



The world's largest CO₂/NH₃ Cascade System consisting of:

- 297,896 square feet of freezer space at -10°F room temperature
- 37,630 square feet of convertible space at -10°F to 35°F room temperature
- 32,325 square feet of rail dock space at +35°F room temperature
- 70,290 square feet of truck dock space at +35°F room temperature
- 438,141 total square feet
- 15,781,185 total cubic feet
- Less than 10,000 pounds of ammonia charge
- Based on kilowatts per cubic foot, the Bethlehem, Pennsylvania plant is the most energy efficient facility operated by U.S. Cold Storage

M&M Refrigeration designs, manufactures, installs and services CO₂ systems, not only for U.S. Cold Storage but also for other blast freezing, processing and cold storage facilities. Contact M&M Refrigeration for further information or for an on-site visit.

GO GREEN WITH CO₂

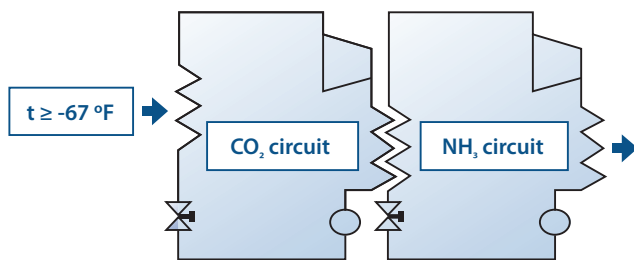
we are green

- No ammonia in working/processing/storage areas
- CO₂ is classified as nontoxic and nonflammable
- Lower installation cost
- Reduced ammonia charge (below 10,000#)
- Lower refrigerant costs
- CO₂ systems always operate at a positive pressure
- Lower operating temperatures with higher production yields
- No cooling required on the low side compressors
- Lower operating costs

With the CO₂/NH₃ concept the CO₂ pressure is always positive and contamination with air and moisture is avoided.

CO₂/NH₃ Cascade Systems

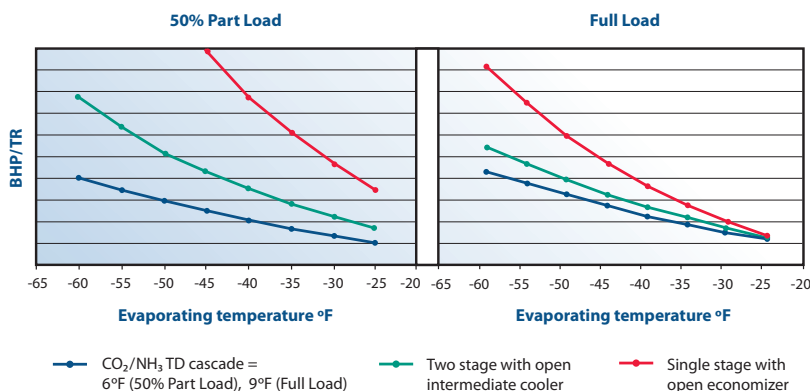
The innovative M&M Refrigeration CO₂/NH₃ concept is based on a cascade system that combines the advantages of CO₂ on the low-temperature side and ammonia on the high-temperature side. Ammonia is limited to the engine room, and only CO₂ will be present in working, processing and storage areas.



Compared with conventional two-stage or economized single-stage systems, a CO₂/NH₃ System uses significantly less power.

Temp. °F	Press. Psig
-68	63.9
-64	71.7
-60	80.1
-56	89.0
-52	98.6
-48	108.8
-44	119.6
-40	131.2
-36	143.5
-32	156.5
-28	170.3
-24	184.9
-20	200.3
-16	216.6
-12	233.8
-8	251.9
-4	271.0
0	291.1
4	312.1
8	334.2
12	357.4
16	381.7
20	407.1
24	433.7
28	461.6
32	490.6
36	521.0
40	552.6
44	585.7

BHP/TR comparison of CO₂/NH₃ with conventional systems



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