

## NaturaLINE

### The Natural One:

### Why CO<sub>2</sub> is a choice refrigerant for container refrigeration

CO<sub>2</sub> comes very close to being the ideal refrigerant, yet maximizing its efficiency has always proved to be a challenge. Carrier's focus on CO<sub>2</sub> makes sense for container applications for many reasons.

#### Only CO<sub>2</sub> Meets the Following Refrigerant Criteria:

- Global warming potential (GWP) of 1
- Zero ozone depletion potential (ODP)
- Excellent heat transfer/heat reclaim properties
- Non-flammable
- Cost effective, available worldwide and requires no special disposal
- Protected against phase-outs, taxes, and European F-gas Regulations

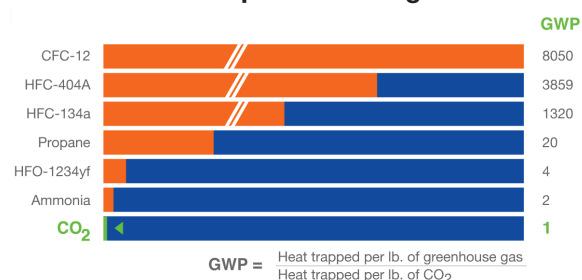
#### CO<sub>2</sub> vs. Conventional Synthetic Refrigerants

The natural refrigerant CO<sub>2</sub>, also known as R-744, is non-ozone depleting. Its GWP of 1 compares very favorably to conventional container system refrigerants, R-134a and R-404A, which have GWPs of 1,320 and 3,260, respectively.

#### Comparison to Other Natural Refrigerants

The GWP of CO<sub>2</sub> is also lower than other natural refrigerants, such as propane (20) and ammonia (2).

#### Environmental Impact of Refrigerants



#### CO<sub>2</sub> is Naturally Occurring

Carrier uses CO<sub>2</sub> recycled from the atmosphere, so it adds no new environmental risk.

#### Responds to Pressures on the Shipping Industry

The introduction of natural refrigerant technology comes at a time when shipping lines are under increasing pressure to reduce their carbon footprint.

#### F-Gas Regulations

While presently there are no HFC bans for the shipping industry, the F-gas Regulation in Europe has phased out automotive air conditioning systems using refrigerants with GWP ratings greater than 150 in new cars, and incentives are being offered in several European Union (EU) ports for ships that produce low emissions and report their energy efficiency. Carrier is committed to offering natural refrigerant solutions to our shipping line customers, even before any potential regulations take effect.