



Genesys™

# Natural Refrigeration Solutions

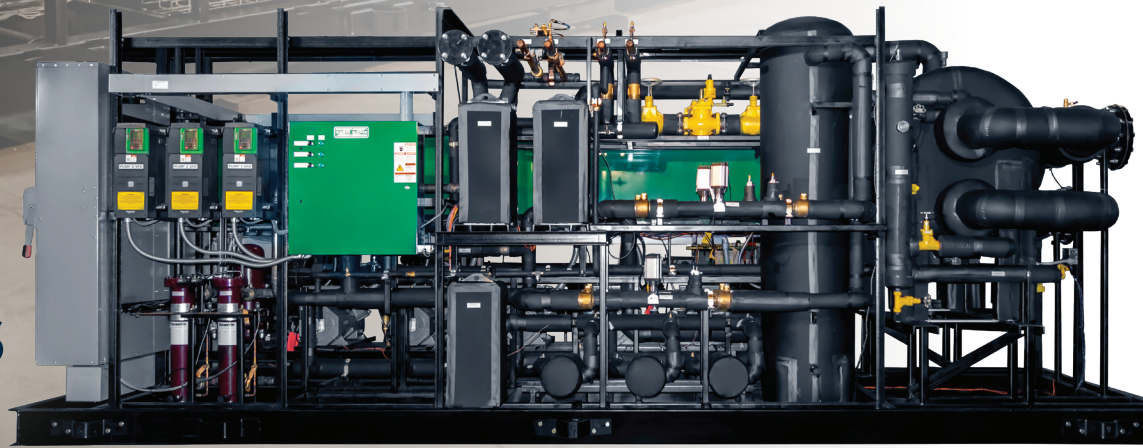
CO<sub>2</sub> Transcritical & Subcritical Systems



# Cold Storage

- Cold Storage Warehouses
- Distribution Centers

# Ice Arenas



## Genesys™ CO<sub>2</sub> System Capabilities

Genesys™ CO<sub>2</sub> systems fit many retail and industrial applications, such as cold storage, food processing, chiller applications (including ice arenas), medical/pharmaceutical plants, and supermarkets. These can be single stage systems, booster systems, and cascade systems. Genesys™ CO<sub>2</sub> systems can incorporate secondary glycol loops, heat reclaim systems, and more. Zero Zone brings knowledge, experience, and a collaborative attitude to your projects to design a system tailored to your needs. Contact your local Zero Zone sales rep to get your next project started.



We've Always Been Green™



# Genesys™

## Genesys™ CO<sub>2</sub> System Capabilities

- Transcritical and subcritical CO<sub>2</sub> refrigeration systems with parallel compression available
- Capacity: 1 ton to 500 tons
- Operating conditions: -50°F to 40°F
- Ambient conditions: -25°F to 110°F
- Single stage systems, booster systems, and cascade systems
- Indoor, outdoor, or factory installed inside a custom electrical mechanical center (CEMC)

## Pharma/Medical

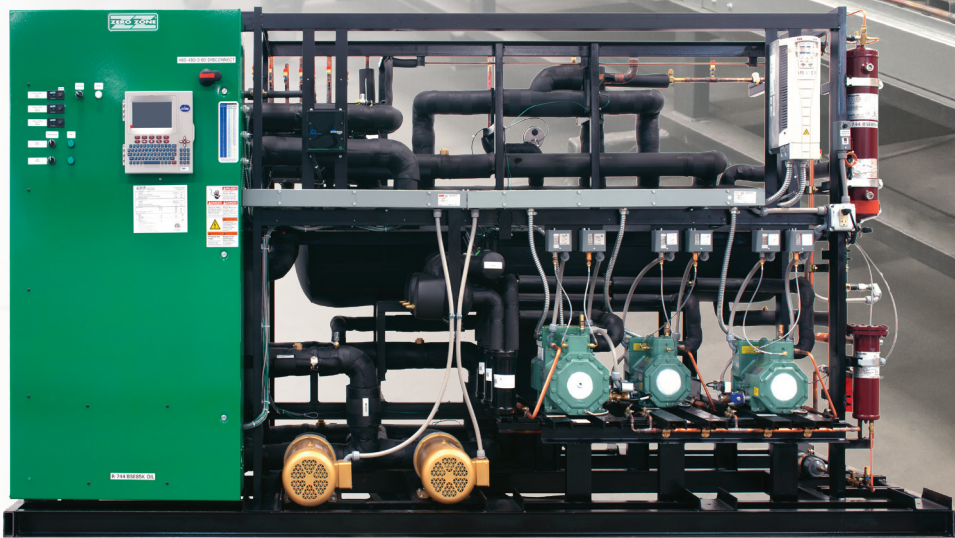


## Process Applications

- Food processing
- Blast freezers
- Chillers
- Food & beverage production
- Pasteurization plants

# Retail Applications

- Supermarkets
- Convenience stores
- Dollar stores



## Genesys™ CO<sub>2</sub> System Features & Options

### Standard

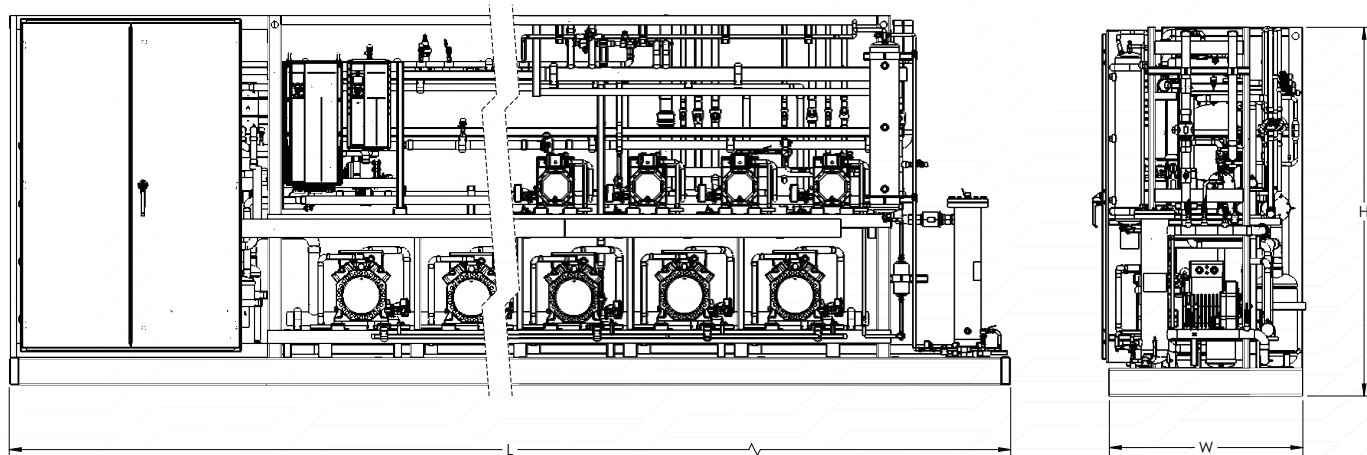
- Reciprocating compressors: Bitzer, Copeland, Dorin
- Variable capacity control on lead compressors
- Gas coolers: air-cooled, water-cooled, or adiabatic
- Microprocessor control systems: Emerson CPC
- High-pressure XHP copper or stainless steel piping
  - 120-bar pressure rating on high side
  - 45-bar pressure rating on low side
- Coalescent oil separators
- High pressure expansion valve (HPEV)
- Flash gas receiver
  - High-level/low-level optical switch plus sight glass
- Flash gas bypass valve (FGBV)
- Suction accumulator
- Low temperature suction-to-liquid heat exchanger
- Factory-installed leak detection

### Optional

- Scroll compressors: Copeland
- Microprocessor control systems: Danfoss, Micro Thermo, RDM, Carel
- PLC control systems: Allen Bradley
- Low side: 90-bar pressure rating
- Parallel compression for flash gas receiver control
- Charge saver for emergency flash tank cooling
- Accumulator with high standstill pressure (90-bar pressure rating)
- Accumulator with level monitoring and alarm options
- Factory-installed desuperheater
- Single-point power connection available
- Heat reclaim system for water heating or space heating
- Hot gas defrost

# Genesys™ CO<sub>2</sub> Systems

## Standard Indoor Parallel Racks



### Genesys™ Standard CO<sub>2</sub> Indoor Parallel Systems

Model	Compressors		Cooling Capacity Mbtu/hr (Tons of Refrig)		Remote Gas-Cooler Outlet Temp	Dry Weights (Approx.)	Operational Weights (Approx.)	Dimensions (L x W x H)
	LT x MT	Type	LT	MT				
R-05-S-19	2 x 3	Reciprocating	53 (4.4)	172 (14.3)	85°F	6,700 lbs	7,200 lbs	171" x 42" x 80"
R-06-S-29	3 x 3	Reciprocating	79 (6.6)	260 (21.7)	85°F	7,000 lbs	7,500 lbs	171" x 42" x 80"
R-07-S-36	3 x 4	Reciprocating	106 (8.8)	328 (27.3)	85°F	8,300 lbs	9,000 lbs	193" x 42" x 80"
R-08-S-47	3 x 5	Reciprocating	131 (10.9)	426 (35.5)	85°F	8,900 lbs	9,600 lbs	210" x 42" x 80"
R-08-S-55	4 x 4	Reciprocating	160 (13.3)	498 (41.5)	85°F	9,300 lbs	10,200 lbs	193" x 42" x 80"
R-09-S-65	4 x 5	Reciprocating	193 (16.1)	586 (48.8)	85°F	10,000 lbs	11,000 lbs	210" x 42" x 80"

Cooling capacity is based on LT SST = -20°F and MT SST = 20°F.  
For cooling capacities up to 500 tons and for other configurations, consult the factory.



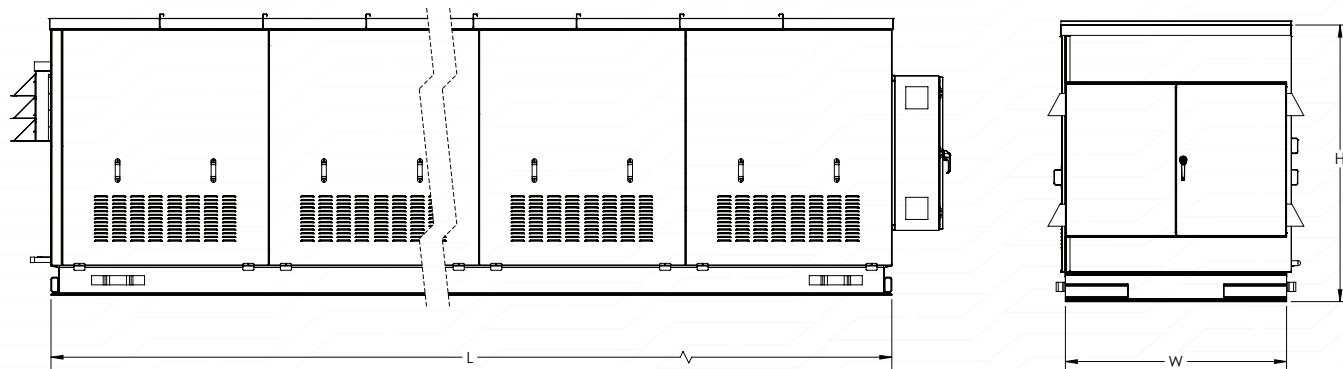
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# Genesys™ CO<sub>2</sub> Systems

## Standard Outdoor Parallel Racks



### Genesys™ Standard CO<sub>2</sub> Outdoor Parallel Systems (OPS)

Model	Compressors		Cooling Capacity Mbtu/hr (Tons of Refrig)		Remote Gas-Cooler Outlet Temp	Dry Weights (Approx.)	Operational Weights (Approx.)	Dimensions (L x W x H)
	LT x MT	Type	LT	MT				
OPS-05-S-19	2 x 3	Reciprocating	53 (4.4)	172 (14.3)	85°F	8,300 lbs	8,800 lbs	171" x 60" x 75"
OPS-06-S-29	3 x 3	Reciprocating	79 (6.6)	260 (21.7)	85°F	8,600 lbs	9,100 lbs	171" x 60" x 75"
OPS-07-S-36	3 x 4	Reciprocating	106 (8.8)	328 (27.3)	85°F	9,600 lbs	10,300 lbs	171" x 60" x 75"
OPS-08-S-47	3 x 5	Reciprocating	131 (10.9)	426 (35.5)	85°F	11,000 lbs	11,700 lbs	227" x 60" x 75"
OPS-08-S-55	4 x 4	Reciprocating	160 (13.3)	498 (41.5)	85°F	11,300 lbs	12,200 lbs	227" x 60" x 75"
OPS-09-S-65	4 x 5	Reciprocating	193 (16.1)	586 (48.8)	85°F	12,000 lbs	13,000 lbs	227" x 60" x 75"

Cooling capacity is based on LT SST = -20°F and MT SST = 20°F.  
For cooling capacities up to 500 tons and for other configurations, consult the factory.



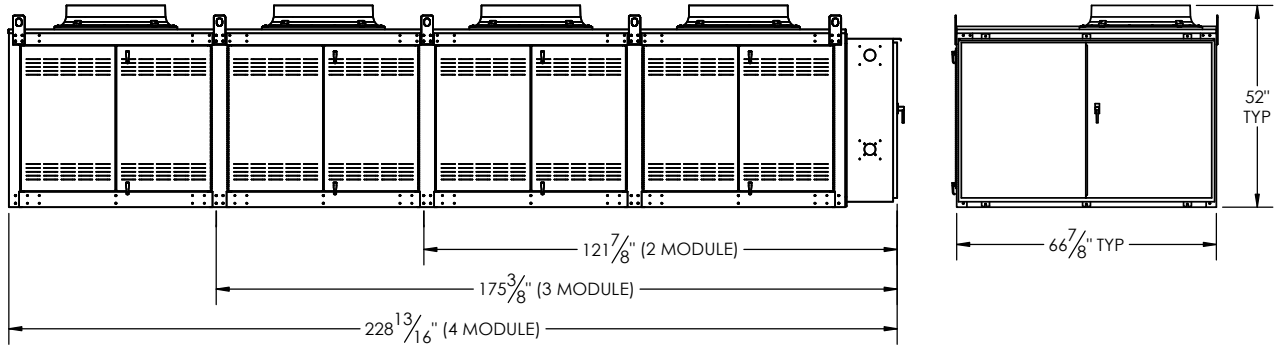
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# Genesis™ CO<sub>2</sub> Systems

## Edge™ XT Outdoor Distributed Systems



Genesis™ Standard CO<sub>2</sub> Edge™ XT Outdoor Distributed Systems

Model	Compressors		Cooling Capacity Mbtu/hr (Tons of Refrig)		Ambient Dry Bulb Temp	Dry Weights (Approx.)	Operational Weights (Approx.)	Dimensions (L x W x H)
	LT x MT	Type	LT	MT				
EXT-01-M-08	0 x 1	Reciprocating	---	90 (7.5)	95°F	2300	2400	1 Module 69" x 67" x 52"
EXT-01-L-08	1 x 0	Reciprocating	90 (7.5)	---	95°F	2500	2600	1 Module 69" x 67" x 52"
EXT-02-M-14	0 x 2	Reciprocating	---	168 (14.0)	95°F	3900	4200	2 Modules 122" x 67" x 52"
EXT-02-L-09	2 x 0	Reciprocating	107 (8.9)	---	95°F	3900	4200	2 Modules 122" x 67" x 52"
EXT-02-S-15	1 x 1	Reciprocating	45 (3.8)	135 (11.3)	95°F	3900	4200	2 Modules 122" x 67" x 52"
EXT-04-M-22	0 x 4	Reciprocating	---	265 (22.1)	95°F	5500	5900	3 Modules 176" x 67" x 52"
EXT-04-L-18	4 x 0	Reciprocating	215 (17.9)	---	95°F	5500	5900	3 Modules 176" x 67" x 52"
EXT-05-S-14	2 x 3	Reciprocating	40 (3.3)	120 (10.0)	95°F	5500	5900	3 Modules 176" x 67" x 52"
EXT-06-M-30	0 x 6	Reciprocating	---	350 (29.2)	95°F	7000	7500	4 Modules 229" x 67" x 52"
EXT-06-L-27	6 x 0	Reciprocating	322 (26.8)	---	95°F	7000	7500	4 Modules 229" x 67" x 52"
EXT-07-S-30	3 x 4	Reciprocating	90 (7.5)	270 (22.5)	95°F	7000	7500	4 Modules 229" x 67" x 52"

Cooling capacity is based on LT SST = -20°F and MT SST = 20°F.  
For other configurations, consult the factory.



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# Genesys™ CO<sub>2</sub> Transcritical & Subcritical Systems

## The Natural Choice

**Proven Partner:** Hundreds of CO<sub>2</sub> systems across the United States for new and retrofit projects since 2012

- **Complete Solution:** A package system ready to install and commission
- **For Your Application:**
  - Supermarkets
  - Cold storage
  - Food processing
  - Chiller applications
  - Medical/pharmaceutical plants
- **Service in Mind:** Better servicing and commissioning experience
- **Repurpose Heat, Save Energy:** Heat reclaim options for facility heating
- **1000 Quality Checks:** All systems go through extensive quality testing

## Training Opportunities

Zero Zone offers CO<sub>2</sub> refrigeration training to our partners at our location in Ramsey, MN. Trainees learn about subcritical CO<sub>2</sub>, transcritical CO<sub>2</sub>, service, safety, and gain a half day of hands-on lab training taught by our leading industry experts.

**Contact your Zero Zone sales representative today to sign up!**

## The Right Refrigerant for Right Now and Tomorrow

- **Sustainable:** Energy efficient with high cooling capacity
- **Future proof:** Exceeds refrigeration regulations
- **Responsible:** 0 ODP and 1 GWP
- **Safe:** ASHRAE safety classification of A1 (nontoxic, nonflammable)
- **Affordable:** Reduced refrigerant cost



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# Genesys™

## Natural Refrigeration Solutions

### We stand by our products. And you.

When you need sustainable refrigeration solutions, Genesys™ Natural Refrigeration Solutions are the natural choice. At Zero Zone, we've always been green. And, as an industry leader, we offer quality products and our expertise to help you confidently navigate ever-changing regulations that meet your business & sustainability goals. Even more, we stand by our products. And you.

*"I wanted the best product in here for the long run, not only economically but also environmentally. CO<sub>2</sub> seemed like a no-brainer."*

*– Director of Buildings for School District*

*"We've partnered with Zero Zone on many projects dating back 20, 30, 40 years, so we've always been familiar with Zero Zone equipment. They put together a very nice product for us to put in."*

*– Owner of Refrigeration Company*

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1-YEAR PARTS

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