

CPKF SERIES

50 Hz

Split System Heat Pump

2 to 5 Ton
[7.0 kW to 17.56 kW]

Nominal Capacity:
24,000 to 60,000 BTUH



This 50-Hz split system heat pump allows for ground-level or rooftop applications.

Standard Features

- Quiet operating top discharge
- High-efficiency performance
- Copper tube, aluminum fin coil
- Brass suction and liquid line shut-off valves with sweat connection
- Fully charged for 15' [4.57m] of interconnecting tubing
- Manual reset high-pressure control
- Automatic reset low-pressure control for loss-of-charge protection
- Totally enclosed, permanently lubricated condenser motor
- Ultra-quiet hermetically sealed compressor with internal high-pressure control
- Bi-flow liquid line drier
- Suction line accumulator
- Check-flowrator expansion device
- Anti-cycling reversing valve circuit
- Crankcase heater (where indicated)
- Time initiated, temperature terminated defrost control
- Bottom pan rails elevate the unit above the slab

Air Handler Compatibilities

- Designed for use with evaporator blowers A series air handlers
- A series air handlers may be located in a closet, utility room, attic or basement

Cabinet Construction

- Heavy-gauge, G-90 galvanized cabinet with removable access panels, completely weatherized, properly reinforced and braced
- Steel sheet metal is zinc-coated and galvanized by the hot-dip process

Accessories

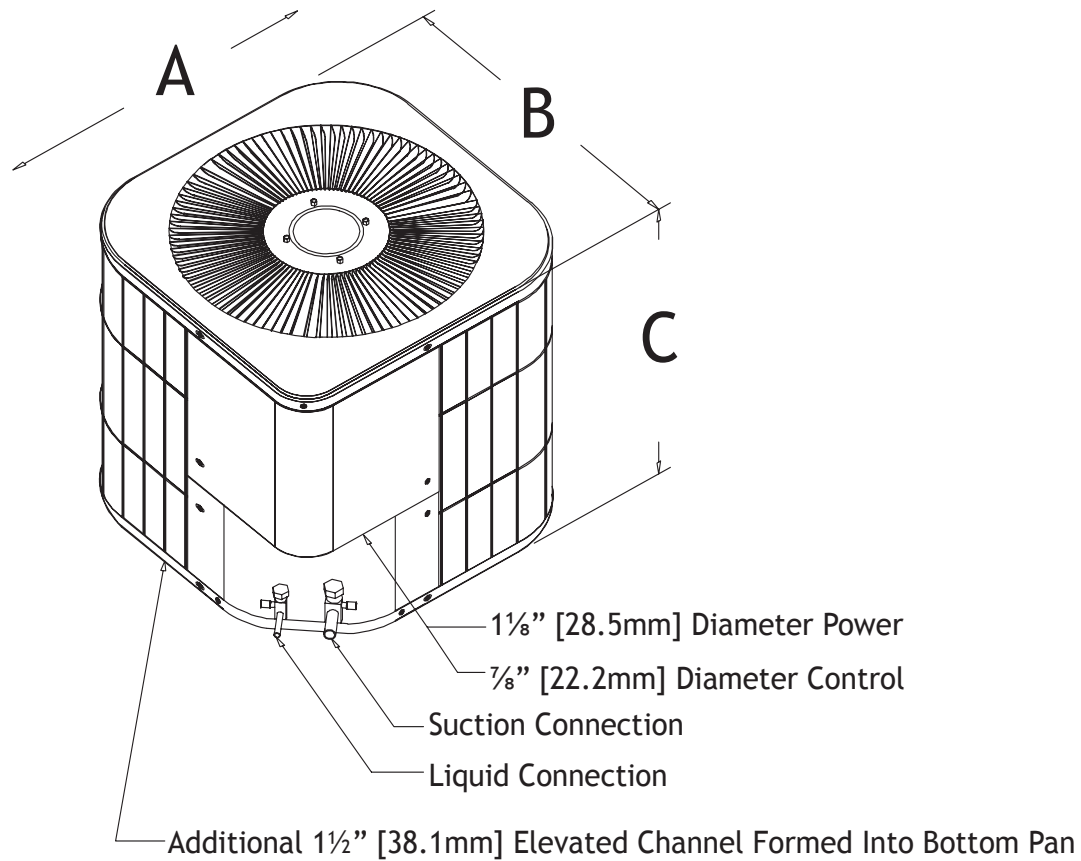
- Room thermostat with 2-stage heat/1-stage cool and emergency heat, capability (HPT18-60)
- Automatic changeover room thermostat with 2-stage heat/1-stage cool and emergency heat capability (HPTA18-60)
- Digital Room Thermostat (CTHP18-60HD) 2-stage heat/1-stage cool

PRODUCT SPECIFICATIONS

Specifications

	CPKF24-2	CPKF36-2/-5	CPKF42-5	CPKF48-2/-5	CPKF60-5	CPKF61-5
Fan						
Diameter	18	18	22	22	22	22
RPM	950	950	950	950	950	950
Coil Description						
Face Area (Ft. ²)	10.4	12.5	17.5	17.5	21.9	21.9
Tube Diameter (Inches)	$\frac{3}{8}$ [9.5mm]	$\frac{3}{8}$ [9.5mm]	$\frac{3}{8}$ [9.5mm]	$\frac{3}{8}$ [9.5mm]	$\frac{3}{8}$ [9.5mm]	$\frac{3}{8}$ [9.5mm]
No. Rows Per Fins Per Inch	1/19	1/19	1/19	1/19	1/19	1/19
No. Tubes	20	24	24	24	30	30
Fin Types	RIPPLE	RIPPLE	RIPPLE	RIPPLE	RIPPLE	RIPPLE
Refrigerant Connections						
Liquid	$\frac{3}{8}$ [9.5mm]	$\frac{3}{8}$ [9.5mm]	$\frac{3}{8}$ [9.5mm]	$\frac{3}{8}$ [9.5mm]	$\frac{3}{8}$ [9.5mm]	$\frac{3}{8}$ [9.5mm]
Suction	$\frac{3}{4}$ [19mm]	$\frac{3}{4}$ [19mm]	$\frac{7}{8}$ [22.2mm]	$\frac{7}{8}$ [22.2mm]	$\frac{7}{8}$ [22.2mm]	$\frac{7}{8}$ [22.2mm]
Type	SWEAT	SWEAT	SWEAT	SWEAT	SWEAT	SWEAT
Shipping Weight (lbs./[kg])	144 [65.4]	165 [74.9]	195 [88.5]	200 [90.8]	220 [99.9]	223 [101.2]

Dimensional Data



	A	B	C
CPKF24-2	23" [58cm]	23" [58cm]	25" [57cm]
CPKF36-5/-5	23" [58cm]	23" [58cm]	30" [76cm]
CPKF42-5	29" [73cm]	29" [73cm]	30" [76cm]
CPKF48-2/-5	29" [73cm]	29" [73cm]	30" [76cm]
CPKF60-5	29" [73cm]	29" [73cm]	37.5" [95cm]
CPKF61-5	29" [73cm]	29" [73cm]	37.5" [95cm]

PRODUCT SPECIFICATIONS

Cooling and Heating Performance Data

MODEL OUTDOOR SECTION	MODEL INDOOR SECTION	COOLING @ 95 °F OUTDOOR 80/67 °f INDOOR			COOLING @ 115 °F OUTDOOR 80/67 °f INDOOR			HEATING @ 47/ 70 °F OUTDOOR 70 °F INDOOR		HEATING @ 17/ 13 °F OUTDOOR 70 °F INDOOR		SOUND RATING BELS	HEATING COP @ 47 °F	HEATING COP @ 17 °F
		TOTAL BTUH	SENS. BTUH	WATTS	TOTAL BTUH	SENS. BTUH	WATTS	TOTAL BTUH	WATTS	TOTAL BTUH	WATTS			
CPKF24-2	A24-00-2R	22000	16500	2750	19300	15500	3000	23000	2320	13000	2110	8.0	2.91	1.81
CPKF36-2/-5	A36-00-2R	32000	25000	3760	28200	23400	4125	32000	3230	20800	3380	8.0	2.90	1.80
CPKF36-2/-5	A48-00-2R	36000	28000	4240	31600	26200	4510	35000	3530	22800	3710	8.0	2.91	1.80
CPKF42-5	A48-00-2R	40000	31200	5000	35000	29300	5480	39000	3940	24200	3940	8.4	2.90	1.80
CPKF48-2/-5	A48-00-2R	47000	37400	5220	41400	34300	5720	48000	4850	31400	5110	8.4	2.90	1.80
CPKF60-5	A60-00-2R	52000	41200	5780	46000	37000	6700	53000	5350	34000	5530	8.4	2.90	1.80
CPKF61-5	A60-00-2R	58000	45200	6440	51000	42300	7100	58000	5860	37800	6150	8.4	2.90	1.80

When mix-matching outdoor and indoor units, the indoor unit check-flowrator must match the outdoor unit size. See "AR" unit or coil instructions.

Cooling and Heating Performance Data (Metric)

MODEL OUTDOOR SECTION	MODEL INDOOR SECTION	COOLING @ 35 °C OUTDOOR 27/19 °C INDOOR			COOLING @ 46 °C OUTDOOR 27/19 °C INDOOR			HEATING @ 8.3/ 6.1 °C OUTDOOR 21 °C INDOOR		HEATING @ -8.3/ -10.5 °C OUTDOOR 21 °C INDOOR		SOUND RATING BELS	HEATING COP @ 8.3 °C	HEATING COP @ -8.3 °C
		TOTAL KW	SENS. KW	WATTS	TOTAL KW	SENS. KW	WATTS	TOTAL KW	WATTS	TOTAL KW	WATTS			
CPKF24-2	A24-00-2R	6.4	4.8	2750	5.7	4.5	3000	6.7	2320	3.8	2110	8.0	2.91	1.81
CPKF36-2/-5	A36-00-2R	9.4	7.3	3760	8.3	6.9	4125	9.4	3230	6.1	3380	8.0	2.90	1.80
CPKF36-2/-5	A48-00-2R	10.6	8.2	4240	9.3	7.7	4510	12.3	3530	6.7	3710	8.0	2.91	1.80
CPKF42-5	A48-00-2R	11.7	9.1	5000	10.3	8.6	5480	11.4	3940	7.1	3940	8.4	2.90	1.80
CPKF48-2/-5	A48-00-2R	13.8	11.0	5220	12.1	10.1	5720	14.1	4850	9.2	5110	8.4	2.90	1.80
CPKF60-5	A60-00-2R	15.2	12.1	5780	13.5	10.8	6700	15.5	5350	10.0	5530	8.4	2.90	1.80
CPKF61-5	A60-00-2R	17.0	13.2	6440	14.9	12.4	7100	17.0	5860	11.1	6150	8.4	2.90	1.80

Electrical Data

MODEL	POWER SUPPLY			+MINIMUM CIRCUIT AMPACITY	*MAXIMUM OVERCURRENT PROTECTION	MINIMUM VOLTS	MAXIMUM VOLTS	COMPRESSOR		COND. FAN MOTOR	
	VOLTS	PH	HZ					RLA	LRA	FLA	HP
†CPKF24-2	220/240	1	50	17.8	30	198	264	12.8	75	0.9	1/4
†CPKF36-2	220/240	1	50	23.2	40	198	264	17.9	90	0.9	1/4
†CPKF36-5	380/415	3	50	9.4	15	342	456	6.1	39	0.8	1/4
†CPKF42-5	380/415	3	50	12.2	20	342	456	8.33	45	0.8	1/4
CPKF48-2	220/240	1	50	30	50	198	263	19.2	140.0	0.9	1/4
CPKF48-5	380/415	3	50	11.8	15	342	456	8.0	67	0.8	1/4
†CPKF60-5	380/415	3	50	14.6	20	342	456	10.3	65	0.8	1/4
CPKF61-5	380/415	3	50	13.6	20	342	456	9.5	73	0.8	1/4

† Includes Crankcase Heater

* May use fuses or HACR type Circuit Breakers of the same size as noted.

+ Wire size should be determined in accordance with Local Electrical Codes. Extensive wire runs will require larger wire sizes.

PRODUCT SPECIFICATIONS

OUTDOOR UNIT CPKF48-2/-5

INDOOR UNIT A48-00-2R

INDOOR AIR		CONDENSER AIR TEMPERATURE														
		75F			85F			95F			105F			115F		
SCFM	WB	TOTAL MBTUH	SENS MBTUH	WATTS KWH	TOTAL MBTUH	SENS MBTUH	WATTS KWH	TOTAL MBTUH	SENS MBTUH	WATTS KWH	TOTAL MBTUH	SENS MBTUH	WATTS KWH	TOTAL MBTUH	SENS MBTUH	WATTS KWH
1332	72	54.5	28.1	4.91	52.2	26.9	5.17	49.4	25.8	5.38	46.5	24.7	5.64	43.7	23.6	5.90
	67	49.8	34.8	4.60	47.5	33.7	4.80	45.1	32.5	5.07	42.3	31.4	5.33	39.5	31.4	5.59
	62	46.1	41.1	4.28	43.7	40.0	4.54	42.5	38.9	4.80	41.4	37.8	5.07	39.0	36.3	5.27
	57	44.2	44.5	4.18	42.3	42.6	4.44	40.4	40.8	4.70	38.1	38.5	5.01	36.2	36.3	5.22
1567	72	56.9	31.0	5.07	54.1	29.9	5.27	51.2	28.8	5.54	48.4	28.1	5.80	45.1	26.6	6.06
	67	52.2	39.6	4.75	49.8	38.5	4.96	47.0	37.4	5.22	44.2	36.3	5.48	41.4	35.2	5.74
	62	48.4	47.5	4.49	46.1	46.0	4.70	43.7	44.1	4.96	41.8	41.9	5.22	39.5	39.6	5.54
	57	47.9	48.2	4.44	45.6	46.4	4.70	43.7	44.1	4.96	41.8	41.9	5.22	39.5	39.6	5.54
1802	72	58.3	33.7	5.17	55.5	32.5	5.38	52.6	31.4	5.64	49.4	30.3	5.90	46.5	29.5	6.16
	67	54.1	43.8	4.86	51.2	43.0	5.07	48.4	41.9	5.33	45.6	40.4	5.59	42.8	39.3	5.85
	62	50.8	51.2	4.65	48.9	49.0	4.91	46.1	46.8	5.17	44.2	44.5	5.43	41.4	41.9	5.74
	57	50.8	51.2	4.65	48.9	49.0	4.91	46.1	46.8	5.17	44.2	44.5	5.43	41.4	41.9	5.74

OUTDOOR UNIT CPKF60-5

INDOOR UNIT A60-00-2R

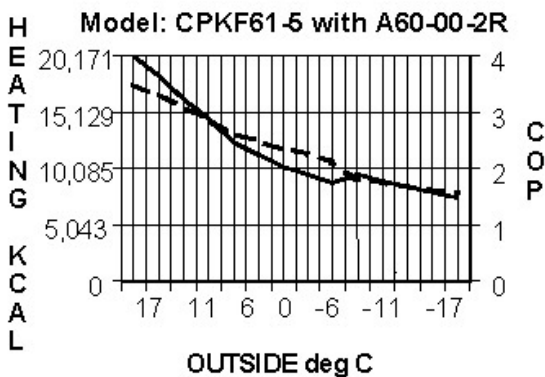
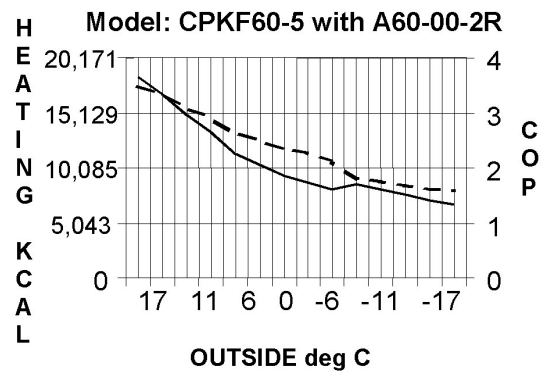
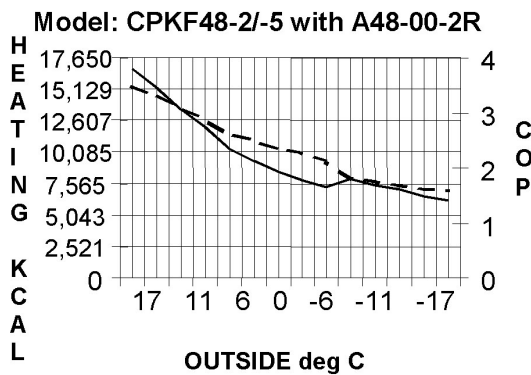
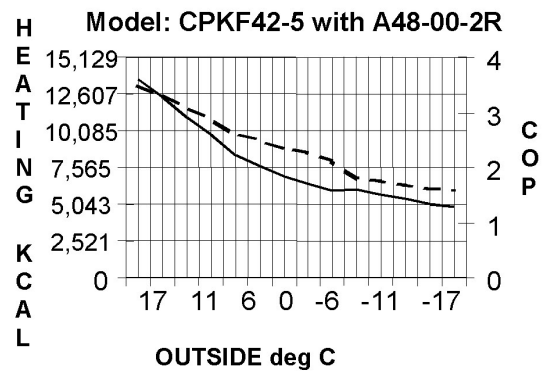
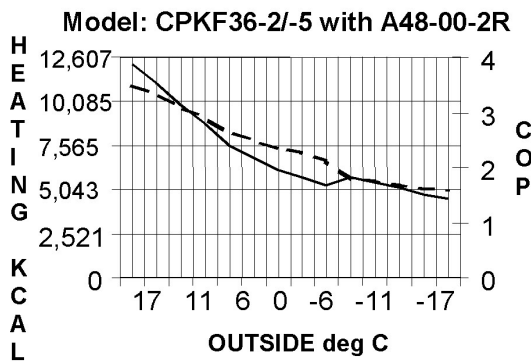
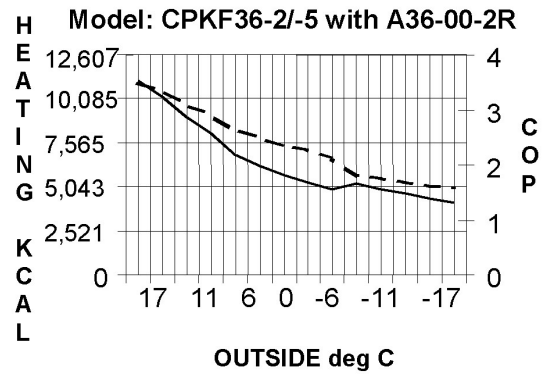
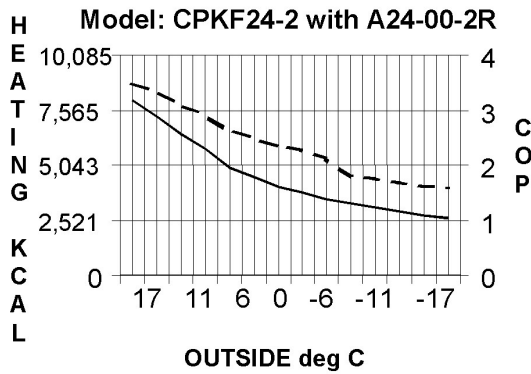
INDOOR AIR		CONDENSER AIR TEMPERATURE														
		75F			85F			95F			105F			115F		
SCFM	WB	TOTAL MBTUH	SENS MBTUH	WATTS KWH	TOTAL MBTUH	SENS MBTUH	WATTS KWH	TOTAL MBTUH	SENS MBTUH	WATTS KWH	TOTAL MBTUH	SENS MBTUH	WATTS KWH	TOTAL MBTUH	SENS MBTUH	WATTS KWH
1473	72	60.3	30.9	5.43	57.7	29.6	5.72	54.6	28.4	5.95	51.5	27.2	6.24	48.4	25.9	6.53
	67	55.1	38.3	5.08	52.5	37.1	5.32	49.9	35.8	5.60	46.8	34.6	5.89	43.7	34.6	6.18
	62	51.0	45.3	4.74	48.4	44.1	5.03	47.1	42.8	5.32	45.8	41.6	5.60	43.2	39.9	5.84
	57	48.9	49.0	4.62	46.8	46.9	4.91	44.7	44.9	5.20	42.1	42.4	5.55	40.0	39.9	5.78
1733	72	62.9	34.2	5.60	59.8	32.9	5.84	56.7	31.7	6.12	53.6	30.9	6.41	49.9	29.2	6.70
	67	57.7	43.7	5.26	55.1	42.4	5.49	52.0	41.2	5.78	48.9	39.9	6.07	45.8	38.7	6.36
	62	53.6	52.3	4.97	51.0	50.7	5.20	48.4	48.6	5.49	46.3	46.1	5.78	43.7	43.7	6.12
	57	53.0	53.1	4.91	50.4	51.1	5.20	48.4	48.6	5.49	46.3	46.1	5.78	43.7	43.7	6.12
1800	72	64.5	37.1	5.72	61.4	35.8	5.95	58.2	34.6	6.24	54.6	33.4	6.53	51.5	32.5	6.82
	62	59.8	48.2	5.37	56.7	47.4	5.60	53.6	46.1	5.89	50.4	44.5	6.18	47.3	43.2	6.47

OUTDOOR UNIT CPKF61-5

INDOOR UNIT A60-00-2R

INDOOR AIR		CONDENSER AIR TEMPERATURE														
		75F			85F			95F			105F			115F		
SCFM	WB	TOTAL MBTUH	SENS MBTUH	WATTS KWH	TOTAL MBTUH	SENS MBTUH	WATTS KWH	TOTAL MBTUH	SENS MBTUH	WATTS KWH	TOTAL MBTUH	SENS MBTUH	WATTS KWH	TOTAL MBTUH	SENS MBTUH	WATTS KWH
1643	72	67.3	33.9	6.06	64.4	32.6	6.38	60.9	31.2	6.64	57.4	29.9	6.96	53.9	28.5	7.28
	67	61.5	42.1	5.67	58.6	40.7	5.93	55.7	39.4	6.25	52.2	38.0	6.57	48.7	38.0	6.90
	62	56.8	49.8	5.28	53.9	48.4	5.61	52.5	47.0	5.93	51.0	45.7	6.25	48.1	43.9	6.51
	57	54.5	53.8	5.16	52.2	51.6	5.48	49.9	49.3	5.80	47.0	46.6	6.19	44.7	43.9	6.44
1733	72	70.2	37.5	6.25	66.7	36.2	6.51	63.2	34.8	6.83	59.7	33.9	7.15	55.7	32.1	7.48
	67	64.4	48.0	5.86	61.5	46.6	6.12	58.0	45.2	6.44	54.5	43.9	6.77	51.0	42.5	7.09
	62	59.7	57.5	5.54	56.8	55.6	5.80	53.9	53.4	6.12	51.6	50.7	6.44	48.7	48.0	6.83
	57	59.2	58.4	5.48	56.3	56.1	5.80	53.9	53.4	6.12	51.6	50.7	6.44	48.7	48.0	6.83
1800	72	71.9	40.7	6.38	68.4	39.4	6.64	65.0	38.0	6.96	60.9	36.6	7.28	57.4	35.7	7.60
	67	66.7	52.9	5.99	63.2	52.0	6.25	59.7	50.7	6.57	56.3	48.9	6.90	52.8	47.5	7.22
	62	62.6	62.0	5.74	60.3	59.3	6.06	56.8	56.6	6.38	54.5	53.8	6.70	51.0	50.7	7.09
	57	62.6	62.0	5.74	60.3	59.3	6.06	56.8	56.6	6.38	54.5	53.8	6.70	51.0	50.7	7.09

Heating Performance Expanded Ratings @ 21.1 °C Indoor Ambient



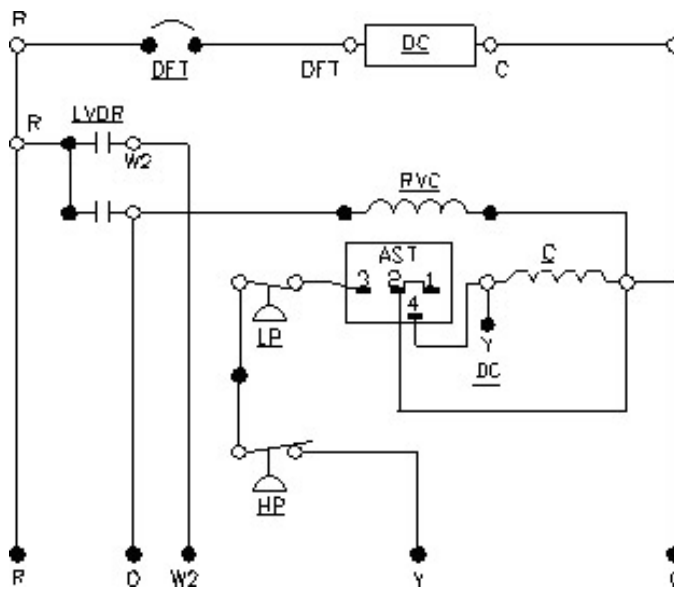
PRODUCT SPECIFICATIONS

Legend and Notes

1. All capacities are net and include the effect of the outdoor fan and indoor motors.
2. SCFM - Supply air flow (CFM)
3. WB - Entering wet bulb temperature
4. MBTUH - 1000 BTU/Hour
5. KWI - Total kW input including compressor, outdoor and indoor motors
6. Sensible heat capacities shown are based on 80 °F [26.6 °C] DB entering air at the evaporator coil. For sensible heat capacities at other than 80 °F [26.6 °C] DB, deduct 84 BTUH per 100 CFM of evaporator coil air for each degree below 80 °F [26.6 °C], or add 84 BTUH per 100 CFM of evaporator coil air per degree above 80 °F [26.6 °C].

Schematic Wiring Diagram

Low-Voltage Control Wiring Diagram

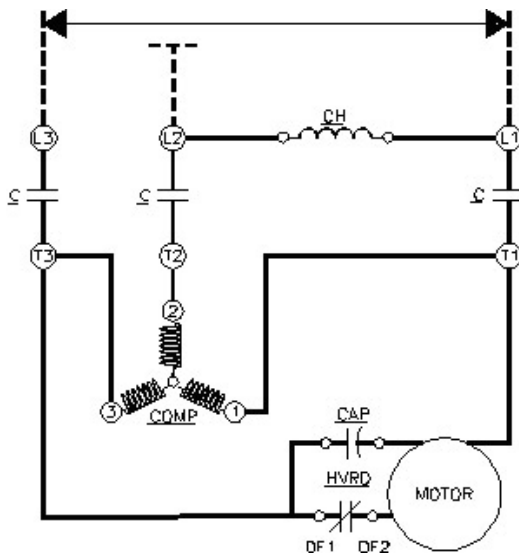


COMPONENT CODE

- CM - OUTDOOR FAN MOTOR
- COMP - COMPRESSOR
- C - CONTACTOR
- DC - DEFROST CONTROL
- LDVR - LOW VOLTAGE DEFROST RELAY
- CH - CRANKCASE HEATER
- IO - INTERNAL OVERLOAD
- LP - LOW PRESSURE CONTROL
- HP - HIGH PRESSURE CONTROL
- OT - OUTDOOR THERMOSTAT (OPTIONAL)
- FC - FAN CAPACITOR
- DFT - DEFROST THERMOSTAT
- RVC - REVERSING VALVE COIL
- HVDR - HIGH VOLTAGE DEFROST RELAY
- AST - ANTI SHORT CYCLE TIMER

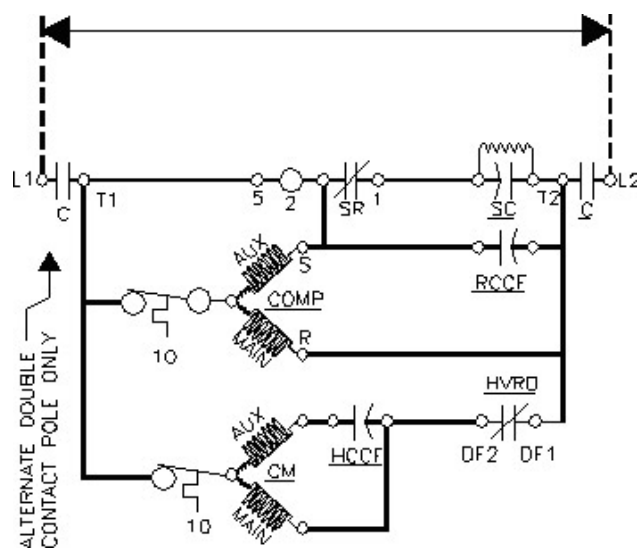
LINE VOLTAGE POWER WIRING DIAGRAMS

380/415, 50 HZ, 3 PH



CPKF36-5, CPKF48-5, CPKF60-5 & CPKF61-5

220/240, 50HZ, 1 PH



CPKF24-2, CPKF36-2 & CPKF48-2

Quality Makes the Difference!

All of our systems are designed and manufactured with the same high-quality standards, regardless of size or efficiency. We have designed these units to significantly reduce the most frequent causes of product failure. They are simple to service and forgiving to operate. We use quality materials and components. Finally, every unit is run-tested before it leaves the factory. That's why we know...there's no better quality.

Visit our web site at
www.goodmanmfg.com for information on:
Goodman Products • Customer Services • Parts

Goodman Manufacturing Company, L.P.
2550 North Loop West, Suite 400
Houston, Texas 77092 USA

Goodman Manufacturing Company, L.P., reserves the right to discontinue, or change at any time, specifications or designs without notice or without incurring obligations.
Copyright © 2003 Goodman Manufacturing Company, L.P. • Houston, Texas • Printed in the USA. • Goodman products are made proudly in the USA.
