



TRANSCRITICAL CO₂ RACK SYSTEM

STANDARD CONFIGURATION SPECIFICATION BULLETIN

OVERVIEW

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The Hussmann Transcritical CO₂ Rack System is an ideal solution for new construction projects for supermarkets and warehouses.

This system operates with a 100% natural refrigerant (R-744, CO₂) and serves as a solution to meet current and upcoming regulatory requirements.

In addition, for retailers looking to achieve net zero or sustainability goals, the CO₂ refrigerant provides a GWP (global warming potential) rating of 1. The low GWP rating can have a profound impact on your organizations direct emissions and assist you in achieving your goals.

We reserve the right to change or revise specifications and product design in connection with any feature of our products. Such changes do not entitle the buyer to corresponding changes, improvements, additions or replacements for equipment previously sold or shipped.

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ELECTRICAL	
PARAMETER	DEFAULT CONFIGURATION
Rack Voltage	460V Single or Split Feed
SCCR Rating	10K or 30K
Main Disconnect	External
Control Voltage Supply	Separate Feed / Single Feed
Control Voltage	120V
Gas Cooler Voltage Supply	From Rack Panel
Gas Cooler Voltage	460V
Lighting (in rack)	Included
Lighting (in panel)	Included
Courtesy Outlet	Optional
Courtesy Outlet Voltage	120V 10A (supplied internally)

VALVES	
PARAMETER	DEFAULT CONFIGURATION
Throttle Valve	CCMT
Flash Gas Bypass	CCMT
Safety Valves	(2) 435 psi (6) 652 psi (2) 1740 psi

COMPRESSORS	
PARAMETER	DEFAULT CONFIGURATION
MT Compressor Type	Bitzer Reciprocating
# of MT Compressors	3 - 5
LT Compressor Type	Bitzer Reciprocating
# of LT Compressors	2 - 4
Compressors Selected By	Hussmann
Excess Design Capacity	10 - 15%
Oil in Compressors	No

FILTERS, DRIERS, & ACCUMULATORS	
PARAMETER	DEFAULT CONFIGURATION
Drier	Shipped loose (2 sets)
Suction Filter	Shipped loose (1 per shell)
Suction Accumulator	1 per suction group

CONTROLS	
PARAMETER	DEFAULT CONFIGURATION
Rack Controller	Copeland E2
Rack Controller Provider	Manufacturer
Rack Controller Location	Remote Panel or on-rack
Rack Controller Program	Included
High Pressure Controller	Copeland IPro
Variable Frequency Drives	Lead MT/LT Compressor
Gas Cooler Control	0 - 10V signal from rack
Leak Detection	Copeland MRLDS
Defrost Type (MT/LT)	Off-time / Electric

OIL SYSTEM	
PARAMETER	DEFAULT CONFIGURATION
Oil Separator	Temprite
Oil Reservoir Regulator	EVT 3.0
Compressor Oiling	Emerson OMC

OIL USED	
PARAMETER	DEFAULT CONFIGURATION
Bitzer Compressor	BSE85K
Oil Reservoir Capacity Gal.	4.5

HEAT EXCHANGER	
PARAMETER	DEFAULT CONFIGURATION
MT Superheat Control	Hot Gas Dump / Braze Plate Hx
Liquid Subcooling	Braze Plate HX
Heat Reclaim	Double Wall Direct HX
Available Heat Calculation	25% THR

DESIGN CONSIDERATIONS	
PARAMETER	DEFAULT CONFIGURATION
Gas Cooler Outlet Temp	85°F for adiabatic Ambient +5°F for air-cooled
Design Temp Source	ASHRAE, 0.04% Average

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HUSSMANN[®]

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DESIGN PRESSURES

PARAMETER	DEFAULT CONFIGURATION
Flash Tank / Liquid Line	521 psi
MT Suction	400 psi
MT Discharge	1,000 - 1,400 psi
LT Suction	200 psi
LT Discharge	400 psi
Oil System	521 psi

SHIP LOOSE ITEMS

PARAMETER	DEFAULT CONFIGURATION
Oil	Upon Request
Filters	Provided
Drier Cores	Provided
Isolation Pads	OEM Provided

PHYSICAL INFORMATION

PARAMETER	DEFAULT CONFIGURATION
Outdoor Enclosure	Galvanized Steel
Quantity of Spring Tabs	4 - 6
Access Panels	Lift-off
Access	Front and Rear
Ventilation	Enclosure Fan

Customer-Focused Solutions

Hussmann has a long history of innovation - continually updating current product offerings and developing new solutions to help reduce your environmental impact and satisfy regulatory requirements.

Hussmann can help you understand benefits and trade-offs associated with each solution and make the most of incentive and rebate programs.

TECHNICAL INFORMATION



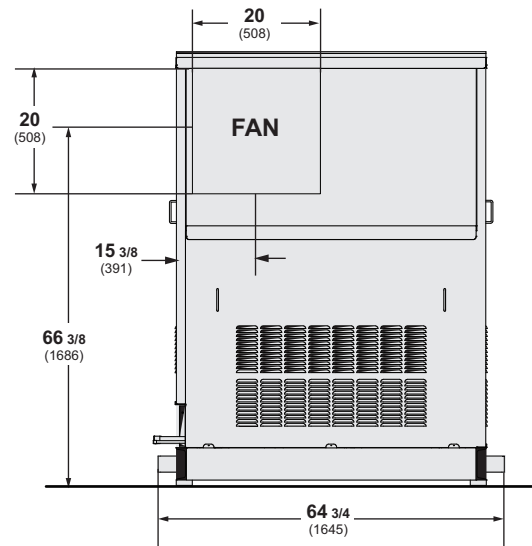
Scan the QR code with your mobile device to access additional resources on hussmann.com

Note

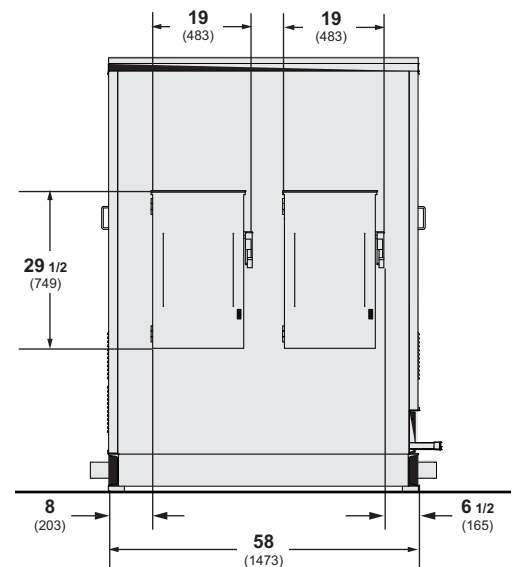
Use Hussmann's installation manual to get precise dimensions. Dimension are in Inches (millimeters)

Dimensional Drawings

Side Views



Left End



Right End

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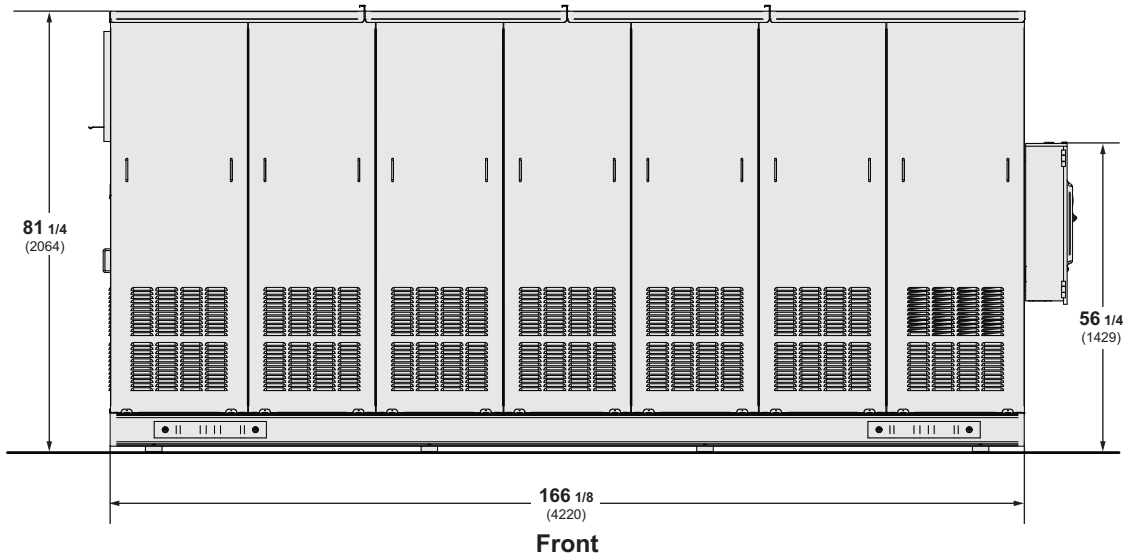
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Dimensional Drawings

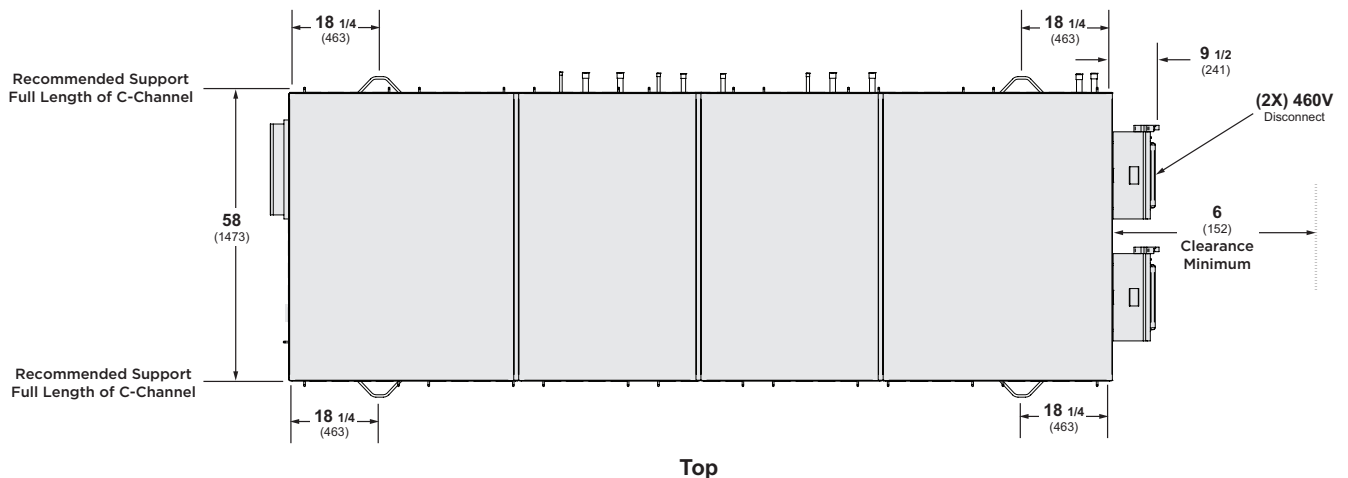
Front View

Note

Use Hussmann's installation manual to get precise dimensions. Dimension are in Inches (millimeters)



Top View



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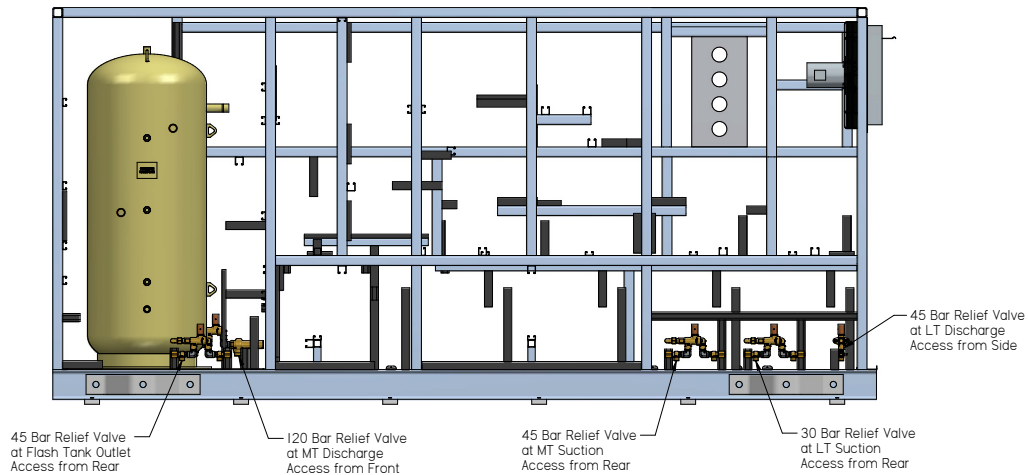
Isometric Views

Front Views



Relief Valve Locations

PARTIAL REAR VIEW



NOTE: Relief Valves are located to release approx. 4 inches above the drain pan.

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