HAZARDGARD® SERIES

HAZARDOUS LOCATION AIR CONDITIONERS

FRIEDRICH
1883

50 | 60
HERTZ

ATEX Certified, CE Ex II 3 G Ex nA nC IIC T4 Gc **IECEx Certified**, Ex nA nC II C T4 Gc
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

Hazardgard®

Engineered to perform in the harshest conditions.

HAZARDGARD 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.

For more than 30 years, industrial professionals have trusted Hazardgard to deliver safe and reliable cooling in the most extreme conditions. Hazardgard 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.

Hazardgard is rated for these conditions:

Model	Hazardous Location Classification: Gases	
SH20N50AT SH24N20AT	ATEX, CE Ex II 3 G Ex nA nC IIC T4 Gc IECEx, Ex nA nC IIC T4 Gc	National Electrical Code, NFPA 70 ARTICLE 501: Class 1, Division 2, Group A/B/C/D, Temperature Class T4/T4A* ARTICLE 505: Class 1, Zone 2, Group II C/ II B/ II A, Temperature Class T4/T4A*

*T4A Temperature classification for dual frequency (50/60Hz) models - SH24N20AT.

For global applications, Hazardgard cooling capacities are tested in a certified laboratory at moderate (T1) and hot (T3) climate conditions.

The Friedrich Advantage Reliable Design Backed by Robust Engineering

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 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.

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 cabinet** for corrosion protection and to withstand years of hard use
- **Stainless Steel** Fan Shaft
- **Coated Coils for Corrosion Protection**
- **Molded Compressor Plug Harnesses**
- **Steel enclosure for solid state relays**
- **Sealed control enclosure for thermostat and on-off control**
- **Durable outdoor industrial electrical cable harnesses and cable glands**

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®

MODEL SH20N50AT

- Anti-corrosive, hydrophilic coating

ElectroFin® 5-stage, Immersion Ecoat Benefits:

MODEL SH24N20AT

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

5-Stage ecoat Corrosion Protection

MEETS THE FOLLOWING:

- MIL-C-46168 Chemical Agent Resistance -DS2, HCI 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)

PERFORMANCE IN EXTREME CONDITIONS

- **Hot gas bypass** for cooling operation at low ambient temperatures, down to 45°F / 7°C without freezing
- **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

Commercial grade enclosed fan motor

Steel enclosure for solid state relays

Industrial Cable harnesses & cable glands

Molded compressor plug harnesses

Engineered 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 workshops
- Office complexes where methane is a by-product
- Hazardous materials storage

SPECIFICATIONS

Model	Cooling Capacity (Btu/Hr.)	Volts Rated	Cooling Amps	Cooling Capacity (KW)	Energy Efficiency Ratio EER	Moisture Removal Pints/ HR	Air Direction Controls	Air Circulation (CFM)	Refrigerant
	60 HERTZ -PERFORMANCE								
SH24N20AT	24000/23700	230/208/60	12.6/13.5	7.03/6.95	8.8/8.5	8.20/7.5	8-way	385	R-410A
	50 HERTZ -PERFORMANCE								
SH24N20AT	21000/20500	240/220-50	15.0/13.2	6.15/6.01	8.1/8.5	7.0/7.0	8-way	360	R-410A
SH20N50AT	19500/19100	240-220-50	9.8/10.3	5.72/5.60	9.0/9.0	5.6/5.5	8-way	425	R-410A

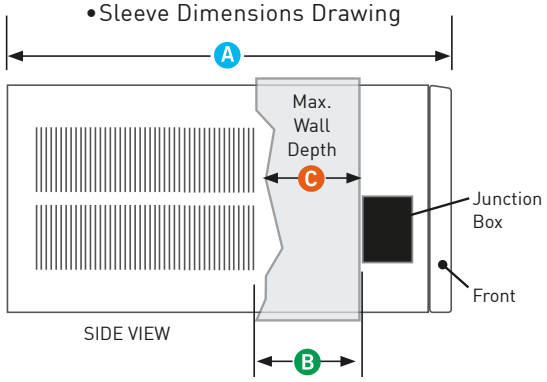
INSTALLATION INFORMATION

Model	Unit Dimensions						Window Width		In-Wall Installation Finished Hole			Circuit Rating Breaker or T - D Fuse	Weight Lbs.	
	Height	Width	Depth with Front (A)	Depth J Box to Louvers (B)	Minimum Extension Into Room	Minimum Extension Outside	Min.	Max.	Height	Width	Max. Depth (C)	Volts - Amps	Net	Ship-ping
SH24N20AT	17 15/16"	25 15/16"	27 3/8"	4 7/8"	3 1/16"	16 15/16"	27 7/8"	42"	18 3/16"	26 3/16"	6"	250V-30	180	185
SH20N50AT	17 15/16"	25 15/16"	27 3/8"	4 7/8"	3 1/16"	16 15/16"	27 7/8"	42"	18 3/16"	26 3/16"	6"	250V-15	171	175

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, 662, 058. MAXIMUM outdoor ambient operating temperature is 130°F. (55°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.

•Sleeve Dimensions Drawing



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