

Copeland™ F-Line

Air-Cooled and Water-Cooled Condensing Units



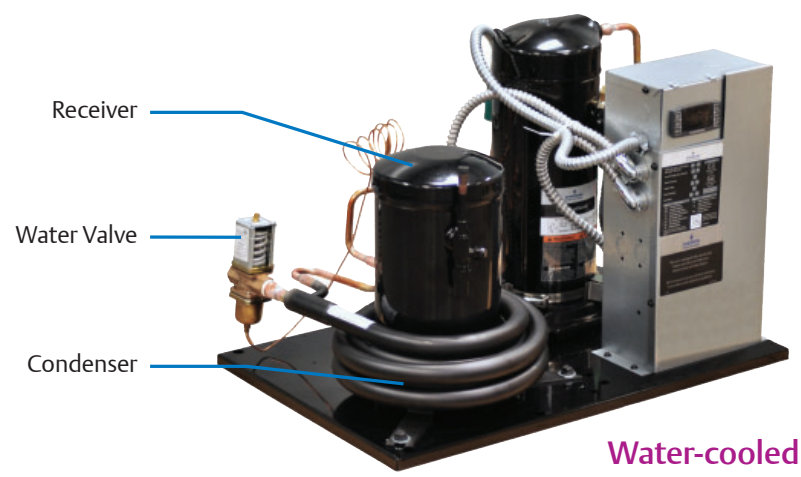
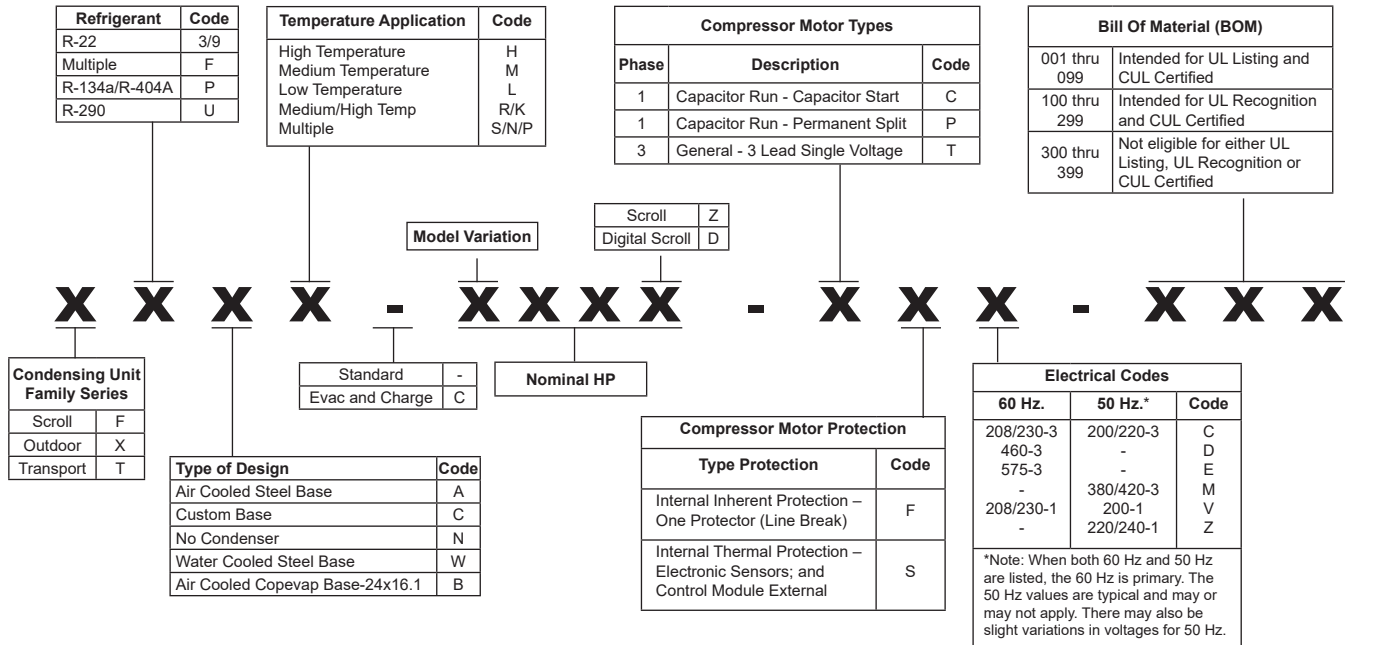
Product Information

Horsepower: 3/4 - 10

Refrigerants: R-22, R-134a, R-404A, R-407A,
R-407C, R-448A, R-449A, R-507



Nomenclature • Welded Condensing Units



Bill of Materials Matrix

BOM	Options																UL		
Sweat	Receiver W/ Valve	Suction Valve	Liquid Base Valve	Fan Guard	End Covers	Conduit	Power Cord	Accumulator	Fan Cycling	EUC/Pressure Controls	Filter Drier	Moisture Indicator	Solenoid Valve	Crankcase Heater	Head Pressure Control Valve	Water Valve	Compressor Electronics Technology	Listed	Recognized
Air Cooled																			
071	X	X		X	X	X		X	X	X	X	X		X				X	
072	X	X		X	X	X		X*		X	X	X						X	
075	X	X		X	X	X		X ¹		X	X	X		X	X			X	
Water Cooled																			
020	X	X				X				X				X		X		X	

* Accumulator available on FFAL units for -072 BOM

¹ Accumulator included on dual fan FFAM/FFAP units and all FFAL units for -075 BOM

All information in this catalog is for reference only and subject to change without notice. Please visit Emerson.com/CopelandOPI for a complete listing of all available models and updated information.

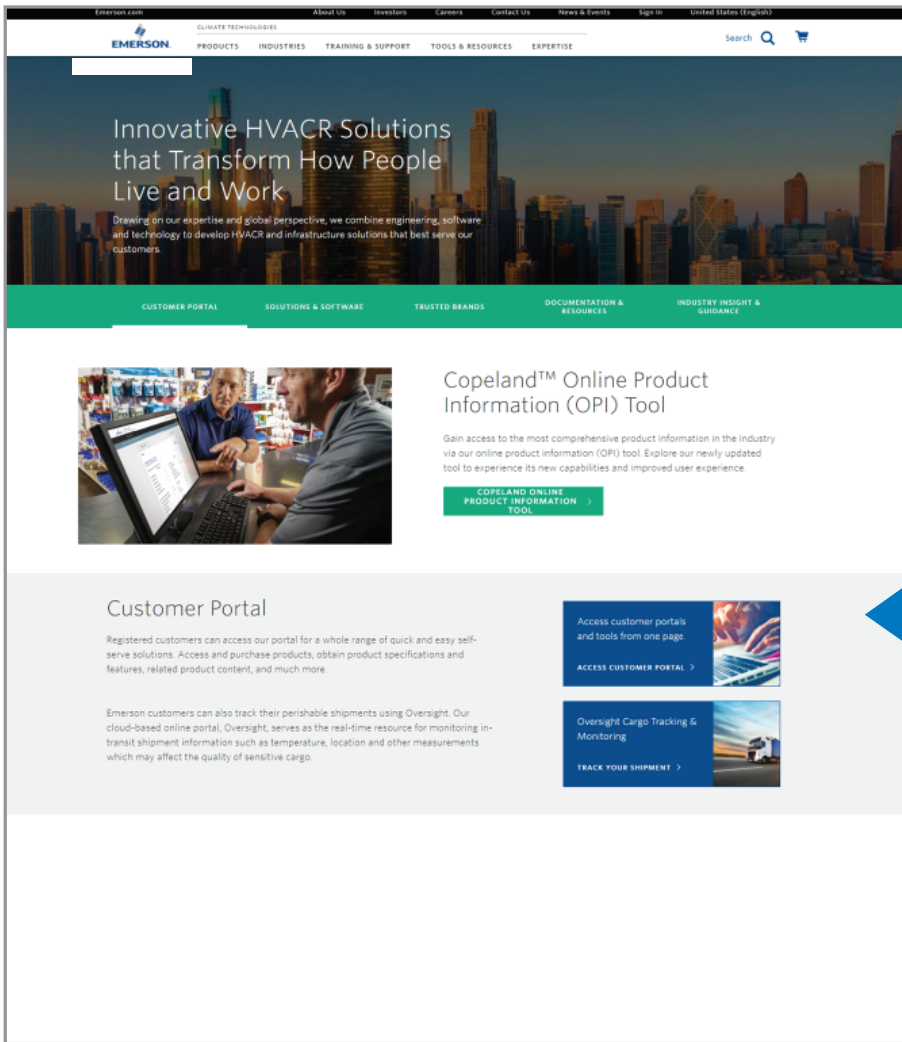
For AWEF compliant models, see catalog section 2020ECT-1_AWEF

Application Engineering Bulletins

- 4-1273 Factors to Consider in Converting Compressor Rated Capacity to Actual Capacity
- 4-1292 Medium Temperature R-22 Copelaweld Compressors
- 4-1295 HFC-134A Refrigerant Guidelines
- 4-1298 Extended Medium Temperature R-404A/507 Hermetic Compressors and Condensing Units
- 4-1299 Application Guidelines for Copeland Scroll Compressors 2 - 6 Horsepower
- 4-1302 Application Guidelines for Copeland Scroll Compressors 7.5 - 15 Horsepower
- 4-1305 SystemPro AF, AR, & AS Refrigeration Hermetic 1/8-1 Horsepower Compressors
- 4-1306 Application Guidelines for RF Low Temperature Refrigeration Compressors
- 4-1307 Application Guidelines for CF Refrigeration Compressors and Condensing Units
- 4-1317 Application Guidelines for ZBKC / ZBKCE Refrigeration Scroll Compressors 1.3 to 6 HP
- 4-1318 Application Guidelines for ZBKC / ZBKCE Refrigeration Scroll Compressors 7 to 15 HP
- 4-1344 Application Guidelines for RFT, RRT, RST Compressors
- 4-1387 Application Guidelines for ZS**KAE Copeland Scroll Refrigeration Compressors 1.3-4.5 HP
- 8-1376 Electronic Unit Controller
- 11-1147 Suction Accumulators
- 11-1297 Liquid Line Filter-Driers
- 17-1260 Compressor Overheating
- 17-1268 Compression Ratio As It Affects Compressor Reliability
- 22-1182 Liquid Refrigerant Control in Refrigeration and Air Conditioning Systems

Copeland™ air-cooled and water-cooled condensing units

Features	Benefits
Copeland Scroll Compressor	Reliability, High Energy Efficiency, Low Sound & Vibration
Advance Diagnostics and Protection Features	Faster Trouble Shooting Warranty Reduction
Factory Installed EK Filter Drier & HMI Moisture Indicator	Less Leaks, Reduce Callbacks, Lower Installation Cost, Increase Equipment Reliability, Lower Warranty
Aluminum/Copper Condenser Design	Durability
Multi Refrigerant Approval for High/Med Models	Application Flexibility Inventory Consolidation



Climate.Emerson.com

Access for more product information

For more information, visit Emerson.com/CopelandOPI.

Medium Temp – Air Cooled

90° Ambient																	
HP	Model	Compressor	Electrical	Refrigerant	Capacity (BTU/Hr) @ SST, 40°F RG (65°F RG in Bold), 5°F Subcooling												
					-5	0	5	10	15	20	25	25	30	35	40	45	
3/4	FFAM-A08Z	ZB06KAE	TFC CFV	R-134a			2800	3200	3640	4130	4680	4770	5340	5960	6620	7330	
				R-404A	3920	4380	4900	5470	6090	6760	7470	7740	8510	9300	10100	10900	
				R-407A	3560	3950	4420	4950	5550	6210	6920	7040	7820	8650	9520	10400	
				R-407C	3090	3580	4090	4640	5230	5850	6520	6610	7320	8080	8880	9720	
				R-448A/449A	3610	4070	4570	5120	5720	6360	7040	7160	7890	8650	9440	10300	
1	FFAM-A10Z	ZB07KAE	TFC CFV	R-134a			3440	3920	4460	5030	5640	5740	6410	7120	7890	8690	
				R-404A	4600	5210	5850	6530	7260	8030	8850	9190	10100	11000	12000	13100	
				R-407A	4120	4720	5360	6050	6770	7530	8320	8460	9290	10100	11000	11900	
				R-407C	3740	4280	4870	5510	6190	6910	7680	7790	8590	9440	10300	11200	
				R-448A/449A	4240	4780	5370	6010	6710	7460	8250	8410	9250	10100	11100	12000	
	FFAK-010Z	ZS09KAE	TFC TFD CFV	R-134a		4020	4520	5060	5620	6230	6870	7100	7810	8570	9370	10200	
				R-404A	5870	6470	7110	7780	8490	9230	10000	10500	11300	12200	13100		
				R-134a			4090	4640	5270	5960	6700	6820	7600	8450	9350	10300	
				R-404A	5560	6240	6950	7700	8500	9370	10300	10700	11800	13000	14300	15700	
1 1/4	FFAM-A12Z	ZB08KAE	TFC CFV	R-407A	4960	5730	6520	7330	8160	9010	9880	10000	10900	11900	12800	13700	
				R-407C	4560	5190	5860	6580	7360	8190	9090	9210	10200	11200	12300	13500	
				R-448A/449A	5110	5720	6420	7190	8030	8930	9900	10100	11100	12200	13300	14400	
				R-134a		4730	5300	5920	6560	7250	7980	8250	9060	9910	10800	11700	
				R-404A	6890	7570	8260	9000	9760	10500	11400	11900	12800	13700	14600		
	FFAK-012Z	ZS11KAE	TFC TFD CFV	R-134a		6640	7470	8360	9300	10300	11400	11800	13000	14200	15600	17000	
				R-404A	9860	10900	11900	13100	14300	15600	16900	17600	19100	20600	22200		
				R-134a			4790	5410	6100	6810	7570	7700	8530	9430	10400	11400	
				R-404A	6350	7070	7840	8680	9570	10500	11600	11800	12800	13900	15000	16200	
1 1/2	FFAP-A15Z	ZS09KAE	TFC TFD CFV	R-407A	6010	6700	7430	8220	9070	9990	11000	11200	12200	13400	14700	16100	
				R-407C	4910	5770	6660	7580	8530	9520	10500	10700	11700	12900	14000	15200	
				R-448A/449A	5440	6110	6820	7610	8470	9420	10500	10700	11800	13100	14400	15900	
				R-134a		7410	8330	9310	10300	11500	12600	13100	14300	15700	17200	18700	
				R-404A	10900	12000	13100	14300	15600	16900	18300	19100	20600	22200	23800		
	FFAK-015Z	ZS09KAE	TFC TFD CFV	R-134a		4400	5030	5720	6440	7210	8030	8920	9080	10000	11100	12200	13400
				R-404A	7570	8410	9300	10300	11300	12400	13600	13800	14900	16100	17300	18600	
				R-407A	7090	7890	8740	9650	10600	11700	12800	13000	14300	15600	17100	18600	
				R-407C	5800	6820	7860	8940	10000	11200	12400	12500	13800	15100	16400	17700	
2	FFAP-A20Z	ZS13KAE	TFC TFD CFV	R-448A/449A	6510	7290	8130	9050	10100	11200	12400	12600	13900	15400	16900	18600	
				R-134a	5020	5750	6530	7390	8280	9230	10200	10400	11500	12700	14000	15400	
				R-404A	8710	9670	10700	11800	13000	14300	15700	16800	18200	19800	21400	23200	
				R-407A	8150	9080	10100	11100	12300	13500	14800	15100	16500	18100	19800	21600	
				R-407C	6670	7840	9040	10300	11600	12900	14300	14400	15900	17400	18900	20500	
	FFAK-020Z	ZS21KAE	TFC TFD CFV	R-448A/449A	7620	8530	9460	10400	11500	12700	14000	14200	15700	17300	19200	21200	
				R-134a		10000	11300	12600	14000	15500	17200	17700	19500	21400	23400	25600	
				R-404A	14800	16400	18000	19700	21500	23400	25300	26300	28300	30400	32300		
				R-134a	6060	6930	7870	8910	10000	11300	12600	12800	14200	15700	17400	19100	
2 1/4	FFAP-A22Z	ZS15KAE	TFC TFD CFV	R-404A	10700	11900	13200	14700	16200	17900	19700	20100	21900	23800	25800	27900	
				R-407A	9960	11100	12400	13700	15100	16700	18400	18700	20500	22600	24800	27200	
				R-407C	8130	9560	11000	12600	14200	15800	17600	17800	19600	21500	23500	25600	
				R-448A/449A	9040	10200	11400	12700	14100	15800	17500	17800	19800	21900	24200	26800	
				R-134a	7140	8120	9190	10300	11600	12900	14300	14600	16100	17700	19500	21300	
	FFAP-A30Z	ZS19KAE	TFC TFD CFV	R-404A	11900	13200	14700	16300	18000	19800	21700	22200	24100	26200	28300	30600	
				R-407A	11200	12500	13800	15300	16900	18600	20500	20800	22900	25100	27600	30200	
				R-407C	9110	10700	12400	14100	15900	17700	19700	19900	21900	24000	26200	28500	
				R-448A/449A	10300	11600	12900	14200	15700	17400	19300	19600	21700	24100	26700	29700	

Area Restrictions: 20°F Max Superheat

Area Restrictions: 40°F Max Return Gas Temp

For the latest data information visit Emerson.com/CopelandOPI

Medium Temp – Air Cooled

90° Ambient																
HP	Model	Compressor	Electrical	Refrigerant	Capacity (BTU/Hr) @ SST, 40°F RG (65°F RG in Bold), 5°F Subcooling											
					-5	0	5	10	15	20	25	25	30	35	40	45
3 1/4	FFAP-A32Z	ZS21KAE	TFC TFD CFV	R-134a	9190	10500	11900	13400	15000	16700	18600	18900	20900	23100	25400	27800
				R-404A	15600	17300	19100	21100	23200	25500	27900	28300	30700	33100	35600	38200
				R-407A	14500	16100	17900	19700	21700	23900	26200	26600	29200	31900	34900	38100
				R-407C	12100	14200	16300	18600	20900	23300	25700	26100	28600	31300	34100	36900
				R-448A/449A	14100	15900	17900	20000	22200	24500	26900	27400	30000	32700	35600	38600
4	FFAK-039Z	ZS29KAE	TFC TFD CFV	R-134a		11300	12800	14300	16000	17800	19700	22500	24800	27200	29800	32600
				R-404A	18800	20800	22900	25100	27500	29900	32600	34000	36900	39900	43100	
	FFAP-A40Z	ZS26KAE	TFC TFD CFV	R-134a	10200	11700	13200	15000	16900	18900	21100	21500	23800	26300	29000	31900
				R-404A	17700	19800	22000	24400	26900	29700	32700	33400	36400	39600	42900	46400
				R-407A	15700	17700	19900	22200	24700	27500	30400	30900	34100	37500	41200	45100
R-407C	13600	16000	18500	21000	23700	26500	29400	29700	32800	36000	39300	42800				
	R-448A/449A	15500	17400	19500	21900	24400	27200	30300	30800	34100	37700	41500	45600			
4 1/4	FFAP-A42Z	ZS33KAE	TFC TFD CFV	R-134a	12700	14500	16400	18600	20800	23200	25800	26300	29100	32100	35300	38800
				R-404A	21900	24400	27000	29900	33000	36300	39800	40800	44300	48000	52000	56000
				R-407A	20600	23000	25500	28100	31000	34200	37500	38100	41900	45900	50000	55000
				R-407C	16600	19600	22600	25800	29000	32400	35900	36300	40000	43800	47800	52000
				R-448A/449A	19700	22400	25200	28200	31400	34700	38300	38900	42700	46700	51000	55500
5	FFAP-050Z	ZS38K4E	TFC TFD TFE CFV CFZ	R-134a	14800	16800	18800	21100	23600	26200	29000	29600	32600	35900	39400	43100
				R-22				32500	35800	39300	43000	43000	47000	51000	55500	60000
				R-404A	25600	28200	31000	33900	37000	40300	43800	45500	49200	53000	57500	61500
				R-407A	22600	25500	28700	32000	35500	39200	43000	43700	47700	52000	56000	60000
				R-407C	22300	25200	28300	31600	35000	38700	42400	43000	46900	51000	55000	59000
				R-448A/449A	22300	25300	28600	32100	35800	39700	43700	44500	48700	53000	57500	61500
				R-507	26400	29100	31900	34900	38100	41400	44900	46800	50500	54500	59000	63000
6	FFAP-060Z	ZS45K4E	TFC TFD	R-134a	17500	19800	22300	24900	27800	30900	34200	34800	38400	42200	46300	50500
				R-22					42200	46300	50500	51000	55500	60000	65500	70500
				R-404A	30100	33100	36200	39500	43000	46700	50500	52500	57000	61000	65500	70500
				R-407A	26900	30300	33900	37700	41700	45900	50000	51000	56000	60500	65500	70000
				R-407C		29900	33400	37200	41200	45300	49600	50500	55000	59500	64500	69000
				R-448A/449A	26300	29800	33500	37500	41700	46100	50500	51500	56500	61500	66500	71500
				R-507	31000	34100	37200	40600	44200	47900	52000	54000	58500	63000	67500	72500
7	FFAM-071Z	ZB48KCE	TFC TFD	R-134a			25300	28400	31700	35200	39100	39800	44000	48400	53000	58000
				R-404A	33400	37100	41100	45200	49600	54500	59000	61500	67000	72500	78000	84500
				R-407A	28300	32200	36400	40900	45700	51000	56500	57500	63000	69500	76000	82500
				R-407C					38900	44200	49900	50500	56500	63000	70000	77000
				R-448A/449A	28500	32700	37000	41600	46400	51500	57000	58000	63500	70000	76500	83500
				R-507	34500	38300	42400	46700	51500	56000	61000	63500	69500	75000	81000	87500
8	FFAM-081Z	ZB57KCE	TFC TFD	R-134a			26900	30600	34600	39000	43800	44600	49800	55000	61000	67000
				R-404A	37800	41800	46100	50500	55500	60500	65500	68500	74000	80000	86000	92500
				R-407A	33100	37300	41800	46500	51500	57000	62500	63500	69500	76000	82500	90000
				R-407C					48500	54000	60000	61000	67000	74000	81000	88500
				R-448A/449A	32500	37200	42000	47000	52500	58000	63500	64500	71000	77500	84500	91500
				R-507	39000	43200	47700	52500	57500	62500	68000	71000	76500	83000	89000	95500
9	FFAM-091Z	ZB66K5E	TFC TFD	R-134a			31500	35400	39700	44400	49400	50500	56000	61500	67500	74000
				R-404A	44300	49100	54500	59500	65000	71000	77000	80000	86500	93500	101000	108000
				R-407A	36000	40900	46200	52000	58000	65000	71500	73000	80500	88000	95500	104000
				R-407C		40200	45400	51000	57000	63500	70500	71500	79000	87000	96000	105000
				R-448A/449A	34700	40200	45900	52000	58000	64500	71500	73000	80500	88000	96000	104000
10	FFAM-101Z	ZB76K5E	TFC TFD	R-134a			35900	40400	45200	50500	56000	57000	63000	69500	76500	83500
				R-404A	50500	56000	61500	67500	73500	79500	86000	90000	97000	104000	112000	120000
				R-407A	42900	49400	56000	62000	68500	75500	82500	84000	91500	99500	108000	117000
				R-407C			52500	58500	65000	71500	79000	80000	87500	96000	104000	113000
				R-448A/449A	39500	46200	53000	59500	66500	74000	81500	83000	91000	99000	108000	117000
R-507	51500	57000	63000	68500	75000	81000	88000	92000	99000	106000	114000	122000				

Area Restrictions: 20°F Max Superheat

Area Restrictions: 40°F Max Return Gas Temp

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Medium Temp – Air Cooled

100° Ambient																	
HP	Model	Compressor	Electrical	Refrigerant	Capacity (BTU/Hr) @ SST, 40°F RG (65°F RG in Bold), 5°F Subcooling												
					-5	0	5	10	15	20	25	25	30	35	40	45	
3/4	FFAM-A08Z	ZB06KAE	TFC CFV	R-134a			2690	3050	3450	3900	4380	4480	5020	5600	6220	6890	
				R-404A	3570	4010	4490	5020	5590	6190	6820	7130	7810	8510	9220	9940	
				R-407A	3330	3690	4120	4610	5170	5770	6430	6580	7300	8070	8880	9740	
				R-407C	2830	3300	3800	4320	4870	5450	6070	6180	6840	7550	8290	9070	
				R-448A/449A	3300	3730	4200	4720	5280	5880	6510	6660	7350	8070	8830	9610	
1	FFAM-A10Z	ZB07KAE	TFC CFV	R-134a			3270	3710	4190	4710	5280	5400	6030	6690	7400	8160	
				R-404A	4260	4820	5410	6030	6670	7350	8070	8440	9220	10100	10900	11800	
				R-407A	3690	4280	4920	5590	6290	7010	7760	7930	8720	9520	10300	11100	
				R-407C	3440	3960	4530	5130	5760	6430	7140	7280	8020	8800	9610	10400	
	FPAK-010Z	ZS09KAE	TFC TFD CFV	R-134a		4020	4520	5060	5620	6230	6870	6670	7340	8040	8790	9580	
				R-404A	5370	5900	6460	7050	7670	8310	8990	9470	10200	11000			
				R-134a			3910	4420	4980	5600	6270	6400	7140	7930	8770	9670	
				R-404A	5130	5770	6420	7090	7820	8600	9460	9890	10900	12000	13100	14400	
1 1/4	FFAM-A12Z	ZB08KAE	TFC CFV	R-134a			3910	4420	4980	5600	6270	6400	7140	7930	8770	9670	
				R-404A	5130	5770	6420	7090	7820	8600	9460	9890	10900	12000	13100	14400	
				R-407A	4600	5330	6070	6820	7600	8400	9210	9410	10300	11100	12000	12900	
				R-407C	4270	4870	5500	6160	6880	7640	8450	8600	9490	10400	11400	12500	
	FPAK-012Z	ZS11KAE	TFC TFD CFV	R-134a			4980	5550	6140	6780	7450	7740	8480	9270	10100	11000	
				R-404A	6280	6860	7460	8080	8730	9380	10100	10600					
				R-134a			7040	7870	8750	9690	10700	11100	12200	13400	14600	16000	
				R-404A	9050	9950	10900	11900	12900	14000	15000	15700	16800				
1 1/2	FFAP-A15Z	ZS09KAE	TFC TFD CFV	R-134a	3560	4050	4580	5150	5760	6420	7140	7290	8070	8910	9810	10800	
				R-404A	5860	6510	7220	7980	8800	9690	10600	10900	11800	12800	13800	14800	
				R-407A	5580	6230	6910	7630	8420	9260	10200	10400	11400	12500	13700	15000	
				R-407C	4520	5370	6240	7130	8040	8970	9940	10100	11100	12200	13200	14400	
	FPAK-015Z	ZS09KAE	TFC TFD CFV	R-134a			7840	8750	9710	10700	11800	12300	13500	14800	16100	17600	
				R-404A	9950	10900	11900	12900	13900	14900	15800	16500					
				R-134a	4220	4800	5420	6080	6800	7570	8400	8580	9490	10500	11500	12600	
				R-404A	6980	7740	8560	9440	10400	11400	12500	12800	13800	14800	15900	17000	
1 3/4	FFAP-A17Z	ZS11KAE	TFC TFD CFV	R-134a	6580	7330	8110	8950	9850	10800	11900	12100	13300	14500	15900	17300	
				R-404A	6580	7330	8110	8950	9850	10800	11900	12100	13300	14500	15900	17300	
				R-407A	6580	7330	8110	8950	9850	10800	11900	12100	13300	14500	15900	17300	
				R-407C	5330	6330	7350	8390	9450	10500	11700	11900	13000	14200	15500	16700	
	FFAP-A20Z	ZS13KAE	TFC TFD CFV	R-134a	4850	5510	6220	6990	7810	8700	9660	9870	10900	12000	13200	14500	
				R-404A	8030	8910	9870	10900	12000	13200	14500	15700	17000	18400	19900	21400	
				R-407A	7570	8440	9350	10300	11400	12500	13700	14000	15400	16800	18400	20100	
				R-407C	6150	7300	8470	9670	10900	12200	13400	13700	15000	16400	17900	19300	
2	FFAP-A20Z	ZS13KAE	TFC TFD CFV	R-448A/449A	7250	8030	8830	9690	10600	11700	12900	13200	14500	16100	17800	19700	
				R-134a			10600	11900	13200	14600	16100	16700	18400	20200	22100	24100	
				R-404A	13600	15000	16400	17900	19400	20800	22200	23200					
				R-134a	5890	6700	7590	8540	9570	10700	11900	12100	13500	14900	16400	18100	
	2 1/4	FFAP-A22Z	ZS15KAE	TFC TFD CFV	R-404A	9850	11000	12200	13500	14900	16400	18000	20100	21900	23800	25800	27900
					R-407A	9260	10300	11500	12700	14000	15500	17100	17400	19100	21000	23100	25300
					R-407C	7520	8940	10400	11900	13400	15000	16600	16800	18600	20400	22200	24200
					R-448A/449A	8740	9730	10800	12000	13400	14800	16500	16800	18600	20600	22800	25200
3		FFAP-A30Z	ZS19KAE	TFC TFD CFV	R-134a	6940	7860	8840	9890	11000	12200	13600	13800	15300	16800	18400	20200
					R-404A	11000	12200	13500	14900	16500	18100	19900	20400	22100	24000	25900	27900
					R-407A	10400	11600	12900	14200	15700	17300	19000	19400	21300	23400	25700	28100
					R-407C	8420	10000	11600	13300	15000	16700	18500	18800	20700	22700	24800	26900
	R-448A/449A				9810	11000	12100	13400	14700	16300	18000	18400	20300	22500	24900	27700	

Area Restrictions: 20°F Max Superheat

Area Restrictions: 40°F Max Return Gas Temp

For the latest data information visit Emerson.com/CopelandOPI

Medium Temp – Air Cooled

100° Ambient																	
HP	Model	Compressor	Electrical	Refrigerant	Capacity (BTU/Hr) @ SST, 40°F RG (65°F RG in Bold), 5°F Subcooling												
					-5	0	5	10	15	20	25	25	30	35	40	45	
3 1/4	FFAP-A32Z	ZS21KAE	TFC TFD CFV	R-134a		10000	11300	12700	14200	15800	17500	17900	19800	21800	23900	26300	
				R-404A	14400	15900	17500	19300	21200	23200	25400	26100	28300	30400	32700	35100	
				R-407A	13400	15000	16600	18300	20100	22100	24200	24700	27100	29600	32400	35300	
				R-407C	11100	13200	15300	17500	19700	21900	24200	24600	27100	29500	32100	34700	
				R-448A/449A	12700	14500	16400	18400	20400	22600	24900	25400	27900	30400	33100	35900	
4	FFAK-039Z	ZS29KAE	TFC TFD CFV	R-134a		10700	12100	13500	15000	16700	18500	21100	23300	25600	28000	30700	
				R-404A	17100	18800	20700	22600	24600	26800	29100	30700	33300	36100	39100		
	FFAP-A40Z	ZS26KAE	TFC TFD CFV	R-134a	9900	11300	12700	14300	16000	17900	19900	20300	22500	24900	27500	30200	
				R-404A	16400	18200	20200	22400	24700	27300	30000	30800	33500	36300	39300	42400	
				R-407A	14600	16500	18500	20700	23100	25600	28300	28900	31900	35000	38400	42000	
R-407C	12500	14800	17300	19800	22300	25000	27700	28100	31000	34000	37100	40400					
R-448A/449A	14100	15800	17800	19900	22400	25000	27900	28400	31600	35000	38700	42600					
4 1/4	FFAP-A42Z	ZS33KAE	TFC TFD CFV	R-134a	12200	13900	15700	17600	19700	21900	24300	24900	27500	30400	33400	36700	
				R-404A	20200	22400	24800	27400	30200	33200	36400	37700	40800	44100	47500	51000	
				R-407A	19100	21300	23600	26100	28800	31600	34800	35500	39000	42700	46800	51000	
				R-407C	15200	18200	21100	24200	27300	30500	33800	34300	37800	41400	45100	48900	
				R-448A/449A	17800	20300	23100	25900	28900	32100	35500	36200	39800	43600	47600	52000	
5	FFAP-050Z	ZS38K4E	TFC TFD TFE CFV CFZ	R-134a	14000	15800	17800	19900	22200	24700	27400	28000	30900	34000	37300	40700	
				R-22								40800	40800	44500	48500	52500	57000
				R-404A	23400	25700	28200	30900	33700	36700	39800	41700	45100	48600	52500	56000	
				R-407A	21000	23700	26600	29700	33000	36400	40000	40900	44600	48500	52500	56500	
				R-407C	20600	23300	26200	29300	32500	36000	39500	40200	43900	47800	51500	55500	
				R-448A/449A	20500	23200	26100	29400	32800	36400	40200	41100	45100	49200	53500	57500	
				R-507	24100	26500	29100	31800	34800	33000	35900	37600	40800	44100	47500	51000	
6	FFAP-060Z	ZS45K4E	TFC TFD	R-134a	16500	18700	21000	23500	26200	29100	32200	32900	36300	39900	43800	47800	
				R-22								47900	48100	52500	57000	62000	67000
				R-404A	27600	30300	33100	36000	39200	42400	45900	48100	52000	56000	60000	64000	
				R-407A	25000	28100	31500	35000	38800	42700	46800	47900	52000	56500	61000	66000	
				R-407C		27700	31100	34600	38300	42200	46200	47100	51500	56000	60500	65000	
				R-448A/449A	24500	27500	30800	34500	38400	42500	46700	47900	52500	57000	62000	67000	
				R-507	28500	31200	34100	37100	40400	43700	47200	49700	53500	57500	61500	65500	
7	FFAM-071Z	ZB48KCE	TFC TFD	R-134a			23800	26700	29800	33200	36800	37600	41500	45600	50000	54500	
				R-404A	30300	33600	37200	41000	44900	49100	53500	56000	61000	66000	71500	77000	
				R-407A	25900	29400	33300	37500	42000	46800	52000	53000	58500	64500	70000	76500	
				R-407C						40600	46000	46900	52500	58500	65000	72000	
				R-448A/449A	25600	29700	33900	38200	42700	47500	52500	53500	59000	65000	71000	77500	
				R-507	31200	34700	38400	42400	46500	51000	55500	58500	63500	68500	74000	79500	
				R-134a			25100	28500	32400	36600	41100	42000	46900	52000	57500	63500	
8	FFAM-081Z	ZB57KCE	TFC TFD	R-404A	34700	38400	42200	46200	50500	55000	59500	62500	67500	73000	78000	84000	
				R-407A	30500	34600	38800	43200	47800	52500	58000	59500	65000	71000	77000	83500	
				R-407C							56000	57000	63000	69500	76500	83500	
				R-448A/449A	29700	34200	38800	43600	48400	53500	59000	60000	66000	72000	78500	85000	
				R-507	35800	39600	43700	47900	52500	57000	61500	65000	70000	75500	81000	86500	
				R-134a			29400	33000	37000	41400	46200	47200	52500	58000	63500	69500	
9	FFAM-091Z	ZB66K5E	TFC TFD	R-404A	40100	44700	49300	54000	59000	64500	70000	73500	79500	85500	91500	98000	
				R-407A	33500	37700	42400	47600	53500	59500	65500	67000	74000	81000	88500	96000	
				R-407C			42000	47300	53000	59000	66000	67000	74000	82000	90000	99000	
				R-448A/449A	29900	35400	41000	46700	52500	59000	65500	67000	74000	81000	89000	96500	
				R-134a			33400	37600	42200	47100	52500	53500	59500	65500	72000	78500	
10	FFAM-101Z	ZB76K5E	TFC TFD	R-404A	46600	51500	56500	61500	67000	72500	78500	82500	88500	95000	102000	109000	
				R-407A	38500	45200	51500	57500	64000	70000	76500	78500	85000	92000	99500	108000	
				R-407C				55000	60500	67000	73500	75000	82500				
				R-448A/449A	33200	39900	46600	53500	60000	67000	74500	76000	83500	91500	99500	108000	
				R-507	47500	52500	57500	63000	68500	74000	80000	84000	90000	96500	102000	108000	
				R-134a			33400	37600	42200	47100	52500	53500	59500	65500	72000	78500	

Area Restrictions: 20°F Max Superheat

Area Restrictions: 40°F Max Return Gas Temp

For the latest data information visit Emerson.com/CopelandOPI

Medium Temp – Air Cooled

110° Ambient

HP	Model	Compressor	Electrical	Refrigerant	Capacity (BTU/Hr) @ SST, 40°F RG (65°F RG in Bold), 5°F Subcooling											
					-5	0	5	10	15	20	25	25	30	35	40	45
3/4	FFAM-A08Z	ZB06KAE	TFC CFV	R-134a			2510	2850	3220	3630	4080	4200	4700	5240	5820	6440
				R-404A	3230	3630	4070	4550	5040	5560	6100	6430	7010	7600	8190	8770
				R-407A	3100	3440	3830	4270	4780	5330	5930	6100	6760	7470	8220	9000
				R-407C	2610	3070	3540	4030	4540	5080	5650	5780	6390	7040	7710	8420
				R-448A/449A		3400	3850	4330	4850	5410	6010	6180	6830	7500	8210	8950
1	FFAM-A10Z	ZB07KAE	TFC CFV	R-134a			3050	3460	3910	4390	4920	5060	5640	6260	6920	7610
				R-404A	3930	4440	4950	5480	6020	6580	7150	7560	8190	8860	9530	10200
				R-407A	3200	3800	4440	5100	5770	6470	7180	7380	8120	8870	9620	10400
				R-407C	3180	3690	4220	4790	5380	5990	6630	6790	7470	8170	8890	9640
				R-448A/449A		4100	4600	5160	5760	6400	7070	7280	8010	8760	9540	10300
1	FPAK-010Z	ZS09KAE	TFC TFD CFV	R-134a				4410	4900	5410	5960	6210	6820	7470	8160	8900
				R-404A	4760	5200	5660	6140	6650	7180						
1 1/4	FFAM-A12Z	ZB08KAE	TFC CFV	R-134a			3630	4110	4630	5210	5830	5980	6670	7400	8190	9020
				R-404A	4790	5360	5920	6490	7090	7730	8420	8880	9670	10500	11500	12500
				R-407A	4250	4920	5600	6310	7030	7770	8520	8750	9540	10400	11200	12000
				R-407C	4030	4590	5180	5790	6440	7130	7860	8040	8830	9680	10600	11500
				R-448A/449A		4920	5520	6170	6880	7630	8440	8680	9540	10400	11400	12300
1 1/4	FPAK-012Z	ZS11KAE	TFC TFD CFV	R-134a				5680	6260	6880	7160	7850	8570	9350	10200	
				R-404A	5490	5950	6430	6930								
1 1/4	FPAK-013Z	ZS15KAE	TFC TFD CFV	R-134a				7320	8130	9000	9920	10300	11400	12500	13600	14900
				R-404A	7710	8330	8940	9540								
1 1/2	FFAP-A15Z	ZS09KAE	TFC TFD CFV	R-134a			4300	4830	5400	6010	6680	6850	7580	8370	9220	10100
				R-404A	5410	5960	6550	7180	7850	8560	9320	9910	10700	11400	12200	13100
				R-407A	5160	5750	6370	7040	7750	8520	9360	9620	10600	11600	12700	13900
				R-407C			5770	6640	7510	8400	9310	9510	10500	11400	12400	13500
				R-448A/449A		5330	5870	6480	7170	7940	8800	9070	10000	11100	12300	13500
1 1/2	FPAK-015Z	ZS09KAE	TFC TFD CFV	R-134a				8120	9010	9950	11000	11400	12500	13700	15000	16300
				R-404A	8280	8870										
1 3/4	FFAP-A17Z	ZS11KAE	TFC TFD CFV	R-134a			5080	5700	6360	7080	7850	8060	8900	9810	10800	11800
				R-404A	6360	6980	7640	8340	9080	9860	10700	11600	12500	13300	14200	
				R-407A		6760	7480	8240	9060	9940	10900	11200	12300	13400	14600	
				R-407C			6790	7800	8820	9850	10900	11100	12200	13300	14500	15700
				R-448A/449A		6310	6940	7640	8420	9300	10300	10600	11700	12800	14100	15400
2	FFAP-A20Z	ZS13KAE	TFC TFD CFV	R-134a			5830	6550	7320	8140	9040	9270	10300	11300	12400	13700
				R-404A	7340	8100	8930	9800	10700	11700	12800	14100	15200	16300	17400	18600
				R-407A	6990	7790	8630	9520	10500	11500	12600	13000	14200	15600	17000	18600
				R-407C			7830	9000	10200	11400	12600	12900	14100	15400	16800	18200
				R-448A/449A	6730	7360	8030	8750	9570	10500	11500	11900	13100	14500	16100	17900
2	FPAK-020Z	ZS21KAE	TFC TFD CFV	R-134a				11100	12300	13600	15000	15600	17200	18800	20600	22500
				R-404A	11800	12700	13700	14600								
2 1/4	FFAP-A22Z	ZS15KAE	TFC TFD CFV	R-134a			7130	8010	8970	10000	11100	11400	12600	14000	15400	17000
				R-404A	8870	9860	11000	12100	13400	14800	16400	17100	18600	20200	21800	23500
				R-407A	8560	9550	10600	11700	12900	14300	15700	16100	17700	19400	21400	23400
				R-407C			9630	11100	12500	14000	15600	15900	17500	19200	20900	22700
				R-448A/449A	8230	9080	10000	11100	12300	13600	15000	15400	17100	18900	20900	23100
3	FFAP-A30Z	ZS19KAE	TFC TFD CFV	R-134a			8360	9340	10400	11500	12700	13000	14400	15800	17300	18900
				R-404A	9890	11000	12200	13500	14900	16500	18100	19100	20700	22400	24100	26000
				R-407A	9590	10700	11900	13100	14400	15900	17500	17900	19700	21600	23700	26000
				R-407C			10800	12400	14000	15700	17400	17700	19500	21400	23300	25200
				R-448A/449A	9080	10100	11100	12200	13400	14800	16300	16800	18500	20500	22700	25200
3 1/4	FFAP-A32Z	ZS21KAE	TFC TFD CFV	R-134a			10600	11900	13200	14700	16300	16800	18500	20400	22400	24600
				R-404A	13000	14400	15900	17600	19400	21300	23300	24700	26700	28600	30600	32500
				R-407A		13800	15300	16800	18500	20300	22200	22800	25000	27300	29800	
				R-407C			14100	16200	18300	20500	22600	23100	25400	27700	30100	32500
				R-448A/449A		12800	14600	16500	18500	20500	22700	23300	25600	27900		

Area Restrictions: 20°F Max Superheat

Area Restrictions: 40°F Max Return Gas Temp

For the latest data information visit Emerson.com/CopelandOPI

Medium Temp – Air Cooled

110° Ambient

HP	Model	Compressor	Electrical	Refrigerant	Capacity (BTU/Hr) @ SST, 40°F RG (65°F RG in Bold), 5°F Subcooling													
					-5	0	5	10	15	20	25	25	30	35	40	45		
4	FFAP-039Z	ZS29KAE	TFC	R-134a				12600	14000	15600	17200	19700	21700	23900	26200	28600		
			TFD	R-404A	15500	17000	18600	20200	22000	23800	25700							
			CFV	R-134a			12000	13500	15100	16800	18700	19100	21200	23400	25800	28400		
	FFAP-A40Z	ZS26KAE	TFC	R-404A	15000	16600	18400	20300	22400	24700	27100	28500	30800	33300	35800	38400		
			TFD	R-407A	13500	15200	17100	19100	21200	23600	26100	26700	29500	32400	35500	38800		
			CFV	R-407C			16000	18400	20900	23400	26000	26500	29200	32100	35000	38000		
4 1/4	FFAP-A42Z	ZS33KAE	TFC TFD CFV	R-448A/449A	12100	13600	15400	17400	19600	22100	24800	25500	28500	31700	35200	39000		
				R-134a			14700	16500	18400	20500	22800	23300	25800	28500	31400	34400		
				R-404A	18400	20400	22500	24800	27200	29800	32600	34900	37600	40400	43200	46100		
				R-407A		19700	21800	24000	26400	29000	31900	32700	35900	39400	43200	47300		
				R-407C			19500	22500	25500	28600	31700	32400	35600	39000	42500	46000		
				R-448A/449A		18000	20600	23400	26300	29300	32500	33300	36800	40400	44100	48000		
5	FFAP-050Z	ZS38K4E	TFC TFD TFE CFV CFZ	R-134a	13100	14800	16700	18600	20800	23100	25600	26300	29000	31900	35000	38300		
				R-22										41900	45600	49500	53500	
				R-404A	21100	23100	25300	27600	30100	32600	35200	37200	40100	43000	46000			
				R-407A		21800	24500	27300	30400	33500	36800	37900	41400	45000	48800			
				R-407C		21500	24200	27100	30100	33300	36600	37400	40900	44500	48200	52000		
				R-448A/449A		21500	24100	26900	30000	33300	36800	37900	41600	45500	49400	53500		
6	FFAP-060Z	ZS45K4E	TFC TFD	R-134a	15500	17500	19700	22100	24600	27200	30100	30900	34100	37500	41100	44900		
				R-22											53500	58500	63000	
				R-404A	25000	27200	29600	32200	34800	37500	40200	42600	45500					
				R-407A		25900	29000	32300	35700	39300	43100	44400	48400					
				R-407C			28700	32000	35400	39100	42800	43800	47800	52000	56000	60500		
				R-448A/449A			28800	31900	35400	39200	43100	44400	48700	53000	57500	62000		
7	FFAM-071Z	ZB48KCE	TFC TFD	R-507	25400	27600	29900	32300	34700	37300	39900	42500						
				R-134a					25000	27900	31000	34300	35300	38900	42700	46800	51000	
				R-404A			33200	36600	40200	44000	48000	51000	55000	60000	64500	69500		
				R-407A		26700	30200	34000	38100	42500	47200	48500	53500	59000	64500	70500		
				R-407C										48400	54000	60000	66500	
				R-448A/449A		26800	30800	34900	39200	43700	48400	49800	55000	60500	66000			
8	FFAM-081Z	ZB57KCE	TFC TFD	R-507			34200	37700	41400	45200	49200	52000	56500	61000	65500	70000		
				R-134a					26400	30000	33900	38200	39200	43900	48800	54000	59500	
				R-404A			38100	41700	45400	49300	53000	56500	61000	65000	70000	74500		
				R-407A		31500	35400	39500	43800	48400	53000	54500	60000	65500				
				R-407C											65000	71500	78500	
				R-448A/449A			35600	40000	44500	49200	54000	55500	61000	66000				
9	FFAM-091Z	ZB66K5E	TFC TFD	R-507			42800	46600	50500	54500	57500	62000	6600					
				R-134a					30500	34200	38300	42700	43900	48700	54000	59000	65000	
				R-404A		39500	43700	47900	52500	57000	61500	65500	70500	76000	82000			
				R-407A			38900	43400	48400	53500	59500	61500	67500					
				R-407C					48900	54500	61000	62500	69500					
				R-448A/449A			35500	41100	46800	53000	59000	61000	67500					
10	FFAM-101Z	ZB76K5E	TFC TFD	R-134a				34700	39000	43600	48500	49900	55500	61000	67000	73000		
				R-404A			50500	55000	59500	64500	69500	74000	79500					
				R-407A			50500	55000	59500	64500	69500	74000	79500					
				R-407C					58000	64500								
				R-448A/449A			39300	46000	53000	59500								
				R-507		47500	52000	56500	60500	65000	68500							

Area Restrictions: 20°F Max Superheat

Area Restrictions: 40°F Max Return Gas Temp

For the latest data information visit Emerson.com/CopelandOPI

Extended Medium Temp/Low Temp – Air Cooled

90° Ambient

HP	Model	Comp.	Electrical	Refrigerant	Capacity (BTU/Hr) @ SST, 40°F RG, 5°F Subcooling																
					-40	-35	-30	-25	-20	-15	-10	-5	0	5	10	15	20	25	30		
1	FFAL-A10Z	ZF03KAE	TFC CFV	R-404A	2050	2280	2550	2860	3210	3600	4050	4550	5110	5730	6410						
				R-407A	1770	1980	2220	2480	2780	3130	3510	3950	4430	4970	5570						
				R-448A/R-449A	1810	2040	2300	2580	2890	3230	3620	4060	4560	5110	5730						
				R-507	2120	2360	2640	2950	3310	3720	4180	4700	5270								
1 1/4	FFPAK-010Z	ZS09KAE	TFC TFD CFV	R-134a									4020	4520	5060	5620	6230	6870			
				R-404A				3830	4290	4780	5310	5870	6470	7110	7780	8490	9230	10000			
1 1/4	FFAL-A13Z	ZF04KAE	TFC CFV	R-134a									4730	5300	5920	6560	7250	7980			
				R-404A				4560	5090	5660	6260	6890	7570	8260	9000	9760	10500	11400			
				R-404A	2620	2930	3310	3750	4260	4820	5440	6120	6840	7620	8440						
				R-407A	2200	2450	2780	3180	3640	4160	4740	5390	6090	6840	7640						
1 1/2	FFAP-A15Z	ZF06KAE	TFC TFD CFV	R-448A/R-449A	2250	2540	2890	3300	3770	4300	4890	5530	6210	6950	7730						
				R-507	2710	3030	3420	3880	4400	4980	5610	6300	7050								
				R-134a									6640	7470	8360	9300	10300	11400			
				R-404A				6410	7180	8010	8900	9860	10900	11900	13100	14300	15600	16900			
1 1/2	FFAL-A14Z	ZF05KAE	TFC TFD CFV	R-404A	3200	3630	4140	4700	5330	6020	6760	7560	8410	9300	10200						
				R-407A	2520	2870	3300	3800	4380	5020	5740	6520	7360	8270	9240						
				R-448A/R-449A	2650	3030	3490	4010	4590	5240	5950	6720	7540	8410	9340						
				R-507	3310	3760	4280	4870	5520	6220	6990	7810	8680								
1 1/2	FFAL-A15Z	ZF06KAE	TFC TFD CFV	R-404A	4340	4930	5590	6310	7100	7960	8900	9900	11000								
				R-407A	3500	4070	4680	5350	6090	6900	7790	8760	9820								
				R-448A/R-449A	3630	4180	4790	5460	6190	7000	7880	8850	9890								
				R-507	4360	4960	5620	6340	7140	8010	8940	9950	11000								
1 3/4	FFAP-A15Z	ZS09KAE	TFC TFD CFV	R-134a								3680	4210	4790	5410	6100	6810	7570			
				R-404A				4020	4530	5090	5690	6350	7070	7840	8680	9570	10500	11600			
				R-407A				3470	4100	4720	5350	6010	6700	7430	8220	9070	9990	11000			
				R-407C								4910	5770	6660	7580	8530	9520	10500			
1 3/4	FFPAK-015Z	ZS19KAE	TFC TFD CFV	R-448A/R-449A				3180	3710	4260	4830	5440	6110	6820	7610	8470	9420	10500			
				R-134a									7410	8330	9310	10300	11500	12600			
				R-404A				7120	7970	8870	9840	10900	12000	13100	14300	15600	16900	18300			
				R-404A	4820	5620	6440	7290	8190	9140	10200	11300	12400	13700	15100						
1 3/4	FFAL-A17Z	ZF07KAE	TFC CFV	R-404A	4030	4720	5430	6190	7000	7870	8820	9860	11000	12200	13600						
				R-407A	4160	4840	5530	6260	7040	7890	8830	9880	11000	12300	13800						
				R-448A/R-449A	4160	4840	5530	6260	7040	7890	8830	9880	11000	12300	13800						
				R-507	4980	5810	6660	7530	8450	9430	10500	11600	12800								
2	FFAP-A17Z	ZS11KAE	TFC TFD CFV	R-134a								4400	5030	5720	6440	7210	8030	8920			
				R-404A				4820	5430	6080	6800	7570	8410	9300	10300	11300	12400	13600			
				R-407A				4110	4850	5580	6320	7090	7890	8740	9650	10600	11700	12800			
				R-407C								5800	6820	7860	8940	10000	11200	12400			
2	FFAP-A20Z	ZS13KAE	TFC TFD CFV	R-448A/R-449A				3870	4490	5120	5800	6510	7290	8130	9050	10100	11200	12400			
				R-134a								5020	5750	6530	7390	8280	9230	10200			
				R-404A				5540	6230	6990	7810	8710	9670	10700	11800	13000	14300	15700			
				R-407A	4720	5560	6410	7260	8150	9080	10100	11100	12300	13500	14800						
2 1/4	FFAL-A22Z	ZF09KAE	TFC TFD CFV	R-407C								6670	7840	9040	10300	11600	12900	14300			
				R-448A/R-449A				3590	4730	5760	6710	7620	8530	9460	10400	11500	12700	14000			
				R-134a									10000	11300	12600	14000	15500	17200			
				R-404A				9630	10800	12100	13400	14800	16400	18000	19700	21500	23400	25300			
2 1/4	FFAP-A20Z	ZS21KAE	TFC TFD CFV	R-404A	5820	6730	7670	8680	9760	10900	12200	13500	15000								
				R-407A	4670	5470	6340	7290	8330	9470	10700	12100	13500								
				R-448A/R-449A	4950	5800	6680	7600	8590	9670	10800	12100	13500								
				R-507	5910	6810	7760	8770	9840	11000	12200	13600	15000								
2 1/4	FFAP-A22Z	ZS15KAE	TFC TFD CFV	R-134a								6060	6930	7870	8910	10000	11300	12600			
				R-404A				6730	7590	8530	9550	10700	11900	13200	14700	16200	17900	19700			
				R-407A				5740	6770	7810	8860	9960	11100	12400	13700	15100	16700	18400			
				R-407C								8130	9560	11000	12600	14200	15800	17600			
2 1/2	FFAL-A26Z	ZF11K4E	TFC TFD CFV	R-448A/R-449A				5250	6130	7050	8010	9040	10200	11400	12700	14100	15800	17500			
				R-404A	8040	9130	10300	11500	12900	14300	15800	17400	19100	20900	22700	24600	26600	28600	30600		
				R-407A	6640	7400	8430	9670	11100	12600	14100	15600	17100								
				R-448A/R-449A	6880	7870	8960	10100	11500	12900	14400	16000	17800	19600	21600	23700	25900	28100			
2 1/2	FFAL-A26Z	ZF11K4E	TFC CFV	R-507	8340	9450	10600	11900	13200	14700	16200	17800	19500	21200	23000	24900	26900	28900	31000		

Area Restrictions: 20°F Max Superheat

Area Restrictions: 40°F Max Return Gas Temp

For the latest data information visit Emerson.com/CopelandOPI

Extended Medium Temp/Low Temp – Air Cooled

90° Ambient

HP	Model	Comp.	Electrical	Refrigerant	Capacity (BTU/Hr) @ SST, 40°F RG, 5°F Subcooling																
					-40	-35	-30	-25	-20	-15	-10	-5	0	5	10	15	20	25	30		
3	FFAL-A30Z	ZF13K4E	TFC	R-404A	9060	10400	11800	13200	14800	16500	18300	20200	22200	24300	26500	28800	31200	33600	36200		
			TFD	R-407A	7660	8520	9640	11000	12600	14300	16200	18200	20300								
			CFV	R-448A/R-449A	7880	8990	10300	11700	13300	15000	16900	18900	21000	23300	25600	28100	30600	33300			
			R-507	9340	10700	12100	13600	15300	17000	18900	20800	22800	25000	27200	29600	32000	34500	37100			
	FFAP-A30Z	ZS19KAE	TFC	R-404A				7510	8470	9510	10600	11900	13200	14700	16300	18000	19800	21700			
			TFD	R-407A				6440	7600	8760	9940	11200	12500	13800	15300	16900	18600	20500			
			CFV	R-407C								9110	10700	12400	14100	15900	17700	19700			
			R-448A/R-449A				4830	6370	7760	9050	10300	11600	12900	14200	15700	17400	19300				
3 1/4	FFAP-A32Z	ZS21KAE	TFC	R-404A				9960	11200	12500	14000	15600	17300	19100	21100	23200	25500	27900			
			TFD	R-407A				8390	9900	11400	12900	14500	16100	17900	19700	21700	23900	26200			
			CFV	R-407C								12100	14200	16300	18600	20900	23300	25700			
			R-448A/R-449A				7610	9110	10700	12300	14100	15900	17900	20000	22200	24500	26900				
4	FFAP-A40Z	ZS29KAE	TFC	R-134a									11300	12800	14300	16000	17800	19700			
			TFD	R-404A				12200	13700	15300	17000	18800	20800	22900	25100	27500	29900	32600			
			CFV	R-407A	11400	12900	14500	16200	18000	19900	21900	24000	26300	28600	31100	33600	36200	38800	41500		
			R-407C	9670	10700	11900	13500	15300	17300	19500	21900	24400									
	FFAL-A40Z	ZF15K4E	TFC	R-407A	9920	11200	12700	14400	16200	18200	20300	22600	25000	27500	30200	32900	35700	38600			
			TFD	R-448A/R-449A	9920	11200	12700	14400	16200	18200	20300	22600	25000	27500	30200	32900	35700	38600			
			CFV	R-507	11700	13300	14900	16600	18500	20500	22500	24700	27000	29400	31900	34400	37000	39700	42500		
			R-134a									10200	11700	13200	15000	16900	18900	21100			
FFAP-A40Z	ZS26KAE	TFC	R-404A				11200	12600	14200	15900	17700	19800	22000	24400	26900	29700	32700				
		TFD	R-407A				9120	10600	12100	13800	15700	17700	19900	22200	24700	27500	30400				
		CFV	R-407C								13600	16000	18500	21000	23700	26500	29400				
		R-448A/R-449A				10100	11200	12400	13900	15500	17400	19500	21900	24400	27200	30300					
4 1/4	FFAP-A42Z	ZS33KAE	TFC	R-134a									12700	14500	16400	18600	20800	23200	25800		
			TFD	R-404A				13900	15700	17600	19600	21900	24400	27000	29900	33000	36300	39800			
			CFV	R-407A				11900	14000	16200	18400	20600	23000	25500	28100	31000	34200	37500			
			R-407C								16600	19600	22600	25800	29000	32400	35900				
5	FFAL-A50Z	ZF18K4E	TFC	R-404A	13500	15300	17200	19200	21200	23400	25600	28000	30400	32900	35500	38200	40900	43700	46500		
			TFD	R-407A	11500	12700	14300	16100	18300	20600	23200	25800	28700								
			CFV	R-448A/R-449A	11900	13500	15300	17200	19300	21600	24000	26500	29100	31900	34800	37700					
			R-507	13900	15800	17700	19700	21800	24000	26300	28700	31200	33800	36400	39100	41900	44600	47500			
	FFAP-050Z	ZS38K4E	TFC	R-134a									13100	14800	16800	18800	21100	23600	26200	29000	
			TFD	R-404A				16700	18700	20800	23100	25600	28200	31000	33900	37000	40300	43800			
			TFE	R-407A				13500	15400	17500	20000	22600	25500	28700	32000	35500	39200	43000			
			CFV	R-407C							15200	17300	19700	22300	25200	28300	31600	35000	38700	42400	
6	FFAP-060Z	ZS45K4E	TFC	R-134a								15400	17500	19800	22300	24900	27800	30900	34200		
			TFD	R-22													42200	46300	50500	55500	
			CFV	R-404A				20000	22300	24700	27400	30100	33100	36200	39500	43000	46700	50500			
			R-407A				16200	18400	21000	23800	26900	30300	33900	37700	41700	45900	50000				

Extended Medium Temp/Low Temp – Air Cooled

100° Ambient

HP	Model	Comp.	Electrical	Refrigerant	Capacity (BTU/Hr) @ SST, 40°F RG, 5°F Subcooling														
					-40	-35	-30	-25	-20	-15	-10	-5	0	5	10	15	20	25	30
1	FFAL-A10Z	ZF03KAE	TFC CFV	R-404A	1910	2120	2360	2630	2940	3300	3700	4150	4660	5220	5850				
				R-407A	1650	1850	2080	2330	2610	2920	3270	3660	4100	4590	5130				
				R-448A/R-449A	1700	1940	2180	2440	2730	3050	3410	3810	4270	4770	5340				
				R-507	1970	2190	2440	2720	3040	3400	3820	4280	4800						
1 1/4	FFPAK-010Z	ZS09KAE	TFC TFD CFV	R-134a									4260	4750	5280	5840	6440		
				R-404A				3560	3970	4410	4880	5370	5900	6460	7050	7670	8310	8990	
1 1/4	FFAL-A13Z	ZF04KAE	TFC CFV	R-134a									4980	5550	6140	6780	7450		
				R-404A				4220	4700	5200	5720	6280	6860	7460	8080	8730	9380	10100	
				R-407A	2420	2690	3030	3420	3880	4390	4960	5580	6250	6960	7720				
				R-448A/R-449A	2070	2300	2590	2950	3370	3860	4390	4990	5630	6330	7070				
1 1/2	FFAP-A13Z	ZS15KAE	TFC TFD CFV	R-134a									7040	7870	8750	9690	10700		
				R-404A				5950	6660	7400	8200	9050	9950	10900	11900	12900	14000	15000	
1 1/2	FFAL-A14Z	ZF05KAE	TFC TFD CFV	R-404A	2960	3360	3820	4330	4910	5540	6220	6940	7720	8540	9400				
				R-407A	2370	2680	3070	3530	4060	4660	5320	6050	6840	7700	8610				
				R-448A/R-449A	2480	2840	3260	3740	4280	4880	5540	6250	7020	7840	8700				
				R-507	3060	3480	3950	4480	5080	5720	6420	7170	7970						
1 1/2	FFAL-A15Z	ZF06KAE	TFC TFD CFV	R-404A	4030	4570	5160	5810	6530	7300	8140	9040	10000						
				R-407A	3300	3830	4400	5030	5710	6460	7280	8180	9160						
				R-448A/R-449A	3420	3940	4510	5140	5820	6560	7380	8270	9230						
				R-507	4060	4590	5190	5840	6560	7340	8180	9080	10100						
1 3/4	FFAP-A15Z	ZS09KAE	TFC TFD CFV	R-134a								3560	4050	4580	5150	5760	6420	7140	
				R-404A				3740	4200	4710	5260	5860	6510	7220	7980	8800	9690	10600	
				R-407A						4370	4970	5580	6230	6910	7630	8420	9260	10200	
				R-407C								4520	5370	6240	7130	8040	8970	9940	
1 3/4	FFAP-A15Z	ZS19KAE	TFC TFD CFV	R-448A/R-449A						4220	4710	5250	5840	6480	7190	7970	8830	9780	
				R-134a									7840	8750	9710	10700	11800		
1 3/4	FFAL-A17Z	ZF07KAE	TFC CFV	R-404A	4420	5170	5920	6700	7500	8350	9260	10200	11300	12400	13600				
				R-407A	3750	4400	5070	5780	6530	7330	8210	9160	10200	11400	12600				
				R-448A/R-449A	3910	4550	5200	5870	6590	7370	8230	9190	10300	11400	12800				
				R-507	4570	5340	6120	6910	7740	8610	9540	10500	11600						
2	FFAP-A17Z	ZS11KAE	TFC TFD CFV	R-134a								4220	4800	5420	6080	6800	7570	8400	
				R-404A				4490	5040	5630	6280	6980	7740	8560	9440	10400	11400	12500	
				R-407A						5160	5860	6580	7330	8110	8950	9850	10800	11900	
				R-407C								5330	6330	7350	8390	9450	10500	11700	
2	FFAP-A20Z	ZS13KAE	TFC TFD CFV	R-448A/R-449A						5070	5640	6260	6940	7690	8510	9410	10400	11500	
				R-134a									4850	5510	6220	6990	7810	8700	9660
2	FFAP-A20Z	ZS13KAE	TFC TFD CFV	R-404A				5140	5770	6460	7210	8030	8910	9870	10900	12000	13200	14500	
				R-407A						5940	6740	7570	8440	9350	10300	11400	12500	13700	
				R-407C								6150	7300	8470	9670	10900	12200	13400	
				R-448A/R-449A							5680	6480	7250	8030	8830	9690	10600	11700	12900
2 1/4	FFAP-A20Z	ZS21KAE	TFC TFD CFV	R-134a									10600	11900	13200	14600	16100		
				R-404A				8950	10000	11100	12300	13600	15000	16400	17900	19400	20800	22200	
2 1/4	FFAL-A22Z	ZF09KAE	TFC TFD CFV	R-404A	5360	6190	7060	7970	8950	10000	11100	12300	13700						
				R-407A	4430	5160	5950	6820	7770	8810	9940	11200	12500						
				R-448A/R-449A	4670	5470	6290	7150	8060	9040	10100	11300	12600						
				R-507	5370	6210	7080	8000	8990	10000	11200	12400	13700						
2 1/4	FFAP-A22Z	ZS15KAE	TFC TFD CFV	R-134a								5890	6700	7590	8540	9570	10700	11900	
				R-404A				6280	7060	7910	8840	9850	11000	12200	13500	14900	16400	18000	
				R-407A						7240	8230	9260	10300	11500	12700	14000	15500	17100	
				R-407C								7520	8940	10400	11900	13400	15000	16600	
2 1/2	FFAL-A26Z	ZF11K4E	TFC TFD CFV	R-448A/R-449A						6980	7830	8740	9730	10800	12000	13400	14800	16500	
				R-134a									8740	9730	10800	12000	13400	14800	16500
2 1/2	FFAL-A26Z	ZF11K4E	TFC TFD CFV	R-404A	7430	8420	9490	10600	11800	13100	14500	15900	17400	19000	20700	22400	24100	25900	27700
				R-407A	6190	6920	7900	9070	10400	11800	13200	14600	15900						
				R-448A/R-449A	6520	7440	8460	9570	10800	12100	13500	15000	16600	18300	20100				
				R-507	7640	8670	9770	10900	12200	13500	14900	16400	17900	19500	21200	22900	24700	26300	27900

Area Restrictions: 20°F Max Superheat

Area Restrictions: 40°F Max Return Gas Temp

For the latest data information visit Emerson.com/CopelandOPI

Extended Medium Temp/Low Temp – Air Cooled

100° Ambient

HP	Model	Comp.	Electrical	Refrigerant	Capacity (BTU/Hr) @ SST, 40°F RG, 5°F Subcooling															
					-40	-35	-30	-25	-20	-15	-10	-5	0	5	10	15	20	25	30	
3	FFAL-A30Z	ZF13K4E	TFC	R-404A	8390	9530	10800	12100	13500	15000	16600	18300	20100	22000	24000	26100	28300	30500	32800	
			TFD	R-407A	7230	7930	8910	10100	11600	13200	15000	16900	18900							
			CFV	R-448A/R-449A	7630	8550	9640	10900	12300	13800	15500	17300	19200	21300	23500	25700	28100			
				R-507	8610	9790	11100	12400	13900	15500	17100	18900	20800	22800	24800	27000	29200	31500	33800	
	FFAP-A30Z	ZS19KAE	TFC	R-404A				7010	7880	8820	9850	11000	12200	13500	14900	16500	18100	19900		
			TFD	R-407A						8120	9230	10400	11600	12900	14200	15700	17300	19000		
			CFV	R-407C								8420	10000	11600	13300	15000	16700	18500		
				R-448A/R-449A							7460	8660	9810	11000	12100	13400	14700	16300	18000	
3 1/4	FFAP-A32Z	ZS21KAE	TFC	R-134a									10000	11300	12700	14200	15800	17500		
			TFD	R-404A				9270	10400	11600	12900	14400	15900	17500	19300	21200	23200	25400		
			CFV	R-407A							10500	12000	13400	15000	16600	18300	20100	22100	24200	
				R-407C									11100	13200	15300	17500	19700	21900	24200	
4	FFAK-039Z	ZS29KAE	TFC	R-134a										10700	12100	13500	15000	16700	18500	
			TFD	R-404A				10100	11300	12600	14000	15500	17100	18800	20700	22600	24600	26800	29100	
			CFV	R-407A	10500	11800	13200	14800	16400	18100	19900	21800	23800	25800	28000	30200	32500	34900	37300	
				R-407C	8980	9850	11000	12400	14100	16000	18100	20300	22700							
	FFAL-A40Z	ZF15K4E	TFC	R-448A/R-449A	9500	10600	12000	13400	15000	16800	18700	20700	22800	25100						
			TFD	R-507	10800	12200	13600	15200	16900	18700	20600	22500	24600	26700	28900	31100	33400	35600	37900	
			CFV	R-134a									9900	11300	12700	14300	16000	17900	19900	
				R-404A				10400	11700	13200	14700	16400	18200	20200	22400	24700	27300	30000		
FFAP-A40Z	ZS26KAE	TFC	R-407A								11300	12900	14600	16500	18500	20700	23100	25600	28300	
		TFD	R-407C									12500	14800	17300	19800	22300	25000	27700		
		CFV	R-448A/R-449A								11400	12600	14100	15800	17800	19900	22400	25000	27900	
			R-134a										12200	13900	15700	17600	19700	21900	24300	
4 1/4	FFAP-A42Z	ZS33KAE	TFC	R-404A				13000	14600	16300	18200	20200	22400	24800	27400	30200	33200	36400		
			TFD	R-407A							15000	17000	19100	21300	23600	26100	28800	31600	34800	
			CFV	R-407C									15200	18200	21100	24200	27300	30500	33800	
				R-448A/R-449A									15300	17800	20300	23100	25900	28900	32100	35500
5	FFAL-A50Z	ZF18K4E	TFC	R-404A	12500	14200	15900	17600	19500	21400	23400	25400	27600	29800	32000	34400	36800	39200	41700	
			TFD	R-407A	10800	11800	13300	15000	17000	19100	21500	24000	26700							
			CFV	R-448A/R-449A	11600	13000	14500	16200	18000	20000	22100	24300	26600							
				R-507	12900	14600	16400	18200	20100	22100	24100	26200	28400	30600	32900	35200	37400	39600		
	FFAP-050Z	ZS38K4E	TFC	R-134a									12300	14000	15800	17800	19900	22200	24700	27400
			TFD	R-404A				15400	17200	19100	21200	23400	25700	28200	30900	33700	36700	39800		
			TFE	R-407A							16300	18500	21000	23700	26600	29700	33000	36400	40000	
			CFV	R-407C								18200	20600	23300	26200	29300	32500	36000	39500	
FFAP-060Z	ZS45K4E	TFC	R-448A/R-449A									18100	20500	23200	26100	29400	32800	36400	40200	
		TFD	R-134a									14500	16500	18700	21000	23500	26200	29100	32200	
			R-22																47900	52500
			R-404A				18500	20600	22800	25100	27600	30300	33100	36000	39200	42400	45900			
6	FFAP-060Z	ZS45K4E	TFC	R-407A							22100	25000	28100	31500	35000	38800	42700	46800		
			TFD	R-407C									27700	31100	34600	38300	42200	46200	50500	
			CFV	R-448A/R-449A									24500	27500	30800	34500	38400	42500	46700	
				R-134a																

Area Restrictions: 20°F Max Superheat

Area Restrictions: 40°F Max Return Gas Temp

For the latest data information visit Emerson.com/CopelandOPI

Extended Medium Temp/Low Temp – Air Cooled

110° Ambient																					
HP	Model	Comp.	Electrical	Refrigerant	Capacity (BTU/Hr) @ SST, 40°F RG, 5°F Subcooling																
					-40	-35	-30	-25	-20	-15	-10	-5	0	5	10	15	20	25	30		
1	FFAL-A10Z	ZF03KAE	TFC CFV	R-404A	1790	1980	2190	2430	2710	3020	3370	3770	4210	4710	5260						
				R-407A	1540	1740	1960	2190	2450	2730	3050	3410	3800	4240	4720						
				R-448A/R-449A	1550	1780	2020	2270	2530	2820	3150	3510	3920	4380	4890						
				R-507	1860	2060	2280	2530	2810	3130	3490	3890	4340								
1 1/4	FFAL-A13Z	ZF04KAE	TFC CFV	R-134a											4410	4900	5410	5960			
				R-404A						3950	4350	4760	5200	5660	6140	6650	7180				
1 1/2	FFAL-A14Z	ZF05KAE	TFC TFD CFV	R-134a												5680	6260	6880			
				R-404A						4610	5040	5490	5950	6430	6930						
				R-404A	2240	2470	2760	3110	3520	3970	4470	5020	5610	6240	6900						
				R-407A	1940	2140	2400	2720	3100	3540	4030	4570	5160	5800	6480						
1 3/4	FFAL-A15Z	ZF06KAE	TFC TFD CFV	R-448A/R-449A	1990	2220	2510	2850	3240	3690	4180	4720	5310	5940	6620						
				R-507	2320	2560	2860	3220	3630	4090	4600	5150	5740								
				R-134a											7320	8130	9000	9920			
				R-404A						6510	7110	7710	8330	8940	9540						
2	FFAP-A15Z	ZS09KAE	TFC TFD CFV	R-404A	2750	3110	3520	3980	4490	5050	5650	6290	6970	7690	8440						
				R-407A	2220	2500	2850	3260	3740	4290	4900	5570	6310	7100	7940						
				R-448A/R-449A	2310	2630	3010	3460	3950	4510	5120	5770	6480	7240	8040						
				R-507	2810	3180	3600	4070	4600	5180	5800	6470	7180								
2	FFAP-A15Z	ZS09KAE	TFC TFD CFV	R-404A	3750	4220	4740	5300	5920	6580	7300	8080	8910								
				R-407A	3100	3590	4130	4700	5330	6010	6760	7570	8460								
				R-448A/R-449A	3210	3700	4230	4810	5440	6120	6860	7670	8560								
				R-507	3750	4220	4740	5300	5930	6600	7330	8120	8980								
2	FFAP-A15Z	ZS09KAE	TFC TFD CFV	R-134a										4300	4830	5400	6010	6680			
				R-404A				3550	3970	4420	4900	5410	5960	6550	7180	7850	8560	9320			
				R-407A								5160	5750	6370	7040	7750	8520	9360			
				R-407C										5770	6640	7510	8400	9310			
2	FFAP-A15Z	ZS09KAE	TFC TFD CFV	R-448A/R-449A									5330	5870	6480	7170	7940	8800			
				R-134a											8120	9010	9950	11000			
				R-404A							7680	8280	8870								
				R-404A	4030	4710	5370	6050	6740	7460	8210	9030	9910	10900	11900						
2	FFAL-A17Z	ZF07KAE	TFC CFV	R-407A	3430	4050	4670	5320	6000	6730	7520	8380	9320	10300	11500						
				R-448A/R-449A	3650	4250	4850	5470	6120	6830	7610	8480	9450	10500	11800						
				R-507	4130	4830	5520	6220	6940	7690	8480	9320	10200								
				R-134a											5080	5700	6360	7080	7850		
2	FFAP-A17Z	ZS11KAE	TFC TFD CFV	R-404A				4230	4710	5230	5780	6360	6980	7640	8340	9080	9860	10700			
				R-407A									6760	7480	8240	9060	9940	10900			
				R-407C										6790	7800	8820	9850	10900			
				R-448A/R-449A										6310	6940	7640	8420	9300	10300		
2	FFAP-A20Z	ZS13KAE	TFC TFD CFV	R-134a											5830	6550	7320	8140	9040		
				R-404A				4790	5360	5970	6630	7340	8100	8930	9800	10700	11700	12800			
				R-407A									6990	7790	8630	9520	10500	11500	12600		
				R-407C											7830	9000	10200	11400	12600		
2	FFAP-A20Z	ZS13KAE	TFC TFD CFV	R-448A/R-449A								6730	7360	8030	8750	9570	10500	11500			
				R-134a											11100	12300	13600	15000			
				R-404A							9880	10800	11800	12700	13700	14600					

Extended Medium Temp/Low Temp – Air Cooled

110° Ambient

HP	Model	Comp.	Electrical	Refrigerant	Capacity (BTU/Hr) @ SST, 40°F RG, 5°F Subcooling															
					-40	-35	-30	-25	-20	-15	-10	-5	0	5	10	15	20	25	30	
2 1/4	FFAL-A22Z	ZF09KAE	TFC	R-404A	4910	5670	6450	7270	8140	9070	10100	11100	12300							
			TFD	R-407A	4220	4870	5570	6340	7190	8110	9130	10200	11500							
			CFV	R-448A/R-449A	4390	5140	5900	6670	7500	8380	9340	10400	11600							
				R-507	4930	5700	6480	7300	8170	9100	10100	11200	12400							
	FFAP-A22Z	ZS15KAE	TFC	R-404A				5680	6370	7130	7960	8870	9860	11000	12100	13400	14800	16400		
			TFD	R-407A								8560	9550	10600	11700	12900	14300	15700		
			CFV	R-407C										9630	11100	12500	14000	15600		
				R-448A/R-449A									8230	9080	10000	11100	12300	13600	15000	
2 1/2	FFAL-A26Z	ZF11K4E	TFC	R-404A	6770	7670	8620	9620	10700	11800	13000	14300	15600	17000	18400	19900	21300	22700		
			TFD	R-407A	5760	6460	7380	8470	9670	10900	12200	13500	14600							
			CFV	R-448A/R-449A	6120	6980	7910	8930	10000	11200	12500	13900	15300							
				R-507	6960	7890	8860	9890	11000	12100	13400	14700	16000	17400	18800	20300	21700	23100		
	FFAL-A30Z	ZF13K4E	TFC	R-404A	7700	8660	9710	10900	12100	13500	15000	16600	18300	20100	21900	23900	25800	27800	29600	
			TFD	R-407A	6740	7280	8110	9190	10500	12000	13700	15500	17400							
			CFV	R-448A/R-449A	7500	8200	9060	10100	11300	12600	14000	15600	17400							
				R-507	8000	8990	10100	11200	12500	13900	15300	16900	18500	20200	22100	24000	25900	28000	30100	
FFAP-A30Z	ZS19KAE	TFC	R-404A				6340	7120	7960	8880	9890	11000	12200	13500	14900	16500	18100			
		TFD	R-407A								9590	10700	11900	13100	14400	15900	17500			
		CFV	R-407C										10800	12400	14000	15700	17400			
			R-448A/R-449A									9080	10100	11100	12200	13400	14800	16300		
3 1/4	FFAP-A32Z	ZS21KAE	TFC	R-404A					9440	10500	11700	13000	14400	15900	17600	19400	21300	23300		
			TFD	R-407A									13800	15300	16800	18500	20300	22200		
			CFV	R-407C											14100	16200	18300	20500	22600	
				R-448A/R-449A										12800	14600	16500	18500	20500	22700	
	FFAP-A32Z	ZS21KAE	TFC	R-134a											10600	11900	13200	14700	16300	
			TFD	R-404A																
			CFV	R-404A																
				R-407A																
4	FFAL-A40Z	ZF15K4E	TFC	R-404A	9420	10700	12000	13400	14900	16400	18100	19900	21700	23500	25400	27200	28700			
			TFD	R-407C	8130	8880	9910	11200	12800	14500	16400	18500	20700							
			CFV	R-448A/R-449A	9130	10100	11200	12400	13800	15300	16900	18600	20500							
				R-507	9760	11000	12300	13700	15200	16700	18300	20000	21800	23600	25500	27500	29500			
	FFAP-A40Z	ZS26KAE	TFC	R-134a												12000	13500	15100	16800	18700
			TFD	R-404A				9660	10800	12100	13500	15000	16600	18400	20300	22400	24700	27100		
			CFV	R-407A										13500	15200	17100	19100	21200	23600	26100
				R-407C												16000	18400	20900	23400	26000
4 1/4	FFAL-A42Z	ZS33KAE	TFC	R-134a												14700	16500	18400	20500	22800
			TFD	R-404A				12000	13400	15000	16600	18400	20400	22500	24800	27200	29800	32600		
			CFV	R-407A											19700	21800	24000	26400	29000	31900
				R-407C												19500	22500	25500	28600	31700
	FFAL-A50Z	ZF18K4E	TFC	R-404A	11500	13000	14600	16200	17900	19700	21500	23300	25100	26900	28400					
			TFD	R-407A	9850	10800	12100	13700												
				R-448A/R-449A											24100					
				R-507	11800	13400	14900	16500	18200	19900	21600	23400	25300	27200	29200					
FFAP-050Z	ZS38K4E	TFC	R-134a								11600	13100	14800	16700	18600	20800	23100	25600		
		TFD	R-404A				14000	15600	17300	19100	21100	23100	25300	27600	30100	32600	35200			
		CFV	R-407A										21800	24500	27300	30400	33500	36800		
			R-407C											21500	24200	27100	30100	33300	36600	
6	FFAP-060Z	ZS45K4E	TFC	R-134a								13600	15500	17500	19700	22100	24600	27200	30100	
			TFD	R-404A										27200	29600	32200	34800	37500	40200	
				R-407A											25900	29000	32300	35700	39300	43100
				R-407C												28700	32000	35400	39100	42800
	FFAP-060Z	ZS45K4E	TFC	R-448A/R-449A											28800	31900	35400	39200	43100	

Area Restrictions: 20°F Max Superheat

Area Restrictions: 40°F Max Return Gas Temp

For the latest data information visit Emerson.com/CopelandOPI

Physical and Electrical Data

Copeland F-Line air-cooled condensing units

Model*	Comp.	Voltage	L	W	H	Ref. Conn.		Receiver Capacity (lbs @ 90% volume)							MCA	Max Over-Current	Ship Wt.
						Liq.	Suc.	22	134a	404A	407A	407C	448A/449A	507			
FFAL-A10Z-CFV-072	ZF03KAE	208/230-1	24.91	18.82	17.77	3/8	7/8	8.5	8.6	7.3	8.1	8.0	7.8/7.8	7.4	8.6	15.0	110
FFAL-A10Z-CFV-075	ZF03KAE	208/230-1	24.91	19.46	17.77	3/8	7/8	13.8	14.0	12.0	13.2	13.2	12.7/12.8	12.0	8.6	15.0	134
FFAL-A10Z-TFC-072	ZF03KAE	208/230-3	24.91	18.82	17.77	3/8	7/8	8.5	8.6	7.3	8.1	8.0	7.8/7.8	7.4	6.1	15.0	116
FFAL-A10Z-TFC-075	ZF03KAE	208/230-3	24.91	19.46	17.77	3/8	7/8	13.8	14.0	12.0	13.2	13.2	12.7/12.8	12.0	6.1	15.0	134
FFAL-A13Z-CFV-072	ZF04KAE	208/230-1	24.91	18.82	17.77	3/8	7/8	8.5	8.6	7.3	8.1	8.0	7.8/7.8	7.4	10.3	15.0	121
FFAL-A13Z-CFV-075	ZF04KAE	208/230-1	24.91	19.46	17.77	3/8	7/8	13.8	14.0	12.0	13.2	13.2	12.7/12.8	12.0	10.3	15.0	136
FFAL-A13Z-TFC-072	ZF04KAE	208/230-3	24.91	18.82	17.77	3/8	7/8	8.5	8.6	7.3	8.1	8.0	7.8/7.8	7.4	9.3	15.0	118
FFAL-A13Z-TFC-075	ZF04KAE	208/230-3	24.91	19.46	17.77	3/8	7/8	13.8	14.0	12.0	13.2	13.2	12.7/12.8	12.0	9.3	15.0	136
FFAL-A14Z-CFV-072	ZF05KAE	208/230-1	24.86	20.42	19.08	3/8	7/8	15.0	15.2	13.0	14.3	14.2	13.8/13.8	13.0	12.2	15.0	124
FFAL-A14Z-CFV-075	ZF05KAE	208/230-1	24.86	20.97	19.08	3/8	7/8	15.0	15.2	13.0	14.3	14.2	13.8/13.8	13.0	12.2	15.0	139
FFAL-A14Z-TFC-072	ZF05KAE	208/230-3	24.86	20.42	19.08	3/8	7/8	15.0	15.2	13.0	14.3	14.2	13.8/13.8	13.0	10.7	15.0	122
FFAL-A14Z-TFC-075	ZF05KAE	208/230-3	24.86	20.97	19.08	3/8	7/8	15.0	15.2	13.0	14.3	14.2	13.8/13.8	13.0	10.7	15.0	137
FFAL-A14Z-TFD-072	ZF05KAE	460-3	24.86	20.42	19.08	3/8	7/8	15.0	15.2	13.0	14.3	14.2	13.8/13.8	13.0	5.7	15.0	127
FFAL-A14Z-TFD-075	ZF05KAE	460-3	24.86	20.97	19.08	3/8	7/8	15.0	15.2	13.0	14.3	14.2	13.8/13.8	13.0	5.7	15.0	142
FFAL-A15Z-CFV-072	ZF06KAE	208/230-1	24.86	20.42	19.08	3/8	7/8	15.0	15.2	13.0	14.3	14.2	13.8/13.8	13.0	18.4	30.0	120
FFAL-A15Z-CFV-075	ZF06KAE	208/230-1	24.86	20.97	19.08	3/8	7/8	15.0	15.2	13.0	14.3	14.2	13.8/13.8	13.0	18.4	30.0	147
FFAL-A15Z-TFC-072	ZF06KAE	208/230-3	24.86	20.42	19.08	3/8	7/8	15.0	15.2	13.0	14.3	14.2	13.8/13.8	13.0	11.7	15.0	119
FFAL-A15Z-TFC-075	ZF06KAE	208/230-3	24.86	20.97	19.08	3/8	7/8	15.0	15.2	13.0	14.3	14.2	13.8/13.8	13.0	11.7	15.0	153
FFAL-A15Z-TFD-072	ZF06KAE	460-3	24.86	20.42	19.08	3/8	7/8	15.0	15.2	13.0	14.3	14.2	13.8/13.8	13.0	6.7	15.0	125
FFAL-A15Z-TFD-075	ZF06KAE	460-3	24.86	20.97	19.08	3/8	7/8	15.0	15.2	13.0	14.3	14.2	13.8/13.8	13.0	6.7	15.0	158
FFAL-A17Z-CFV-072	ZF07KAE	208/230-1	24.86	20.42	19.08	3/8	7/8	15.0	15.2	13.0	14.3	14.2	13.8/13.8	13.0	18.7	30.0	123
FFAL-A17Z-CFV-075	ZF07KAE	208/230-1	24.86	20.97	19.08	3/8	7/8	15.0	15.2	13.0	14.3	14.2	13.8/13.8	13.0	18.7	30.0	125
FFAL-A17Z-TFC-072	ZF07KAE	208/230-3	24.86	20.42	19.08	3/8	7/8	15.0	15.2	13.0	14.3	14.2	13.8/13.8	13.0	12.1	15.0	122
FFAL-A17Z-TFC-075	ZF07KAE	208/230-3	24.86	20.97	19.08	3/8	7/8	15.0	15.2	13.0	14.3	14.2	13.8/13.8	13.0	12.1	15.0	125
FFAL-020Z-CFV-071	ZF08K4E	208-230-1	34.06	25	19.29	3/8	7/8	17.9	18.1	15.5	17.1	17.0	16.4/16.5	15.5	23.3	35.0	202
FFAL-020Z-TFC-071	ZF08K4E	208-230-3	34.06	25	19.29	3/8	7/8	17.9	18.1	15.5	17.1	17.0	16.4/16.5	15.5	14.8	20.0	137
FFAL-020Z-TFD-071	ZF08K4E	460-3	34.06	25	19.29	3/8	7/8	17.9	18.1	15.5	17.1	17.0	16.4/16.5	15.5	8.0	15.0	133
FFAL-022Z-CFV-071	ZF09K4E	208-230-1	34.06	25	19.29	3/8	7/8	17.9	18.1	15.5	17.1	17.0	16.4/16.5	15.5	24.1	35.0	207
FFAL-A22Z-CFV-072	ZF09KAE	208/230-1	34.03	25.09	18.87	3/8	7/8	17.9	18.1	15.5	17.1	17.0	16.4/16.5	15.5	21.9	35.0	166
FFAL-A22Z-CFV-075	ZF09KAE	208/230-1	34.12	25.09	23.1	3/8	7/8	27.9	28.4	24.2	26.7	26.6	25.7/25.8	24.3	21.9	35.0	166
FFAL-022Z-TFC-071	ZF09K4E	208-230-3	34.06	25	19.29	3/8	7/8	17.9	18.1	15.5	17.1	17.0	16.4/16.5	15.5	16.6	20.0	196
FFAL-A22Z-TFC-072	ZF09KAE	208/230-3	34.03	25.09	18.87	3/8	7/8	17.9	18.1	15.5	17.1	17.0	16.4/16.5	15.5	15.7	20.0	213
FFAL-A22Z-TFC-075	ZF09KAE	208/230-3	34.12	25.09	23.1	3/8	7/8	27.9	28.4	24.2	26.7	26.6	25.7/25.8	24.3	15.7	20.0	213
FFAL-022Z-TFD-071	ZF09K4E	460-3	34.06	25	19.29	3/8	7/8	17.9	18.1	15.5	17.1	17.0	16.4/16.5	15.5	8.9	15.0	207
FFAL-A22Z-TFD-072	ZF09KAE	460-3	34.03	25.09	18.87	3/8	7/8	17.9	18.1	15.5	17.1	17.0	16.4/16.5	15.5	8.4	15.0	217
FFAL-A22Z-TFD-075	ZF09KAE	460-3	34.12	25.09	23.1	3/8	7/8	27.9	28.4	24.2	26.7	26.6	25.7/25.8	24.3	8.4	15.0	220
FFAL-026Z-CFV-071	ZF11K4E	208-230-1	34.06	25	19.29	3/8	7/8	17.9	18.1	15.5	17.1	17.0	16.4/16.5	15.5	28.7	45.0	191
FFAL-A26Z-CFV-072	ZF11K4E	208/230-1	34.03	25.09	19.29	3/8	7/8	17.9	18.1	15.5	17.1	17.0	16.4/16.5	15.5	28.0	45.0	208
FFAL-A26Z-CFV-075	ZF11K4E	208/230-1	34.12	25.09	23.1	3/8	7/8	27.9	28.4	24.2	26.7	26.6	25.7/25.8	24.3	28.0	45.0	214
FFAL-026Z-TFC-071	ZF11K4E	208-230-3	34.06	25	19.29	3/8	7/8	17.9	18.1	15.5	17.1	17.0	16.4/16.5	15.5	20.5	30.0	158
FFAL-A26Z-TFC-072	ZF11K4E	208/230-3	34.03	25.09	19.29	3/8	7/8	17.9	18.1	15.5	17.1	17.0	16.4/16.5	15.5	19.8	30.0	176
FFAL-A26Z-TFC-075	ZF11K4E	208/230-3	34.12	25.09	23.1	3/8	7/8	27.9	28.4	24.2	26.7	26.6	25.7/25.8	24.3	19.8	30.0	182
FFAL-026Z-TFD-071	ZF11K4E	460-3	34.06	25	19.29	3/8	7/8	17.9	18.1	15.5	17.1	17.0	16.4/16.5	15.5	10.6	15.0	165
FFAL-A26Z-TFD-072	ZF11K4E	460-3	34.03	25.09	19.29	3/8	7/8	17.9	18.1	15.5	17.1	17.0	16.4/16.5	15.5	11.2	15.0	221
FFAL-A26Z-TFD-075	ZF11K4E	460-3	34.12	25.09	23.1	3/8	7/8	27.9	28.4	24.2	26.7	26.6	25.7/25.8	24.3	11.2	15.0	227
FFAL-030Z-CFV-071	ZF13K4E	208-230-1	34.06	25	20.01	3/8	7/8	17.9	18.1	15.5	17.1	17.0	16.4/16.5	15.5	36.2	60.0	226
FFAL-A30Z-CFV-072	ZF13K4E	208/230-1	34.06	25.04	20.01	3/8	7/8	17.9	18.1	15.5	17.1	17.0	16.4/16.5	15.5	36.2	60.0	226
FFAL-030Z-CFV-075	ZF13K4E	208/230-1	34.06	25.04	23.09	3/8	7/8	27.9	28.4	24.2	26.7	26.6	25.7/25.8	24.3	36.2	60.0	228
FFAL-030Z-TFC-071	ZF13K4E	208-230-3	34.06	25	20.01	3/8	7/8	17.9	18.1	15.5	17.1	17.0	16.4/16.5	15.5	21.5	30.0	220
FFAL-A30Z-TFC-072	ZF13K4E	208/230-3	34.06	25.04	20.01	3/8	7/8	17.9	18.1	15.5	17.1	17.0	16.4/16.5	15.5	21.5	30.0	220
FFAL-A30Z-TFC-075	ZF13K4E	208/230-3	34.06	25.04	23.09	3/8	7/8	27.9	28.4	24.2	26.7	26.6	25.7/25.8	24.3	21.5	30.0	226
FFAL-030Z-TFD-071	ZF13K4E	460-3	34.06	25	20.01	3/8	7/8	17.9	18.1	15.5	17.1	17.0	16.4/16.5	15.5	12.0	15.0	225
FFAL-A30Z-TFD-072	ZF13K4E	460-3	34.06	25.04	20.01	3/8	7/8	17.9	18.1	15.5	17.1	17.0	16.4/16.5	15.5	13.4	15.0	226
FFAL-A30Z-TFD-075	ZF13K4E	460-3	34.06	25.04	23.09	3/8	7/8	27.9	28.4	24.2	26.7	26.6	25.7/25.8	24.3	13.4	15.0	232
FFAL-040Z-CFV-071	ZF15K4E	208-230-1	34.06	25	20.01	3/8	7/8	17.9	18.1	15.5	17.1	17.0	16.4/16.5	15.5	42.5	70.0	247
FFAL-A40Z-CFV-072	ZF15K4E	208/230-1	34.06	25.04	20.01	3/8	7/8	17.9	18.1	15.5	17.1	17.0	16.4/16.5	15.5	42.5	70.0	213
FFAL-040Z-CFV-075	ZF15K4E	208/230-1	34.06	25.04	23.09	3/8	7/8	27.9	28.4	24.2	26.7	26.6	25.7/25.8	24.3	42.5	70.0	213
FFAL-040Z-TFC-071	ZF15K4E	208-230-3	34.06	25	20.01	3/8	7/8	17.9	18.1	15.5	17.1	17.0	16.4/16.5	15.5	29.5	45.0	178
FFAL-A40Z-TFC-072	ZF15K4E	208/230-3	34.06	25.04	20.01	3/8	7/8	17.9	18.1	15.5	17.1	17.0	16.4/16.5	15.5	29.5	45.0	200
FFAL-A40Z-TFC-075	ZF15K4E	208/230-3	34.06	25.04	23.09	3/8	7/8	27.9	28.4	24.2	26.7	26.6	25.7/25.8	24.3	29.5	45.0	213
FFAL-040Z-TFD-071	ZF15K4E	460-3	34.06	25	20.01	3/8	7/8	17.9	18.1	15.5	17.1	17.0	16.4/16.5	15.5	13.8	20.0	185
FFAL-A40Z-TFD-072	ZF15K4E	460-3	34.06	25.04	20.01	3/8	7/8	17.9	18.1	15.5	17.1	17.0	16.4/16.5	15.5	15.2	20.0	206
FFAL-A40Z-TFD-075	ZF15K4E	460-3	34.06	25.04	23.09	3/8	7/8	27.9	28.4	24.2	26.7	26.6	25.7/25.8	24.3	15.2	20.0	218

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Physical and Electrical Data

Copeland F-Line air-cooled condensing units

Model*	Comp.	Voltage	L	W	H	Ref. Conn.		Receiver Capacity (lbs @ 90% volume)							MCA	Max Over-Current	Ship Wt.
						Liq.	Suc.	22	134a	404A	407A	407C	448A/449A	507			
FFAL-050Z-TFC-071	ZF18K4E	208-230-3	34.06	25	20.01	3/8	7/8	17.9	18.1	15.5	17.1	17.0	16.4/16.5	15.5	32.6	50.0	170
FFAL-A50Z-TFC-072	ZF18K4E	208/230-3	34.06	25.04	20.01	3/8	7/8	17.9	18.1	15.5	17.1	17.0	16.4/16.5	15.5	32.6	50.0	170
FFAL-A50Z-TFC-075	ZF18K4E	208/230-3	34.06	25.04	23.09	3/8	7/8	27.9	28.4	24.2	26.7	26.6	25.7/25.8	24.3	32.6	50.0	170
FFAL-050Z-TFD-071	ZF18K4E	460-3	34.06	25	20.01	3/8	7/8	17.9	18.1	15.5	17.1	17.0	16.4/16.5	15.5	13.4	20.0	175
FFAL-A50Z-TFD-072	ZF18K4E	460-3	34.06	25.04	20.01	3/8	7/8	17.9	18.1	15.5	17.1	17.0	16.4/16.5	15.5	14.8	20.0	176
FFAL-A50Z-TFD-075	ZF18K4E	460-3	34.06	25.04	23.09	3/8	7/8	27.9	28.4	24.2	26.7	26.6	25.7/25.8	24.3	14.8	20.0	176
FFAM-A08Z-CFV-072	ZB06KAE	208/230-1	24.12	18.33	16.46	3/8	7/8	8.5	8.6	7.3	8.1	8.0	7.8/7.8	7.4	8.5	15.0	102
FFAM-A08Z-CFV-075	ZB06KAE	208/230-1	24.08	18.92	16.31	3/8	7/8	13.8	14.0	12.0	13.2	13.2	12.7/12.8	12.0	8.5	15.0	103
FFAM-A08Z-TFC-072	ZB06KAE	208/230-3	24.12	18.33	16.46	3/8	7/8	8.5	8.6	7.3	8.1	8.0	7.8/7.8	7.4	7.0	15.0	108
FFAM-A08Z-TFC-075	ZB06KAE	208/230-3	24.08	18.92	16.31	3/8	7/8	13.8	14.0	12.0	13.2	13.2	12.7/12.8	12.0	7.0	15.0	110
FFAM-A10Z-CFV-075	ZB07KAE	208/230-1	24.08	18.92	16.31	3/8	7/8	13.8	14.0	12.0	13.2	13.2	12.7/12.8	12.0	8.9	15.0	104
FFAM-A10Z-TFC-072	ZB07KAE	208/230-3	24.12	18.33	16.46	3/8	7/8	8.5	8.6	7.3	8.1	8.0	7.8/7.8	7.4	7.5	15.0	94
FFAM-A10Z-TFC-075	ZB07KAE	208/230-3	24.08	18.92	16.31	3/8	7/8	13.8	14.0	12.0	13.2	13.2	12.7/12.8	12.0	7.5	15.0	110
FFAM-A12Z-CFV-072	ZB08KAE	208/230-1	24.12	18.33	16.46	3/8	7/8	8.5	8.6	7.3	8.1	8.0	7.8/7.8	7.4	11.4	15.0	72
FFAM-A12Z-CFV-075	ZB08KAE	208/230-1	24.08	18.92	16.31	3/8	7/8	13.8	14.0	12.0	13.2	13.2	12.7/12.8	12.0	11.4	15.0	80
FFAM-A12Z-TFC-072	ZB08KAE	208/230-3	24.12	18.33	16.45	3/8	7/8	8.5	8.6	7.3	8.1	8.0	7.8/7.8	7.4	8.0	15.0	104
FFAM-A12Z-TFC-075	ZB08KAE	208/230-3	24.08	18.92	16.31	3/8	7/8	13.8	14.0	12.0	13.2	13.2	12.7/12.8	12.0	8.0	15.0	110
FFAM-071Z-TFC-071	ZB48KCE	208/230-3	44	27.78	36.65	5/8	1-3/8	46.5	47.2	40.3	44.5	44.2	42.7/43.0	40.5	40.7	50.0	312
FFAM-071Z-TFD-071	ZB48KCE	460-3	44	27.78	36.65	5/8	1-3/8	46.5	47.2	40.3	44.5	44.2	42.7/43.0	40.5	21.4	30.0	362
FFAM-081Z-TFC-071	ZB57KCE	208/230-3	44	27.78	36.65	5/8	1-3/8	46.5	47.2	40.3	44.5	44.2	42.7/43.0	40.5	53.3	70.0	337
FFAM-081Z-TFD-071	ZB57KCE	460-3	44	27.78	36.65	5/8	1-3/8	46.5	47.2	40.3	44.5	44.2	42.7/43.0	40.5	23.4	30.0	488
FFAM-091Z-TFC-071	ZB66K5E	208/230-3	44	27.78	36.66	5/8	1-3/8	55.0	55.8	47.7	52.6	52.3	50.5/50.8	47.8	58.1	80.0	465
FFAM-091Z-TFD-071	ZB66K5E	460-3	44	27.78	36.66	5/8	1-3/8	55.0	55.8	47.7	52.6	52.3	50.5/50.8	47.8	26.0	35.0	483
FFAM-101Z-TFC-071	ZB76K5E	208/230-3	44	27.78	36.66	5/8	1-3/8	55.0	55.8	47.7	52.6	52.3	50.5/50.8	47.8	62.7	90.0	514
FFAM-101Z-TFD-071	ZB76K5E	460-3	44	27.78	36.66	5/8	1-3/8	55.0	55.8	47.7	52.6	52.3	50.5/50.8	47.8	30.2	45.0	532
FFAP-050Z-CFV-071	ZS38K4E	208/230-1	44.06	28.29	26.62	1/2	1-1/8	31.5	31.9	27.3	30.1	29.9	28.9/29.1	27.4	43.3	70.0	260.5
FFAP-050Z-CFV-072	ZS38K4E	208/230-1	44.06	28.29	26.62	1/2	1-1/8	31.5	31.9	27.3	30.1	29.9	28.9/29.1	27.4	43.3	70.0	244.5
FFAP-050Z-TFC-071	ZS38K4E	208/230-3	44.06	28.29	26.62	1/2	1-1/8	31.5	31.9	27.3	30.1	29.9	28.9/29.1	27.4	30.3	45.0	247.5
FFAP-050Z-TFC-072	ZS38K4E	208/230-3	44.06	28.29	26.62	1/2	1-1/8	31.5	31.9	27.3	30.1	29.9	28.9/29.1	27.4	30.3	45.0	229.5
FFAP-050Z-TFD-071	ZS38K4E	460-3	44.06	28.29	26.62	1/2	1-1/8	31.5	31.9	27.3	30.1	29.9	28.9/29.1	27.4	14.4	20.0	250.5
FFAP-050Z-TFE-075	ZS38K4E	575-3	44.06	28.19	26.8	1/2	1-1/8	31.5	31.9	27.3	30.1	29.9	28.9/29.1	27.4	11.8	15.0	299.5
FFAP-060Z-TFC-071	ZS45K4E	208/230-3	44.06	28.29	26.62	1/2	1-1/8	31.5	31.9	27.3	30.1	29.9	28.9/29.1	27.4	33.4	50.0	295.5
FFAP-060Z-TFD-071	ZS45K4E	460-3	44.06	28.29	26.62	1/2	1-1/8	31.5	31.9	27.3	30.1	29.9	28.9/29.1	27.4	14.0	20.0	317.5
FFAP-A15Z-CFV-072	ZS09KAE	208/230-1	24.1	18.42	16.62	3/8	7/8	13.8	14.0	12.0	13.2	13.2	12.7/12.8	12.0	13.9	20.0	110
FFAP-A15Z-CFV-075	ZS09KAE	208/230-1	24.09	18.98	16.62	3/8	7/8	13.8	14.0	12.0	13.2	13.2	12.7/12.8	12.0	13.9	20.0	139
FFAP-A15Z-TFC-072	ZS09KAE	208/230-3	24.1	18.42	16.62	3/8	7/8	13.8	14.0	12.0	13.2	13.2	12.7/12.8	12.0	11.4	15.0	110
FFAP-A15Z-TFC-075	ZS09KAE	208/230-3	24.09	18.98	16.62	3/8	7/8	13.8	14.0	12.0	13.2	13.2	12.7/12.8	12.0	11.4	15.0	139
FFAP-A15Z-TFD-072	ZS09KAE	460-3	24.1	18.42	16.62	3/8	7/8	13.8	14.0	12.0	13.2	13.2	12.7/12.8	12.0	6.3	15.0	116
FFAP-A15Z-TFD-075	ZS09KAE	460-3	24.09	18.98	16.62	3/8	7/8	13.8	14.0	12.0	13.2	13.2	12.7/12.8	12.0	6.3	15.0	145
FFAP-A17Z-CFV-072	ZS11KAE	208/230-1	24.1	18.42	16.62	3/8	7/8	13.8	14.0	12.0	13.2	13.2	12.7/12.8	12.0	17.1	25.0	109
FFAP-A17Z-CFV-075	ZS11KAE	208/230-1	24.09	18.98	16.62	3/8	7/8	13.8	14.0	12.0	13.2	13.2	12.7/12.8	12.0	17.1	25.0	111
FFAP-A17Z-TFC-072	ZS11KAE	208/230-3	24.1	18.42	16.62	3/8	7/8	13.8	14.0	12.0	13.2	13.2	12.7/12.8	12.0	14.4	20.0	109
FFAP-A17Z-TFC-075	ZS11KAE	208/230-3	24.09	18.98	16.62	3/8	7/8	13.8	14.0	12.0	13.2	13.2	12.7/12.8	12.0	14.4	20.0	111
FFAP-A17Z-TFD-072	ZS11KAE	460-3	24.1	18.42	16.62	3/8	7/8	13.8	14.0	12.0	13.2	13.2	12.7/12.8	12.0	6.9	15.0	115
FFAP-A17Z-TFD-075	ZS11KAE	460-3	24.09	18.98	16.62	3/8	7/8	13.8	14.0	12.0	13.2	13.2	12.7/12.8	12.0	6.9	15.0	117
FFAP-A20Z-CFV-072	ZS13KAE	208/230-1	34.06	25.02	18.88	3/8	7/8	15.6	15.8	13.5	14.9	14.8	14.3/14.4	13.5	16.8	25.0	157
FFAP-A20Z-CFV-075	ZS13KAE	208/230-1	34.14	25.04	18.86	3/8	7/8	15.6	15.8	13.5	14.9	14.8	14.3/14.4	13.5	16.8	25.0	160
FFAP-A20Z-TFC-072	ZS13KAE	208/230-3	34.06	25.02	18.88	3/8	7/8	15.6	15.8	13.5	14.9	14.8	14.3/14.4	13.5	13.9	20.0	157
FFAP-A20Z-TFC-075	ZS13KAE	208/230-3	34.14	25.04	18.86	3/8	7/8	15.6	15.8	13.5	14.9	14.8	14.3/14.4	13.5	13.9	20.0	160
FFAP-A20Z-TFD-072	ZS13KAE	460-3	34.06	25.02	18.88	3/8	7/8	15.6	15.8	13.5	14.9	14.8	14.3/14.4	13.5	7.0	15.0	163
FFAP-A20Z-TFD-075	ZS13KAE	460-3	34.14	25.04	18.86	3/8	7/8	15.6	15.8	13.5	14.9	14.8	14.3/14.4	13.5	7.0	15.0	166
FFAP-A22Z-CFV-072	ZS15KAE	208/230-1	34.06	25.06	19.03	3/8	7/8	17.9	18.1	15.5	17.1	17.0	16.4/16.5	15.5	22.4	35.0	157
FFAP-A22Z-CFV-075	ZS15KAE	208/230-1	34.06	25.06	23.09	3/8	7/8	27.9	28.4	24.2	26.7	26.6	25.7/25.8	24.3	22.4	35.0	160
FFAP-A22Z-TFC-072	ZS15KAE	208/230-3	34.06	25.06	19.03	3/8	7/8	17.9	18.1	15.5	17.1	17.0	16.4/16.5	15.5	16.0	20.0	157
FFAP-A22Z-TFC-075	ZS15KAE	208/230-3	34.06	25.06	23.09	3/8	7/8	27.9	28.4	24.2	26.7	26.6	25.7/25.8	24.3	16.0	20.0	160
FFAP-A22Z-TFD-072	ZS15KAE	460-3	34.06	25.06	19.03	3/8	7/8	17.9	18.1	15.5	17.1	17.0	16.4/16.5	15.5	9.9	15.0	163
FFAP-A22Z-TFD-075	ZS15KAE	460-3	34.06	25.06	23.09	3/8	7/8	27.9	28.4	24.2	26.7	26.6	25.7/25.8	24.3	9.9	15.0	166
FFAP-A30Z-CFV-072	ZS19KAE	208/230-1	34.06	25.06	19.03	3/8	7/8	17.9	18.1	15.5	17.1	17.0	16.4/16.5	15.5	25.3	40.0	169
FFAP-A30Z-CFV-075	ZS19KAE	208/230-1	34.06	25.06	23.09	3/8	7/8	27.9	28.4	24.2	26.7	26.6	25.7/25.8	24.3	25.3	40.0	175
FFAP-A30Z-TFC-072	ZS19KAE	208/230-3	34.06	25.06	19.03	3/8	7/8	17.9	18.1	15.5	17.1	17.0	16.4/16.5	15.5	19.9	30.0	176
FFAP-A30Z-TFC-075	ZS19KAE	208/230-3	34.06	25.06	23.09	3/8	7/8	27.9	28.4	24.2	26.7	26.6	25.7/25.8	24.3	19.9	30.0	176
FFAP-A30Z-TFD-072	ZS19KAE	460-3	34.06	25.06	19.03	3/8	7/8	17.9	18.1	15.5	17.1	17.0	16.4/16.5	15.5	11.3	15.0	220
FFAP-A30Z-TFD-075	ZS19KAE	460-3	34.06	25.06	23.09	3/8	7/8	27.9	28.4	24.2	26.7	26.6	25.7/25.8	24.3	11.3	15.0	220
FFAP-A32Z-CFV-072	ZS21KAE	208/230-1	34.06	25.06	18.88	3/8	1-1/8	17.9	18.1	15.5	17.1	17.0	16.4/16.5	15.5	31.8	50.0	171
FFAP-A32Z-CFV-075	ZS21KAE	208/230-1	34.06	25.1	23.1	3/8	1-1/8	27.9	28.4	24.2	26.7	26.6	25.7/25.8	24.3	31.8	50.0	175

Physical and Electrical Data

Copeland F-Line air-cooled condensing units

Model*	Comp.	Voltage	L	W	H	Ref. Conn.		Receiver Capacity (lbs @ 90% volume)							MCA	Max Over-Current	Ship Wt.
						Liq.	Suc.	22	134a	404A	407A	407C	448A/449A	507			
FFAP-A32Z-TFC-072	ZS21KAE	208/230-3	34.06	25.06	18.88	3/8	1-1/8	17.9	18.1	15.5	17.1	17.0	16.4/16.5	15.5	21.8	30.0	175
FFAP-A32Z-TFC-075	ZS21KAE	208/230-3	34.06	25.1	23.1	3/8	1-1/8	27.9	28.4	24.2	26.7	26.6	25.7/25.8	24.3	21.8	30.0	180
FFAP-A32Z-TFD-072	ZS21KAE	460-3	34.06	25.06	18.88	3/8	1-1/8	17.9	18.1	15.5	17.1	17.0	16.4/16.5	15.5	11.8	15.0	220
FFAP-A32Z-TFD-075	ZS21KAE	460-3	34.06	25.1	23.1	3/8	1-1/8	27.9	28.4	24.2	26.7	26.6	25.7/25.8	24.3	11.8	15.0	220
FFAP-A40Z-CFV-072	ZS26KAE	208/230-1	44.06	28.26	26.65	1/2	1-1/8	33.4	33.9	32.0	32.0	31.8	30.7/30.9	29.1	33.1	50.0	222.0
FFAP-A40Z-CFV-075	ZS26KAE	208/230-1	44.06	28.19	27.44	1/2	1-1/8	39.6	40.2	34.4	37.9	37.7	36.4/36.6	34.5	33.1	50.0	224.0
FFAP-A40Z-TFC-072	ZS26KAE	208/230-3	44.06	28.26	26.65	1/2	1-1/8	33.4	33.9	32.0	32.0	31.8	30.7/30.9	29.1	22.9	30.0	226.0
FFAP-A40Z-TFC-075	ZS26KAE	460-3	44.06	28.19	27.44	1/2	1-1/8	39.6	40.2	34.4	37.9	37.7	36.4/36.6	34.5	22.9	30.0	228.0
FFAP-A40Z-TFD-072	ZS26KAE	460-3	44.06	28.26	26.65	1/2	1-1/8	33.4	33.9	32.0	32.0	31.8	30.7/30.9	29.1	11.0	15.0	232.0
FFAP-A40Z-TFD-075	ZS26KAE	460-3	44.06	28.19	27.44	1/2	1-1/8	39.6	40.2	34.4	37.9	37.7	36.4/36.6	34.5	11.0	15.0	234.0
FFAP-A42Z-CFV-072	ZS33KAE	208/230-1	44.06	28.26	26.65	1/2	1-1/8	33.4	33.9	32.0	32.0	31.8	30.7/30.9	29.1	38.8	60.0	230.5
FFAP-A42Z-CFV-075	ZS33KAE	208/230-1	44.06	28.19	27.44	1/2	1-1/8	39.6	40.2	34.4	37.9	37.7	36.4/36.6	34.5	38.8	60.0	190.5
FFAP-A42Z-TFC-072	ZS33KAE	208/230-3	44.06	28.26	26.65	1/2	1-1/8	33.4	33.9	32.0	32.0	31.8	30.7/30.9	29.1	31.4	50.0	220.5
FFAP-A42Z-TFC-075	ZS33KAE	208/230-3	44.06	28.19	27.44	1/2	1-1/8	39.6	40.2	34.4	37.9	37.7	36.4/36.6	34.5	31.4	50.0	212.5
FFAP-A42Z-TFD-072	ZS33KAE	460-3	44.06	28.26	26.65	1/2	1-1/8	33.4	33.9	32.0	32.0	31.8	30.7/30.9	29.1	14.9	20.0	230.5
FFAP-A42Z-TFD-075	ZS33KAE	460-3	44.06	28.19	27.44	1/2	1-1/8	39.6	40.2	34.4	37.9	37.7	36.4/36.6	34.5	14.9	20.0	212.5
FPAK-010Z-CFV-072	ZS09KAE	208/230-1	24	17.06	16.62	3/8	5/8	8.5	8.6	7.3	8.1	8.0	7.8/7.8	7.4	13.6	20.0	94
FPAK-010Z-TFC-072	ZS09KAE	208/230-3	24	17.06	16.62	3/8	5/8	8.5	8.6	7.3	8.1	8.0	7.8/7.8	7.4	11.1	15.0	97
FPAK-010Z-TFD-072	ZS09KAE	460-3	24	17.06	16.62	3/8	5/8	8.5	8.6	7.3	8.1	8.0	7.8/7.8	7.4	5.4	15.0	104
FPAK-012Z-CFV-072	ZS11KAE	208/230-1	24	17.06	16.62	3/8	5/8	8.5	8.6	7.3	8.1	8.0	7.8/7.8	7.4	16.9	25.0	95
FPAK-012Z-TFC-072	ZS11KAE	208/230-3	24	17.06	16.62	3/8	5/8	8.5	8.6	7.3	8.1	8.0	7.8/7.8	7.4	14.1	20.0	94
FPAK-012Z-TFD-072	ZS11KAE	460-3	24	17.06	16.62	3/8	5/8	8.5	8.6	7.3	8.1	8.0	7.8/7.8	7.4	6.1	15.0	97
FPAK-013Z-CFV-072	ZS15KAE	208/230-1	24.14	18.33	16.62	3/8	7/8	9.3	9.4	8.0	8.9	8.8	8.5/8.6	8.1	21.0	35.0	100
FPAK-013Z-CFV-075	ZS15KAE	208/230-1	24.09	18.33	16.62	3/8	7/8	14.3	14.5	12.4	13.6	13.6	13.1/13.2	12.4	21.0	35.0	75
FPAK-013Z-TFC-072	ZS15KAE	208/230-3	24.14	18.33	16.62	3/8	7/8	9.3	9.4	8.0	8.9	8.8	8.5/8.6	8.1	14.6	20.0	105
FPAK-013Z-TFC-075	ZS15KAE	208/230-3	24.09	18.33	16.62	3/8	7/8	14.3	14.5	12.4	13.6	13.6	13.1/13.2	12.4	14.6	20.0	113
FPAK-013Z-TFD-072	ZS15KAE	460-3	24.14	18.33	16.62	3/8	7/8	9.3	9.4	8.0	8.9	8.8	8.5/8.6	8.1	8.3	15.0	100
FPAK-013Z-TFD-075	ZS15KAE	460-3	24.09	18.33	16.62	3/8	7/8	14.3	14.5	12.4	13.6	13.6	13.1/13.2	12.4	8.3	15.0	122
FPAK-015Z-CFV-072	ZS19KAE	208/230-1	24.14	18.33	16.62	3/8	7/8	9.3	9.4	8.0	8.9	8.8	8.5/8.6	8.1	23.9	40.0	107
FPAK-015Z-CFV-075	ZS19KAE	208/230-1	24.09	18.33	16.62	3/8	7/8	14.3	14.5	12.4	13.6	13.6	13.1/13.2	12.4	23.9	40.0	116
FPAK-015Z-TFC-072	ZS19KAE	208/230-3	24.14	18.33	16.62	3/8	7/8	9.3	9.4	8.0	8.9	8.8	8.5/8.6	8.1	18.5	30.0	105
FPAK-015Z-TFC-075	ZS19KAE	208/230-3	24.09	18.33	16.62	3/8	7/8	14.3	14.5	12.4	13.6	13.6	13.1/13.2	12.4	18.5	30.0	114
FPAK-015Z-TFD-072	ZS19KAE	460-3	24.14	18.33	16.62	3/8	7/8	9.3	9.4	8.0	8.9	8.8	8.5/8.6	8.1	9.7	15.0	109
FPAK-015Z-TFD-075	ZS19KAE	460-3	24.09	18.33	16.62	3/8	7/8	14.3	14.5	12.4	13.6	13.6	13.1/13.2	12.4	9.7	15.0	109
FPAK-020Z-CFV-071	ZS21KAE	208/230-1	34.03	25.06	18.88	3/8	1-1/8	16.0	16.2	13.9	15.3	15.2	14.7/14.8	13.9	31.8	50.0	198
FPAK-020Z-CFV-072	ZS21KAE	208/230-1	34.03	25.06	18.88	3/8	1-1/8	16.0	16.2	13.9	15.3	15.2	14.7/14.8	13.9	31.8	50.0	146
FPAK-020Z-TFC-071	ZS21KAE	208/230-3	34.03	25.06	18.88	3/8	1-1/8	16.0	16.2	13.9	15.3	15.2	14.7/14.8	13.9	21.8	30.0	190
FPAK-020Z-TFC-072	ZS21KAE	208/230-3	34.03	25.06	18.88	3/8	1-1/8	16.0	16.2	13.9	15.3	15.2	14.7/14.8	13.9	21.8	30.0	139
FPAK-020Z-TFD-071	ZS21KAE	460-3	34.03	25.06	18.88	3/8	1-1/8	16.0	16.2	13.9	15.3	15.2	14.7/14.8	13.9	11.8	15.0	193
FPAK-020Z-TFD-072	ZS21KAE	460-3	34.03	25.06	18.88	3/8	1-1/8	16.0	16.2	13.9	15.3	15.2	14.7/14.8	13.9	11.8	15.0	144
FPAK-039Z-CFV-071	ZS29KAE	208/230-1	34.06	25.1	18.9	3/8	1-1/8	18.3	18.5	15.9	17.5	17.4	16.8/16.9	15.9	35.4	50.0	161
FPAK-039Z-TFC-071	ZS29KAE	208/230-3	34.06	25.1	18.9	3/8	1-1/8	18.3	18.5	15.9	17.5	17.4	16.8/16.9	15.9	28.4	45.0	149
FPAK-039Z-TFD-071	ZS29KAE	460-3	34.06	25.1	18.9	3/8	1-1/8	18.3	18.5	15.9	17.5	17.4	16.8/16.9	15.9	14.9	20.0	162

*Not all available models are listed. Please visit Emerson.com/CopelandOPI to see all available models.

Hoods for Low Temp AWEF Models

Unit	Hood
FFAL-A10Z-***-072/075	505-7093-04
FFAL-A13Z-***-072/075	
FFAL-A14Z-***-072/075	
FFAL-A15Z-***-072-075	In Development
FFAL-A17Z-***-072-075	
FFAL-A22Z-***-072-075	505-7093-05
FFAL-A26Z-***-072-075	
FFAL-A30Z-***-072-075	
FFAL-A40Z-***-072-075	
FFAL-A50Z-***-072-075	

Hoods for Medium Temp AWEF Models

Unit	Hood
FFAM-A08Z-***-072/075	505-7093-04
FFAM-A10Z-***-072/075	
FFAM-A12Z-***-072/075	
FFAM-A15Z-***-072/075	
FFAM-A17Z-***-072/075	505-7093-05
FFAM-A20Z-***-072/075	
FFAM-A22Z-***-072/075	
FFAM-A30Z-***-072/075	505-7093-06
FFAM-A32Z-***-072/075	
FFAM-A40Z-***-072/075	
FFAM-A42Z-***-072/075	

For the latest data information visit Emerson.com/CopelandOPI

AWEF Cooler Scores

Copeland F-Line air-cooled condensing units

Refrigeration systems in this table are designed and certified for use in walk-in cooler applications

Model Number	R-404A		R-407A		R-448A / R449A	
	Indoor	Outdoor	Indoor	Outdoor	Indoor	Outdoor
FFAM-A08Z-CFV-072	5.61		5.61		5.61	
FFAM-A08Z-CFV-075	5.61	7.6	5.61	7.6	5.61	7.6
FFAM-A08Z-TFC-072	5.61		5.61		5.61	
FFAM-A08Z-TFC-075	5.61	7.6	5.61	7.6	5.61	7.6
FFAM-A10Z-CFV-072	5.61		5.61		5.61	
FFAM-A10Z-CFV-075	5.61	7.6	5.61	7.6	5.61	7.6
FFAM-A10Z-TFC-072	5.61		5.61		5.61	
FFAM-A10Z-TFC-075	5.61	7.6	5.61	7.6	5.61	7.6
FFAM-A12Z-CFV-072	5.61		5.61		5.61	
FFAM-A12Z-CFV-075	5.61	7.6	5.61	7.6	5.61	7.6
FFAM-A12Z-TFC-072	5.61		5.61		5.61	
FFAM-A12Z-TFC-075	5.61	7.6	5.61	7.6	5.61	7.6
FFAP-A15Z-CFV-072	5.61		5.61		5.61	
FFAP-A15Z-CFV-075	5.61	7.6	5.61	7.6	5.61	7.6
FFAP-A15Z-TFC-072	5.61		5.61		5.61	
FFAP-A15Z-TFC-075	5.61	7.6	5.61	7.6	5.61	7.6
FFAP-A15Z-TFD-072	5.61		5.61		5.61	
FFAP-A15Z-TFD-075	5.61	7.6	5.61	7.6	5.61	7.6
FFAP-A17Z-CFV-072	5.61		5.61		5.61	
FFAP-A17Z-CFV-075	5.61	7.6	5.61	7.6	5.61	7.6
FFAP-A17Z-TFC-072	5.61		5.61		5.61	
FFAP-A17Z-TFC-075	5.61	7.6	5.61	7.6	5.61	7.6
FFAP-A17Z-TFD-072	5.61		5.61		5.61	
FFAP-A17Z-TFD-075	5.61	7.6	5.61	7.6	5.61	7.6
FFAP-A20Z-CFV-072	5.61		5.61		5.61	
FFAP-A20Z-CFV-075	5.61	7.6	5.61	7.6	5.61	7.6
FFAP-A20Z-TFC-072	5.61		5.61		5.61	
FFAP-A20Z-TFC-075	5.61	7.6	5.61	7.6	5.61	7.6
FFAP-A20Z-TFD-072	5.61		5.61		5.61	
FFAP-A20Z-TFD-075	5.61	7.6	5.61	7.6	5.61	7.6
FFAP-A22Z-CFV-072	5.61		5.61		5.61	
FFAP-A22Z-CFV-075	5.61	7.6	5.61	7.6	5.61	7.6
FFAP-A22Z-TFC-072	5.61		5.61		5.61	
FFAP-A22Z-TFC-075	5.61	7.6	5.61	7.6	5.61	7.6
FFAP-A22Z-TFD-072	5.61		5.61		5.61	
FFAP-A22Z-TFD-075	5.61	7.6	5.61	7.6	5.61	7.6
FFAP-A30Z-CFV-072	5.61		5.61		5.61	
FFAP-A30Z-CFV-075	5.61	7.6	5.61	7.6	5.61	7.6
FFAP-A30Z-TFC-072	5.61		5.61		5.61	
FFAP-A30Z-TFC-075	5.61	7.6	5.61	7.6	5.61	7.6
FFAP-A30Z-TFD-072	5.61		5.61		5.61	
FFAP-A30Z-TFD-075	5.61	7.6	5.61	7.6	5.61	7.6
FFAP-A32Z-CFV-072			5.61		5.61	
FFAP-A32Z-CFV-075		7.6	5.61	7.6	5.61	7.6
FFAP-A32Z-TFC-072			5.61		5.61	
FFAP-A32Z-TFC-075		7.6	5.61	7.6	5.61	7.6
FFAP-A32Z-TFD-072			5.61		5.61	
FFAP-A32Z-TFD-075		7.6	5.61	7.6	5.61	7.6
FFAP-A40Z-CFV-072	5.61		5.61		5.61	
FFAP-A40Z-CFV-075	5.61	7.6	5.61	7.6	5.61	7.6
FFAP-A40Z-TFC-072	5.61		5.61		5.61	
FFAP-A40Z-TFC-075	5.61	7.6	5.61	7.6	5.61	7.6
FFAP-A40Z-TFD-072	5.61		5.61		5.61	
FFAP-A40Z-TFD-075	5.61	7.6	5.61	7.6	5.61	7.6
FFAP-A42Z-CFV-072	5.61		5.61		5.61	
FFAP-A42Z-CFV-075	5.61	7.6	5.61	7.6	5.61	7.6
FFAP-A42Z-TFC-072	5.61		5.61		5.61	
FFAP-A42Z-TFC-075	5.61	7.6	5.61	7.6	5.61	7.6
FFAP-A42Z-TFD-072	5.61		5.61		5.61	
FFAP-A42Z-TFD-075	5.61	7.6	5.61	7.6	5.61	7.6
FFAP-A50Z-CFV-072						
FFAP-A50Z-CFV-075						
FFAP-A50Z-TFC-072						
FFAP-A50Z-TFC-075						
FFAP-A50Z-TFD-072						
FFAP-A50Z-TFD-075						

In Development

AWEF Freezer Scores

Copeland F-Line air-cooled condensing units

Refrigeration systems in this table are designed and certified for use in walk-in freezer applications

Model Number	R-404A		R-407A		R-448A		R-449A	
	Indoor	Outdoor	Indoor	Outdoor	Indoor	Outdoor		
FFAL-A10Z-CFV-072	2.07		2.04		2.06		2.05	
FFAL-A10Z-CFV-075	2.07	2.91	2.04	2.89	2.06	2.9	2.05	2.90
FFAL-A10Z-TFC-072	2.07		2.04		2.06		2.05	
FFAL-A10Z-TFC-075	2.07	2.91	2.04	2.89	2.06	2.9	2.05	2.90
FFAL-A13Z-CFV-072	2.15		2.11		2.13		2.13	
FFAL-A13Z-CFV-075	2.15	2.96	2.11	2.94	2.13	2.95	2.13	2.95
FFAL-A13Z-TFC-072	2.16		2.11		2.13		2.13	
FFAL-A13Z-TFC-075	2.16	2.96	2.11	2.94	2.13	2.95	2.13	2.95
FFAL-A14Z-CFV-072	2.22		2.15		2.17		2.18	
FFAL-A14Z-CFV-075	2.22	3.01	2.15	2.97	2.17	2.98	2.18	2.98
FFAL-A14Z-TFC-072	2.22		2.15		2.17		2.17	
FFAL-A14Z-TFC-075	2.22	3.01	2.15	2.97	2.17	2.98	2.17	2.98
FFAL-A14Z-TFD-072	2.22		2.15		2.17		2.17	
FFAL-A14Z-TFD-075	2.22	3.01	2.15	2.97	2.17	2.98	2.17	2.98
FFAL-A15Z-CFV-072	2.37		2.29		2.30		2.30	
FFAL-A15Z-CFV-075	2.37	3.11	2.29	3.07	2.30	3.07	2.30	3.07
FFAL-A15Z-TFC-072	2.36		2.29		2.30		2.30	
FFAL-A15Z-TFC-075	2.36	3.11	2.29	3.07	2.30	3.07	2.30	3.07
FFAL-A15Z-TFD-072	2.36		2.29		2.30		2.30	
FFAL-A15Z-TFD-075	2.36	3.11	2.29	3.07	2.30	3.07	2.30	3.07
FFAL-A17Z-CFV-072	2.40		2.37		2.37		2.37	
FFAL-A17Z-CFV-075	2.40	3.15	2.37	3.12	2.37	3.12	2.37	3.12
FFAL-A17Z-TFC-072	2.40		2.37		2.37		2.37	
FFAL-A17Z-TFC-075	2.40	3.15	2.37	3.12	2.37	3.12	2.37	3.12
FFAL-A22Z-CFV-072	2.40		2.40		2.40		2.40	
FFAL-A22Z-CFV-075	2.40	3.15	2.40	3.15	2.40	3.15	2.40	3.15
FFAL-A22Z-TFC-072	2.40		2.40		2.40		2.40	
FFAL-A22Z-TFC-075	2.40	3.15	2.40	3.15	2.40	3.15	2.40	3.15
FFAL-A22Z-TFD-072	2.40		2.40		2.40		2.40	
FFAL-A22Z-TFD-075	2.40	3.15	2.40	3.15	2.40	3.15	2.40	3.15
FFAL-A26Z-CFV-072	2.40		2.40		2.40		2.40	
FFAL-A26Z-CFV-075	2.40	3.15	2.40	3.15	2.40	3.15	2.40	3.15
FFAL-A26Z-TFC-072	2.40		2.40		2.40		2.40	
FFAL-A26Z-TFC-075	2.40	3.15	2.40	3.15	2.40	3.15	2.40	3.15
FFAL-A26Z-TFD-072	2.40		2.40		2.40		2.40	
FFAL-A26Z-TFD-075	2.40	3.15	2.40	3.15	2.40	3.15	2.40	3.15
FFAL-A30Z-CFV-072	2.40		2.40		2.40		2.40	
FFAL-A30Z-CFV-075	2.40	3.15	2.40	3.15	2.40	3.15	2.40	3.15
FFAL-A30Z-TFC-072	2.40		2.40		2.40		2.40	
FFAL-A30Z-TFC-075	2.40	3.15	2.40	3.15	2.40	3.15	2.40	3.15
FFAL-A30Z-TFD-072	2.40		2.40		2.40		2.40	
FFAL-A30Z-TFD-075	2.40	3.15	2.40	3.15	2.40	3.15	2.40	3.15
FFAL-A40Z-CFV-072	2.40		2.40		2.40		2.40	
FFAL-A40Z-CFV-075	2.40	3.15	2.40	3.15	2.40	3.15	2.40	3.15
FFAL-A40Z-TFC-072	2.40		2.40		2.40		2.40	
FFAL-A40Z-TFC-075	2.40	3.15	2.40	3.15	2.40	3.15	2.40	3.15
FFAL-A40Z-TFD-072	2.40		2.40		2.40		2.40	
FFAL-A40Z-TFD-075	2.40	3.15	2.40	3.15	2.40	3.15	2.40	3.15
FFAL-A50Z-TFC-072	2.40		2.40		2.40		2.40	
FFAL-A50Z-TFC-075	2.40	3.15	2.40	3.15	2.40	3.15	2.40	3.15
FFAL-A50Z-TFD-072	2.40		2.40		2.40		2.40	
FFAL-A50Z-TFD-075	2.40	3.15	2.40	3.15	2.40	3.15	2.40	3.15

Medium Temp/High Temp – Water Cooled

HP	Model	Comp.	Electrical	Refrigerant	BTU/H at 105° Condensing, 75° Water Inlet - Evaporator Temp (°F), Capacities rated at 40°F return gas (65° return gas for capacities in bold), 5°F subcooling										Water Flow (GPM) at @evap temp (°F)		
					0	5	10	15	20	25	30	35	40	45	0	25	45
					1 1/2	FFWP-015Z	ZS09KAE	TFC TFD CFV	R-134a	4110	4670	5280	5940	6670	7610	8490	9450
R-22	6630	7580	8560	9590					10700	11800	13100	14400	15900	17500	0.9	1.5	2.1
R-404A	6880	7700	8600	9590					10700	12200	13500	14800	16300	17900	1.0	1.6	2.2
R-407A	6710	7490	8350	9280					10300	11600	12900	14300	15800	17500	0.9	1.4	2.1
R-407C	5800	6730	7710	8740					9830	11100	12300	13600	15000	16500	0.8	1.4	2.0
R-448A/449A	6150	6870	7670	8570					9580	10900	12200	13700	15300	17200	0.9	1.4	2.1
1 3/4	FFWP-017Z	ZS11KAE	TFC TFD CFV CFZ	R-134a	4910	5580	6300	7100	7970	9090	10100	11300	12500	13900	0.7	1.2	1.7
				R-22	7910	9040	10200	11400	12700	14100	15600	17200	18900	20900	1.1	1.8	2.5
				R-404A	8180	9150	10200	11400	12700	14400	15900	17500	19300	21100	1.1	1.8	2.5
				R-407A	8010	8950	9970	11100	12300	13900	15400	17100	18900	20900	1.1	1.7	2.5
				R-407C	6930	8050	9210	10400	11700	13200	14700	16300	17900	19700	1.0	1.7	2.3
				R-448A/449A	7390	8250	9220	10300	11500	13100	14700	16400	18400	20600	1.0	1.7	2.5
2	FFWP-020Z	ZS13KAE	TFC TFD CFV	R-134a	5540	6290	7110	8010	8990	10400	11600	12900	14300	15900	0.8	1.3	1.9
				R-22	9160	10500	11800	13200	14600	16400	18000	19900	21800	24000	1.2	2.0	2.9
				R-404A	8980	10000	11200	12500	13900	16800	18500	20400	22400	24600	1.3	2.1	2.9
				R-407A	9050	10100	11300	12500	13900	16300	18100	20100	22200	24900	1.2	2.0	2.8
				R-407C	7840	9090	10400	11800	13200	15100	16800	18600	20500	22500	1.1	1.9	2.7
				R-448A/449A	8420	9410	10500	11700	13100	15000	16700	18800	21000	23500	1.2	1.9	2.9
2 1/4	FFWP-022Z	ZS15KAE	TFC TFD CFV	R-134a	6760	7680	8680	9770	11000	12500	14000	15500	17300	19100	0.9	1.6	2.3
				R-22	10700	12200	13800	15500	17200	19100	21100	23200	25600	28200	1.5	2.4	3.4
				R-404A	11500	12900	14400	16100	17900	21100	23000	25100	27400	29800	1.5	2.6	3.5
				R-407A	10500	11900	13400	15100	16900	19200	21400	23800	26400	29200	1.5	2.3	3.4
				R-407C	9550	11100	12700	14400	16200	18200	20200	22400	24700	27100	1.3	2.3	3.2
				R-448A/449A	10200	11400	12700	14200	15900	18000	20200	22600	25300	28400	1.4	2.3	3.4
3	FFWP-030Z	ZS19KAE	TFC TFD TFE CFV	R-134a	7630	8660	9790	11000	12400	14100	15800	17500	19500	21600	1.1	1.8	2.5
				R-22	12100	13900	15700	17600	19600	21600	23900	26400	29100	32000	1.7	2.7	3.8
				R-404A	12900	14500	16200	18000	20100	22900	25200	27700	30500	33400	1.7	2.8	4.0
				R-407A	12400	13900	15500	17200	19100	21600	23900	26500	29400	32500	1.7	2.6	3.8
				R-407C	10800	12500	14300	16200	18200	20600	22800	25300	27800	30600	1.5	2.6	3.6
				R-448A/449A	11600	13000	14500	16100	17900	20300	22700	25400	28400	31900	1.6	2.6	3.8
3 1/4	FFWP-032Z	ZS21KAE	TFC TFD CFV	R-134a	10200	11600	13200	14800	16600	19000	21200	23600	26200	29000	1.4	2.3	3.4
				R-22	16300	18600	21100	23600	26300	29100	32100	35400	39100	43000	2.2	3.6	5.1
				R-404A	17300	19400	21600	24100	26900	31700	34700	37800	41200	44900	2.3	3.9	5.5
				R-407A	16400	18300	20400	22700	25300	28400	31500	35000	38700	42900	2.1	3.5	5.0
				R-407C	14500	16800	19200	21800	24500	27600	30700	33900	37400	41100	2.0	3.4	4.8
				R-448A/449A	16500	18700	20900	23400	26000	29200	32300	35600	39100	42900	2.2	3.7	5.2
4	FFWP-040Z	ZS26KAE	TFC TFD CFV	R-134a	11400	12900	14600	16400	18400	21000	23500	26100	29000	32200	1.5	2.6	3.8
				R-22	18100	20700	23400	26200	29100	32200	35600	39300	43300	47700	2.4	4.0	5.7
				R-404A	19100	21300	23800	26600	29600	34900	38100	41600	45300	49400	2.6	4.1	5.9
				R-407A	17500	19800	22400	25200	28300	32000	35700	39600	43900	48600	2.4	3.9	5.6
				R-407C	16100	18600	21300	24200	27200	30600	34000	37600	41500	45600	2.2	3.8	5.3
				R-448A/449A	17600	19800	22200	24900	27900	31500	35100	38900	43000	47400	2.4	4.0	5.7
4 1/4	FFWP-042Z	ZS33KAE	TFC TFD CFV	R-134a	14100	16000	18100	20400	22900	26100	29200	32500	36100	40000	1.9	3.2	4.7
				R-22	22500	25700	29000	32500	36200	40100	44300	48800	54000	59500	0.9	5.6	8.0
				R-404A	24200	27100	30300	33700	37600	42900	47300	52000	57000	62500	3.1	5.3	7.6
				R-407A	23200	26000	28900	32200	35700	40200	44600	49500	55000	60500	3.0	5.0	7.1
				R-407C	19900	23100	26500	30000	33700	38100	42300	46800	51500	56500	2.7	4.7	6.6
				R-448A/449A	23100	26100	29300	32700	36400	40900	45200	49800	54500	60000	3.1	5.1	7.2
5	FFWP-050Z	ZS38K4E	TFC TFD TFE CFV	R-134a	15900	18200	20700	23500	26500	30200	33700	37300	41100	45000	2.1	3.8	5.7
				R-22			33000	36600	40600	44900	49400	54500	59500	65000	3.5	5.6	8.0
				R-404A	27900	31000	34400	38000	42000	48100	53000	58000	63500	69500	3.8	6.5	9.3
				R-407A	25500	28900	32500	36400	40600	45600	50000	55000	60000	65500	3.5	5.8	8.2
				R-407C	25900	29300	33000	37000	41200	46100	51000	55500	61000	66000	3.5	5.3	7.8
				R-448A/449A	26800	30600	34800	39200	43900	47400	52500	57500	63000	68500	3.6	6.0	8.6

Area Restrictions: 20°F Max Superheat

Area Restrictions: 40°F Max Return Gas Temp

For the latest data information visit Emerson.com/CopelandOPI

Low Temp – Water Cooled

HP	Model	Comp.	Electrical	Refrigerant	BTU/H at 105°Condensing, 75° Water Inlet - Evaporator Temp (°F), Capacities rated at 40°F return gas, 5°F subcooling								Water Flow (GPM) at @evap temp (°F)		
					-30	-25	-20	-15	-10	-5	0	5	-25	-10	5
					1 1/2	FFWP-015Z	ZS09KAE	CFV	R-404A		3870	4380	4930	5550	6230
			TFC	R-407A		3350	3990	4630	5290	5980	6710	7490	0.5	0.7	1.0
			TFD	R-448A/449A		3140	3720	4290	4880	5490	6150	6870	0.5	0.7	1.0
1 3/4	FFWP-017Z	ZS11KAE	CFV	R-404A		4540	5130	5790	6500	7300	8180	9150	0.7	0.9	1.3
			CFZ	R-407A		4010	4770	5530	6320	7140	8010	8950	0.6	0.9	1.2
			TFC	R-448A/449A		3810	4490	5170	5870	6600	7390	8250	0.6	0.9	1.1
			TFD	R-448A/449A		3810	4490	5170	5870	6600	7390	8250	0.6	0.9	1.1
2	FFWP-020Z	ZS13KAE	CFV	R-404A		5280	5960	6720	7550	8480	9500	10600	0.8	1.1	1.5
			TFC	R-407A		4570	5440	6320	7210	8150	9150	10200	0.7	1.0	1.4
			TFD	R-448A/449A		4330	5110	5890	6690	7520	8420	9410	0.7	1.0	1.3
2 1/4	FFWP-022Z	ZS15KAE	CFV	R-404A		6420	7250	8170	9180	10300	11500	12900	1.0	1.3	1.8
			TFC	R-407A		4920	5880	6900	8000	9190	10500	11900	0.8	1.2	1.6
			TFD	R-448A/449A		5180	6150	7100	8070	9090	10200	11400	0.8	1.2	1.6
3	FFWP-030Z	ZS19KAE	CFV	R-404A		7190	8120	9150	10300	11500	12900	14500	1.1	1.5	2.0
			TFC	R-407A		6230	7410	8600	9820	11100	12400	13900	1.0	1.4	1.8
			TFD	R-448A/449A		4820	6320	7700	9010	10300	11600	13000	0.8	1.3	1.8
			TFE	R-448A/449A		4820	6320	7700	9010	10300	11600	13000	0.8	1.3	1.8
3 1/4	FFWP-032Z	ZS21KAE	CFV	R-404A		9630	10900	12300	13800	15500	17300	19400	1.4	1.9	2.6
			TFC	R-407A		8210	9780	11300	13000	14600	16400	18300	1.2	1.8	2.4
			TFD	R-448A/449A		7700	9270	10900	12700	14500	16500	18700	1.2	1.8	2.5
4	FFWP-040Z	ZS26KAE	CFV	R-404A		10600	12000	13500	15200	17000	19100	21300	1.6	2.1	2.9
			TFC	R-407A		8020	9660	11400	13300	15300	17500	19800	1.3	1.9	2.6
			TFD	R-448A/449A		10300	11300	12500	14000	15700	17600	19800	1.5	1.9	2.6
4 1/4	FFWP-042Z	ZS33KAE	CFV	R-404A		13500	15200	17100	19300	21600	24200	27100	2.0	2.7	3.6
			TFC	R-407A		11600	13800	16100	18300	20700	23200	26000	1.8	2.6	3.5
			TFD	R-448A/449A		10800	13000	15300	17700	20400	23100	26100	1.7	2.5	3.4
5	FFWP-050Z	ZS38K4E	CFV, TFC	R-404A		15900	17900	20100	22500	25100	27900	31000	2.4	3.2	4.2
			TFD, TFE	R-407A		13000	14900	17100	19600	22400	25500	28900	2.0	2.8	3.9
				R-448A/449A		15700	17100	18900	21200	23800	26800	30100	2.4	3.0	4.1

Physical and Electrical Data

Copeland F-Line water-cooled condensing units

Model*	Comp.	Voltage	L	W	H	Ref. Conn.		Receiver Capacity (lbs @ 90% volume)							MCA	Max Over-Current	Ship Wt.
						Liq.	Suc.	134	22	404A	407A	407C	448/449	507			
FFWP-015Z-CFV-020	ZS09KAE	208/230-1	24.05	16.1	16.63	3/8	7/8	12.5	12.3	10.7	11.8	11.7	11.3/11.4	10.7	12.5	20	67
FFWP-015Z-TFC-020	ZS09KAE	208/230-3	24.05	16.1	16.63	3/8	7/8	12.5	12.3	10.7	11.8	11.7	11.3/11.4	10.7	10	15	72
FFWP-015Z-TFD-020	ZS09KAE	460-3	24.05	16.1	16.63	3/8	7/8	12.5	12.3	10.7	11.8	11.7	11.3/11.4	10.7	4.7	15	107
FFWP-017Z-CFV-020	ZS11KAE	208/230-1	24.05	16.1	16.63	3/8	7/8	12.5	12.3	10.7	11.8	11.7	11.3/11.4	10.7	15.7	25	72
FFWP-017Z-TFC-020	ZS11KAE	208/230-3	24.05	16.1	16.63	3/8	7/8	12.5	12.3	10.7	11.8	11.7	11.3/11.4	10.7	13	20	71
FFWP-017Z-TFD-020	ZS11KAE	460-3	24.05	16.1	16.63	3/8	7/8	12.5	12.3	10.7	11.8	11.7	11.3/11.4	10.7	5.3	15	105
FFWP-020Z-CFV-020	ZS13KAE	208/230-1	24.05	16.1	16.63	3/8	7/8	12.5	12.3	10.7	11.8	11.7	11.3/11.4	10.7	15	25	73
FFWP-020Z-TFC-020	ZS13KAE	208/230-3	24.05	16.1	16.63	3/8	7/8	12.5	12.3	10.7	11.8	11.7	11.3/11.4	10.7	12.1	20	72
FFWP-020Z-TFD-020	ZS13KAE	460-3	24.05	16.1	16.63	3/8	7/8	12.5	12.3	10.7	11.8	11.7	11.3/11.4	10.7	6	15	75
FFWP-022Z-CFV-020	ZS15KAE	208/230-1	24.05	16.1	16.63	3/8	7/8	12.5	12.3	10.7	11.8	11.7	11.3/11.4	10.7	19.6	35	72
FFWP-022Z-TFC-020	ZS15KAE	208/230-3	24.05	16.1	16.63	3/8	7/8	12.5	12.3	10.7	11.8	11.7	11.3/11.4	10.7	13.2	20	60
FFWP-022Z-TFD-020	ZS15KAE	460-3	24.05	16.1	16.63	3/8	7/8	12.5	12.3	10.7	11.8	11.7	11.3/11.4	10.7	6.7	15	70
FFWP-030Z-CFV-020	ZS19KAE	208/230-1	24.06	16.1	16.66	3/8	7/8	12.5	12.3	10.7	11.8	11.7	11.3/11.4	10.7	22.5	40	75
FFWP-030Z-TFC-020	ZS19KAE	208/230-3	24.06	16.1	16.66	3/8	7/8	12.5	12.3	10.7	11.8	11.7	11.3/11.4	10.7	17.1	30	73
FFWP-030Z-TFD-020	ZS19KAE	460-3	24.06	16.1	16.66	3/8	7/8	12.5	12.3	10.7	11.8	11.7	11.3/11.4	10.7	8.1	15	106
FFWP-032Z-CFV-020	ZS21KAE	208/230-1	27.34	21	18.2	3/8	1-1/8	13.4	13.2	11.4	12.6	12.5	12.1/12.2	11.5	29	50	123.9
FFWP-032Z-TFC-020	ZS21KAE	208/230-3	27.34	21	18.2	3/8	1-1/8	13.4	13.2	11.4	12.6	12.5	12.1/12.2	11.5	19	30	110
FFWP-032Z-TFD-020	ZS21KAE	460-3	27.34	21	18.2	3/8	1-1/8	13.4	13.2	11.4	12.6	12.5	12.1/12.2	11.5	8.6	15	120.9
FFWP-040Z-CFV-020	ZS26KAE	208/230-1	27.6	21	21.12	1/2	1-1/8	21.7	21.4	18.6	20.5	20.4	19.7/19.8	18.6	29.5	50	182
FFWP-040Z-TFC-020	ZS26KAE	208/230-3	27.6	21	21.12	1/2	1-1/8	21.7	21.4	18.6	20.5	20.4	19.7/19.8	18.6	19.3	30	132.9
FFWP-040Z-TFD-020	ZS26KAE	460-3	27.6	21	21.12	1/2	1-1/8	21.7	21.4	18.6	20.5	20.4	19.7/19.8	18.6	8.6	15	186
FFWP-042Z-CFV-020	ZS33KAE	208/230-1	27.47	21	21.13	1/2	1-1/8	21.7	21.4	18.6	20.5	20.4	19.7/19.8	18.6	35.2	60	187.9
FFWP-042Z-TFC-020	ZS33KAE	208/230-3	27.47	21	21.13	1/2	1-1/8	21.7	21.4	18.6	20.5	20.4	19.7/19.8	18.6	27.8	50	142.9
FFWP-042Z-TFD-020	ZS33KAE	460-3	27.6	21	21.12	1/2	1-1/8	21.7	21.4	18.6	20.5	20.4	19.7/19.8	18.6	12.5	20	210.9
FFWP-050Z-CFV-020	ZS38K4E	208/230-1	27.74	21	21.12	1/2	1-1/8	21.7	21.4	18.6	20.5	20.4	19.7/19.8	18.6	39.7	70	210.9
FFWP-050Z-TFC-020	ZS38K4E	208/230-3	27.74	21	21.12	1/2	1-1/8	21.7	21.4	18.6	20.5	20.4	19.7/19.8	18.6	26.7	45	157.9
FFWP-050Z-TFD-020	ZS38K4E	460-3	27.74	21	21.12	1/2	1-1/8	21.7	21.4	18.6	20.5	20.4	19.7/19.8	18.6	12	20	199.9
FFWP-050Z-TFE-020	ZS38K4E	575-3	27.84	21	21.12	1/2	1-1/8	21.7	21.4	18.6	20.5	20.4	19.7/19.8	18.6	9.8	15	217.9

*Not all available models are listed. Please visit Emerson.com/CopelandOPI to see all available models.

Area Restrictions: 20°F Max Superheat Area Restrictions: 40°F Max Return Gas Temp

For the latest data information visit Emerson.com/CopelandOPI

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