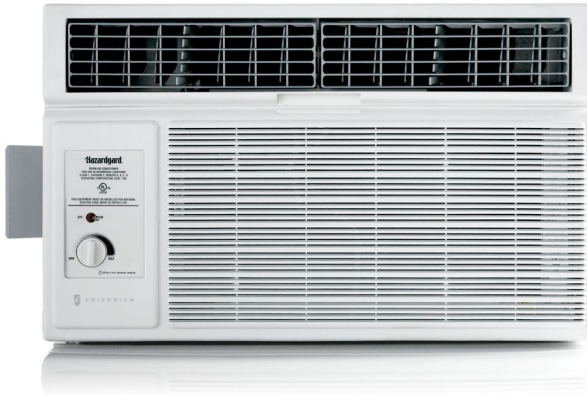




## Friedrich Hazardgard® Series

# Hazardous Location Room Air Conditioners



UL LISTED for CLASS 1, DIV 2, GROUPS A, B, C and D.

CERTIFIED in accordance with ISA 12.12.01 and NFPA 70

(NATIONAL ELECTRIC CODE), ANSI/UL 484 Room Air Conditioners KSA registered model tested in accordance with SASO 2681

## FEATURES

- Unit surface temperatures will not rise above 135° C/275° F.
- Operates at low ambient conditions without freezing at outdoor ambient temperatures as low as 7° C/45° F.
- Tolerates higher outdoor temperatures up to 55° C /130° F. Permanent split capacitor motor
- Hot gas bypass for cooling operation at low ambient temperatures, down to 45°F / 7°C without freezing
- Designed to tolerate high ambient temperatures, allowing units to operate in T3 conditions
- Hermetically sealed refrigeration system
- Environmentally sealed on/off switch and gold plated contacts in thermostat for corrosion resistance
- Solid-state control relays for compressor and fan operation
- Commercial grade, enclosed fan motor with hermetically sealed overload for arc-free operation
- Direct-wired (field supplied), 15-amp circuit with time delay fuse that will tolerate current surge without tripping the breaker
- Powder Coated 22-gauge, G60 steel air conditioner cabinet for corrosion protection and to withstand years of hard use

- Stainless Steel Fan Shaft
- Coated Coils for Corrosion Protection
  - ElectroFin® 5-stage, immersion ecoat process, or Diamonblue Advanced Corrosion Protection® on 100% of metallic surfaces on the outdoor coil provides outstanding corrosion resistance protection and extends the life of the unit, especially in coastal or corrosive environments.

### Diamonblue Advanced Corrosion Protection®

- Standard on all models (except SH24N30A, see below)
- Anti-corrosive, hydrophilic coating

### ElectroFin® 5-stage, Immersion Ecoat (Model SH24N30A only)

- Excellent adhesion characteristics
- Less than 1% thermal degradation
- Outstanding chemical resistance
- Passed 6048 hrs.ASTM B-117 Salt Spray

### MEETS THE FOLLOWING:


- MIL-C-46168 Chemical Agent Resistance -DS2, HCl Gas
- CID A-A-52474A (GSA)
- MIL-STD 810F, Method 509.4 (Sand and Dust)
- MIL-P-53084 (ME)-TACOM Approval
- MIL-DTL-12468 Decontamination Agent (STB)

- DPG (Douglas Proving Grounds) Soil & Water Exposure Tests
- GM9540P-97 Accelerated Corrosion Test (120 cycles)
- ASTM B117-G85 Modified Salt Spray (Fog) Testing-2,000 hours
- ASTM B117 Salt Spray (tested by ARL for Lockheed Martin)



## SPECIFICATIONS

| Model     | Electrical Characteristics  |                |                 |                          |   |                                      |                                  |                           |             |
|-----------|-----------------------------|----------------|-----------------|--------------------------|---|--------------------------------------|----------------------------------|---------------------------|-------------|
|           | Cooling Capacity<br>Btu/Hr. | Volts<br>Rated | Cooling<br>Amps | Cooling Capacity<br>(KW) | Circuit Rating Breaker or<br>T - D Fuse | Energy<br>Efficiency<br>Ratio<br>EER | Moisture<br>Removal<br>Pints/ Hr | Air<br>Circulation<br>CFM | Refrigerant |
|           |                             |                |                 |                          | Volts - Amps                            |                                      |                                  |                           |             |
| 60 HERTZ  |                             |                |                 |                          |   |                                      |                                  |                           |             |
| SH15M30A  | 15700/15700                 | 230/208        | 7.9/7.8         | 4.60/4.10                | 250V-15                                 | 9.7/9.7                              | 4.0                              | 375                       | R-410A      |
| SH20M30B  | 21000/21000                 | 230/208        | 10.5/9.4        | 6.15/6.15                | 250V-15 (230V) / 250V-20 (208V)         | 9.7/9.6                              | 5.5                              | 375                       | R-410A      |
| SH20M30SA | 19000/19000                 | 220            | 8.5             | 5.57                     | 250V-20 (230V) / 250V-20 (208V)         | 9.7/9.6                              | 5.5                              | 375                       | R-410A      |
| SH24N30A  | 24000/24000                 | 230/208        | 11.8            | 6.8                      | 250V-20                                 | 9.7/8.5                              | 8.0/7.5                          | 385                       | R-410A      |
| 50 HERTZ  |                             |                |                 |                          |   |                                      |                                  |                           |             |
| SH20M50B  | 21000/19100                 | 240/220        | 11.6/10.3       | 6.15/6.15                | 250V-15                                 | 8.8/8.8                              | 7.0/7.0                          | 425                       | R-410A      |

| Model   | Hazardous Location Classification: Gases  |
|---|---|
| SH15M30A, SH20M30SA<br>SH20M30B, SH20M50B<br>SH24N30A | <p>National Electrical Code, NFPA 70</p> <p>ARTICLE 501: Class 1, Division 2, Group A / B / C / D , Temperature Class T4</p> <p>ARTICLE 505: Class 1, Zone 2, Group II C / IIB / II A , Temperature Class T4</p> <p></p> |

For global applications, Hazardgard cooling capacities are tested in a certified laboratory at moderate (T1\*) and hot (T3\*) climate conditions in accordance with SASO (Saudi Arabian Standards Organization) Standard 2681. SASO Standard 2681 is adopted from ISO Standard 5151 for testing and rating for performance of non-ducted air conditioners and heat pumps. Model SH20M30SA is KSA Registered in accordance with SASO2681 and meets SASO 2663 Energy Efficiency standard.

## INSTALLATION INFORMATION

| Model     | Dimensions<br>Inches |           |                                 |                                       |                                   |                                 | Window Width<br>Inches |      | In-Wall Installation<br>Finished Hole Inches |          |                        | Weight<br>Lbs. |          |
|-----------|----------------------|-----------|---------------------------------|---------------------------------------|-----------------------------------|---------------------------------|------------------------|------|--|----------|------------------------|----------------|----------|
|           | Height               | Width     | Depth with<br>Front<br><b>A</b> | Depth J Box<br>to Louvers<br><b>B</b> | Minimum<br>Extension<br>Into Room | Minimum<br>Extension<br>Outside | Min.                   | Max. | Height                                       | Width    | Max. Depth<br><b>C</b> | Net            | Shipping |
| SH15M30A  | 15 15/16"            | 25 15/16" | 27 3/8"                         | 6"                                    | 3 1/16"                           | 16 15/16"                       | 27 7/8"                | 42"  | 16 3/16"                                     | 26 3/16" | 6"                     | 140            | 167      |
| SH20M30B  | 17 15/16"            | 25 15/16" | 27 3/8"                         | 6"                                    | 3 1/16"                           | 16 15/16"                       | 27 7/8"                | 42"  | 18 3/16"                                     | 26 3/16" | 6"                     | 166            | 170      |
| SH20M30SA | 17 15/16"            | 25 15/16" | 27 3/8"                         | 6"                                    | 3 1/16"                           | 16 15/16"                       | 27 7/8"                | 42"  | 18 3/16"                                     | 26 3/16" | 6"                     | 166            | 170      |
| SH20M50B  | 17 15/16"            | 25 15/16" | 27 3/8"                         | 6"                                    | 3 1/16"                           | 16 15/16"                       | 27 7/8"                | 42"  | 18 3/16"                                     | 26 3/16" | 6"                     | 171            | 175      |
| SH24N30A  | 17 15/16"            | 25 15/16" | 27 3/8"                         | 6"                                    | 3 1/16"                           | 16 15/16"                       | 27 7/8"                | 42"  | 18 3/16"                                     | 26 3/16" | 6"                     | 180            | 185      |

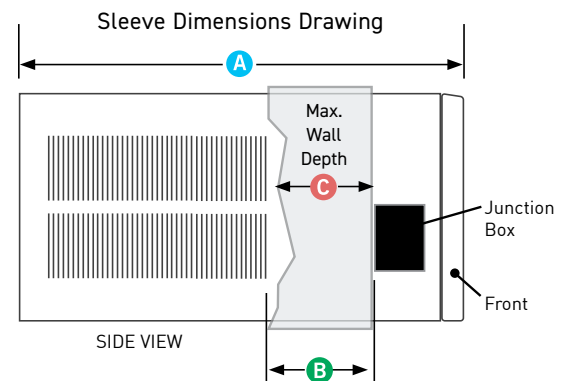
Due to continuing engineering research and technology, specifications are subject to change without notice.

U.S. MAXIMUM outdoor ambient operating temperature is 115°F. (46°C) MAXIMUM TEMPERATURE RATING FOR CLASS 1, DIVISION 2, GROUPS A, B, C, D.

Capacity and efficiency values at each climate conditions are available upon request.

NOTE: Hazardgard unit must be hard-wired.

Manufactured under Design Patent DES 368, 306 decorative front; Utility Patent 5, 662, 058.



Friedrich Air Conditioning Co. | [www.friedrich.com](http://www.friedrich.com)