



**FRIEDRICH**

1 8 8 3

# HAZARDOUS LOCATION ROOM AIR CONDITIONERS

## UL LISTED

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

KSA REGISTERED  
and TESTED in  
accordance with  
SASO 2681

## CERTIFIED

in accordance with  
ISA 12.12.01 and NFPA 70  
(NATIONAL ELECTRIC CODE),  
ANSI/UL 484  
Room Air Conditioners

50 | 60  
HERTZ



Hazardgard®

THE EXPERTS IN ROOM AIR CONDITIONING

## HAZARDOUS LOCATION ROOM AIR CONDITIONERS

UL LISTED FOR CLASS 1, DIVISION 2,  
GROUPS A, B, C AND D HAZARDOUS LOCATIONS.



### Extreme A/C for Hazardous Conditions

Hazardgard® is specifically designed to cool 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.

Hazardgard meets T4 temperature classification which means unit surface temperatures will not rise above 135° C/275° F. (note: 50/60Hz model listed as T4A for surface temperatures to 120° C/248° 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.

Equipment is certified in accordance with ISA 12.12.01 and NFPA 70 (National Electric Code)

#### ARTICLE 501

Class I, Div. 2, Group A and Group B  
Class I, Div. 2, Group B

Class I, Div. 2, Group C  
Class I, Div. 2, Group D

#### ARTICLE 505

Class I, Zone 2, Group IIC  
Class I, Zone 2, Group IIB  
plus hydrogen, or "+H2"

Class I, Zone 2, Group IIB  
Class I, Zone 2, Group IIA

Equipment is certified in accordance with ANSI/UL 484 and SASO 2681

### Hazardgard®

60 Hertz models  
North America  
14000 to 24000 Btu  
**Up to 9.7 EER**

50 Hertz models  
International  
19100 to 19500 Btu  
**Up to 9.0 EER**

50-60 Hertz model  
International-North America  
50 Hertz 21000/20500 Btu **8.1/8.5 EER**  
60 Hertz 24000/23700 **8.8/8.5 EER**

## FEATURES

- 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
- Hot gas bypass allows the air conditioner to operate at low ambient conditions without freezing at outdoor temperatures as low as 45° F (7°C)
- Hermetically sealed reciprocating compressor is cooled during the refrigeration cycle, which allows the unit to tolerate higher outdoor temperatures up to 130° F (55°C)
- Larger, commercial grade, enclosed fan motor with hermetically sealed overload for arc-free operation. Totally enclosed to assure efficient operation under adverse electrical conditions
- Unit utilizes field supplied, direct-wired, 15-amp circuit with time-delay fuse that will tolerate current surge without tripping the breaker
- 22-gauge, G60 steel air conditioner cabinet is powder coated for corrosion protection and to withstand years of hard use
- High density EPS foam insulation for thermal resistance and sound control
- Honeycomb matrix packaging resists damage during shipment and is environmentally friendly



## COILS COATED FOR CORROSION RESISTANCE

### MODEL SH24M20

- ElectroFin® 5-stage, immersion ecoat process on 100% of metallic surfaces on the outdoor coil provides outstanding corrosion resistance protection in coastal or corrosive environments

#### ELECTROFIN BENEFITS:

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

#### ELECTROFIN 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)

### 5-stage ecoat



### MODELS SH15M30A, SH20M30A, SH20M50A

- Diamonblue Advanced Corrosion Protection® on the outdoor coil protects the coil against deterioration and extends the life of the unit especially in coastal or corrosive environments

**DIAMONBLUE**  
Advanced Corrosion Protection®



## APPLICATIONS

### Built to perform in the harshest environments

- Offshore oil rigs, on-shore oil company offices and refineries
- Petrochemical sites and 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/stripping workshops
- Fertilizer plants
- Office complexes where methane is a by-product
- Hazardous materials storage
- Container labs
- For analyzer houses/shelters



Friedrich air conditioners can be found in some of the world's toughest locations. Oil companies rely on us to cool offshore oil rigs in the most extreme conditions.



# SPECIFICATIONS

## Hazardgard®

Model	Electrical Characteristics				Energy Efficiency Ratio EER	Moisture Removal Pints/HR	Air Direction Controls	Air Circulation CFM	Refrigerant
	Cooling Capacity		Cooling Amps	Cooling Watts					
	Btu/Hr.	Volts Rated							
<b>60 HERTZ - NORTH AMERICA</b>									
SH15M30A	14500/14000	230/208	6.9/7.5	1495/1443	9.7/9.7	4.0	8-way	375	R-410A
SH20M30A	20000/19000	230/208	8.7/9.6	2125/2021	9.4/9.4	5.5	8-way	375	R-410A
SH24M20	24000/23700	230/208	12.6/13.5	2727/2788	8.8/8.5	8.0/7.5	8-way	385	R-401A
<b>50 HERTZ - INTERNATIONAL</b>									
SH20M50A	19500/19100	240/220	9.8/10.3	2167/2156	9.0/9.0	5.6/5.5	8-way	425	R-410A
SH24M20	21000/20500	240/220	15.0/13.2	2600/2412	8.1/8.5	7.0/7.0	8-way	360	R-410A

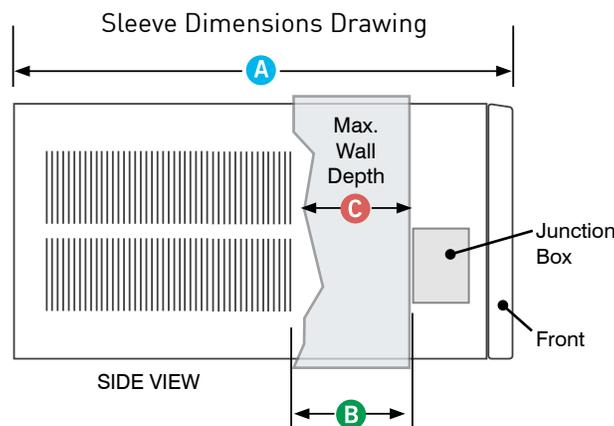
## Installation Information

Model	Dimensions INCHES						Window Width INCHES		In-Wall Installation Finished Hole INCHES			Circuit Rating Breaker or T - D Fuse		Weight Lbs.	
	Height	Width	Depth with Front	Depth J Box to Louvers	Minimum Extension Into Room	Minimum Extension Outside	Min.	Max.	Height	Width	Max. Depth <sup>C</sup>	Volts - Amps	Net	Shipping	
			<sup>A</sup>	<sup>B</sup>											
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"	250V-15	140	167	
SH20M30A	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"	250V-15 (230V) 250V-20 (208V)	166	170	
SH20M50A	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"	250V-15	171	175	
SH24M20	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"	250V-30	180	185	

Due to continuing engineering research and technology, specifications are subject to change without notice. Manufactured under U.S. Design Patent DES 368, 306 decorative front; Utility Patent 5, 622, 058. MAXIMUM outdoor ambient operating temperature is 130°F. (55°C) MAXIMUM TEMPERATURE RATING FOR CLASS I, DIVISION 2, GROUPS A,B,C,D.

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.

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



NOTE: Hazardgard unit must be hard-wired.



Friedrich Air Conditioning Co. | 10001 Reunion Place, Suite 500 | San Antonio, TX 78216 | 877.599.5665  
www.friedrich.com