

SUSTAINABLE REFRIGERATION SOLUTIONS FOR AN EVER-CHANGING REGULATORY ENVIRONMENT



California Air Resources Board (CARB)

In December 2020, CARB approved rules to further restrict the use of synthetic refrigerants. The new rules affect commercial and industrial stationary refrigeration units. Some of the new regulations are effective as early as 2022 with additional requirements set for 2026 and 2030.

OVERVIEW OF CARB RULING

NEW STORE COMPLIANCE EFFECTIVE JANUARY 1, 2022

- Systems with a charge **less than** 50 pounds can use SNAP approved refrigerants with Global Warming Potentials (GWP's) **less than** 2,200
 - In 2026, the AIM Act will supersede California's regulation and require any new remote system requiring <200 pounds (including CARB's <50) of charge to have a GWP of 300 or less.
- Systems with a charge **greater than** 50 pounds will require SNAP approved refrigerants with GWP's **less than** 150

EXISTING STORE COMPLIANCE

- Retailers can use one of two options for 2030 compliance
- Retailers can begin taking credit for fleet Greenhouse Gas Potential (GHGp) reduction using 2020 reworks

OPTION 1

- Reduce the total GHGp of refrigerants 55% below 2019 baseline by 2030 (**per company** not per system / store)

OPTION 2




- Reduce the weighted average GWP of refrigerants used to less than 1,400 by 2030:
 - Fixed target; no need for tracking company baselines
 - Per company not per system / store
 - Retailers **under** 20 stores have until 2030 to achieve
 - Retailers **over** 20 stores have until 2026 to show path to compliance and baseline of each location

CLEAN PATH TO 2030 CARB COMPLIANCE

Hussmann stands ready to help you navigate these regulations and plan for the coming years to ensure your refrigeration assets are well managed and equipment life is not cut short.

HUSSMANN REFRIGERATION SOLUTIONS

CALIFORNIA AIR RESOURCES BOARD (CARB)

	CARB RULE	REFRIGERANTS AVAILABLE*	HUSSMANN SYSTEM SOLUTIONS	END USE APPLICATIONS
NEW STORE COMPLIANCE	Systems with charge <50 lbs. require refrigerants with GWP's <2,200	R-407A, R-407F, R-448A, R-449A, R-513A, R-290, R-744 (CO ₂)	 HE H-Series, Freedom Line, microDS, Krack microDS Monoblock, Protocol SPI** (Indoor unit shown), Protocol SPO** , Protocol HE** with Remote Pump Station+	C-Stores Drug Stores Dollar Stores Grocery Stores Micro-Fulfillment Supermarkets
	Systems with charge >50 lbs. require refrigerants with GWP's <150	R-744 (CO ₂)	 Hussmann Transcritical CO ₂	Cold Storage Grocery Stores Industrial Wholesale Supermarkets
EXISTING STORE COMPLIANCE	Reduce weighted average GWP of refrigerants used to <1,400 by the year 2030 <i>(Charge does not matter)</i>	R-448A, R-449A, R-513A, R-290, R-744 (CO ₂)	 All System Products including Proto-Aire EZ (shown), Freedom Line, MicroDS	C-Stores Drug Stores Dollar Stores Grocery Stores Micro-Fulfillment Supermarkets

* Additional information below. NOTE: Not all refrigerants apply to all system products.

** Water-Cooled + Glycol for medium temp or water for high side of propane. Refer to Product Solutions card for specific solutions.

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.



The StoreConnect leak detection system complies with the California Air Resources Board (CARB) definition of an Automatic

Refrigerant Leak Detection System under the regulation for the management of high Global Warming Potential (GWP) refrigerants for stationary sources. The CARB regulation states mandatory leak inspections every 90 days on medium size charge systems can be waived if an automatic leak detection system is present.

REFRIGERANTS AVAILABLE				
REFRIGERANT NAME	COMMON NAME	ASHRAE CLASS	OZONE DEPLETING POTENTIAL (ODP)	GLOBAL WARMING POTENTIAL (GWP)
R-717	Ammonia	B2L	0	0
R-744	CO ₂	A1	0	1
R-290	Propane	A3	0	3
R-513A	Opteon XP10	A1	0	631
R-448A	Solstice N40	A1	0	1387
R-449A	Opteon XP40	A1	0	1397
R-134a	HFC-134a	A1	0	1430
R-407C	R-407C	A1	0	1774
R-407F	R-407F	A1	0	1825
R-410A	Puron, AZ-20	A1	0	2088
R-407A	KLEA 60	A1	0	2107
Legacy Solutions				
R-404A	HP-62	A1	0	3900
R-507A	AZ-50	A1	0	3985

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NOTE: 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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