.4	81.6	7.47	7.5	23.8									
				2500	64.7	56.1	41.4	83.1	7.90	7.1	23.9									
	15.0	2.4	5.5	1950	61.0	55.8	40.0	79.5	6.95	8.0	22.2									
				2200	62.6	56.2	41.4	81.0	7.27	7.7	22.7									
				2500	64.7	56.2	41.4	82.5	7.69	7.3	22.8									
	18.0	3.2	7.4	1950	61.0	55.8	40.0	79.5	6.95	8.0	22.2									
				2200	62.6	56.2	41.4	80.7	7.18	7.8	22.3									
				2500	64.7	56.2	41.4	82.2	7.60	7.4	22.3									

NOTE: See page 23 for performance data parameters and guidelines.

ENGINEERING SPECIFICATIONS

ZS Models Performance Tables

Model ZS072, 6 Ton, w/ECM, BPHE Full Load Performance Data

EWT	Flow °F	WPD		BPHE ECM Unit - Heating							BPHE ECM Unit - Cooling														
		PSI	FT	Aiflow CFM	LAT (DB) °F	HC MBtuh	HE MBtuh	Power kW	COP W/W	DH MBtuh	Aiflow CFM	LAT (DB) °F	TC MBtuh	SC MBtuh	HR MBtuh	Power kW	EER Btuh/W	DH MBtuh							
25	18.0	3.8	8.7	2030	93.5	51.5	35.1	4.82	3.13	12.3	Operation Not Recommended														
				2200	91.8	51.8	35.5	4.78	3.18	11.8															
30	11.7	1.8	4.2	2030	94.0	52.7	36.5	4.75	3.25	12.1															
				2200	92.3	53.0	37.0	4.72	3.30	11.6															
	15.0	2.7	6.3	2030	94.8	54.5	38.1	4.79	3.33	12.3															
				2200	93.1	54.8	38.6	4.75	3.38	11.8															
	18.0	3.7	8.5	2030	95.3	55.5	39.0	4.82	3.37	12.4															
				2200	93.5	55.8	39.5	4.79	3.42	11.9															
40	11.7	1.8	4.1	2030	97.5	60.2	43.7	4.85	3.64	12.8								2000	60.5	67.1	42.0	77.0	2.92	22.9	4.3
				2200	95.5	60.6	44.1	4.82	3.68	12.3								2230	62.1	67.4	43.0	77.7	3.03	22.2	4.3
	15.0	2.7	6.2	2030	98.4	62.2	45.5	4.89	3.73	13.0								Operation Not Recommended							
				2200	96.3	62.6	46.0	4.86	3.78	12.5															
	18.0	3.6	8.3	2030	98.9	63.4	46.5	4.93	3.77	13.2															
				2200	96.8	63.7	47.0	4.90	3.82	12.7															
50	11.7	1.8	4.0	2030	100.9	67.7	50.5	5.05	3.93	14.0	2000	59.0	71.5	45.4	82.6	3.24	22.1								6.3
				2200	98.7	68.1	51.0	5.02	3.98	13.4	2230	60.7	71.9	46.5	83.3	3.36	21.4								6.3
	15.0	2.6	6.0	2030	101.9	69.9	52.6	5.09	4.03	14.3	2000	59.0	71.7	45.4	82.4	3.14	22.8	5.8							
				2200	99.6	70.4	53.1	5.06	4.08	13.7	2230	60.7	72.0	46.5	83.1	3.26	22.1	5.8							
	18.0	3.5	8.1	2030	102.5	71.2	53.7	5.13	4.07	14.5	2000	59.0	71.7	45.4	82.2	3.10	23.1	5.6							
				2200	100.2	71.7	54.3	5.10	4.12	13.9	2230	60.7	72.0	46.5	82.9	3.21	22.4	5.6							
60	11.7	1.7	4.0	2030	104.3	75.2	57.1	5.31	4.15	15.6	2000	58.0	72.8	47.6	85.0	3.57	20.4	8.4							
				2200	101.8	75.6	57.6	5.27	4.21	14.9	2230	59.8	73.1	48.7	85.7	3.70	19.8	8.4							
	15.0	2.6	5.9	2030	105.4	77.7	59.4	5.35	4.25	15.9	2000	58.0	72.9	47.6	84.7	3.46	21.1	7.8							
				2200	102.9	78.1	60.0	5.31	4.31	15.2	2230	59.8	73.2	48.7	85.5	3.59	20.4	7.9							
	18.0	3.5	8.0	2030	106.1	79.1	60.7	5.39	4.30	16.1	2000	58.0	72.9	47.6	84.6	3.42	21.3	7.6							
				2200	103.5	79.6	61.3	5.35	4.36	15.4	2230	59.8	73.2	48.7	85.3	3.54	20.7	7.6							
70	11.7	1.7	3.9	2030	107.7	82.6	63.6	5.59	4.33	17.3	2000	57.6	72.3	48.3	85.7	3.93	18.4	10.6							
				2200	105.0	83.1	64.2	5.55	4.39	16.6	2230	59.5	72.6	49.5	86.5	4.08	17.8	10.6							
	15.0	2.5	5.8	2030	108.9	85.4	66.2	5.63	4.44	17.6	2000	57.6	72.4	48.3	85.4	3.82	19.0	10.0							
				2200	106.2	85.9	66.8	5.59	4.50	16.9	2230	59.5	72.7	49.5	86.2	3.96	18.4	10.0							
	18.0	3.4	7.8	2030	109.7	87.0	67.6	5.68	4.49	17.9	2000	57.6	72.4	48.3	85.3	3.77	19.2	9.7							
				2200	106.8	87.5	68.3	5.63	4.55	17.2	2230	59.5	72.7	49.5	86.1	3.90	18.6	9.7							
80	11.7	1.7	3.8	2030	111.1	90.1	70.1	5.85	4.51	18.9	2000	57.8	70.8	47.9	85.7	4.35	16.3	12.9							
				2200	108.2	90.7	70.8	5.81	4.57	18.2	2230	59.6	71.1	49.1	86.5	4.51	15.8	12.9							
	15.0	2.5	5.7	2030	112.5	93.1	73.0	5.90	4.63	19.3	2000	57.8	70.9	47.9	85.3	4.22	16.8	12.2							
				2200	109.4	93.7	73.7	5.86	4.69	18.6	2230	59.6	71.3	49.1	86.2	4.37	16.3	12.2							
	18.0	3.4	7.7	2030	113.3	94.8	74.5	5.95	4.67	19.6	2000	57.8	70.9	47.9	85.2	4.16	17.0	11.9							
				2200	110.2	95.4	75.3	5.90	4.74	18.9	2230	59.6	71.3	49.1	86.0	4.31	16.5	11.9							
90	11.7	1.6	3.8	2030	114.5	97.6	76.9	6.07	4.71	20.4	2000	58.2	68.7	47.1	85.1	4.83	14.2	15.3							
				2200	111.3	98.2	77.6	6.02	4.78	19.7	2230	60.0	69.0	48.2	86.1	5.00	13.8	15.4							
	15.0	2.5	5.7	2030	116.0	100.8	79.9	6.12	4.83	20.8	2000	58.2	68.8	47.1	84.8	4.68	14.7	14.5							
				2200	112.7	101.4	80.7	6.07	4.89	20.0	2230	60.0	69.1	48.2	85.7	4.85	14.2	14.6							
	18.0	3.3	7.6	2030	116.8	102.7	81.6	6.16	4.88	21.1	2000	58.2	68.8	47.1	84.6	4.62	14.9	14.2							
				2200	113.5	103.3	82.4	6.12	4.95	20.3	2230	60.0	69.1	48.2	85.4	4.79	14.4	14.2							
100	11.7	1.6	3.7	Operation Not Recommended							2000	58.7	65.8	46.0	84.2	5.39	12.2	17.9							
											2230	60.4	66.1	47.2	85.1	5.59	11.8	18.0							
	15.0	2.4	5.6								2000	58.7	65.9	46.0	83.7	5.23	12.6	17.0							
											2230	60.4	66.2	47.2	84.7	5.42	12.2	17.1							
	18.0	3.3	7.6								2000	58.7	65.9	46.0	83.5	5.16	12.8	16.6							
											2230	60.4	66.2	47.2	84.4	5.35	12.4	16.7							
110	11.7	1.6	3.7								2000	59.3	62.0	44.6	82.6	6.05	10.2	20.7							
											2230	61.0	62.3	45.7	83.7	6.27	9.9	20.7							
	15.0	2.4	5.6								2000	59.3	62.1	44.6	82.1	5.87	10.6	19.7							
											2230	61.0	62.4	45.7	83.1	6.08	10.3	19.8							
	18.0	3.3	7.5								2000	59.3	62.1	44.6	81.9	5.79	10.7	19.3							
											2230	61.0	62.4	45.7	82.9	6.00	10.4	19.3							
120	11.7	1.6	3.7	2000	60.6	57.3	41.8	80.6	6.83	8.4	23.7														
				2230	62.2	57.6	42.9	81.7	7.08	8.1	23.7														
	15.0	2.4	5.5	2000	60.6	57.4	41.8	80.0	6.63	8.7	22.6														
				2230	62.2	57.7	42.9	81.1	6.87	8.4	22.7														
	18.0	3.2	7.4	2000	60.6	57.4	41.8	79.7	6.54	8.8	22.1														
				2230	62.2	57.7	42.9	80.8	6.77	8.5	22.2														

NOTE: See page 23 for performance data parameters and guidelines.

ZS Models Performance Tables

Model ZS072, 6 Ton, w/PSC, COAX Full Load Performance Data

EWT °F	Flow GPM	WPD		COAX PSC Unit - Heating					COAX PSC Unit - Cooling										
		PSI	FT	Aiffow CFM	LAT (DB) °F	HC MBtuh	HE MBtuh	Power kW	COP W/W	DH MBtuh	Aiffow CFM	LAT (DB) °F	TC MBtuh	SC MBtuh	HR MBtuh	Power kW	EER Btuh/W	DH MBtuh	
25	18.0	14.5	33.5	1950	93.8	50.1	32.8	5.07	2.90	11.1									
				2200	91.2	50.3	33.3	4.98	2.96	10.4									
				2500	88.8	50.7	33.6	5.02	2.96	9.8									
30	9.0	4.6	10.7	1950	94.0	50.5	33.4	5.02	2.95	11.1	Operation Not Recommended								
				2200	91.3	50.6	33.8	4.92	3.01	10.4									
				2500	88.9	51.1	34.2	4.96	3.02	9.8									
	13.5	8.3	19.2	1950	95.0	52.7	35.3	5.10	3.03	11.4									
				2200	92.2	52.8	35.8	5.00	3.10	10.7									
				2500	89.8	53.3	36.1	5.04	3.10	10.0									
	18.0	12.9	29.7	1950	95.6	54.0	36.4	5.15	3.07	11.6									
				2200	92.8	54.1	36.9	5.05	3.14	10.9									
				2500	90.2	54.6	37.3	5.09	3.15	10.2									
40	9.0	4.4	10.1	1950	97.4	57.8	40.0	5.22	3.24	12.1	Operation Not Recommended	1950	59.4	69.8	43.3	82.3	3.66	19.0	7.9
				2200	94.4	58.0	40.5	5.13	3.31	11.4									
				2500	91.7	58.5	40.9	5.16	3.32	10.7									
	13.5	7.9	18.2	1950	98.6	60.3	42.2	5.31	3.33	12.6									
				2200	95.5	60.5	42.7	5.21	3.40	11.8									
				2500	92.6	61.0	43.1	5.25	3.41	11.1									
	18.0	12.2	28.2	1950	99.3	61.8	43.5	5.36	3.38	12.8									
				2200	96.1	61.9	44.0	5.26	3.45	12.0									
				2500	93.2	62.5	44.4	5.30	3.46	11.3									
50	9.0	4.1	9.4	1950	101.0	65.3	46.5	5.30	3.48	13.4	Operation Not Recommended	1950	58.0	73.0	46.3	86.8	4.04	18.1	8.9
				2200	97.5	65.4	47.0	5.40	3.55	12.6									
				2500	94.5	66.0	47.5	5.43	3.56	11.8									
	13.5	7.3	16.8	1950	102.3	68.1	49.0	5.58	3.57	14.0									
				2200	98.7	68.3	49.6	5.48	3.65	13.1									
				2500	95.5	68.9	50.1	5.52	3.66	12.3									
	18.0	11.3	26.1	1950	103.1	69.7	50.5	5.64	3.63	14.3									
				2200	99.4	69.9	51.0	5.54	3.70	13.4									
				2500	96.1	70.6	51.6	5.57	3.71	12.6									
60	9.0	3.8	8.7	1950	104.6	72.9	53.1	5.80	3.68	15.0	Operation Not Recommended	1950	57.5	72.9	47.3	88.0	4.41	16.5	9.8
				2200	100.8	73.1	53.6	5.70	3.76	14.1									
				2500	97.3	73.8	54.2	5.74	3.77	13.2									
	13.5	6.8	15.7	1950	106.1	76.1	55.9	5.90	3.78	15.6									
				2200	102.1	76.3	56.5	5.79	3.86	14.7									
				2500	98.5	77.0	57.1	5.83	3.87	13.8									
	18.0	10.5	24.3	1950	107.0	77.9	57.6	5.95	3.83	16.0									
				2200	102.9	78.1	58.2	5.85	3.92	15.1									
				2500	99.2	78.8	58.7	5.89	3.92	14.2									
70	9.0	3.6	8.2	1950	108.3	80.7	59.8	6.12	3.87	16.6	Operation Not Recommended	1950	57.7	70.9	46.9	87.3	4.81	14.7	11.2
				2200	104.1	80.9	60.4	6.01	3.95	15.6									
				2500	100.2	81.6	61.0	6.05	3.96	14.7									
	13.5	6.4	14.8	1950	110.0	84.2	63.0	6.22	3.97	17.4									
				2200	105.5	84.4	63.6	6.10	4.05	16.4									
				2500	101.6	85.2	64.2	6.15	4.06	15.5									
	18.0	9.9	22.9	1950	110.9	86.2	64.8	6.28	4.03	17.8									
				2200	106.4	86.5	65.4	6.16	4.11	16.8									
				2500	102.3	87.3	66.1	6.20	4.12	15.9									
80	9.0	3.4	7.8	1950	112.1	88.7	66.8	6.41	4.06	18.3	Operation Not Recommended	1950	58.3	67.6	45.7	85.5	5.26	12.9	13.1
				2200	107.4	88.9	67.4	6.29	4.14	17.2									
				2500	103.2	89.7	68.1	6.33	4.15	16.2									
	13.5	6.1	14.0	1950	113.9	92.5	70.3	6.51	4.16	19.2									
				2200	109.0	92.7	70.9	6.39	4.25	18.1									
				2500	104.7	93.6	71.6	6.44	4.26	17.1									
	18.0	9.4	21.7	1950	115.0	94.7	72.3	6.57	4.22	19.7									
				2200	110.0	95.0	73.0	6.45	4.31	18.6									
				2500	105.5	95.9	73.7	6.50	4.32	17.6									
90	9.0	3.2	7.4	1950	116.0	96.8	74.1	6.64	4.27	19.9	Operation Not Recommended	1950	59.0	63.7	44.1	83.3	5.77	11.0	15.4
				2200	110.8	97.0	74.8	6.52	4.36	18.7									
				2500	106.3	97.9	75.5	6.57	4.37	17.7									
	13.5	5.8	13.4	1950	117.9	101.0	78.0	6.75	4.38	20.9									
				2200	112.6	101.3	78.6	6.63	4.48	19.8									
				2500	107.8	102.2	79.4	6.67	4.49	18.7									
	18.0	9.0	20.7	1950	119.1	103.4	80.2	6.82	4.45	21.5									
				2200	113.6	103.7	80.9	6.69	4.54	20.4									
				2500	108.8	104.7	81.7	6.74	4.55	19.2									
100	9.0	3.0	6.8	1950	119.1	103.4	80.2	6.82	4.45	21.5	Operation Not Recommended	1950	59.9	59.5	42.3	81.2	6.37	9.3	17.9
				2200	113.6	103.7	80.9	6.69	4.54	20.4									
				2500	108.8	104.7	81.7	6.74	4.55	19.2									
	13.5	5.4	12.4	1950	116.0	96.8	74.1	6.64	4.27	19.9									
				2200	110.8	97.0	74.8	6.52	4.36	18.7									
				2500	106.3	97.9	75.5	6.57	4.37	17.7									
	18.0	8.4	19.4	1950	117.9	101.0	78.0	6.75	4.38	20.9									
				2200	112.6	101.3	78.6	6.63	4.48	19.8									
				2500	107.8	102.2	79.4	6.67	4.49	18.7									
110	9.0	2.9	6.6	1950	119.1	103.4	80.2	6.82	4.45	21.5	Operation Not Recommended	1950	60.8	55.3	40.5	79.5	7.08	7.8	20.5
				2200	113.6	103.7	80.9	6.69	4.54	20.4									
				2500	108.8	104.7	81.7	6.74	4.55	19.2									
	13.5	5.2	12.0	1950	116.0	96.8	74.1	6.64	4.27	19.9									
				2200	110.8	97.0	74.8	6.52	4.36	18.7									
				2500	106.3	97.9	75.5	6.57	4.37	17.7									
	18.0	8.1	18.7	1950	117.9	101.0	78.0	6.75	4.38	20.9									
				2200	112.6	101.3	78.6	6.63	4.48	19.8									
				2500	107.8	102.2	79.4	6.67	4.49	18.7									
120	9.0	2.8	6.4	1950	119.1	103.4	80.2	6.82	4.45	21.5	Operation Not Recommended	1950	61.6	51.4	38.8	78.4	7.93	6.5	23.3
				2200	113.6	103.7	80.9	6.69	4.54	20.4									
				2500	108.8	104.7	81.7	6.74	4.55	19.2									
	13.5	5.0	11.6	1950	116.0	96.8	74.1	6.64	4.27	19.9									
				2200	110.8	97.0	74.8	6.52	4.36	18.7									
				2500	106.3	97.9	75.5	6.57	4.37	17.7									
	18.0	7.8	18.1	1950	117.9	101.0	78.0	6.75	4.38	20.9									
				2200	112.6	101.3	78.6	6.63	4.48	19.8									
				2500	107.8	102.2	79.4	6.67	4.49	18.7									

NOTE: See page 23 for performance data parameters and guidelines.

ENGINEERING SPECIFICATIONS

ZS Models Performance Tables

Model ZS072, 6 Ton, w/ECM, COAX Full Load Performance Data

EWT	Flow °F	WPD		COAX ECM Unit - Heating							COAX ECM Unit - Cooling																					
		GPM	PSI	FT	Aiflow CFM	LAT (DB) °F	HC MBtuh	HE MBtuh	Power kW	COP W/W	DH MBtuh	Aiflow CFM	LAT (DB) °F	TC MBtuh	SC MBtuh	HR MBtuh	Power kW	EER Btuh/W	DH MBtuh													
25	18.0	14.5	33.5	2030	92.2	48.7	33.0	4.60	3.11	10.9	Operation Not Recommended																					
				2200	90.6	48.8	33.3	4.56	3.14	10.4																						
30	9.0	4.6	10.7	2030	92.4	49.1	33.6	4.54	3.17	10.8																						
				2200	90.7	49.2	33.9	4.50	3.21	10.4																						
	13.5	8.3	19.2	2030	93.4	51.3	35.5	4.62	3.25	11.2																						
				2200	91.6	51.4	35.8	4.58	3.29	10.7																						
	18.0	12.9	29.7	2030	94.0	52.6	36.6	4.67	3.30	11.3																						
				2200	92.2	52.7	36.9	4.63	3.34	10.9																						
40	9.0	4.4	10.1	2030	95.7	56.4	40.2	4.75	3.48	11.9								2000	59.0	71.6	45.3	82.6	3.23	22.1	7.9							
				2200	93.8	56.5	40.5	4.70	3.52	11.4								2230	60.7	71.9	46.6	83.3	3.35	21.5	8.2							
	13.5	7.9	18.2	2030	96.9	58.9	42.4	4.83	3.58	12.3								Operation Not Recommended														
				2200	94.8	59.0	42.7	4.78	3.62	11.8																						
	18.0	12.2	28.2	2030	97.5	60.4	43.7	4.88	3.63	12.5																						
				2200	95.5	60.5	44.0	4.83	3.67	12.0																						
50	9.0	4.1	9.4	2030	99.1	63.9	46.7	5.02	3.73	13.2															2000	57.6	74.8	48.4	87.1	3.61	20.8	8.9
				2200	96.9	64.0	47.0	4.97	3.77	12.6															2230	59.3	75.2	49.8	87.9	3.73	20.1	9.2
	13.5	7.3	16.8	2030	100.4	66.7	49.3	5.10	3.83	13.7								2000	57.6	75.5	48.4	87.1	3.39	22.3	8.0							
				2200	98.1	66.8	49.6	5.06	3.87	13.1								2230	59.3	75.8	49.8	87.8	3.51	21.6	8.3							
	18.0	11.3	26.1	2030	101.2	68.3	50.7	5.16	3.88	14.0	2000	57.6	75.5	48.4	86.8	3.30	22.9	7.6														
				2200	98.8	68.5	51.0	5.11	3.93	13.4	2230	59.3	75.9	49.8	87.5	3.41	22.2	7.9														
60	9.0	3.8	8.7	2030	102.6	71.5	53.3	5.32	3.94	14.7	2000	57.2	74.8	49.3	88.4	3.98	18.8	9.8														
				2200	100.1	71.6	53.6	5.27	3.98	14.1	2230	58.9	75.1	50.8	89.2	4.12	18.2	10.1														
	13.5	6.8	15.7	2030	104.0	74.6	56.2	5.41	4.04	15.3	2000	57.1	75.5	49.4	88.2	3.74	20.2	8.8														
				2200	101.5	74.8	56.5	5.36	4.09	14.7	2230	58.9	75.8	50.8	89.0	3.87	19.6	9.0														
	18.0	10.5	24.3	2030	104.9	76.5	57.8	5.47	4.10	15.7	2000	57.1	75.5	49.4	87.9	3.64	20.7	8.3														
				2200	102.3	76.6	58.2	5.42	4.15	15.1	2230	58.9	75.8	50.8	88.7	3.77	20.1	8.5														
70	9.0	3.6	8.2	2030	106.1	79.2	60.0	5.63	4.13	16.3	2000	57.3	72.7	49.0	87.6	4.38	16.6	11.2														
				2200	103.4	79.4	60.4	5.57	4.18	15.6	2230	59.1	73.0	50.4	88.5	4.53	16.1	11.4														
	13.5	6.4	14.8	2030	107.8	82.8	63.2	5.73	4.24	17.1	2000	57.3	73.4	49.0	87.4	4.12	17.8	10.0														
				2200	104.9	82.9	63.6	5.67	4.29	16.4	2230	59.1	73.7	50.4	88.2	4.26	17.3	10.2														
	18.0	9.9	22.9	2030	108.7	84.8	65.1	5.79	4.30	17.5	2000	57.3	73.4	49.0	87.1	4.01	18.3	9.5														
				2200	105.8	85.0	65.4	5.73	4.35	16.8	2230	59.1	73.7	50.4	87.9	4.15	17.8	9.7														
80	9.0	3.4	7.8	2030	109.8	87.2	67.0	5.91	4.32	17.9	2000	57.9	69.4	47.8	85.9	4.83	14.4	13.1														
				2200	106.8	87.4	67.4	5.86	4.37	17.2	2230	59.6	69.7	49.2	86.8	5.00	14.0	13.4														
	13.5	6.1	14.0	2030	111.5	91.1	70.5	6.01	4.44	18.8	2000	57.9	70.0	47.8	85.5	4.54	15.4	11.8														
				2200	108.4	91.3	70.9	5.96	4.49	18.1	2230	59.6	70.4	49.2	86.4	4.70	15.0	12.0														
	18.0	9.4	21.7	2030	112.6	93.3	72.6	6.08	4.50	19.3	2000	57.9	70.1	47.8	85.1	4.42	15.9	11.2														
				2200	109.4	93.5	73.0	6.02	4.55	18.6	2230	59.6	70.4	49.2	86.0	4.57	15.4	11.4														
90	9.0	3.2	7.4	2030	113.5	95.3	74.3	6.14	4.55	19.5	2000	58.6	65.5	46.1	83.7	5.35	12.3	15.5														
				2200	110.2	95.5	74.7	6.09	4.60	18.7	2230	60.3	65.8	47.5	84.7	5.53	11.9	15.7														
	13.5	5.8	13.4	2030	115.4	99.5	78.2	6.25	4.67	20.5	2000	58.6	66.1	46.2	83.2	5.03	13.1	14.0														
				2200	112.0	99.7	78.6	6.19	4.72	19.8	2230	60.3	66.4	47.5	84.1	5.20	12.8	14.2														
	18.0	9.0	20.7	2030	116.5	102.0	80.4	6.32	4.73	21.1	2000	58.6	66.1	46.2	82.8	4.89	13.5	13.3														
				2200	113.0	102.2	80.9	6.26	4.79	20.4	2230	60.3	66.4	47.5	83.7	5.06	13.1	13.5														
100	9.0	3.0	6.8	Operation Not Recommended							2000	59.5	61.3	44.3	81.6	5.95	10.3	18.0														
											2230	61.1	61.6	45.6	82.6	6.16	10.0	18.2														
	13.5	5.4	12.4								2000	59.5	61.9	44.3	81.0	5.60	11.0	16.3														
											2230	61.1	62.1	45.6	81.9	5.79	10.7	16.6														
	18.0	8.4	19.4								2000	59.5	61.9	44.3	80.5	5.45	11.4	15.6														
											2230	61.1	62.2	45.6	81.4	5.64	11.0	15.8														
110	9.0	2.9	6.6								Operation Not Recommended							2000	60.4	57.1	42.4	79.9	6.67	8.6	20.5							
																		2230	61.9	57.3	43.7	80.9	6.91	8.3	20.8							
	13.5	5.2	12.0															2000	60.3	57.6	42.5	79.0	6.28	9.2	18.7							
																		2230	61.9	57.9	43.7	80.0	6.50	8.9	19.0							
	18.0	8.1	18.7															2000	60.3	57.6	42.5	78.5	6.11	9.4	17.9							
																		2230	61.9	57.9	43.7	79.4	6.32	9.2	18.1							
120	9.0	2.8	6.4															Operation Not Recommended							2000	61.1	53.1	40.8	78.8	7.53	7.1	23.3
																									2230	62.6	53.4	41.9	79.9	7.79	6.8	23.6
	13.5	5.0	11.6																						2000	61.1	53.6	40.8	77.8	7.08	7.6	21.4
																									2230	62.6	53.9	42.0	78.9	7.33	7.4	21.6
	18.0	7.8	18.1																						2000	61.1	53.6	40.8	77.1	6.89	7.8	20.4
																									2230	62.6	53.9	42.0	78.2	7.13	7.6	20.7

NOTE: See page 23 for performance data parameters and guidelines.

Unit Setup, Physical Data, and Dimensional Data

ZT Unit Electrical Data: ZT024-048

Model	Voltage Code/ HWG Option	60 Hz Power		Compressor		Fan Motor FLA	HWG Pump FLA	Ext. Loop Pump FLA	Total Unit FLA	Min Circuit AMPS	Max Brkr HACR
		Volts	Phase	LRA	RLA						
ZT024	00	208/230	1	58.3	11.7	3.9	0.0	0.0	15.6	18.5	30
	01	208/230	1	58.3	11.7	3.9	0.5	0.0	16.1	19.0	30
	10	208/230	1	58.3	11.7	3.9	0.0	4.0	19.6	22.5	30
	11	208/230	1	58.3	11.7	3.9	0.5	4.0	20.1	23.0	35
	20	208/230	3	55.4	6.5	3.9	0.0	0.0	10.4	12.0	15
	21	208/230	3	55.4	6.5	3.9	0.5	0.0	10.9	12.5	15
	30/35	460	3	28.0	3.5	3.3	0.0	0.0	6.8	7.7	15
	A	265	1	54.0	9.1	3.3	0.0	0.0	12.4	14.7	20
ZT030	00	208/230	1	73.0	13.1	3.9	0.0	0.0	17.0	20.3	30
	01	208/230	1	73.0	13.1	3.9	0.5	0.0	17.5	20.8	30
	10	208/230	1	73.0	13.1	3.9	0.0	4.0	21.0	24.3	35
	11	208/230	1	73.0	13.1	3.9	0.5	4.0	21.5	24.8	35
	20	208/230	3	58.0	8.7	3.9	0.0	0.0	12.6	14.8	20
	21	208/230	3	58.0	8.7	3.9	0.5	0.0	13.1	15.3	20
	30/35	460	3	28.0	4.3	3.3	0.0	0.0	7.6	8.7	15
	A	265	1	60.0	10.2	3.3	0.0	0.0	13.5	16.1	25
ZT036	00	208/230	1	83.0	15.6	3.9	0.0	0.0	19.5	23.4	35
	01	208/230	1	83.0	15.6	3.9	0.5	0.0	20.0	23.9	40
	10	208/230	1	83.0	15.6	3.9	0.0	4.0	23.5	27.4	40
	11	208/230	1	83.0	15.6	3.9	0.5	4.0	24.0	27.9	40
	20	208/230	3	73.0	11.6	3.9	0.0	0.0	15.5	18.4	30
	21	208/230	3	73.0	11.6	3.9	0.5	0.0	16.0	18.9	30
	30/35	460	3	38.0	5.7	3.3	0.0	0.0	9.0	10.4	15
	A	265	1	72.0	13.0	3.3	0.0	0.0	16.3	19.6	30
ZT042	00	208/230	1	96.0	17.9	5.9	0.0	0.0	23.8	28.3	45
	01	208/230	1	96.0	17.9	5.9	0.5	0.0	24.3	28.8	45
	10	208/230	1	96.0	17.9	5.9	0.0	5.5	29.3	33.8	50
	11	208/230	1	96.0	17.9	5.9	0.5	5.5	29.8	34.3	50
	20	208/230	3	88.0	14.2	5.9	0.0	0.0	20.1	23.7	35
	21	208/230	3	88.0	14.2	5.9	0.5	0.0	20.6	24.2	35
	30/35	460	3	44.0	6.2	4.8	0.0	0.0	11.0	12.6	15
ZT048	00	208/230	1	104.0	21.2	5.9	0.0	0.0	27.1	32.4	50
	01	208/230	1	104.0	21.2	5.9	0.5	0.0	27.6	32.9	50
	10	208/230	1	104.0	21.2	5.9	0.0	5.5	32.6	37.9	50
	11	208/230	1	104.0	21.2	5.9	0.5	5.5	33.1	38.4	60
	20	208/230	3	83.1	14.0	5.9	0.0	0.0	19.9	23.4	35
	21	208/230	3	83.1	14.0	5.9	0.5	0.0	20.4	23.9	35
	30/35	460	3	41.0	6.4	4.8	0.0	0.0	11.2	12.8	15
	A	265	1	109.7	16.0	4.8	0.0	0.0	20.8	24.8	40

Notes:

1. All line and low voltage wiring must adhere to the National Electrical Code and local codes, whichever is the most stringent.
 2. In determining the correct supply wire size and maximum length, reference NFPA 70, Section 310. If the calculation is close to the maximum allowable ampacity of a particular wire size, use the next size up. This will ensure that no adverse effects occur, such as light dimming and/or shortened compressor life.
 3. Min/Max Voltage: 208/230/60 = 187-252, 460/60 = 432-504, 265/60 = 249-291
 4. See Wiring Diagrams for proper 460V power.
- *The external loop pump FLA is based on a maximum of three UP26-116F-230V pumps (1/2hp) for 042-072 and two pumps for 024-036.

ENGINEERING SPECIFICATIONS

Unit Setup, Physical Data, and Dimensional Data

ZT Unit Electrical Data: ZT060-072

Model	Voltage Code/ HWG Option	60 Hz Power		Compressor		Fan Motor FLA	HWG Pump FLA	Ext. Loop Pump FLA	Total Unit FLA	Min Circuit AMPS	Max Brkr HACR
		Volts	Phase	LRA	RLA						
ZT060	00	208/230	1	152.9	27.1	7.4	0.0	0.0	34.5	41.3	60
	01	208/230	1	152.9	27.1	7.4	0.5	0.0	35.0	41.8	60
	10	208/230	1	152.9	27.1	7.4	0.0	5.5	40.0	46.8	70
	11	208/230	1	152.9	27.1	7.4	0.5	5.5	40.5	47.3	70
	20	208/230	3	110.0	16.5	7.4	0.0	0.0	23.9	28.0	45
	21	208/230	3	110.0	16.5	7.4	0.5	0.0	24.4	28.5	45
	30/35	460	3	52.0	7.2	6.0	0.0	0.0	13.2	15.0	20
A	265	1	130.0	22.4	6.0	0.0	0.0	28.4	34.0	50	
ZT072	00	208/230	1	179.2	29.7	7.4	0.0	0.0	37.1	44.5	70
	01	208/230	1	179.2	29.7	7.4	0.5	0.0	37.6	45.0	70
	10	208/230	1	179.2	29.7	7.4	0.0	5.5	42.6	50.0	80
	11	208/230	1	179.2	29.7	7.4	0.5	5.5	43.1	50.5	80
	20	208/230	3	136.0	17.6	7.4	0.0	0.0	25.0	29.4	45
	21	208/230	3	136.0	17.6	7.4	0.5	0.0	25.5	29.9	45
	30/35	460	3	66.1	8.5	6.0	0.0	0.0	14.5	16.6	25

Notes:

1. All line and low voltage wiring must adhere to the National Electrical Code and local codes, whichever is the most stringent.
 2. In determining the correct supply wire size and maximum length, reference NFPA 70, Section 310. If the calculation is close to the maximum allowable ampacity of a particular wire size, use the next size up. This will ensure that no adverse effects occur, such as light dimming and/or shortened compressor life.
 3. Min/Max Voltage: 208/230/60 = 187-252, 460/60 = 432-504, 265/60 = 249-291
 4. See Wiring Diagrams for proper 460V power.
- *The external loop pump FLA is based on a maximum of three UP26-116F-230V pumps (1/2hp) for 042-072 and two pumps for 024-036.

Unit Setup, Physical Data, and Dimensional Data

ZS - ECM Unit Electrical Data

Model	Voltage Code/ HWG Option	60 Hz Power		Compressor		Fan Motor FLA	HWG Pump FLA	Ext. Loop Pump FLA	Total Unit FLA	Min Circuit AMPS	Max Brkr HACR
		Volts	Phase	LRA	RLA						
ZS015	00	208/230	1	26.0	5.5	3.9	0.0	0.0	9.4	10.8	15
	01	208/230	1	26.0	5.5	3.9	0.5	0.0	9.9	11.3	15
	10	208/230	1	26.0	5.5	3.9	0.0	4.0	13.4	14.8	20
	11	208/230	1	26.0	5.5	3.9	0.5	4.0	13.9	15.3	20
	A	265	1	28.0	5.0	3.3	0.0	0.0	8.3	9.6	15
ZS017	00	208/230	1	33.0	6.6	3.9	0.0	0.0	10.5	12.2	15
	01	208/230	1	33.0	6.6	3.9	0.5	0.0	11.0	12.7	15
	10	208/230	1	33.0	6.6	3.9	0.0	4.0	14.5	16.2	20
	11	208/230	1	33.0	6.6	3.9	0.5	4.0	15.0	16.7	20
	A	265	1	28.0	5.6	3.3	0.0	0.0	8.9	10.3	15
ZS018	00	208/230	1	48.0	9.0	3.9	0.0	0.0	12.9	15.2	20
	01	208/230	1	48.0	9.0	3.9	0.5	0.0	13.4	15.7	25
	10	208/230	1	48.0	9.0	3.9	0.0	4.0	16.9	19.2	25
	11	208/230	1	48.0	9.0	3.9	0.5	4.0	17.4	19.7	25
	A	265	1	43.0	7.1	3.3	0.0	0.0	10.4	12.2	15
ZS024	00	208/230	1	58.3	13.5	3.9	0.0	0.0	17.4	20.8	30
	01	208/230	1	58.3	13.5	3.9	0.5	0.0	17.9	21.3	35
	10	208/230	1	58.3	13.5	3.9	0.0	4.0	21.4	24.8	35
	11	208/230	1	58.3	13.5	3.9	0.5	4.0	21.9	25.3	35
	20	208/230	3	55.4	7.1	3.9	0.0	0.0	11.0	12.8	20
	21	208/230	3	55.4	7.1	3.9	0.5	0.0	11.5	13.3	20
	30/35	460	3	28.0	3.5	3.3	0.0	0.0	6.8	7.7	15
	A	265	1	54.0	9.0	3.3	0.0	0.0	12.3	14.6	20
ZS030	00	208/230	1	64.0	12.8	3.9	0.0	0.0	16.7	19.9	30
	01	208/230	1	64.0	12.8	3.9	0.5	0.0	17.2	20.4	30
	10	208/230	1	64.0	12.8	3.9	0.0	4.0	20.7	23.9	35
	11	208/230	1	64.0	12.8	3.9	0.5	4.0	21.2	24.4	35
	20	208/230	3	58.0	8.3	3.9	0.0	0.0	12.2	14.3	20
	21	208/230	3	58.0	8.3	3.9	0.5	0.0	12.7	14.8	20
	30/35	460	3	28.0	5.1	3.3	0.0	0.0	8.4	9.7	15
	A	265	1	60.0	10.9	3.3	0.0	0.0	14.2	16.9	25
ZS036	00	208/230	1	79.0	16.7	3.9	0.0	0.0	20.6	24.8	40
	01	208/230	1	79.0	16.7	3.9	0.5	0.0	21.1	25.3	40
	10	208/230	1	79.0	16.7	3.9	0.0	4.0	24.6	28.8	45
	11	208/230	1	79.0	16.7	3.9	0.5	4.0	25.1	29.3	45
	20	208/230	3	73.0	10.4	3.9	0.0	0.0	14.3	16.9	25
	21	208/230	3	73.0	10.4	3.9	0.5	0.0	14.8	17.4	25
	30/35	460	3	38.0	5.8	3.3	0.0	0.0	9.1	10.6	15
	A	265	1	72.0	13.5	3.3	0.0	0.0	16.8	20.2	30

Notes:

1. All line and low voltage wiring must adhere to the National Electrical Code and local codes, whichever is the most stringent.
 2. In determining the correct supply wire size and maximum length, reference NFPA 70, Section 310. If the calculation is close to the maximum allowable ampacity of a particular wire size, use the next size up. This will ensure that no adverse effects occur, such as light dimming and/or shortened compressor life.
 3. Min/Max Voltage: 208/230/60 = 187-252, 460/60 = 432-504, 265/60 = 249-291
 4. See Wiring Diagrams for proper 460V power.
- *The external loop pump FLA is based on a maximum of three UP26-116F-230V pumps (1/2hp) for 042-072 and two pumps for 015-036.

ENGINEERING SPECIFICATIONS

Unit Setup, Physical Data, and Dimensional Data

ZS - ECM Unit Electrical Data

Model	Voltage Code/ HWG Option	60 Hz Power		Compressor		Fan Motor FLA	HWG Pump FLA	Ext. Loop Pump FLA	Total Unit FLA	Min Circuit AMPS	Max Brkr HACR
		Volts	Phase	LRA	RLA						
ZS042	00	208/230	1	109.0	16.7	5.9	0.0	0.0	22.6	26.8	40
	01	208/230	1	109.0	16.7	5.9	0.5	0.0	23.1	27.3	40
	10	208/230	1	109.0	16.7	5.9	0.0	5.5	28.1	32.3	45
	11	208/230	1	109.0	16.7	5.9	0.5	5.5	28.6	32.8	45
	20	208/230	3	88.0	11.2	5.9	0.0	0.0	17.1	19.9	30
	21	208/230	3	88.0	11.2	5.9	0.5	0.0	17.6	20.4	30
	30/35	460	3	44.0	5.6	4.8	0.0	0.0	10.4	11.8	15
ZS048	00	208/230	1	130.0	19.6	5.9	0.0	0.0	25.5	30.4	50
	01	208/230	1	130.0	19.6	5.9	0.5	0.0	26.0	30.9	50
	10	208/230	1	130.0	19.6	5.9	0.0	5.5	31.0	35.9	50
	11	208/230	1	130.0	19.6	5.9	0.5	5.5	31.5	36.4	50
	20	208/230	3	83.1	13.7	5.9	0.0	0.0	19.6	23.0	35
	21	208/230	3	83.1	13.7	5.9	0.5	0.0	20.1	23.5	35
	30/35	460	3	41.0	6.2	4.8	0.0	0.0	11.0	12.6	15
ZS060	00	208/230	1	144.2	24.4	7.4	0.0	0.0	31.8	37.9	60
	01	208/230	1	144.2	24.4	7.4	0.5	0.0	32.3	38.4	60
	10	208/230	1	144.2	24.4	7.4	0.0	5.5	37.3	43.4	60
	11	208/230	1	144.2	24.4	7.4	0.5	5.5	37.8	43.9	60
	20	208/230	3	110.0	16.0	7.4	0.0	0.0	23.4	27.4	40
	21	208/230	3	110.0	16.0	7.4	0.5	0.0	23.9	27.9	40
	30/35	460	3	52.0	7.8	6.0	0.0	0.0	13.8	15.8	20
ZS072	00	208/230	1	178.0	30.8	7.4	0.0	0.0	38.2	45.9	70
	01	208/230	1	178.0	30.8	7.4	0.5	0.0	38.7	46.4	70
	10	208/230	1	178.0	30.8	7.4	0.0	5.5	43.7	51.4	80
	11	208/230	1	178.0	30.8	7.4	0.5	5.5	44.2	51.9	80
	20	208/230	3	136.0	19.6	7.4	0.0	0.0	27.0	31.9	50
	21	208/230	3	136.0	19.6	7.4	0.5	0.0	27.5	32.4	50
	30/35	460	3	66.1	8.2	6.0	0.0	0.0	14.2	16.3	20

Notes:

1. All line and low voltage wiring must adhere to the National Electrical Code and local codes, whichever is the most stringent.
 2. In determining the correct supply wire size and maximum length, reference NFPA 70, Section 310. If the calculation is close to the maximum allowable ampacity of a particular wire size, use the next size up. This will ensure that no adverse effects occur, such as light dimming and/or shortened compressor life.
 3. Min/Max Voltage: 208/230/60 = 187-252, 460/60 = 432-504, 265/60 = 249-291
 4. See Wiring Diagrams for proper 460V power.
- *The external loop pump FLA is based on a maximum of three UP26-116F-230V pumps (1/2hp) for 042-072 and two pumps for 015-036.

Unit Setup, Physical Data, and Dimensional Data

ZS - PSC Unit Electrical Data

Model	Voltage Code/ HWG Option	60 Hz Power		Compressor		Fan Motor FLA	HWG Pump FLA	Ext. Loop Pump FLA	Total Unit FLA	Min Circuit AMPS	Max Brkr HACR
		Volts	Phase	LRA	RLA						
ZS006	00	208/230	1	17.7	2.5	0.8	0.0	0.0	3.3	3.9	15
	10	208/230	1	17.7	2.5	0.8	0.0	4.0	7.3	7.9	15
	A0	265	1	13.5	2.1	0.7	0.0	0.0	2.8	3.3	15
	90	115	1	36.2	5.0	1.5	0.0	0.0	6.5	7.8	15
ZS009	00	208/230	1	22.2	3.6	0.8	0.0	0.0	4.4	5.3	15
	10	208/230	1	22.2	3.6	0.8	0.0	4.0	8.4	9.3	15
	A0	265	1	17.5	3.4	0.7	0.0	0.0	4.1	5.0	15
	90	115	1	45.6	7.7	1.5	0.0	0.0	9.2	11.1	15
ZS012	00	208/230	1	32.5	5.6	0.8	0.0	0.0	6.4	7.8	15
	10	208/230	1	32.5	5.6	0.8	0.0	4.0	10.4	11.8	15
	A0	265	1	22.2	3.8	0.7	0.0	0.0	4.5	5.5	15
	90	115	1	63.0	11.8	1.5	0.0	0.0	13.3	16.3	25
ZS015	00	208/230	1	26.0	5.5	1.5	0.0	0.0	7.0	8.4	15
	01	208/230	1	26.0	5.5	1.5	0.5	0.0	7.5	8.9	15
	10	208/230	1	26.0	5.5	1.5	0.0	4.0	11.0	12.4	15
	11	208/230	1	26.0	5.5	1.5	0.5	4.0	11.5	12.9	15
	A	265	1	28.0	5.0	2.0	0.0	0.0	7.0	8.3	15
ZS017	00	208/230	1	33.0	6.6	1.5	0.0	0.0	8.1	9.8	15
	01	208/230	1	33.0	6.6	1.5	0.5	0.0	8.6	10.3	15
	10	208/230	1	33.0	6.6	1.5	0.0	4.0	12.1	13.8	20
	11	208/230	1	33.0	6.6	1.5	0.5	4.0	12.6	14.3	20
	A	265	1	28.0	5.6	2.0	0.0	0.0	7.6	9.0	15
ZS018	00	208/230	1	48.0	9.0	1.5	0.0	0.0	10.5	12.8	20
	01	208/230	1	48.0	9.0	1.5	0.5	0.0	11.0	13.3	20
	10	208/230	1	48.0	9.0	1.5	0.0	4.0	14.5	16.8	25
	11	208/230	1	48.0	9.0	1.5	0.5	4.0	15.0	17.3	25
	A	265	1	43.0	7.1	2.0	0.0	0.0	9.1	10.9	15
ZS024	00	208/230	1	58.3	13.5	1.9	0.0	0.0	15.4	18.8	30
	01	208/230	1	58.3	13.5	1.9	0.5	0.0	15.9	19.3	30
	10	208/230	1	58.3	13.5	1.9	0.0	4.0	19.4	22.8	35
	11	208/230	1	58.3	13.5	1.9	0.5	4.0	19.9	23.3	35
	20	208/230	3	55.4	7.1	1.9	0.0	0.0	9.0	10.8	15
	21	208/230	3	55.4	7.1	1.9	0.5	0.0	9.5	11.3	15
	30/35	460	3	28.0	3.5	0.9	0.0	0.0	4.4	5.3	15
	40/45	575	3	24.5	2.9	1.1	0.0	0.0	4.0	4.7	15
A	265	1	54.0	9.0	2.2	0.0	0.0	11.2	13.5	20	
ZS030	00	208/230	1	64.0	12.8	1.9	0.0	0.0	14.7	17.9	30
	01	208/230	1	64.0	12.8	1.9	0.5	0.0	15.2	18.4	30
	10	208/230	1	64.0	12.8	1.9	0.0	4.0	18.7	21.9	35
	11	208/230	1	64.0	12.8	1.9	0.5	4.0	19.2	22.4	35
	20	208/230	3	58.0	8.3	1.9	0.0	0.0	10.2	12.3	20
	21	208/230	3	58.0	8.3	1.9	0.5	0.0	10.7	12.8	20
	30/35	460	3	28.0	5.1	0.9	0.0	0.0	6.0	7.3	15
	40/45	575	3	23.7	3.3	1.1	0.0	0.0	4.4	5.2	15
	A	265	1	60.0	10.9	2.2	0.0	0.0	13.1	15.8	25

Notes:

1. All line and low voltage wiring must adhere to the National Electrical Code and local codes, whichever is the most stringent.
 2. In determining the correct supply wire size and maximum length, reference NFPA 70, Section 310. If the calculation is close to the maximum allowable ampacity of a particular wire size, use the next size up. This will ensure that no adverse effects occur, such as light dimming and/or shortened compressor life.
 3. Min/Max Voltage: 208/230/60 = 187-252, 460/60 = 432-504, 265/60 = 249-291, 115/60 = 108/126
 4. See Wiring Diagrams for proper 460V power.
- *The external loop pump FLA is based on a maximum of three UP26-116F-230V pumps (1/2hp) for 048-072 and two pumps for 006-030.

ENGINEERING SPECIFICATIONS

Unit Setup, Physical Data, and Dimensional Data

ZS - PSC Unit Electrical Data

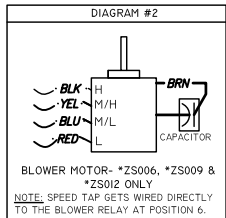
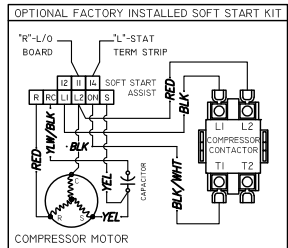
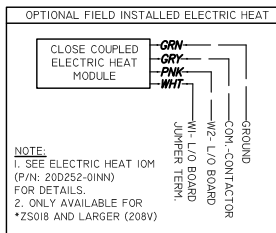
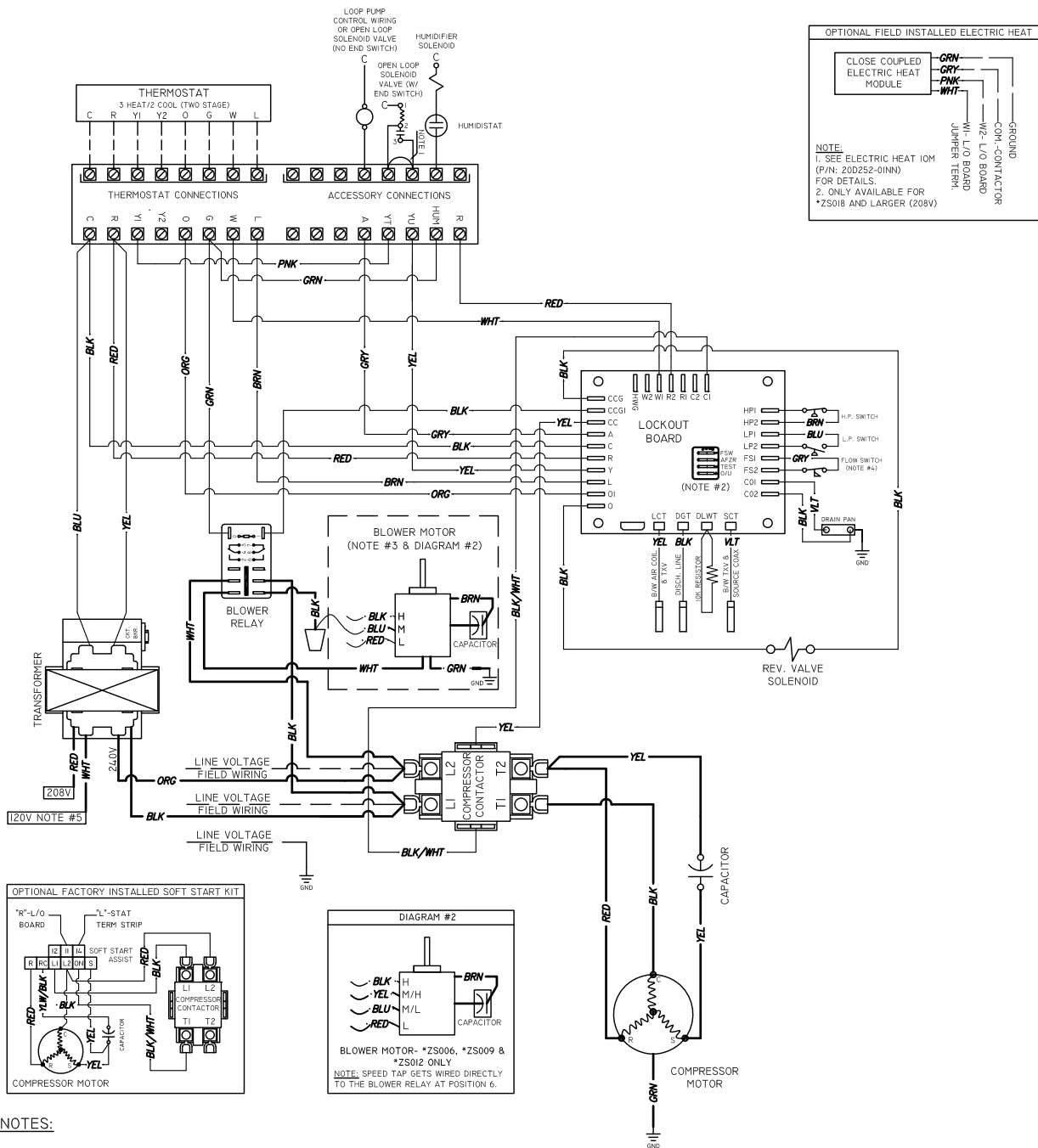
Model	Voltage Code/ HWG Option	60 Hz Power		Compressor		Fan Motor FLA	HWG Pump FLA	Ext. Loop Pump FLA	Total Unit FLA	Min Circuit AMPS	Max Brkr HACR
		Volts	Phase	LRA	RLA						
ZS036	00	208/230	1	79.0	16.7	1.9	0.0	0.0	18.6	22.8	35
	01	208/230	1	79.0	16.7	1.9	0.5	0.0	19.1	23.3	40
	10	208/230	1	79.0	16.7	1.9	0.0	4.0	22.6	26.8	40
	11	208/230	1	79.0	16.7	1.9	0.5	4.0	23.1	27.3	40
	20	208/230	3	73.0	10.4	1.9	0.0	0.0	12.3	14.9	25
	21	208/230	3	73.0	10.4	1.9	0.5	0.0	12.8	15.4	25
	30/35	460	3	38.0	5.8	0.9	0.0	0.0	6.7	8.2	15
	40/45	575	3	36.5	3.8	1.1	0.0	0.0	4.9	5.9	15
A	265	1	72.0	13.5	2.2	0.0	0.0	15.7	19.1	30	
ZS042	00	208/230	1	109.0	16.7	2.9	0.0	0.0	19.6	23.8	40
	01	208/230	1	109.0	16.7	2.9	0.5	0.0	20.1	24.3	40
	10	208/230	1	109.0	16.7	2.9	0.0	5.5	25.1	29.3	45
	11	208/230	1	109.0	16.7	2.9	0.5	5.5	25.6	29.8	45
	20	208/230	3	88.0	11.2	2.9	0.0	0.0	14.1	16.9	25
	21	208/230	3	88.0	11.2	2.9	0.5	0.0	14.6	17.4	25
	30/35	460	3	44.0	5.6	1.2	0.0	0.0	6.8	8.2	15
	40/45	575	3	34.0	3.8	1.0	0.0	0.0	4.8	5.8	15
ZS048	00	208/230	1	130.0	19.6	4.0	0.0	0.0	23.6	28.5	45
	01	208/230	1	130.0	19.6	4.0	0.5	0.0	24.1	29.0	45
	10	208/230	1	130.0	19.6	4.0	0.0	5.5	29.1	34.0	50
	11	208/230	1	130.0	19.6	4.0	0.5	5.5	29.6	34.5	50
	20	208/230	3	83.1	13.7	4.0	0.0	0.0	17.7	21.1	35
	21	208/230	3	83.1	13.7	4.0	0.5	0.0	18.2	21.6	35
	30/35	460	3	41.0	6.2	2.1	0.0	0.0	8.3	9.9	15
	40/45	575	3	33.0	4.8	3.1	0.0	0.0	7.9	9.1	15
ZS060	00	208/230	1	144.2	24.4	5.6	0.0	0.0	30.0	36.1	60
	01	208/230	1	144.2	24.4	5.6	0.5	0.0	30.5	36.6	60
	10	208/230	1	144.2	24.4	5.6	0.0	5.5	35.5	41.6	60
	11	208/230	1	144.2	24.4	5.6	0.5	5.5	36.0	42.1	60
	20	208/230	3	110.0	16.0	5.6	0.0	0.0	21.6	25.6	40
	21	208/230	3	110.0	16.0	5.6	0.5	0.0	22.1	26.1	40
	30/35	460	3	52.0	7.8	2.6	0.0	0.0	10.4	12.4	20
	40/45	575	3	38.9	5.7	2.1	0.0	0.0	7.8	9.2	15
ZS072	00	208/230	1	178.0	30.8	5.6	0.0	0.0	36.4	44.1	70
	01	208/230	1	178.0	30.8	5.6	0.5	0.0	36.9	44.6	70
	10	208/230	1	178.0	30.8	5.6	0.0	5.5	41.9	49.6	80
	11	208/230	1	178.0	30.8	5.6	0.5	5.5	42.4	50.1	80
	20	208/230	3	136.0	19.6	5.6	0.0	0.0	25.2	30.1	50
	21	208/230	3	136.0	19.6	5.6	0.5	0.0	25.7	30.6	50
	30/35	460	3	66.1	8.2	2.6	0.0	0.0	10.8	12.9	20
	40/45	575	3	55.3	6.6	2.1	0.0	0.0	8.7	10.4	15

Notes:

1. All line and low voltage wiring must adhere to the National Electrical Code and local codes, whichever is the most stringent.
 2. In determining the correct supply wire size and maximum length, reference NFPA 70, Section 310. If the calculation is close to the maximum allowable ampacity of a particular wire size, use the next size up. This will ensure that no adverse effects occur, such as light dimming and/or shortened compressor life.
 3. Min/Max Voltage: 208/230/60 = 187-252, 460/60 = 432-504, 265/60 = 249-291, 115/60 = 108-126
 4. See Wiring Diagrams for proper 460V power.
- *The external loop pump FLA is based on a maximum of three UP26-116F-230V pumps (1/2hp) for 048-072 and two pumps for 006-036.

Wiring Diagrams

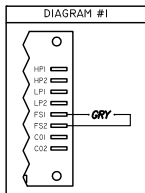
Single Stage, PSC Fan, Single Phase, 208/230V or 115V, 60Hz, Commercial *ZS Series



NOTES:

- FACTORY INSTALLED JUMPER. REMOVE FOR USE WITH SOLENOID VALVE WITH END SWITCH.
- SEE LOCKOUT BOARD LABEL FOR DIP SWITCH SELECTION/DESCRIPTION.
- SPEED SHOULD BE SET TO THE FOLLOWING:

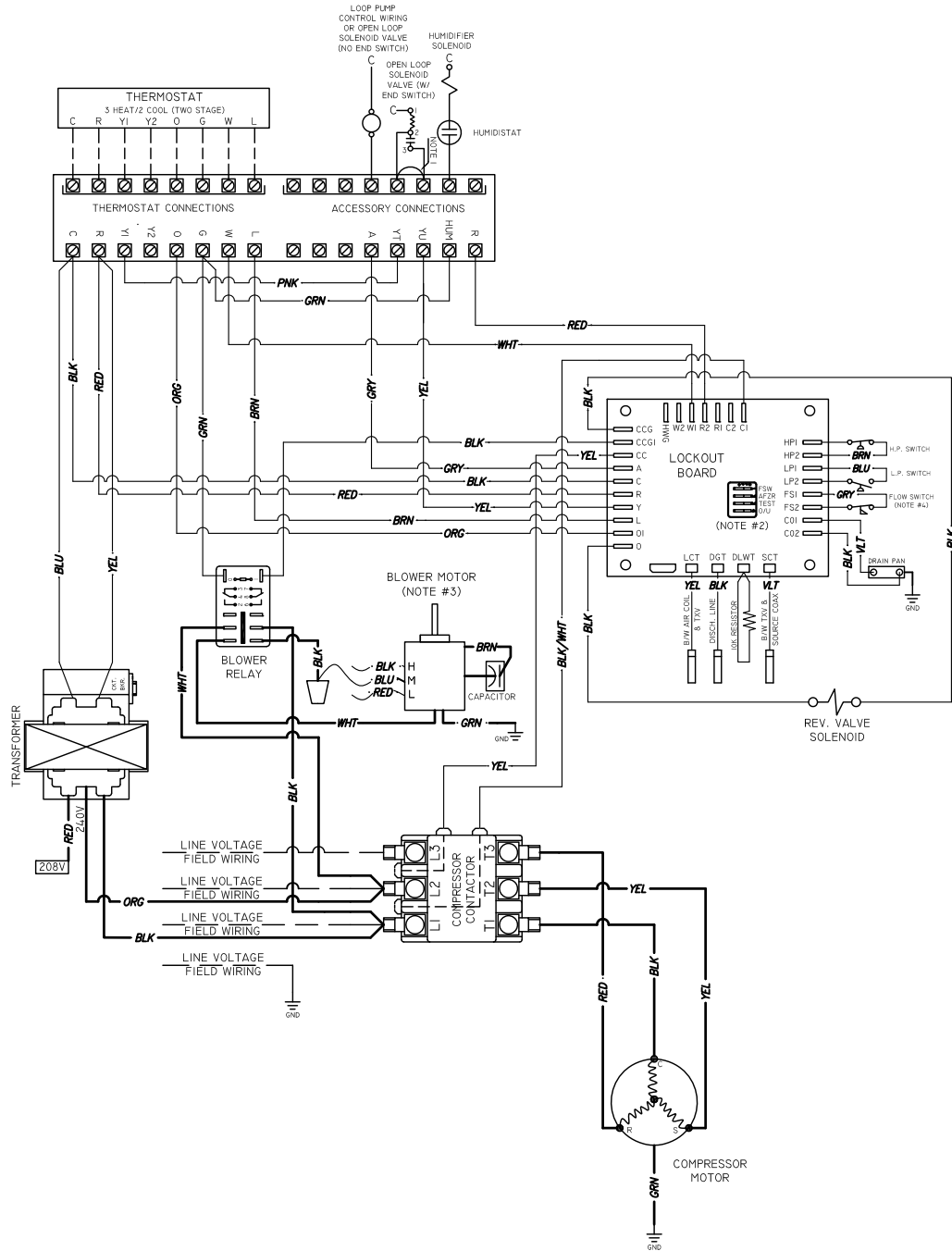
*ZS006= MED/LOW	*ZS009 = HIGH	*ZS012= HIGH
*ZS015= MED	*ZS017= HIGH	*ZS018= MED
*ZS024= MEDIUM	*ZS030= HIGH	*ZS036= HIGH
*ZS042= HIGH	*ZS048= MEDIUM	*ZS060= MEDIUM
*ZS072= HIGH		
- UNITS THAT CONTAIN A COAXIAL HEAT EXCHANGER, WILL NOT HAVE A FLOW SWITCH. A GRAY JUMPER WIRE WILL BE INSTALLED BETWEEN THE FSI AND FS2 TERMINALS, AS SHOWN IN DIAGRAM #1.
- WHITE WIRE WILL BE HOOKED TO L2-TERMINAL AT THE CONTACTOR FOR 115V UNITS.



ENGINEERING SPECIFICATIONS

Wiring Diagrams

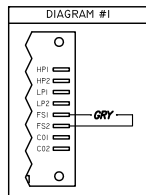
Single Stage, PSC Fan, Three Phase, 208/230V or 115V, 60Hz, Commercial *ZS Series



NOTES:

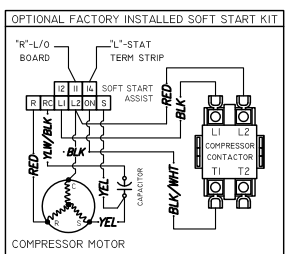
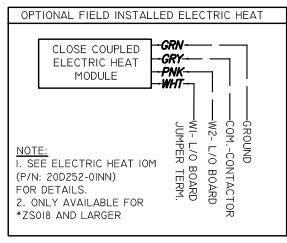
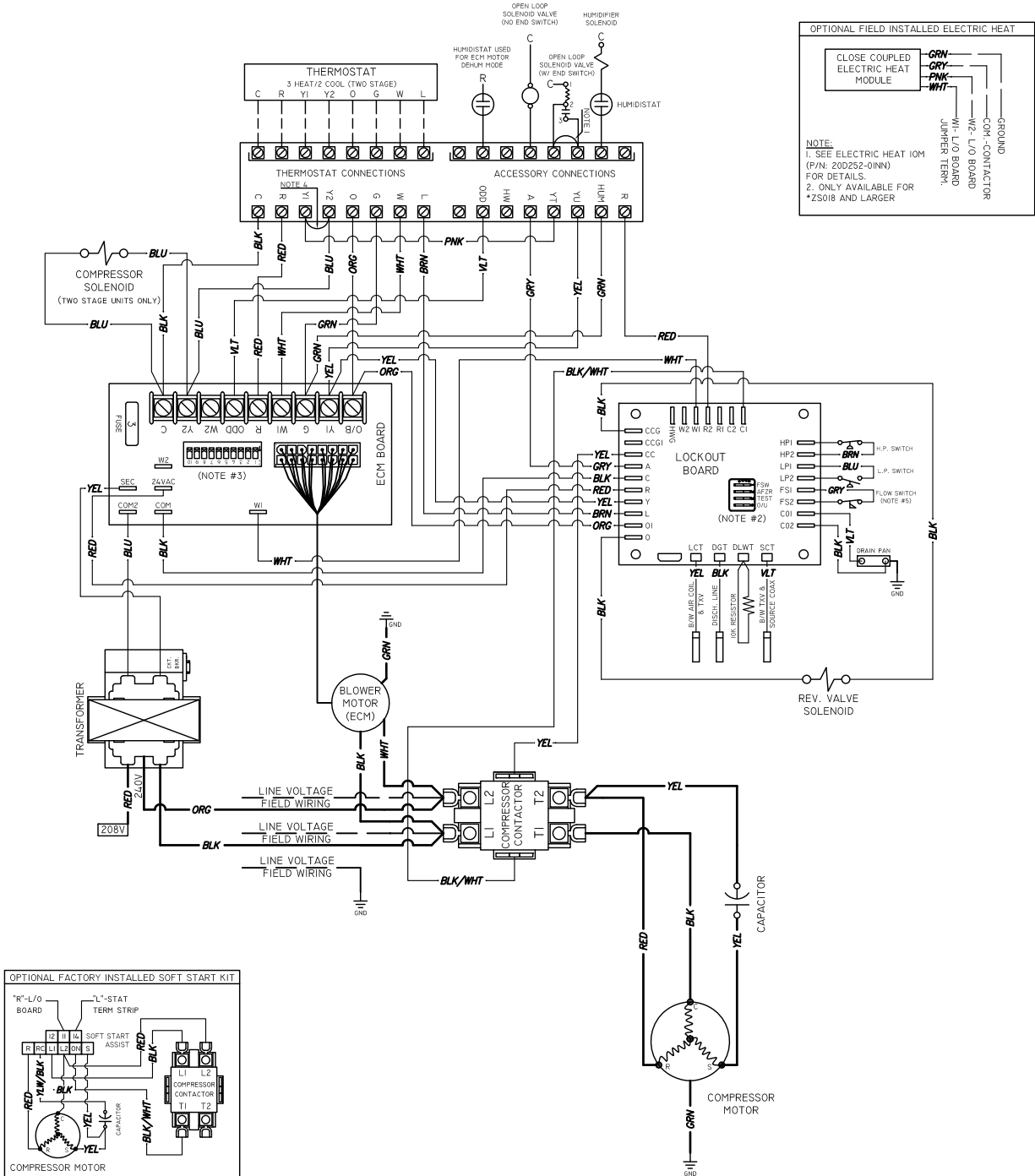
1. FACTORY INSTALLED JUMPER. REMOVE FOR USE WITH SOLENOID VALVE WITH END SWITCH.
2. SEE LOCKOUT BOARD LABEL FOR DIP SWITCH SELECTION/ DESCRIPTION.
3. SPEED SHOULD BE SET TO THE FOLLOWING:

*ZS024= MEDIUM	*ZS030= HIGH
*ZS036= HIGH	*ZS042= HIGH
*ZS048= MEDIUM	*ZS060= MEDIUM
*ZS072= HIGH	
4. UNITS THAT CONTAIN A COAXIAL HEAT EXCHANGER, WILL NOT HAVE A FLOW SWITCH. A GRAY JUMPER WIRE WILL BE INSTALLED BETWEEN THE FS1 AND FS2 TERMINALS, AS SHOWN IN DIAGRAM #1.



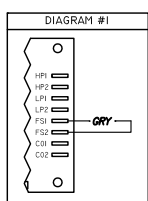
Wiring Diagrams

Single or Two Stage, ECM Fan, Single Phase, 208/230V, 60Hz, Commercial ZS/ZT Series



NOTES:

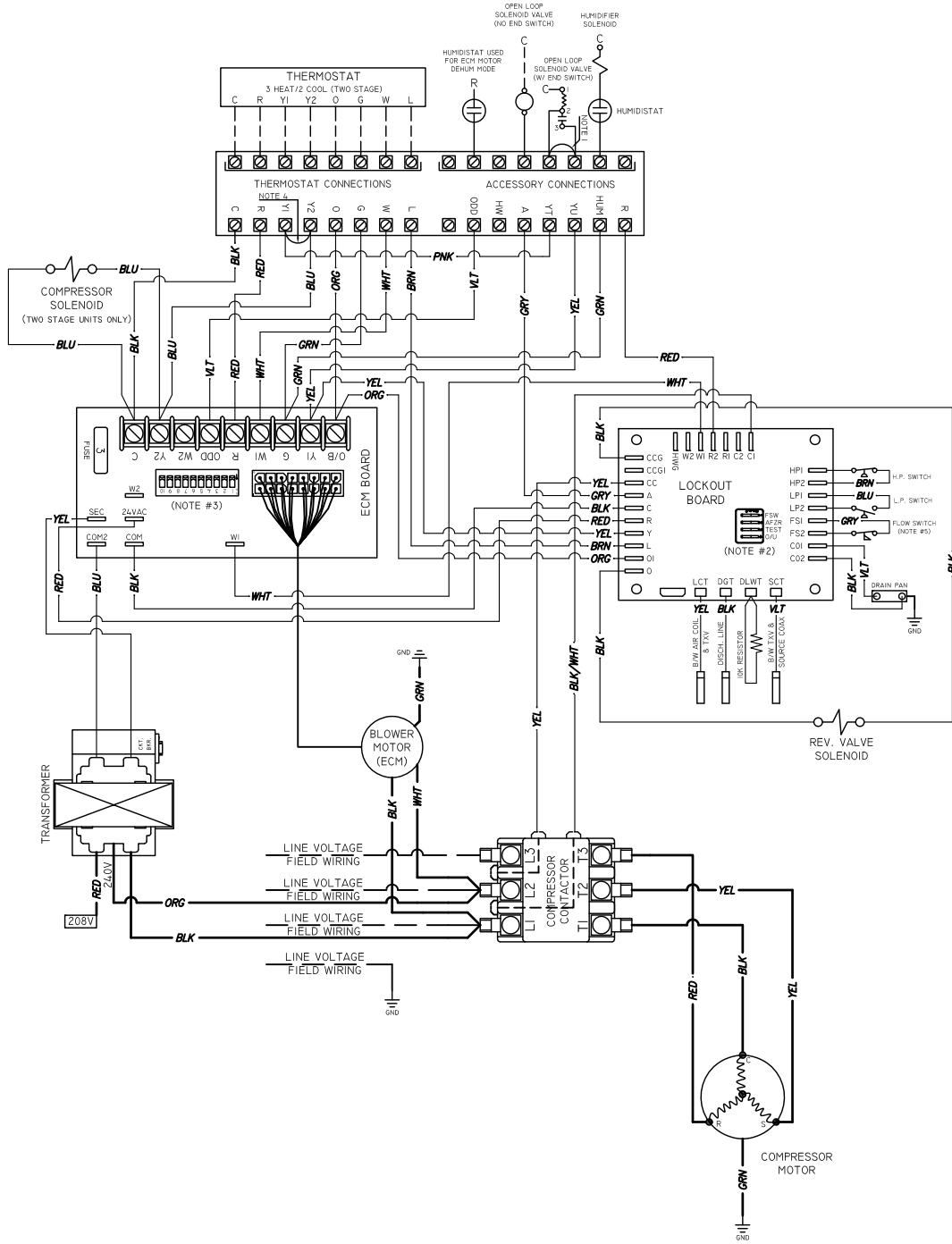
1. FACTORY INSTALLED JUMPER. REMOVE FOR USE WITH SOLENOID VALVE WITH END SWITCH.
2. SEE LOCKOUT BOARD LABEL FOR DIP SWITCH SELECTION/DESCRIPTION.
3. SEE CFM CHART FOR DIP SWITCH CHOICES BY MODEL.
4. FACTORY INSTALLED JUMPER FOR SINGLE STAGE UNITS.
5. UNITS THAT CONTAIN A COAXIAL HEAT EXCHANGER, WILL NOT HAVE A FLOW SWITCH. A GRAY JUMPER WIRE WILL BE INSTALLED BETWEEN THE FSI AND FS2 TERMINALS, AS SHOWN IN DIAGRAM #1.



ENGINEERING SPECIFICATIONS

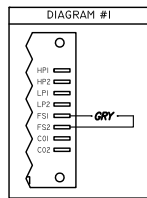
Wiring Diagrams

Single or Two Stage, ECM Fan, Three Phase, 208/230V, 60Hz, Commercial ZS/ZT Series



NOTES:

1. FACTORY INSTALLED JUMPER. REMOVE FOR USE WITH SOLENOID VALVE WITH END SWITCH.
2. SEE LOCKOUT BOARD LABEL FOR DIP SWITCH SELECTION/ DESCRIPTION.
3. SEE CFM CHART FOR DIP SWITCH CHOICES BY MODEL.
4. FACTORY INSTALLED JUMPER FOR SINGLE STAGE UNITS.
5. UNITS THAT CONTAIN A COAXIAL HEAT EXCHANGER, WILL NOT HAVE A FLOW SWITCH. A GRAY JUMPER WIRE WILL BE INSTALLED BETWEEN THE FS1 AND FS2 TERMINALS, AS SHOWN IN DIAGRAM #1.



General

Packaged Single and Two-Stage Horizontal “ZS/ZT” Series Water Source and Geothermal Heat Pumps shall be constructed based on all information to follow. Equipment shall be completely assembled, piped, internally wired, charged with refrigerant, and tested.

Units shall be supplied completely factory built capable of operating over an entering water temperature range from 25°F (with antifreeze and sufficiently high GPM) to 120°F (-3.9° to 48.9°C) (extended data tables: Heating 25°F – 90°F, cooling 40°F (with sufficiently low GPM) – 120°F) as standard. All equipment listed in this section must be rated and certified in accordance with Air-Conditioning, Heating and Refrigeration Institute/International Standards Organization (AHRI/ISO 13256-1). All equipment must be tested, investigated, and determined to comply with the requirements of the standards for Heating and Cooling Equipment UL-1995 for the United States and CAN/CSA-C22.2 NO.236 for Canada, by Intertek Testing Laboratories (ETL). The units shall have AHRI/ISO and ETL-US-C labels.

All units shall be fully quality tested by factory run testing under normal operating conditions as described herein. Quality control system shall automatically perform via computer: helium leak check of both the water and refrigerant circuits, pressure tests, double evacuation and accurately charged system, perform detailed heating and cooling mode run tests, and quality cross check all operational and test conditions to pass/fail criteria.

Note: If unit fails on any check, it shall not be allowed to ship. Units without water flow are not acceptable.

Basic Construction

Horizontal units shall have one of the following air flow arrangements: Left or Right Return air. The supply air discharge shall be field convertible from a straight through (side) to an end configuration. The heat pumps shall be fabricated from heavy gauge galvanized steel. Cabinet air leakage rating must meet ASHRAE 193-2010 standards. All access panels on the air side of the cabinet must be gasketed to ensure proper seal.

- **Option:** Cabinet finish to be “painted” heavy gauge galvanized steel. This corrosion protection system shall meet the stringent 1000 hour salt spray test per ASTM B117.

All units must have a minimum of three access panels for serviceability of compressor compartment. See EDSM manuals for service clearances. All units must have an insulated panel separating the fan compartment from the compressor compartment.

All interior surfaces shall be lined with 3/8 inch (9.5mm) thick, 3-6 lb/ft³ (24 kg/m³) NBR/PVC-based closed cell, non-porous, non-fibrous Nitrile/Vinyl, flexible elastomeric foam insulation passing QUV test chamber UV ASTM D4329, D4587 ISO 4892, SAE J2020 resistance, it shall be free of CFCs, HFCs, HCFCs, PBDEs, formaldehyde and fibers.

Standard cabinet panel insulation must meet UL-1995 and ASTM E 84/UL 723 Flame 25 / Smoke 50 requirements, air erosion and mold growth limits of UL-181, stringent fungal resistance test per ASTM-C1071 and ASTM G21, and shall meet zero level bacteria growth per ASTM G22. The insulation shall be UL-GREENGUARD certified under the Children and Schools classification and approved by the Factory Mutual Research Corporation. For added protection it shall be protected with an EPA approved antimicrobial agent.

All horizontal units to have field installed discharge duct collar, shipped loose and factory installed return air duct collar (residential and/or commercial models) or 1” filter rack (commercial models). An optimal 1”-2” deluxe filter rack is also available to purchase separately.

Introduction

Horizontal units shall have field installed (shipped loose) hanger brackets included that screw to the corner post of the heat pump. Each bracket comes with a high density elastomeric anti-vibration pad that the threaded rod will be attached too. 3 of the 4 hanger brackets will be field convertible from the end to the side of the corner post to eliminate any installation, maintenance, and service issues. See IOM for further details.

- **Option:** Units shall have a factory installed deluxe galvanized filter rack provided by heat pump manufacturer. Filter removal from either side with access door as part of the bracket. Units shall have a 1” (25.4mm) (MERV 8) or 2” (50.8mm)(MERV 13) thick throwaway type pleated filter option.
- **Option:** Units shall have a factory installed 1” or 2” filter rail (open on both sides) provided by heat pump manufacturer. Units shall have a 1” (25.4mm)(MERV 8) or 2” (50.8mm)(MERV 13) thick throwaway type pleated filter option.

Cabinets shall have separate holes and knockouts for entrance of line voltage and low voltage control wiring. All factory-installed wiring passing through factory knockouts and openings shall be protected from sheet metal edges at openings by plastic ferrules. Supply and return water connections shall be copper FPT fittings, and shall be securely mounted flush to the cabinet corner post allowing for connection to a flexible hose without the use of a back-up wrench. All water connections and electrical knockouts must be in the compressor compartment corner post as to not interfere with the serviceability of unit.

ENGINEERING SPECIFICATIONS

The unit shall be supplied with extended range internal insulation as standard. All internal water lines and the evaporator side refrigeration tubing shall all have closed cell EPDM insulation. The water to refrigerant BPHE or coaxial heat exchanger shall have 8lb. Envelo-Seal rigid closed cell spray foam applied to a minimum of .5" thickness.

- **Option:** Multi-Density sound attenuating compressor blanket for additional noise reduction.
- **Option:** The unit will be supplied with internally factory mounted automatic water flow control valve (on/off).
- **Option:** The unit will be supplied with internally mounted source fluid circulating pump for primary/secondary source piping applications.
- **Option:** Insulation package for extended range can be omitted for standard range applications.

Fan and Motor Assembly

Blower shall have orifice rings to allow removal of wheel and motor from one side without removing housing. The fan assembly or housing shall be removable without removing the ductwork. Units shall have a direct-drive centrifugal fan with a dynamic balanced wheel. The fan motor shall be a 3-speed (1.25-6 ton) or 4-speed (0.5-1 ton) PSC ball bearing type motor. The fan motor shall be isolated from the housing by rubber grommets. The motor shall be permanently lubricated and have thermal overload protection.

- **Option:** The unit shall have an ECM variable speed blower motor type. The motor will have 3 dehumidification modes: a factory-set normal heating/cooling airflow mode (dehumidification disabled), a constant dehumidification mode (no humidistat required), and a on-demand dehumidification mode (humidistat input at terminal ODD needed). This ECM fan motor incorporates a soft start feature (ECM is standard with two-stage compressor).
- **Option:** The unit shall have a high static PSC motor, available on certain sizes only.
- **Option:** The unit shall have an ECM constant torque variable speed blower motor type. The motor will have 4 fan speed selections.

Refrigerant Circuit

All units shall contain R-410A sealed refrigerant circuit including a high-efficiency single-stage rotary or scroll or two-stage unloading scroll compressor designed for heat pump operation, a thermostatic expansion valve for refrigerant metering, micro-channel refrigerant to air heat exchanger, reversing valve, brazed plate refrigerant to water heat exchanger, and safety controls (see controls section). Refrigerant access ports shall be factory installed on high and low pressure refrigerant lines to facilitate field service.

Hermetic compressors shall be internally sprung. The compressor shall have a dual level vibration isolation system. The compressor will be mounted on rubber grommets secured to a large heavy gauge compressor mounting plate, which is then mounted to the cabinet base with specially engineered sound-tested elastomeric foam vibration isolation pads for maximized vibration attenuation. Compressor shall have thermal overload protection. Compressor discharge and suction refrigerant lines to have shock loops directly at compressor for additional vibration elimination. Compressor shall be located in an insulated compartment away from air stream to minimize sound transmission.

Refrigerant to air heat exchangers (air coil) shall utilize an all aluminium micro-channel construction and be rated to withstand 625 PSIG (4309 kPa) refrigerant working pressure. Refrigerant to water heat exchangers shall be of A-Symmetrical brazed plate stainless steel design, rated to withstand 650 PSIG (4482 kPa) working refrigerant pressure and 230 PSIG (1586 kPa) working water pressure, and designed to have a low water pressure drop (max. 10ft.hd.).

Refrigerant metering shall be accomplished by thermostatic expansion valve only. Expansion valves shall be dual port balanced types with external equalizer for optimum refrigerant metering. The expansion valves must be bi-directional without the use of check valves. Units shall be designed and tested for operating ranges of entering water temperatures from 25° to 120°F (-3.9° to 48.9°C). Reversing valve shall be four-way solenoid activated refrigerant valve, which shall default to heating mode should the solenoid fail to function.

- **Option:** The unit will be supplied with a refrigerant to water coaxial heat exchanger and shall be of copper inner water tube and steel refrigerant outer tube design (water coil), shall have enhanced rifled and knurled inner tube, rated to withstand 650 PSIG (4482 kPa) working refrigerant pressure and 500 PSIG (3447 kPa) working water pressure, and designed to have a low water pressure drop (max. 15ft.hd.).
- **Option:** The unit will be supplied with a cupronickel coaxial water to refrigerant heat exchanger.
- **Option:** The unit shall be supplied with a hot water generator (desuperheater) heat exchanger, which shall be double wall and vented. This option will also include an internal circulating pump.
- **Option:** Unit shall include on/off hot gas reheat option. Control of reheat must be accomplished via a humidistat or dehumidistat contact closure. The reheat coil will also be constructed from all aluminium micro-channel design.
- **Option:** Unit shall include hot gas bypass to keep the air coil from freezing in low load conditions.

Drain Pan

The drain pan shall be constructed of 304 Stainless Steel to inhibit corrosion. This corrosion protection system shall meet the stringent 1000 hour salt spray test per ASTM B117. Drain pan shall be fully insulated. The unit as standard will be supplied with solid-state electronic condensate overflow protection (see controls section). Units shall be furnished with a 3/4" PVC condensate drain connection. The drain pan comes with end drainage. For full drainage of pan unit must be pitched down towards corner with drain (See page 18).

Electrical

A control box shall be located within the unit compressor compartment and shall contain a 50VA or 75VA transformer, 24VAC activated, 2 or 3 pole compressor contactor, terminal block for thermostat wiring and digital controller for complete unit operation and control. Units shall be name-plated for use with time delay fuses or HACR circuit breakers. Unit controls shall be 24VAC and provide heating or cooling as required by the remote thermostat/sensor.

A detachable low voltage thermostat terminal strip with screw terminals to be provided for field wiring.

- **Option:** Unit will come with factory installed soft start device to reduce start-up amps by 60% to avoid light flicker where power supply is a concern (only available on certain models).
- **Option:** Unit shall come with a factory installed phase monitor for 3-phase equipment to ensure proper phasing of the voltage to protect the compressor from operating backwards.
- **Option:** Unit shall have a factory mounted electrical disconnect switch to provide on/off service of the main electrical system to the heat pump.

Control Board System

Units shall have a digital control system. The control system microprocessor board shall be specifically designed to protect against building electrical system noise contamination, EMI, and RFI interference. The control system shall interface with a heat pump type 24VAC thermostat. The control system shall have the following features:

- A. Anti-short cycle time delay on compressor operation (5 minutes).
- B. Random start on power up mode.
- C. Low voltage protection.
- D. High voltage protection.
- E. Unit shutdown on high or low refrigerant pressures.
- F. Unit shutdown on low temperature (low source coil temp OR low air coil temp).
- G. Condensate overflow electronic protection.
- H. Option to reset unit at thermostat or disconnect (soft or hard reset functions)

- I. Fault retry logic. The same fault trip has to occur 3 times before a hard lockout. If a fault occurs 3 times within 30 minutes sequentially without thermostat meeting temperature, then lockout requiring manual reset will occur. A soft or hard reset will restart the unit.
- J. Ability to defeat time delays for servicing (test mode).
- K. Light emitting diode (LED) on circuit board to indicate high pressure, low pressure, low/high voltage, low water/air temperature, condensate overflow, high discharge gas temperature, faulty temperature sensor(s), and control voltage status.
- L. The low-pressure switch shall not be monitored for the first 30 seconds after a compressor start command to prevent nuisance safety trips.
- M. 24VAC output to cycle a motorized water valve or other device with compressor contactor.
- N. Water coil low temperature sensing selectable for water or anti-freeze.
- O. Air coil low temperature sensing.
- P. High discharge gas temperature sensing.
- Q. Smart desuperheater operation and logic to eliminate any heat transfer from the water tank to the source loop during cooling mode.
- R. Loss of charge compressor protection logic, which will not allow the unit to try and start when the low pressure switch is open on startup, indicating a loss of charge.
- S. Optional fluid flow proving switch. This is located in the source water piping.

ECM Fan Control Board (included with ECM blower option)

Airflow selection shall be accomplished via dip switch settings on the ECM control board. Actual airflow shall be indicated by the CFM LED with each 100 CFM being represented by one flash of the LED. Airflow shall be automatically maintained ($\pm 5\%$) by the ECM motor regardless of external static pressure up to its maximum output capacity. A dip switch shall allow selection of a special dehumidification mode, which reduces airflow in cooling by 10%-20% CFM/ton to increase the latent capacity of the unit. A terminal shall be provided on the control board to allow an external humidistat to activate dehumidification mode, or the control board can be set to constant dehumidification mode.

Warranty

Enertech shall warranty equipment for a period of 12 months from start up or 18 months from shipping (whichever occurs first). All warranty coverage is parts only, no labor.

- **Option:** Extended 4-year compressor warranty covers compressor for a total of 5 years.
- **Option:** Extended 4-year refrigeration circuit warranty covers heat exchanger coils, reversing valve, expansion valve and compressor for a total of 5 years.
- **Option:** Extended 4-year all internal parts which covers the entire heat pump for a total of 5 years.

ENGINEERING SPECIFICATIONS

Optional DDC (Direct Digital Controls) Interface System

Units shall have all the features listed above and the control board will be supplied with a DDC interface board. Available protocols are BACnet MS/TP, Modbus, or Johnson Controls N2. The choice of protocol shall be field selectable/changeable via the use of a simple selector switch. Protocol selection does not require additional programming, external hardware or software tools. This will permit all units to be daisy chain connected by a 2-wire twisted pair shielded cable. The following points must be available at a central or remote computer location:

- A. Space Temperature
- B. Leaving Water Temperature
- C. Discharge Air Temperature
- D. Command of Space Temperature Setpoint
- E. Cooling Status
- F. Heating Status
- G. Low Temperature Sensor Alarm
- H. Low Pressure Sensor Alarm
- I. High Pressure Switch Alarm
- J. Condensate Overflow Alarm
- K. Hi/Low Voltage Alarm
- L. Fan "ON/AUTO" Position of Space Thermostat As Specified Above
- M. Unoccupied/Occupied Command
- N. Cooling Command
- O. Heating Command
- P. Fan "ON/AUTO" Command
- Q. Fault Reset Command
- R. Itemized Fault Code Revealing Reason For Specific Shutdown Fault (any one of 7)

DDC Sensors

Wall mounted DDC sensor to monitor room temperature and interfaces with optional interface system described above.

Several types as described below:

- Sensor only with no display.
- Sensor with override.
- Sensor with setpoint adjustment and override.
- Sensor with setpoint adjustment and override, LCD display, status/fault indication.

Field Installed Options

Hose Kits

All units shall be connected with hoses. The hoses shall be 2 feet (61cm) long, braided stainless steel; fire rated hoses complete with adapters. Only fire rated hoses will be accepted.

Valves

The following valves are available and will be shipped loose:

- A. Ball valve; bronze material, standard port full flow design, FPT connections.
- B. Ball valve with memory stop and PT port.
- C. "Y" strainer with blowdown valve; bronze material, FPT connections.
- D. Motorized water valve; slow acting, 24VAC, FPT connections.

Hose Kit Assemblies

The following assemblies ship with the valves already assembled to the hose described:

- A. Supply and return hoses having ball valve with PT port.
- B. Supply hose having ball valve with PT port; return hose having automatic flow regulator valve with PT ports, and ball valve.
- C. Supply hose having "Y" strainer with blowdown valve, and ball valve with PT port; return hose having automatic flow regulator with PT ports, and ball valve.
- D. Supply hose having "Y" strainer with blowdown valve, and ball valve with PT port; return hose having ball valve with PT port.

Thermostats

The thermostat shall be an electronic type thermostat as selected below with the described features:

- A. Multistage Digital Non-Programmable Automatic or Manual Changeover thermostat (24VAC). Thermostat shall be multi-stage (2H/2C), manual or automatic changeover with HEAT-OFF-COOL-AUTO-EM HEAT system settings and fan ON-AUTO settings. Thermostat shall have an LCD display with temperature, set-point(s), mode, and status indication. The temperature indication shall be selectable for °F or °C. The thermostat shall provide permanent memory of set-point(s) without batteries. A fault LED shall be provided to indicate specific fault condition(s).
- B. Multistage Digital Programmable Automatic or Manual Changeover thermostat (24VAC) Thermostat shall be 7 day programmable (with up to 4 set points per day), multi-stage (3H/2C), automatic or manual changeover with HEAT-OFF-COOL-AUTO-EM HEAT system settings and fan ON-AUTO settings. Thermostat shall have a blue backlit dot matrix LCD display with temperature, setpoints, mode, and status indication. The temperature indication shall be selectable for °F or °C. Time display shall be selectable for 12 or 24 hour clock. Fault identification shall be provided to simplify troubleshooting by providing specific unit fault at the thermostat with red backlit LCD during unit lockout. The thermostat shall provide permanent memory of setpoints without batteries. Thermostat shall provide heating set-point range limit, cooling set-point range limit, temperature display offset, keypad lockout, dead-band range setting, and inter-stage differential settings. Thermostat shall provide progressive recovery to anticipate time required to bring space temperature to the next programmed event. Thermostat shall provide an installer setup for configuring options and for setup of servicing contractor name and contact information. Thermostat shall allow the use of an accessory remote and/or outdoor temperature sensor.

Revision Table

Date	Description of Revision	Page
03MAR2021	ZS and ZT Nomenclatures updated.	2
24JUL2020	ZS/ZT Electrical Data Tables updated	95-100
20SEP2019	ZS/ZT Electrical Data Tables updated	95-100
10JUN2019	AHRI update to ZT042 GW, F/L COP and P/L COP. AHRI update to ZT048 GW F/L COP. Notes ^{1,2,3} added.	3-6
29APR2019	Updated ZT042 Coax F/L and P/L COP AHRI Data.	7
13DEC2018	Added Dehumidification Mode Options Table, formatting updates.	19
12NOV2018	Updated document format, added wiring diagrams, updated BPHE flow rates, and updated water flow selection guidelines	Various
25JUN2018	Dis Switch and Fan Chart updated	-
12APR2018	Unit Dimensional Data updated	-
20OCT2017	PSC Electrical Data Tables revised	-
22AUG2017	Added SC/SH and Extended Data Tables	-
07JUL2017	Unit Physical Data revised	-
15JUN2017	ZS Models 006, 009, 012 added	-
11APR2017	Updated nomenclature drawings and performance data tables updated. AHRI Performance Numbers added for ZS015-017	-
28MAR2017	Revised Electrical Data Tables	-
24MAR2017	PSC and ECM Fan Charts updated	-
01MAR2017	Document created	-

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