



Air Conditioning & Heating

GSH13

1½- To 5-TON

SPLIT SYSTEM HEAT PUMPS

13 SEER / R-22

Standard Features

- Energy-efficient compressor
- Quiet condenser fan system
- Copper tube/aluminum fin coil
- For use with R-22 refrigerant and charged with inert gas for shipping
- Factory-installed bi-flow liquid line filter drier
- Low-pressure switch
- Time-initiated, temperature-terminated defrost control
- Service valves with sweat connections and easy-access gauge ports
- Contactor with lug connection
- Ground lug connection
- ETL Listed

Cabinet Features

- Louver design sound control top
- Steel louver coil guard
- Heavy-gauge, galvanized-steel cabinet with rust-resistant screws
- Attractive Architectural Gray powder-paint finish with 500-hour salt-spray approval
- Single-panel access to controls with space provided for field-installed accessories
- When properly anchored, meets the 2001 Florida Building Code unit integrity requirements for hurricane-type winds (Anchor bracket kits available.)



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* Complete warranty details available from your local dealer or at www.goodmanmfg.com.

NOMENCLATURE

| | G | S | H | 13 | 036 | 1 | A | A | |
|---|--|----------|------------------|------------|--------------|----------|-------------|-----------|--|
| | 1 | 2 | 3 | 4,5 | 6,7,8 | 9 | 10 | 11 | |
| Brand | G Goodman® (Standard Feature Set Models) | | | | | | | | Engineering * Minor Revision |
| Product Category | S Split System | | | | | | | | Engineering * Major Revision |
| Unit Type | C Condenser R-22 | | H Heat Pump R-22 | | | | | | Electrical 1 208/230 V, 1 Phase, 60 Hz |
| Efficiency | 13 13 SEER | | | | | | | | Nominal Capacity |
| | | | | | 018 1½ Tons | | 042 3½ Tons | | |
| | | | | | 024 2 Tons | | 048 4 Tons | | |
| | | | | | 030 2½ Tons | | 060 5 Tons | | |
| | | | | | 036 3 Tons | | | | |
| * Neither used for order entry or inventory management. | | | | | | | | | |



SPECIFICATIONS

| | GSH13 0181C* | GSH13 0241C* | GSH13 0301C* | GSH13 0361C* | GSH13 0421B* | GSH13 0481B* | GSH13 0601A* |
|--|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|
| CAPACITIES AND RATINGS | | | | | | | |
| Tonnage | 1½ | 2 | 2½ | 3 | 3½ | 4 | 5 |
| Decibels | 73 | 71 | 72 | 71 | 76 | 76 | 77 |
| COMPRESSOR | | | | | | | |
| RLA | 8.3 | 10.8 | 13.5 | 14.1 | 19.2 | 19.9 | 25.0 |
| LRA | 40.3 | 56.0 | 68.0 | 75.0 | 112.0 | 104.0 | 148.0 |
| Type | Scroll | Scroll | Scroll | Scroll | Scroll | Scroll | Scroll |
| CONDENSER FAN MOTOR | | | | | | | |
| Horsepower | 1/8 | 1/8 | 1/8 | ¼ | ¼ | ¼ | 1/6 |
| FLA | 0.7 | 0.7 | 0.7 | 1.5 | 1.5 | 1.5 | 1.1 |
| REFRIGERANT SYSTEM | | | | | | | |
| Refrigerant Line Size | | | | | | | |
| Liquid Line Size ("O.D.) | ⅜" | ⅜" | ⅜" | ⅜" | ⅜" | ⅜" | ⅜" |
| Suction Line Size ("O.D.) | ¾" | ¾" | ¾" | ⅞" | 1⅛" | 1⅛" | 1⅛" |
| Refrigerant Connection Size | | | | | | | |
| Liquid Valve Size ("O.D.) | ⅜" | ⅜" | ⅜" | ⅜" | ⅜" | ⅜" | ⅜" |
| Suction Valve Size ("O.D.) | ¾" | ¾" | ¾" | ⅞" | ⅞" | ⅞" | ⅞" |
| Valve Type | Sweat | Sweat | Sweat | Sweat | Sweat | Sweat | Sweat |
| Refrigerant Charge | 127 | 122 | 130 | 188 | 246 | 208 | 233 |
| ELECTRICAL DATA | | | | | | | |
| Voltage-Hz | 208/230-60 | 208/230-60 | 208/230-60 | 208/230-60 | 208/230-1-60 | 208/230-1-60 | 208/230-60 |
| Minimum Circuit Ampacity ² | 11.1 | 14.2 | 17.6 | 19.1 | 25.5 | 26.4 | 32.3 |
| Max. Overcurrent Protection ³ | 15 | 25 | 30 | 30 | 40 | 45 | 50 |
| Min / Max Volts | 197/253 | 197/253 | 197/253 | 197/253 | 197/253 | 197/253 | 197/253 |
| Electrical Conduit Size | ½" or ¾" | ½" or ¾" | ½" or ¾" | ½" or ¾" | ½" or ¾" | ½" or ¾" | ½" or ¾" |
| EQUIPMENT WEIGHT (LBS) | 142 | 147 | 146 | 146 | 152 | 152 | 278 |
| SHIP WEIGHT (LBS) | 159 | 164 | 164 | 164 | 170 | 170 | 300 |

¹ Tested and rated in accordance with AHRI Standard 210/240

² Wire size should be determined in accordance with National Electrical Codes; extensive wire runs will require larger wire sizes

³ Must use time-delay fuses or HACR-type circuit breakers of the same size as noted.

NOTES

- Always check the S&R plate for electrical data on the unit being installed.
- Installer will need to supply ⅜" to 1½" adapters for suction line connections.
- Charge to be added for 15' of ⅜" liquid line. System charge must be adjusted per Installation Instructions Final Charge Procedure.
- Installation of these units requires the specified TXV Kit to be installed on the indoor coil. THE SPECIFIED TXV IS DETERMINED BY THE OUTDOOR UNIT NOT THE INDOOR COIL.

AHRI RATINGS

| OUTDOOR UNIT | INDOOR UNIT | COOLING CAPACITY ¹ | | SEER ² | EER ³ | TVA RATINGS ⁴ | | HEATING CAPACITY ¹ | | | CFM | AHRI # |
|-----------------|------------------|-------------------------------|--------|-------------------|------------------|--------------------------|--------|-------------------------------|-------------------|--------|-------|---------|
| | | TOTAL | SENS. | | | TOTAL | SENS. | HIGH | HSPF ⁵ | LOW | | |
| GSH130181(B,C)* | AR*F182416B* | 17,600 | 13,100 | 13 | 11 | 15,600 | 11,200 | 16,800 | 7.7 | 8,900 | 625 | 4675036 |
| GSH130241(B,C)* | AR*F182416B*+TXV | 23,000 | 17,800 | 13 | 11 | 19,800 | 14,700 | 21,400 | 7.7 | 11,800 | 860 | 4675037 |
| GSH130301(B,C)* | AR*F363616B* | 27,800 | 20,200 | 13 | 11 | 23,400 | 17,600 | 25,400 | 7.7 | 15,300 | 1,020 | 4692016 |
| GSH130361(B,C)* | AR*F374316B* | 33,600 | 26,200 | 13 | 11 | 28,800 | 21,800 | 31,400 | 7.7 | 18,200 | 1,260 | 4692017 |
| GSH130363A* | AR*F374316B* | 33,600 | 26,200 | 13 | 11 | 28,800 | 21,800 | 31,400 | 7.7 | 16,000 | 1,260 | 5528484 |
| GSH130421B* | AR*F364216B* | 40,000 | 29,800 | 13 | 11 | 36,200 | 27,600 | 39,000 | 8.0 | 23,000 | 1,250 | 5528479 |
| GSH130481B* | AR*F486016B* | 45,000 | 33,800 | 13 | 11 | 40,000 | 30,400 | 43,000 | 8.2 | 27,000 | 1,600 | 5528480 |
| GSH130483B* | AR*F486016B* | 45,000 | 33,800 | 13 | 11 | 40,000 | 30,400 | 43,000 | 8.2 | 27,000 | 1,600 | 5528481 |
| GSH130484AD | AR*F486016B* | 45,000 | 33,800 | 13 | 11 | 40,000 | 30,400 | 43,000 | 8.2 | 27,000 | 1,600 | 5528482 |
| GSH130601A* | AR*F486016B* | 55,500 | 41,000 | 13 | 11 | 51,500 | 37,000 | 55,500 | 8.5 | 35,000 | 1,800 | 1492576 |
| GSH130603A* | AR*F486016B* | 55,500 | 41,000 | 13 | 11 | 51,500 | 37,000 | 55,500 | 8.5 | 35,000 | 1,800 | 1492581 |
| GSH130604AC | AR*F486016B* | 55,500 | 41,000 | 13 | 11 | 51,500 | 37,000 | 55,500 | 8.5 | 35,000 | 1,800 | 4982919 |

¹ BTU/h

² Seasonal Energy Efficiency Ratio; Certified per AHRI 210/240 @ 80°F/ 67°F/ 95°F

³ Energy Efficiency Ratio @ 80°F/ 67°F/ 95°F

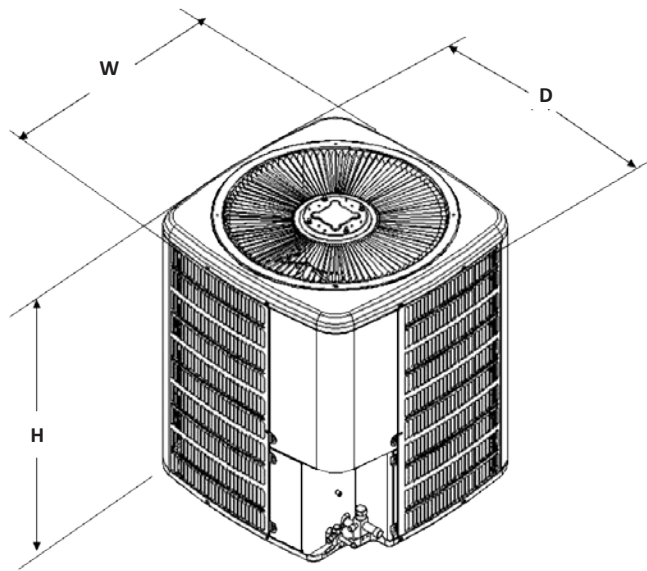
⁴ TVA Rating: BTU/h @ 75°F/ 63°F - 95°F

⁵ HSPF = Heating Seasonal Performance Factor

NOTES

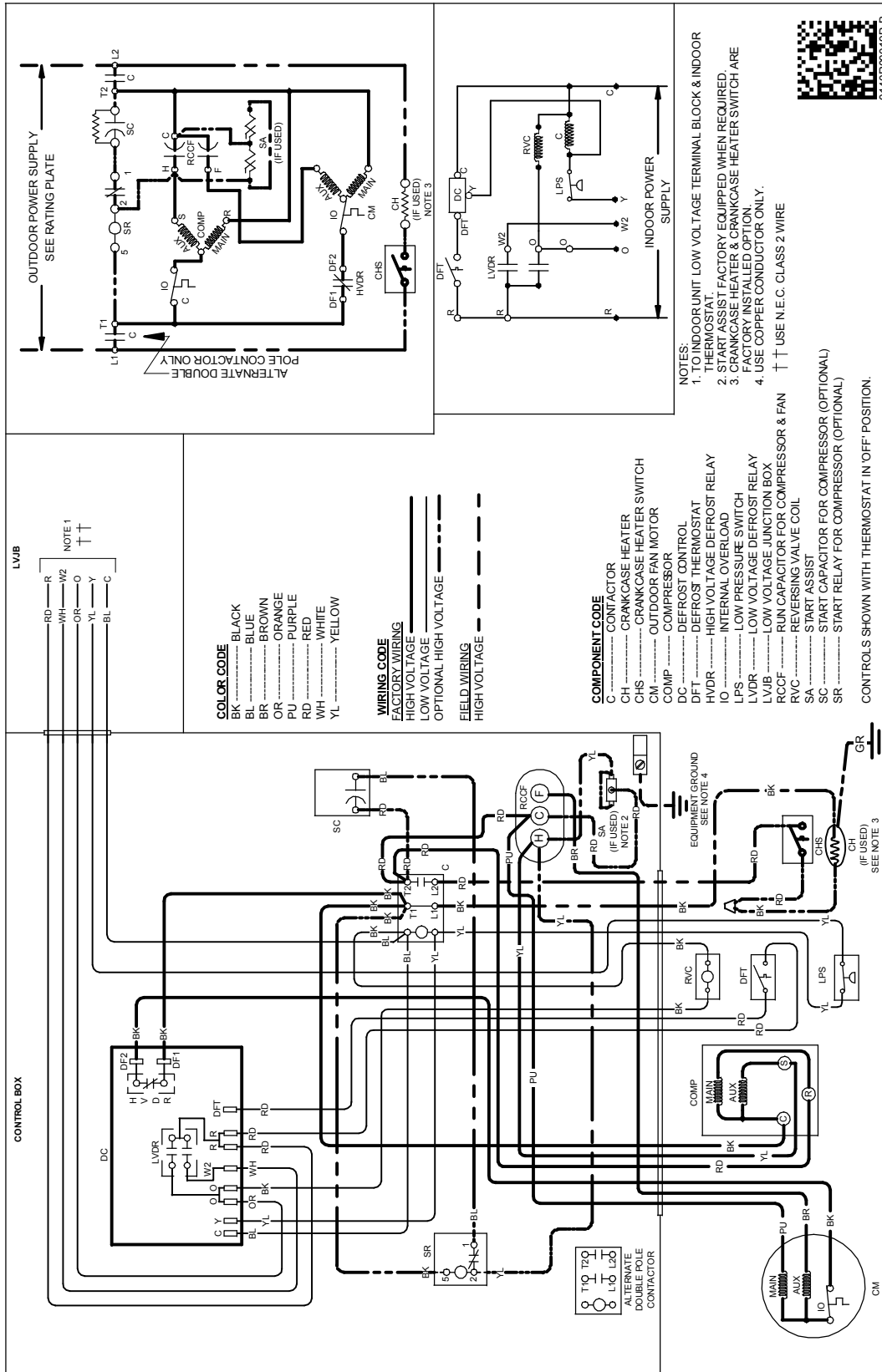
- Always check the S&R plate for electrical data on the unit being installed.
- When matching outdoor unit to indoor unit, use the piston supplied with outdoor unit or that specified on the piston kit chart supplied with the indoor unit.
- EEP - Order from Service Dept. Part No. B13707-38 or new Solid State Board B13707-35S. Part No. B13707-38 is not interchangeable with B13707-35S. The Goodman Gas Furnace contains the EEP cooling time delay

DIMENSIONS



| MODEL | DIMENSIONS | | |
|------------|------------------|------------------|------------------|
| | W" | D" | H" |
| GSH130181C | 26 | 26 | 32 $\frac{1}{4}$ |
| GSH130241C | 26 | 26 | 32 $\frac{1}{4}$ |
| GSH130301C | 29 | 29 | 34 $\frac{3}{4}$ |
| GSH130361C | 29 | 29 | 38 $\frac{1}{4}$ |
| GSH130421B | 29 | 29 | 32 $\frac{1}{4}$ |
| GSH130481B | 29 | 29 | 34 $\frac{3}{4}$ |
| GSH130601A | 35 $\frac{1}{2}$ | 35 $\frac{1}{2}$ | 34 $\frac{3}{4}$ |

WIRING DIAGRAM



ACCESSORIES

| MODEL | DESCRIPTION | GSH13 018 | GSH13 024 | GSH13 030 | GSH13 036 | GSH13 042 | GSH13 048 | GSH13 060 |
|-----------------------|--------------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| ABK-20 | Anchor Bracket Kit * | X | X | X | X | X | X | X |
| ASC01 | Anti-Short Cycle Kit | X | X | X | X | X | X | X |
| CSR-U-1 | Hard-start Kit | X | X | X | X | | | |
| CSR-U-2 | Hard-start Kit | | | | X | X | X | X |
| CSR-U-3 | Hard-start Kit | | | | | | X | X |
| FSK01A ¹ | Freeze Protection Kit | X | X | X | X | X | X | X |
| OT/EHR18-60 | Emergency Heat Relay kit | X | X | X | X | X | X | X |
| OT18-60A ² | Outdoor Thermostat with Lockout Stat | X | X | X | X | X | X | X |

* Contains 20 brackets; four brackets needed to anchor unit to pad

¹ Installed on indoor coil

² Required for heat pump applications where ambient temperatures fall below 0 °F with 50% or higher relative humidity.

³ Condensing units and heat pumps with reciprocating compressors require the use of start-assist components when used in conjunction with an indoor coil using a non-bleed thermal expansion valve refrigerant metering device. The TXV should always be sized based on the tonnage of the outdoor unit.

NOTES