

Kramersaver Series



Kramersaver Air Cooled Condensing Units Models C & KS – 4 through 70 HP

Kramer C and KS model condensing units are available in 4 to 70 HP. While the basic C model is available in a stand alone configuration, KS–KramerSaver systems offer the additional advantage of the rugged design of Kramer manufactured equipment coupled with the inherent energy efficiency provided by floating head pressure technology. With KramerSaver's factory matched and balanced equipment, energy savings are achieved each time air temperatures decrease below design ambient temperatures, saving money and increasing compressor life as operating pressures are reduced. The elimination of the extra refrigerant required for conventional flooded head pressure control adds to the savings achieved when installing and operating KramerSaver high efficiency refrigeration equipment. Kramer's legendary design excellence shines through in every Kramer condensing unit and system.



Features:

- Weatherproof Outdoor Housing
- Copper Tube-Aluminum Fin Coils
- Hi-Lo Pressure Switch
- Electronic Oil Pressure Safety Control
- Receiver With Service Valves
- Suction & Discharge Vibration Eliminator
- Control Circuit Transformer - 460V & 575V
- Liquid Sub-Cooling Circuit
- Crankcase Heater(s)
- Liquid Line Filter-Drier
- Suction Line Filter
- Moisture Indicating Sightglass
- Floating Head Pressure (KS Models only)
- Low Noise/ Energy Efficient 850 RPM Motors (on rail mount units)
- Expansion Valve(s) (Loose)

Optional Features:

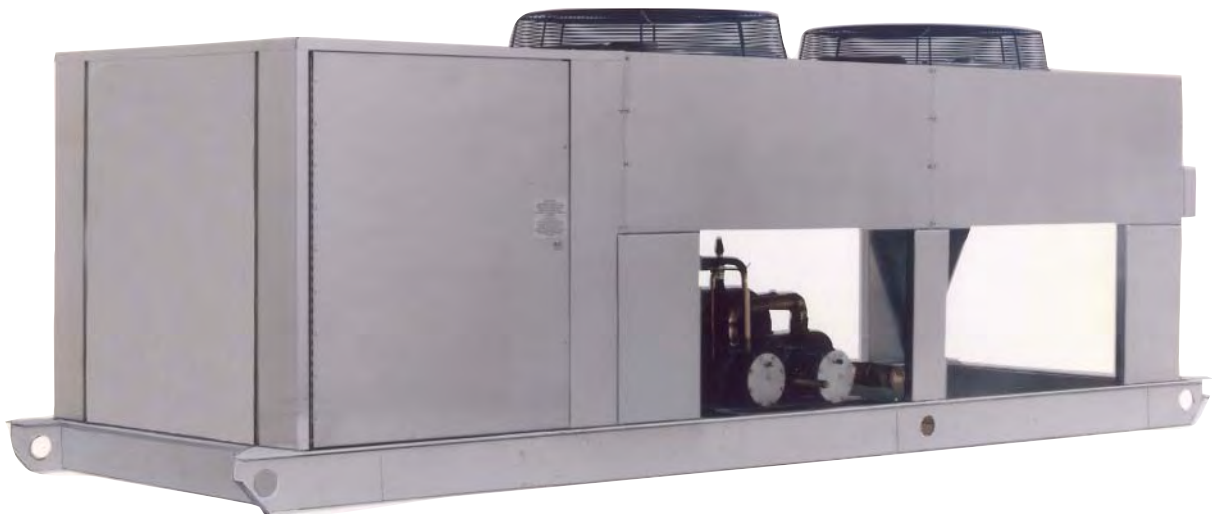
- Liquid Line Solenoid Valve (Loose)
- Complete Defrost Controls
- Manual Pumpdown Switch
- Electronic Room Thermostat (Loose)
- Flooded head pressure controls (C models only)
- Oil separator
- Suction accumulator
- Non fused disconnect
- Gauge kit
- Oversized receiver
- Phase loss monitor
- Single point alarm
- Circuit breakers
- Coil coatings
- Copper fin coil

KRAMER

SINCE 1914 – with over 97 years of continuous improvement in heat transfer technology, KRAMER presents models C and KS condensing units.



SIZE 0400 - 1000



SIZE 1200 - 7000

Models C & KS

Outdoor Air Cooled Condensing Units

Low, Medium And High Temperature Models

Nomenclature:

KS 4 1000 L 44 - E
 I II III IV V VI

I - Series Designator
 C- Basic Outdoor
 KS - KramerSaver

II - Compressor Code
 2 - Copeland Discus
 3 - Carlyle
 4 - Bitzer

III - Nominal HP
 EX: 1000 - 10HP

IV - Temperature range
 L - Low
 M - Medium
 H - High

V - Refrigerant Type
 44 - R404A or R507
 47 - R407C
 22 - R22

VI - Voltage Code
 E - 208-230/3/60
 G - 460/3/60
 J - 575/3/60

MODEL C - CHOICE OF HEAD PRESSURE CONTROLS

- Without Controls
- With Condenser Fan Cycling (Temperature, Pressure or combination of both)
- With Flooded Condenser Control (Adjustable or Fixed)
- With Flooded Condenser and Fan Cycling

MODEL KS - KRAMERSAVER

- Suitable for all climates
- Reduces refrigerant charge requirements
- Reduces operating costs - Increases profits
- Balanced system with factory selected components

KRAMER QUALITY & DEPENDABILITY

Models C and KS are available with environmental friendly R-404A, R507, R407C or R-22 refrigerants. All compressors are supplied with POE synthetic lubricant as standard.

Model C is a basic outdoor condensing unit that can be customized for specific applications with optional components. It can be used for air defrost / off cycle systems or may be ordered with electric defrost components.

Model C can be customized for any outdoor climate. The standard unit without head pressure control can usually be used in mild, tropical climates. When used in colder climates it may be ordered with optional fan cycling and / or flooded condenser head pressure control.

Model KS - KRAMER SAVER is an all climate outdoor condensing unit that is sold as a balanced system with matching Kramer unit coolers. Factory selected thermostatic expansion valve, liquid line solenoid valve and electronic room thermostat are shipped loose for field mounting or can be supplied factory mounted on the evaporator as an option. Low temperature electric defrost units will have all defrost controls factory mounted and wired (including fuse blocks).

Model KS is suitable for all climates and begins saving energy when the outdoor temperature drops below approximately 70°F. As the outdoor temperature drops, system performance increases and less energy is consumed. That's more BTU's for less watts. **More BTU for less \$, reduced operating costs and increased profits.** Less refrigerant is required in the Kramer Saver system, and the compressor runs fewer hours due to increased performance. Less run time also means longer equipment life. The **Kramer Saver** can provide yearly cost saving up to 30% when compared to conventional refrigeration systems. That can be **SUBSTANTIAL COST SAVING**

Models C and KS can be further customized with a long list of options including anti-short cycle timer, evaporator fan contactors, oil separator, suction accumulator, non fused disconnect, guage kit, oversize receiver, phase loss monitor, compressor unloading, single point alarm, hot gas bypass, circuit breakers, coil coatings, etc.

MODEL C & KS CONDENSING UNITS

CONSTRUCTION FEATURES

- Robust all weather housing
- Rigid assembly for roof, pad or rail mounting

SEMI-HERMETIC or DISCUS® COMPRESSOR

- Durable - Long life
- Accessible with service valves
- Service replacements readily available
- Available with Bitzer, Carlyle or Copeland compressors
- Energy Efficient Design
- Extended Compressor warranty available

HIGH PERFORMANCE AIR COOLED CONDENSER

- High efficiency Copper tube & Aluminum fins
- Generous coil surface lowers operating cost
- Wide fin spacing for easier cleaning
- Low Noise / Energy efficient 850 rpm direct drive fan motors on horizontal chasis models
- Epoxy coated fan guards
- Resilient wire motor bracket
- Integral liquid sub-cooling circuit

PIPING AND LINE COMPONENTS

- Replaceable core liquid line filter-drier, 15 - 70 HP
- Suction line vibration eliminator
- Discharge Line Vibration Eliminator
- Receiver with service valves and pressure relief valve

LARGE WEATHERPROOF CONTROL CABINET

- Hinged door for safety and convenience
- Compressor contactors
- Condenser motor contactors
- Control Circuit Fusing
- Pumpdown Switch
- Main power terminal block
- Compressor fusing
- Condenser motor fusing
- Evaporator fan motor fuse block
- Space for optional controls

OPTIONAL FEATURES AND ACCESSORIES

- Special compressors
- Electric defrost controls
- Suction accumulator
- Hot gas bypass (Some models)
- Copper fin condenser
- Oversize condenser
- Gauge kit - High, Low and Oil pressure
- Single point alarm
- Cylinder unloading (Some models)
- Oversized receivers
- Phase loss monitor
- Oil separator
- Anti short cycle timer
- Coated fin condenser
- Non fused disconnect
- Room thermostat
- Liquid Line Solenoid

QUALITY ASSURANCE AND WARRANTY

- UL and C-UL listed
- Warranted 12 months from installation or 15 months from shipment (whichever comes first)

MODELS C & KS - SIZE 0400 - 1000
PERFORMANCE DATA

R-404A & R-507 MEDIUM AND HIGH TEMPERATURE

| MODEL NUMBER C / KS | CAPACITY BTU/HR @95°F AMBIENT | | | | | | | | |
|------------------------|-------------------------------|---------|---------|---------|---------|--------|--------|--------|--------|
| | SUCTION TEMPERATURE (°F) | | | | | | | | |
| | +45°F | +40°F | +35°F | +30°F | +25°F | +20°F | +15°F | +10°F | +5°F |
| 0500M/H44 | 75,400 | 69,500 | 63,700 | 58,100 | 52,800 | 47,700 | 42,900 | 38,400 | 34,400 |
| 0700M/H44 | 105,300 | 97,100 | 89,200 | 81,700 | 74,600 | 67,900 | 61,600 | 55,700 | 50,300 |
| 0800M/H44 | 128,100 | 117,900 | 108,700 | 99,400 | 91,000 | 82,800 | 75,100 | 67,700 | 60,700 |
| 1000M/H44 | 151,500 | 139,600 | 128,400 | 118,000 | 107,800 | 98,300 | 89,300 | 80,700 | 72,600 |

R-407C MEDIUM AND HIGH TEMPERATURE

| MODEL NUMBER C / KS | CAPACITY BTU/HR @ 95°F AMBIENT | | | | | | | | |
|------------------------|--------------------------------|---------|---------|---------|--------|--------|--------|--------|--|
| | SUCTION TEMPERATURE (°F) | | | | | | | | |
| | +45°F | +40°F | +35°F | +30°F | +25°F | +20°F | +15°F | +10°F | |
| 0500M/H47 | 70,700 | 64,400 | 58,400 | 52,600 | 47,300 | 42,200 | 37,500 | 33,100 | |
| 0700M/H47 | 98,700 | 90,000 | 81,800 | 74,000 | 66,700 | 60,000 | 53,800 | 48,000 | |
| 0800M/H47 | 120,100 | 109,200 | 99,600 | 90,000 | 81,400 | 73,200 | 65,500 | 58,300 | |
| 1000M/H47 | 142,000 | 129,300 | 117,700 | 106,800 | 96,400 | 86,800 | 77,900 | 69,500 | |

R-22 MEDIUM AND HIGH TEMPERATURE

| MODEL NUMBER C / KS | CAPACITY BTU/HR @ 95°F AMBIENT | | | | | | | | |
|------------------------|--------------------------------|---------|---------|---------|---------|--------|--------|--------|--|
| | SUCTION TEMPERATURE (°F) | | | | | | | | |
| | +45°F | +40°F | +35°F | +30°F | +25°F | +20°F | +15°F | +10°F | |
| 0500M/H22 | 78,700 | 71,400 | 64,500 | 58,100 | 52,100 | 46,600 | 41,300 | 36,500 | |
| 0700M/H22 | 105,300 | 96,800 | 88,300 | 80,100 | 72,300 | 65,000 | 57,900 | 51,200 | |
| 0800M/H22 | 130,600 | 119,300 | 108,700 | 98,600 | 89,300 | 80,500 | 72,300 | 64,600 | |
| 1000M/H22 | 152,500 | 139,500 | 127,300 | 115,900 | 105,200 | 95,200 | 85,900 | 77,300 | |

AMBIENT CORRECTION FACTORS

| REFRIGERANT | AMBIENT TEMPERATURE (°F) | | | | | |
|-----------------|--------------------------|------|------|------|-------|-------|
| | 80°F | 85°F | 90°F | 95°F | 100°F | 105°F |
| R-22 OR 407C | 1.10 | 1.07 | 1.03 | 1.00 | 0.96 | 0.92 |
| R-404A OR R-507 | 1.15 | 1.10 | 1.05 | 1.00 | 0.95 | 0.90 |

For design condition other than 95°F, multiply the rating by the correction factor.

MODELS C & KS - SIZE 0400 - 1000
PHYSICAL DATA

R-404A & R-507 MEDIUM AND HIGH TEMPERATURE

| MODEL NUMBER C/KS | COMPRESSOR | | | CONDENSER FANS | | | CONNECTION SIZE (IN.) | | REFR. CHARGE R-404A (LBS) | | UNIT CONFIG. (2) | DIM (H) | APPROX. NET WEIGHT LBS. |
|----------------------|--------------|------|-----|----------------|-----------------|-----|-----------------------|-------------|---------------------------|------------------|------------------|---------|-------------------------|
| | MODEL NUMBER | CFH | QTY | QTY | FAN DIAM. (IN.) | HP | SUCTION O.D. | LIQUID O.D. | COND. UNIT(1) | REC'R @ 90% CAP. | | | |
| 0500M/H44 | 2DD-R63KE | 823 | 1 | 2 | 24 | 3/4 | 1 1/8 | 5/8 | 16 | 52 | A | 37 1/4 | 600 |
| 0700M/H44 | 2DA-R89KE | 1135 | 1 | 2 | 24 | 3/4 | 1 3/8 | 5/8 | 25 | 82 | A | 37 1/4 | 750 |
| 0800M/H44 | 3DA-R10ME | 1375 | 1 | 2 | 24 | 3/4 | 1 3/8 | 5/8 | 28 | 82 | A | 37 1/4 | 800 |
| 1000M/H44 | 3DB-R12ME | 1620 | 1 | 2 | 24 | 3/4 | 1 5/8 | 7/8 | 28 | 82 | A | 44 3/4 | 900 |

R-407C MEDIUM AND HIGH TEMPERATURE

| MODEL NUMBER C/KS | COMPRESSOR | | | CONDENSER FANS | | | CONNECTION SIZE (IN.) | | REFR. CHARGE R-407C (LBS) | | UNIT CONFIG. (2) | DIM (H) | APPROX. NET WEIGHT LBS. |
|----------------------|--------------|------|-----|----------------|-----------------|-----|-----------------------|-------------|---------------------------|------------------|------------------|---------|-------------------------|
| | MODEL NUMBER | CFH | QTY | QTY | FAN DIAM. (IN.) | HP | SUCTION O.D. | LIQUID O.D. | COND. UNIT(1) | REC'R @ 90% CAP. | | | |
| 0500M/H47 | 2DD-R63KE | 823 | 1 | 2 | 24 | 3/4 | 1 1/8 | 5/8 | 18 | 61 | A | 37 1/4 | 650 |
| 0700M/H47 | 2DA-R89KE | 1135 | 1 | 2 | 24 | 3/4 | 1 3/8 | 5/8 | 29 | 96 | A | 37 1/4 | 700 |
| 0800M/H47 | 3DA-R10ME | 1375 | 1 | 2 | 24 | 3/4 | 1 3/8 | 5/8 | 28 | 96 | A | 37 1/4 | 750 |
| 1000M/H47 | 3DB-R12ME | 1620 | 1 | 2 | 24 | 3/4 | 1 5/8 | 7/8 | 33 | 96 | A | 44 3/4 | 800 |

R-22 MEDIUM AND HIGH TEMPERATURE

| MODEL NUMBER C/KS | COMPRESSOR | | | CONDENSER FANS | | | CONNECTION SIZE (IN.) | | REFR. CHARGE R-22 (LBS) | | UNIT CONFIG. (2) | DIM (H) | APPROX. NET WEIGHT LBS. |
|----------------------|--------------|------|-----|----------------|-----------------|-----|-----------------------|-------------|-------------------------|------------------|------------------|---------|-------------------------|
| | MODEL NUMBER | CFH | QTY | QTY | FAN DIAM. (IN.) | HP | SUCTION O.D. | LIQUID O.D. | COND. UNIT(1) | REC'R @ 90% CAP. | | | |
| 0500M/H22 | 2DD-R63KE | 823 | 1 | 2 | 24 | 3/4 | 1 1/8 | 5/8 | 18 | 61 | A | 37 1/4 | 600 |
| 0700M/H22 | 2DA-R89KE | 1135 | 1 | 2 | 24 | 3/4 | 1 3/8 | 5/8 | 29 | 96 | A | 37 1/4 | 750 |
| 0800M/H22 | 3DA-R10ME | 1375 | 1 | 2 | 24 | 3/4 | 1 3/8 | 5/8 | 28 | 96 | A | 37 1/4 | 800 |
| 1000M/H22 | 3DB-R12ME | 1620 | 1 | 2 | 24 | 3/4 | 1 5/8 | 7/8 | 33 | 96 | A | 44 3/4 | 900 |

(1) Estimated refrigerant charge is for floating head pressure condensing unit only. It does not include interconnecting piping, evaporators, flooded condenser or other accessories.

(2) See drawings on page 12

MEDIUM AND HIGH TEMPERATURE R-22, R404A & R-507

| MODEL NUMBER C / KS | ELECTRICAL 230 / 3 / 60 | | | | | | ELECTRICAL 460 / 3 / 60 | | | | ELECTRICAL 575 / 3 / 60 | | | | |
|-------------------------|----------------------------|-----|-------------|------------|---------|------------|----------------------------|-------------|------------|---------|----------------------------|-----|-------------|------------|---------|
| | COMPRESSOR | | TOTAL COND. | TOTAL UNIT | MCA (2) | COMPRESSOR | | TOTAL COND. | TOTAL UNIT | MCA (2) | COMPRESSOR | | TOTAL COND. | TOTAL UNIT | MCA (2) |
| | RLA | LRA | FLA | AMPS | | RLA | LRA | FLA | AMPS | | RLA | LRA | FLA | AMPS | |
| | | | | | | | | | | | | | | | |
| 0500M/H22, M/H44, M/H47 | 22.3 | 120 | 8.0 | 31.3 | 37 | 10.5 | 60 | 4.0 | 15.0 | 18 | 7.9 | 49 | 1.7 | 10.1 | 15 |
| 0700M/H22, M/H44, M/H44 | 32.0 | 169 | 8.0 | 41.0 | 49 | 14.1 | 85 | 4.0 | 18.6 | 23 | 13.3 | 67 | 3.5 | 17.3 | 21 |
| 0800M/H22, M/H44, M/H47 | 41.0 | 215 | 8.0 | 50.0 | 61 | 20.0 | 106 | 4.0 | 24.5 | 30 | 16.4 | 84 | 3.5 | 20.4 | 24 |
| 1000M/H22, M/H44, M/H47 | 43.6 | 215 | 8.0 | 52.6 | 64 | 20.0 | 106 | 4.0 | 24.5 | 30 | 16.5 | 84 | 3.5 | 20.5 | 24 |

(2) Minimum Circuit Ampacity (MCA) does not include evaporator(s) electrical requirements (Fan Motors or Defrost Heaters).

MODELS C & KS - SIZE 0400 - 1000
PERFORMANCE DATA

R-404A & R-507 LOW TEMPERATURE

| MODEL NUMBER C/KS | CAPACITY BTU/HR @ 95°F AMBIENT | | | | | | | |
|----------------------|--------------------------------|--------|--------|--------|--------|--------|--------|--------|
| | SUCTION TEMPERATURE (°F) | | | | | | | |
| | 0°F | -5°F | -10°F | -15°F | -20°F | -25°F | -30°F | -40°F |
| 0400L44 | 32,700 | 29,100 | 25,700 | 22,600 | 19,700 | 17,100 | 14,700 | 10,400 |
| 0500L44 | 42,800 | 38,400 | 34,300 | 30,400 | 26,900 | 23,600 | 20,500 | 14,900 |
| 0600L44 | 52,500 | 47,100 | 42,000 | 37,200 | 32,800 | 28,700 | 24,900 | 18,500 |
| 0800L44 | 60,800 | 54,600 | 48,800 | 43,400 | 38,400 | 33,700 | 29,400 | 21,600 |
| 0900L44 | 78,100 | 69,900 | 62,300 | 55,300 | 48,700 | 42,600 | 37,100 | 27,400 |
| 1000L44 | 82,900 | 74,700 | 67,000 | 59,700 | 52,800 | 46,400 | 40,400 | 29,800 |

AMBIENT CORRECTION FACTORS

| REFRIGERANT | AMBIENT TEMPERATURE (°F) | | | | | |
|-----------------|--------------------------|------|------|------|-------|-------|
| | 80°F | 85°F | 90°F | 95°F | 100°F | 105°F |
| R-404A OR R-507 | 1.15 | 1.10 | 1.05 | 1.00 | 0.95 | 0.90 |

For design conditions other than 95°F, multiply the rating by the correction factor.

MODELS C & KS - SIZE 0400 - 1000
PHYSICAL DATA

R-404A & R-507 LOW TEMPERATURE

| MODEL NUMBER C/KS | COMPRESSOR | | | CONDENSER FANS | | | CONNECTION SIZE (IN.) | | REFR. CHARGE R-404A (LBS) | | UNIT CONFIG. (2) | DIM (H) | APPROX. NET WEIGHT LBS. |
|----------------------|--------------|------|-----|----------------|-----------------|-----|-----------------------|-------------|---------------------------|------------------|------------------|---------|-------------------------|
| | MODEL NUMBER | CFH | QTY | QTY | FAN DIAM. (IN.) | HP | SUCTION O.D. | LIQUID O.D. | COND. UNIT(1) | REC'R @ 90% CAP. | | | |
| 0400L44 | 2DF-F16KE | 904 | 1 | 2 | 24 | 3/4 | 1 1/8 | 1/2 | 13 | 52 | A | 37 1/4 | 580 |
| 0500L44 | 2DA-F23KE | 1135 | 1 | 2 | 24 | 3/4 | 1 3/8 | 1/2 | 16 | 52 | A | 37 1/4 | 650 |
| 0600L44 | 3DA-F28KE | 1375 | 1 | 2 | 24 | 3/4 | 1 3/8 | 1/2 | 16 | 52 | A | 37 1/4 | 700 |
| 0800L44 | 3DB-F33KE | 1620 | 1 | 2 | 24 | 3/4 | 1 3/8 | 5/8 | 25 | 82 | A | 44 3/4 | 850 |
| 0900L44 | 3DF-F40KE | 1915 | 1 | 2 | 24 | 3/4 | 1 5/8 | 5/8 | 28 | 82 | A | 44 3/4 | 875 |
| 1000L44 | 3DS-F46KE | 2120 | 1 | 2 | 24 | 3/4 | 1 5/8 | 5/8 | 28 | 82 | A | 44 3/4 | 900 |

(1) Estimated refrigerant charge is for a floating head pressure condensing unit only. It does not include interconnecting piping, evaporators, flooded condenser or other accessories.

(2) See drawings on page 12

R404A & R507 LOW TEMPERATURE

| MODEL NUMBER C/KS | ELECTRICAL 230 / 3 / 60 | | | | | ELECTRICAL 460 / 3 / 60 | | | | | ELECTRICAL 575 / 3 / 60 | | | | |
|----------------------|-------------------------|-----|-------|------|-----|-------------------------|-----|-------|------|-----|-------------------------|-----|-------|------|-----|
| | COMPRESSOR | | COND. | UNIT | MCA | COMPRESSOR | | COND. | UNIT | MCA | COMPRESSOR | | COND. | UNIT | MCA |
| | RLA | LRA | FLA | AMPS | (2) | RLA | LRA | FLA | AMPS | (2) | RLA | LRA | FLA | AMPS | (2) |
| 0400L44 | 16.9 | 102 | 8.4 | 26.3 | 30 | 8.1 | 52 | 4.2 | 12.8 | 15 | 6.7 | 41 | 3.5 | 10.7 | 15 |
| 0500L44 | 28.8 | 161 | 8.4 | 38.2 | 45 | 9.7 | 60 | 4.2 | 14.4 | 17 | 9.1 | 49 | 3.5 | 13.1 | 15 |
| 0600L44 | 30.3 | 150 | 8.4 | 39.7 | 47 | 13.7 | 77 | 4.2 | 18.4 | 22 | 10.5 | 62 | 3.5 | 14.5 | 17 |
| 0800L44 | 31.4 | 161 | 8.4 | 40.8 | 48 | 16.1 | 83 | 4.2 | 20.8 | 25 | 11.0 | 67 | 3.5 | 15.0 | 18 |
| 0900L44 | 39.0 | 215 | 8.4 | 48.4 | 58 | 16.9 | 106 | 4.2 | 21.6 | 26 | 16.5 | 84 | 3.5 | 20.5 | 25 |
| 1000L44 | 42.6 | 215 | 8.4 | 52.0 | 62 | 18.6 | 106 | 4.2 | 23.3 | 28 | 16.8 | 84 | 3.5 | 20.8 | 25 |

(2) Minimum Circuit Ampacity (MCA) does not include evaporator(s) electrical requirements (Fan Motors or Defrost Heaters).

MODELS C & KS - SIZE 1200 - 6200
PERFORMANCE DATA

R-404A & R-507 LOW TEMPERATURE

| MODEL NUMBER C / KS | CAPACITY BTU/HR @ 95°F AMBIENT | | | | | | | |
|------------------------|--------------------------------|---------|---------|---------|---------|---------|---------|---------|
| | SUCTION TEMPERATURE (°F) | | | | | | | |
| | 0°F | -5°F | -10°F | -15°F | -20°F | -25°F | -30°F | -40°F |
| 1200L44 | 96,100 | 86,000 | 76,800 | 68,400 | 60,700 | 53,400 | 46,500 | 33,200 |
| 1500L44 | 113,700 | 102,400 | 92,200 | 82,700 | 73,900 | 65,700 | 57,800 | 42,400 |
| 2200L44 | 132,000 | 119,800 | 109,200 | 98,100 | 87,500 | 77,300 | 67,600 | 49,100 |
| 2700L44 | 169,800 | 153,700 | 138,100 | 123,100 | 108,700 | 95,200 | 82,600 | 60,400 |
| 3100L44 | 187,300 | 169,900 | 153,900 | 136,600 | 121,700 | 106,400 | 92,700 | 69,350 |
| 4400L44 | 267,000 | 242,100 | 218,600 | 196,300 | 175,100 | 154,800 | 135,300 | 98,300 |
| 5400L44 | 340,500 | 307,900 | 279,100 | 248,500 | 219,400 | 192,000 | 166,400 | 121,700 |
| 6200L44 | 373,300 | 338,000 | 306,700 | 271,650 | 242,600 | 212,100 | 184,750 | 138,200 |

AMBIENT CORRECTION FACTORS

| REFRIGERANT | AMBIENT TEMPERATURE (°F) | | | | | |
|-----------------|--------------------------|------|------|------|-------|-------|
| | 80°F | 85°F | 90°F | 95°F | 100°F | 105°F |
| R-404A OR R-507 | 1.15 | 1.10 | 1.05 | 1.00 | 0.95 | 0.90 |

For design conditions other than 95°F, multiply the rating by the correction factor.

MODELS C & KS - SIZE 1200 - 6200
PHYSICAL DATA

R-404A & R-507 LOW TEMPERATURE

| MODEL NUMBER C/KS | COMPRESSOR | | | CONDENSER FANS | | | CONNECTION SIZE (IN.) | | REFR. CHARGE R-404A (LBS) | | UNIT CONFIG. (2) | APPROX. NET WEIGHT LBS. |
|----------------------|--------------|----------|-----|----------------|-----------------|-----|-----------------------|-------------|---------------------------|------------------|------------------|-------------------------|
| | MODEL NUMBER | CFH | QTY | QTY | FAN DIAM. (IN.) | HP | SUCTION O.D. | LIQUID O.D. | COND. UNIT(1) | REC'R @ 90% CAP. | | |
| 1200L44 | 4DA-F47KE | 2386 | 1 | 2 | 30 | 1.0 | 1 5/8 | 5/8 | 22 | 91 | B | 1300 |
| 1500L44 | 4DL-F63KE | 3020 | 1 | 2 | 30 | 1.0 | 1 5/8 | 7/8 | 29 | 91 | B | 1650 |
| 2200L44 | 4DT-F76KE | 3603 | 1 | 2 | 30 | 1.0 | 2 1/8 | 7/8 | 39 | 124 | B | 1900 |
| 2700L44 | 6DL-F93KE | 4530 | 1 | 2 | 30 | 1.0 | 2 1/8 | 7/8 | 49 | 157 | B | 2450 |
| 3100L44 | 6DT-F11ME | 5404 | 1 | 3 | 30 | 1.0 | 2 1/8 | 7/8 | 58 | 189 | C | 3150 |
| 4400L44 | 4DT-F76KE | (2) 3603 | 2 | 4 | 30 | 1.0 | 3 1/8 | 1 1/8 | 58 | 189 | D | 4000 |
| 5400L44 | 6DL-F93KE | (2) 4530 | 2 | 4 | 30 | 1.0 | 3 1/8 | 1 1/8 | 101 | 358 | D | 4600 |
| 6200L44 | 6DT-F11ME | (2) 5404 | 2 | 6 | 30 | 1.0 | 3 1/8 | 1 1/8 | 83 | 253 | E | 6000 |

(1) Estimated refrigerant charge is for floating head pressure condensing unit only. It does not include interconnecting piping, evaporators, flooded condenser or other accessories.

(2) See drawings on page 12

R 404A & R 507 LOW TEMPERATURE

| MODEL NUMBER C / KS | ELECTRICAL | | | | | ELECTRICAL | | | | | ELECTRICAL | | | | |
|------------------------|--------------|-----|-------|-------|---------|--------------|-----|-------|-------|---------|--------------|-----|-------|------|---------|
| | 230 / 3 / 60 | | | | | 460 / 3 / 60 | | | | | 575 / 3 / 60 | | | | |
| | COMPRESSOR | | COND. | UNIT | MCA (2) | COMPRESSOR | | COND. | UNIT | MCA (2) | COMPRESSOR | | COND. | UNIT | MCA (2) |
| RLA | LRA | FLA | AMPS | | RLA | LRA | FLA | AMPS | | RLA | LRA | FLA | AMPS | | |
| 1200L44 | 45.2 | 220 | 8.0 | 54.2 | 65 | 22.6 | 110 | 4.0 | 27.1 | 33 | 17.5 | 106 | 4.2 | 22.2 | 27 |
| 1500L44 | 52.6 | 278 | 8.0 | 61.6 | 74 | 26.3 | 139 | 4.0 | 30.8 | 37 | 20.9 | 113 | 4.2 | 25.6 | 31 |
| 2200L44 | 66.0 | 374 | 8.0 | 75.0 | 91 | 33.0 | 187 | 4.0 | 37.5 | 46 | 24.2 | 135 | 4.2 | 28.9 | 35 |
| 2700L44 | 80.8 | 450 | 8.0 | 89.8 | 109 | 40.4 | 225 | 4.0 | 44.9 | 55 | 32.5 | 172 | 4.2 | 37.2 | 45 |
| 3100L44 | 95.6 | 470 | 12.0 | 108.6 | 132 | 47.8 | 235 | 6.0 | 54.3 | 66 | 39.6 | 200 | 6.3 | 46.4 | 56 |
| 4400L44 | 132.0 | 748 | 16.0 | 149.0 | 181 | 66.0 | 374 | 8.0 | 74.5 | 91 | 48.4 | 270 | 8.4 | 57.3 | 69 |
| 5400L44 | 161.6 | 900 | 16.0 | 178.6 | 218 | 80.8 | 450 | 8.0 | 89.3 | 109 | 65.0 | 344 | 8.4 | 73.9 | 90 |
| 6200L44 | 191.2 | 940 | 24.0 | 216.2 | 263 | 95.6 | 470 | 12.0 | 108.1 | 132 | 79.2 | 400 | 12.6 | 92.3 | 112 |

(2) Minimum Circuit Ampacity (MCA) does not include evaporator(s) electrical requirements (Fan Motors or Defrost Heaters).

MODELS C & KS - SIZE 1200 - 7000
PERFORMANCE DATA

MEDIUM AND HIGH TEMPERATURE R-404A & R-507

| MODEL NUMBER C / KS | CAPACITY BTU/HR @ 95°F AMBIENT | | | | | | | | |
|------------------------|--------------------------------|---------|---------|---------|---------|---------|---------|---------|---------|
| | SUCTION TEMPERATURE (°F) | | | | | | | | |
| | +45°F | +40°F | +35°F | +30°F | +25°F | +20°F | +15°F | +10°F | +5°F |
| 1200M/H44 | 172,700 | 160,200 | 148,100 | 136,500 | 125,300 | 114,700 | 104,600 | 95,000 | 86,200 |
| 1500M/H44 | 201,600 | 185,000 | 170,900 | 157,300 | 144,300 | 130,700 | 119,100 | 108,000 | 98,000 |
| 2500M/H44 | 274,000 | 255,900 | 237,500 | 219,200 | 201,000 | 183,200 | 167,700 | 151,200 | 136,500 |
| 3000M/H44 | 318,200 | 294,400 | 271,400 | 249,300 | 228,100 | 207,700 | 188,400 | 170,100 | 153,400 |
| 3500M/H44 | 425,700 | 392,500 | 357,300 | 327,300 | 298,900 | 272,000 | 246,700 | 222,900 | 201,400 |
| 4000M/H44 | 468,800 | 434,900 | 402,000 | 370,100 | 339,400 | 310,000 | 282,000 | 255,400 | 231,200 |
| 5000M/H44 | 526,900 | 491,500 | 455,700 | 420,000 | 384,800 | 350,400 | 317,300 | 285,900 | 257,900 |
| 6000M/H44 | 635,100 | 587,700 | 541,900 | 497,800 | 455,400 | 414,900 | 376,300 | 339,800 | 306,400 |
| 7000M/H44 | 808,400 | 749,600 | 692,100 | 636,900 | 584,100 | 533,700 | 485,700 | 440,300 | 398,700 |

MEDIUM AND HIGH TEMPERATURE R-407C

| MODEL NUMBER C / KS | CAPACITY BTU/HR @ 95°F AMBIENT | | | | | | | | |
|------------------------|--------------------------------|---------|---------|---------|---------|---------|---------|---------|---------|
| | SUCTION TEMPERATURE (°F) | | | | | | | | |
| | +45°F | +40°F | +35°F | +30°F | +25°F | +20°F | +15°F | +10°F | +5°F |
| 1200M/H47 | 161,900 | 148,400 | 135,700 | 123,600 | 112,100 | 101,300 | 91,300 | 81,800 | 73,000 |
| 1500M/H47 | 188,900 | 171,400 | 156,600 | 142,400 | 129,100 | 115,500 | 103,900 | 93,000 | 83,500 |
| 2500M/H47 | 256,800 | 237,000 | 217,600 | 198,400 | 179,700 | 161,800 | 146,300 | 130,200 | 116,000 |
| 3000M/H47 | 298,200 | 272,700 | 248,700 | 225,700 | 204,000 | 183,400 | 164,300 | 146,500 | 130,500 |
| 3500M/H47 | 398,900 | 363,500 | 327,300 | 296,300 | 267,300 | 240,200 | 215,200 | 192,000 | 170,500 |
| 4000M/H47 | 439,300 | 402,800 | 368,300 | 335,000 | 303,500 | 273,800 | 246,000 | 219,900 | 195,500 |
| 5000M/H47 | 493,800 | 455,200 | 417,500 | 380,100 | 344,100 | 309,500 | 276,700 | 246,200 | 217,500 |
| 6000M/H47 | 595,100 | 544,300 | 496,400 | 450,600 | 407,200 | 366,400 | 328,200 | 292,600 | 259,000 |
| 7000M/H47 | 757,500 | 694,200 | 634,000 | 576,400 | 522,200 | 471,300 | 423,600 | 379,100 | 337,000 |

MEDIUM AND HIGH TEMPERATURE R-22

| MODEL NUMBER C / KS | CAPACITY BTU/HR @ 95°F AMBIENT | | | | | | | | |
|------------------------|--------------------------------|---------|---------|---------|---------|---------|---------|---------|---------|
| | SUCTION TEMPERATURE (°F) | | | | | | | | |
| | +45°F | +40°F | +35°F | +30°F | +25°F | +20°F | +15°F | +10°F | +5°F |
| 1200M/H22 | 164,500 | 151,700 | 139,300 | 127,400 | 116,000 | 105,200 | 95,000 | 85,500 | 77,000 |
| 1500M/H22 | 195,000 | 178,000 | 163,500 | 149,700 | 136,600 | 123,000 | 111,300 | 100,200 | 90,500 |
| 2500M/H22 | 283,300 | 258,900 | 235,500 | 213,300 | 192,100 | 172,200 | 154,900 | 128,200 | 113,000 |
| 3000M/H22 | 313,100 | 286,900 | 262,100 | 238,700 | 216,700 | 196,200 | 177,000 | 159,200 | 143,000 |
| 3500M/H22 | 407,900 | 373,600 | 337,800 | 307,300 | 278,800 | 252,200 | 227,700 | 205,200 | 184,500 |
| 4000M/H22 | 453,600 | 417,800 | 382,500 | 350,800 | 319,800 | 290,800 | 263,800 | 238,900 | 215,000 |
| 5000M/H22 | 539,100 | 494,400 | 451,900 | 411,800 | 374,100 | 338,800 | 306,100 | 275,800 | 246,500 |
| 6000M/H22 | 621,300 | 570,800 | 522,600 | 476,900 | 433,600 | 392,600 | 353,900 | 317,200 | 281,500 |
| 7000M/H22 | 803,100 | 735,500 | 671,500 | 611,300 | 555,000 | 502,700 | 454,400 | 410,300 | 369,000 |

AMBIENT CORRECTION FACTORS

| REFRIGERANT | AMBIENT TEMPERATURE (°F) | | | | | |
|-----------------|--------------------------|------|------|------|-------|-------|
| | 80°F | 85°F | 90°F | 95°F | 100°F | 105°F |
| R-22 or 407C | 1.10 | 1.07 | 1.03 | 1.00 | 0.96 | 0.92 |
| R-404A OR R-507 | 1.15 | 1.10 | 1.05 | 1.00 | 0.95 | 0.90 |

MODELS C & KS - SIZE 1200 - 7000

PHYSICAL DATA

| MODEL NUMBER C/KS | COMPRESSOR | | | CONDENSER FANS | | | CONNECTION SIZE (IN.) | | REFR. CHARGE (LBS) | | UNIT CONFIG. (2) | APPROX. NET WEIGHT LBS. |
|-------------------|--------------|-----|-----|----------------|-----------------|----|-----------------------|-------------|--------------------|------------------|------------------|-------------------------|
| | MODEL NUMBER | CFH | QTY | QTY | FAN DIAM. (IN.) | HP | SUCTION O.D. | LIQUID O.D. | COND. UNIT(1) | REC'R @ 90% CAP. | | |

R-404A & R-507 MEDIUM AND HIGH TEMPERATURE

| | | | | | | | | | | | | |
|-----------|---------------|----------|---|---|----|-----|-------|-------|----|-----|---|------|
| 1200M/H44 | 3DF-R15ME | 1913 | 1 | 2 | 30 | 1.0 | 1 3/8 | 5/8 | 19 | 64 | B | 875 |
| 1500M/H44 | 3DS-R17ME | 2120 | 1 | 2 | 30 | 1.0 | 1 3/8 | 5/8 | 23 | 88 | B | 1100 |
| 2500M/H44 | 4DK-R22ME | 3020 | 1 | 2 | 30 | 1.0 | 2 1/8 | 7/8 | 29 | 88 | B | 1750 |
| 3000M/H44 | 4DJ-R28ME | 3603 | 1 | 3 | 30 | 1.0 | 2 1/8 | 7/8 | 33 | 103 | C | 2350 |
| 3500M/H44 | 6DP-R35ME | 4955 | 1 | 3 | 30 | 1.0 | 2 1/8 | 1 1/8 | 42 | 103 | C | 2600 |
| 4000M/H44 | 6DJ-R40ME | 5404 | 1 | 3 | 30 | 1.0 | 2 1/8 | 1 1/8 | 53 | 103 | C | 2950 |
| 5000M/H44 | (2)4DK-R22ME | (2) 3020 | 2 | 4 | 30 | 1.0 | 2 5/8 | 1 1/8 | 57 | 103 | D | 3250 |
| 6000M/H44 | (2) 4DJ-R28ME | (2) 3603 | 2 | 4 | 30 | 1.0 | 2 5/8 | 1 1/8 | 65 | 103 | D | 3600 |
| 7000M/H44 | (2)6DP-R35ME | (2) 4955 | 2 | 6 | 30 | 1.0 | 2 5/8 | 1 1/8 | 78 | 157 | E | 5250 |

R-22 & R407C MEDIUM AND HIGH TEMPERATURE

| | | | | | | | | | | | | |
|-------------|---------------|----------|---|---|----|-----|-------|-------|----|-----|---|------|
| 1200M22/H47 | 3DF-R15ME | 1913 | 1 | 2 | 30 | 1.0 | 1 3/8 | 5/8 | 19 | 64 | B | 875 |
| 1500H22/H47 | 3DS-R17ME | 2120 | 1 | 2 | 30 | 1.0 | 1 5/8 | 7/8 | 25 | 103 | B | 1100 |
| 2500H22/H47 | 4DK-R22ME | 3020 | 1 | 2 | 30 | 1.0 | 2 1/8 | 7/8 | 32 | 103 | B | 1750 |
| 3000H22/H47 | 4DJ-R28ME | 3603 | 1 | 3 | 30 | 1.0 | 2 1/8 | 7/8 | 46 | 120 | C | 2350 |
| 3500H22/H47 | 6DP-R35ME | 4955 | 1 | 3 | 30 | 1.0 | 2 1/8 | 1 1/8 | 49 | 120 | C | 2600 |
| 4000H22/H47 | 6DJ-R40ME | 5404 | 1 | 3 | 30 | 1.0 | 2 1/8 | 1 3/8 | 60 | 120 | C | 2950 |
| 5000H22/H47 | (2)4DK-R22ME | (2) 3020 | 2 | 4 | 30 | 1.0 | 2 5/8 | 1 3/8 | 65 | 120 | D | 3250 |
| 6000H22/H47 | (2) 4DJ-R28ME | (2) 3603 | 2 | 4 | 30 | 1.0 | 2 5/8 | 1 5/8 | 74 | 120 | D | 3600 |
| 7000H22/H47 | (2)6DP-R35ME | (2) 4955 | 2 | 6 | 30 | 1.0 | 2 5/8 | 1 5/8 | 89 | 182 | E | 5250 |

(1) Estimated refrigerant charge is for a floating head pressure condensing unit only. It does not include interconnecting piping, evaporators, flooded condenser or other accessories.

(2) See drawings on page 12

MODELS C & KS - SIZE 1200 - 7000

ELECTRICAL DATA

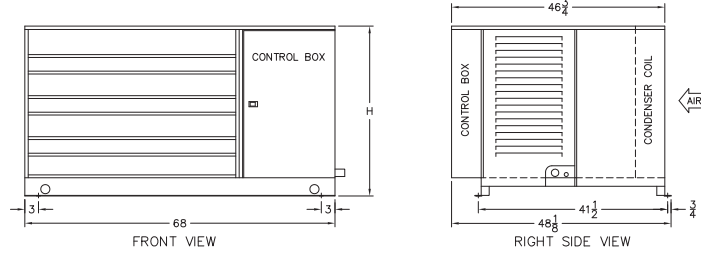
| MODEL NUMBER C/KS | ELECTRICAL 230 / 3 / 60 | | | | | ELECTRICAL 460 / 3 / 60 | | | | | ELECTRICAL 575 / 3 / 60 | | | | |
|-------------------|-------------------------|-----|-------|------|-----|-------------------------|-----|-------|------|-----|-------------------------|-----|-------|------|-----|
| | COMPRESSOR | | COND. | UNIT | MCA | COMPRESSOR | | COND. | UNIT | MCA | COMPRESSOR | | COND. | UNIT | MCA |
| | RLA | LRA | FLA | AMPS | (2) | RLA | LRA | FLA | AMPS | (2) | RLA | LRA | FLA | AMPS | (2) |

MEDIUM AND HIGH TEMPERATURE R-404A & R-507

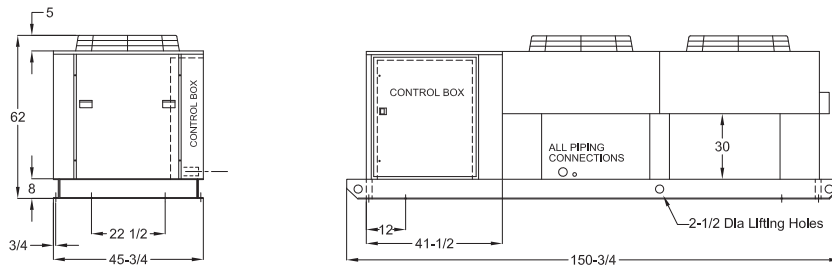
| | | | | | | | | | | | | | | | |
|-----------|-------|------|------|-------|-----|-------|-------|------|-------|-----|------|-----|------|------|-----|
| 1200M/H44 | 48.2 | 275 | 8.0 | 57.2 | 69 | 23.6 | 138 | 4.0 | 28.6 | 34 | N/A | N/A | N/A | N/A | N/A |
| 1500M/H44 | 59.6 | 275 | 8.0 | 68.6 | 83 | 29.0 | 138.0 | 4.0 | 34.0 | 41 | 23.6 | 110 | 4.2 | 28.8 | 34 |
| 2500M/H44 | 83.1 | 428 | 8.0 | 92.1 | 112 | 53.9 | 214.0 | 4.0 | 58.9 | 72 | 34.4 | 172 | 4.2 | 39.6 | 48 |
| 3000M/H44 | 94.0 | 470 | 12.0 | 107.0 | 130 | 55.0 | 235.0 | 6.0 | 62.0 | 75 | 39.3 | 200 | 6.3 | 46.6 | 56 |
| 3500M/H44 | 147.1 | 565 | 12.0 | 160.1 | 196 | 73.6 | 283.0 | 6.0 | 80.6 | 98 | 42.5 | 230 | 6.3 | 49.8 | 60 |
| 4000M/H44 | 141.4 | 594 | 12.0 | 154.4 | 189 | 86.4 | 315.0 | 6.0 | 93.4 | 114 | 53.5 | 245 | 6.3 | 60.8 | 74 |
| 5000M/H44 | 164.2 | 856 | 16.0 | 181.2 | 222 | 105.8 | 428.0 | 8.0 | 114.8 | 141 | 68.8 | 344 | 8.4 | 78.2 | 95 |
| 6000M/H44 | 188.0 | 940 | 16.0 | 205.0 | 251 | 110.0 | 470.0 | 8.0 | 119.0 | 146 | 78.6 | 400 | 8.4 | 88.0 | 107 |
| 7000M/H44 | 294.2 | 1130 | 24.0 | 319.2 | 392 | 147.2 | 566.0 | 12.0 | 160.2 | 196 | 85 | 460 | 12.6 | 98.6 | 119 |

MEDIUM AND HIGH TEMPERATURE R-22 & R-407C

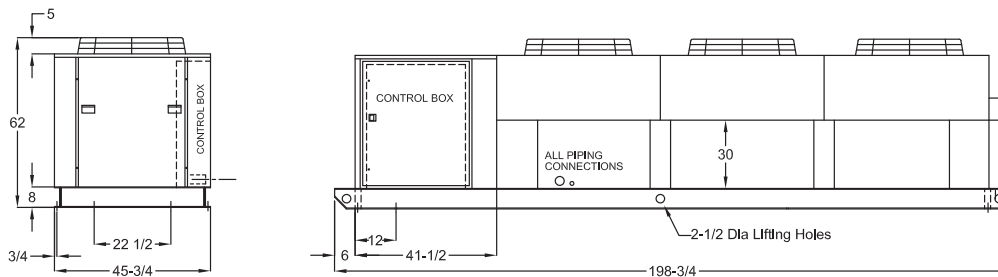
| | | | | | | | | | | | | | | | |
|-------------|-------|------|------|-------|-----|-------|-------|------|-------|-----|------|-----|------|------|-----|
| 1200H22/H47 | 48.2 | 275 | 8.0 | 57.2 | 69 | 23.6 | 138 | 4.0 | 28.6 | 34 | N/A | N/A | N/A | N/A | N/A |
| 1500H22/H47 | 59.6 | 275 | 8.0 | 68.6 | 83 | 29.0 | 138.0 | 4.0 | 34.0 | 41 | 23.6 | 110 | 4.2 | 28.8 | 34 |
| 2500H22/H47 | 83.1 | 428 | 8.0 | 92.1 | 112 | 53.9 | 214.0 | 4.0 | 58.9 | 72 | 34.4 | 172 | 4.2 | 39.6 | 48 |
| 3000H22/H47 | 94.0 | 470 | 12.0 | 107.0 | 130 | 55.0 | 235.0 | 6.0 | 62.0 | 75 | 39.3 | 200 | 6.3 | 46.6 | 56 |
| 3500H22/H47 | 147.1 | 565 | 12.0 | 160.1 | 196 | 73.6 | 283.0 | 6.0 | 80.6 | 98 | 42.5 | 230 | 6.3 | 49.8 | 60 |
| 4000H22/H47 | 141.4 | 594 | 12.0 | 154.4 | 189 | 86.4 | 315.0 | 6.0 | 93.4 | 114 | 53.5 | 245 | 6.3 | 60.8 | 74 |
| 5000H22/H47 | 164.2 | 856 | 16.0 | 181.2 | 222 | 105.8 | 428.0 | 8.0 | 114.8 | 141 | 68.8 | 344 | 8.4 | 78.2 | 95 |
| 6000H22/H47 | 188.0 | 940 | 16.0 | 205.0 | 251 | 110.0 | 470.0 | 8.0 | 119.0 | 146 | 78.6 | 400 | 8.4 | 88.0 | 107 |
| 7000H22/H47 | 294.2 | 1130 | 24.0 | 319.2 | 392 | 147.2 | 566.0 | 12.0 | 160.2 | 196 | 85 | 460 | 12.6 | 98.6 | 119 |



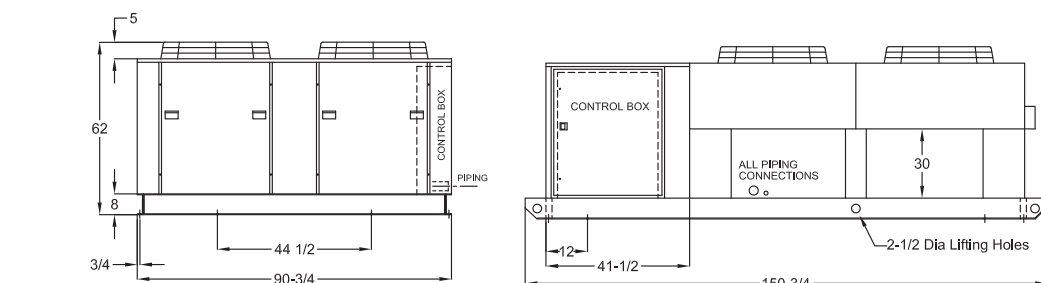
CONFIGURATION "A"



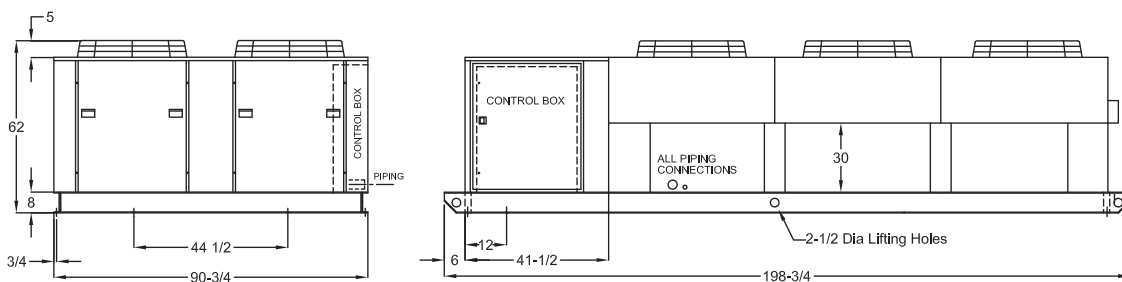
CONFIGURATION "B"



CONFIGURATION "C"



CONFIGURATION "D"



CONFIGURATION "E"

Due to ongoing product improvement, specifications are subject to change without notice.