

Friedrich Hazardgard®  
Hazardous Location  
Room Air Conditioners

*ENGINEERED FOR THE WORLD'S  
TOUGHEST ENVIRONMENTS*

50 HZ | 60 HZ

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



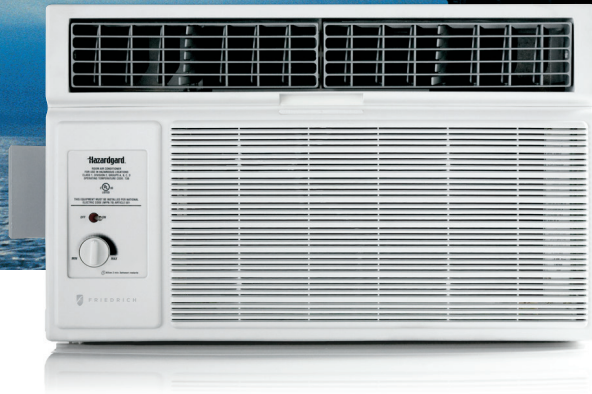
 **FRIEDRICH**

DELIVERING BOLDLY CRAFTED COMFORT

Friedrich Hazardgard<sup>®</sup>, trusted to perform in extreme climates and the harshest conditions

Hazardgard<sup>®</sup> meets T4 temperature classification

- 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.



## THE FRIEDRICH ADVANTAGE

# Reliable Design Backed by Robust Engineering

For almost 40 years, industrial professionals have trusted Hazardgard<sup>®</sup> to deliver safe and reliable cooling in the most extreme conditions. Hazardgard<sup>®</sup> is specifically designed to cool laboratories, control rooms, living quarters, storage areas and other enclosures situated in hazardous locations; where specific volatile flammable liquids or gases are handled or used within enclosed containers or systems.

### Quality

Friedrich is an established player in the air conditioning industry and is known for manufacturing quality products.

### Product Reliability

Used across the globe, Hazardgard<sup>®</sup> is a tested and reliable product and not a quick-fix, job shop alteration


### Durability

Robust engineering, commercial grade components and extensive field testing provide the durability and safety required in hazardous locations.

### Availability

Off the shelf models allow for efficient manufacturing, shorter lead times and standardized component parts.

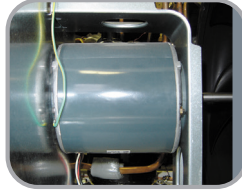
## HAZARDGARD<sup>®</sup> IS RATED FOR THESE CONDITIONS:

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

For global applications, Hazardgard<sup>®</sup> 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.

## Durability & Reliability

- **Permanent split capacitor motor**
- **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



## Performance in Extreme Conditions

- **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

## Coated Coils for Corrosion Resistance

- 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



5-STAGE **ecoat**  
Corrosion Protection

### ElectroFin® 5-stage, Immersion Ecoat Benefits:

#### 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)



## TRUSTED TO PERFORM IN THESE APPLICATIONS

- Offshore oil rigs, on-shore oil company offices and refineries
- Petrochemical sites
- Propane fill-up stations
- Paint and varnish storage or processing plants
- Grain alcohol processors or storage sites
- Plant areas using strong solvents or chemicals
- Munitions plants or armories
- PVC or plastics plants and processing points
- Recycling plants
- Furniture refinishing workshops
- Office complexes where methane is a by-product
- Hazardous materials storage

# SPECIFICATIONS

Model	Electrical Characteristics				Circuit Rating Breaker or T - D Fuse Volts - Amps	Energy Efficiency Ratio EER	Moisture Removal Pints/ Hr	Air Circulation CFM	Refrigerant
	Cooling Capacity Btu/Hr.	Volts Rated	Cooling Amps	Cooling Capacity [KW]					
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

# INSTALLATION INFORMATION

Model	Dimensions Inches						Window Width Inches		In-Wall Installation Finished Hole Inches			Weight Lbs.	
	Height	Width	Depth with Front <b>A</b>	Depth J Box to Louvers <b>B</b>	Minimum Extension Into Room	Minimum Extension Outside	Min.	Max.	Height	Width	Max. Depth <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

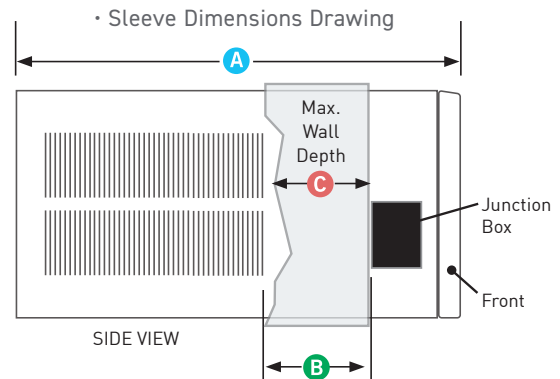
Due to continuing engineering research and technology, specifications are subject to change without notice.

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 | [www.friedrich.com](http://www.friedrich.com)