

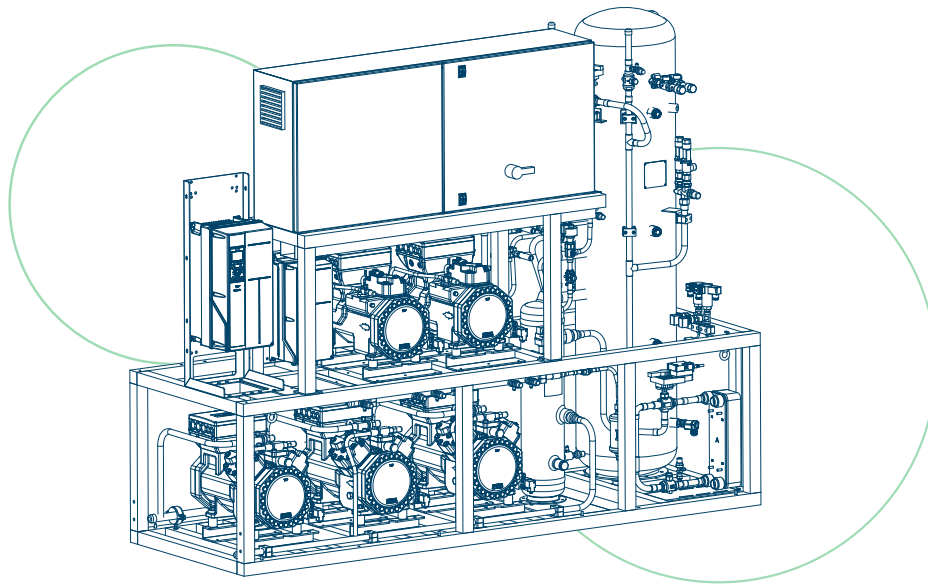


SUSTAINABLE COLD SOLUTIONS

Transcritical CO₂ Booster Rack



We know the art of achieving
a perfect temperature

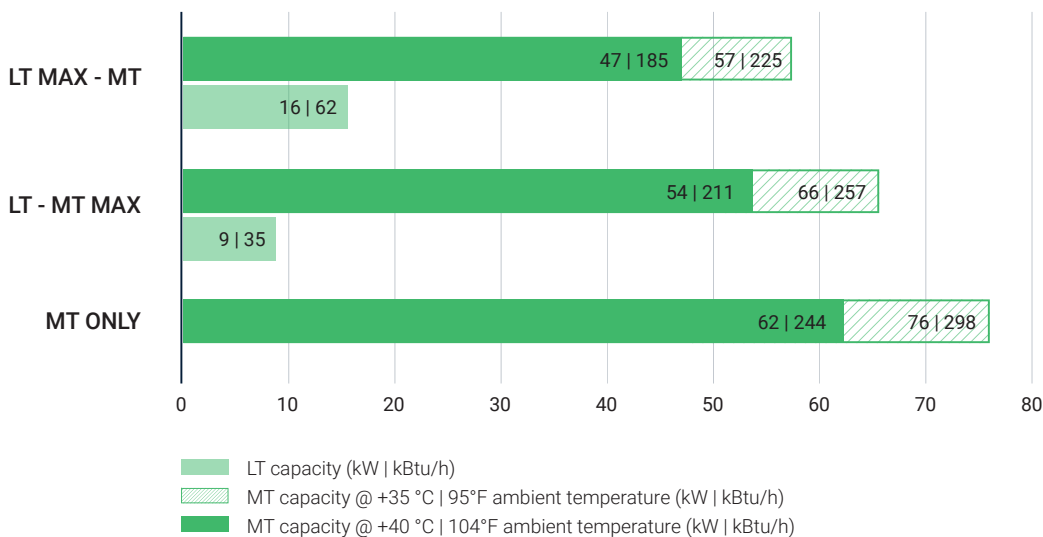


The MWS by SCM Frigo is the most compact CO2 transcritical booster system, featuring Bitzer semi-hermetic piston compressors equipped with frequency inverter or Bitzer CR11 technology. Ideal for medium-temperature (MT) and low-temperature (LT) applications, it is suitable for indoor installations or can be provided within a PNCC/PNC enclosure. Combining high efficiency, minimal footprint, and low noise levels, it represents a smart, versatile refrigeration solution.

MAIN ADVANTAGES

| | | | | | | |
|------------------------------|--------------------------|-----------------------|----------------------------|--------------------------|-------------------------------|------------------|
| <p>ECO-FRIENDLY SOLUTION</p> | <p>ENHANCED CAPACITY</p> | <p>COMPACT DESIGN</p> | <p>MINIMAL MAINTENANCE</p> | <p>ENERGY EFFICIENCY</p> | <p>SCALABLE AND VERSATILE</p> | <p>LOW NOISE</p> |
|------------------------------|--------------------------|-----------------------|----------------------------|--------------------------|-------------------------------|------------------|

Cooling Capacity



Standard Accessories

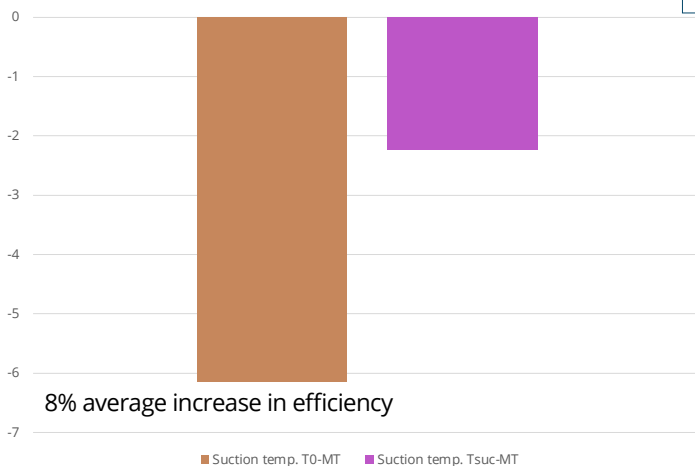
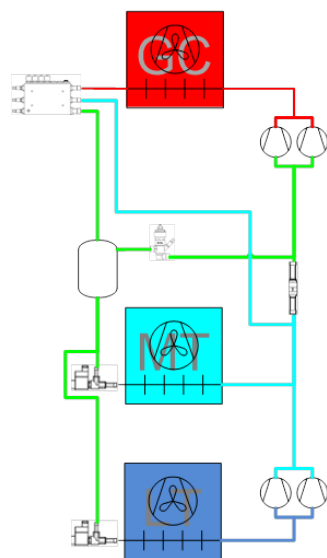
- Electronic oil level regulator Traxoil in each compressor
- Electronic controller
- Replaceable oil filter dryer
- Maintenance free oil separator with integrated oil reservoir
- Electronic minimum liquid level switch
- Liquid-flash internal heat exchanger
- Discharge manifold connected to safety valves
- Full factory testing and parameters setting
- PS 120/80/60/60 Bar | 1885/1160/1160/1160 PSI

Accessories on Request

- Controller Carel, Wurm, RDM, Danfoss
- Frequency inverter MT / LT
- PS 120/80/80/80 Bar | 1885/1160/1160/1160 PSI
- Heat recovery
- Energy metter
- Low noise, enclosure + ultra low noise (46 db(A) @ 10 meters (~33ft))
- PNC frame with integrated gas cooler
- LP ejector
- Backup controller
- V3V bypass gas cooler
- Suction filter strainer LT
- Suction filter dryer MT

High efficiency

LP Ejector



Source: CO2 Booster with LP Ejector (Punta Cana – Dominican Republic)

LSPM Motor



BITZER COMPRESSORS LSPM (line start permanent magnet)

The line-start permanent magnet (LSPM) motor technology take advantage of the motor efficiency and low heat input into the refrigerant, estimating 14% annual savings when compared with standard compressors.

DANFOSS MULTI EJECTOR LP (LOW PRESSURE)

In warm climates, the ejectors can lift all the gas from the evaporators into the receiver, witch is at a higher suction pressure than the evaporator and this is lowering the system energy consumption. In cold ambient conditions, the LP ejector serves the same functions as a coventional high-pressure valve controlling the system to perform at optimum COP.

Technical data Smart Booster (a)

| Unit Model (a) | Qo MT ^(b) | | Qo LT ^(c) | | QGC | | I _{MAX} | LRA | P _{MAX} | Liquid receiver | Weight | | Sound pressure @10m ^{(d)(e)} | PNC | PNC Sound pressure @10m ^(f) | Dim. |
|-------------------------------------|----------------------|--------|----------------------|--------|-----|--------|------------------|-------|------------------|-----------------|--------|-------|---------------------------------------|-----|----------------------------------------|-------|
| | kW | kBtu/h | kW | kBtu/h | kW | kBtu/h | | | | | A | A | | | | |
| MWS 2x043 MTDX | 15.7 | 61.7 | - | - | 27 | 106 | 21.6 | 124.4 | 11.8 | 105 | 535 | 1,180 | 45 | YES | 33 | A/B/C |
| MWS 065+043 MTDX | 20.9 | 82.1 | - | - | 34 | 133.5 | 26.8 | 144.6 | 14.5 | 105 | 540 | 1,191 | 45 | YES | 34 | A/B/C |
| MWS 2x065 MTDX | 26 | 102.1 | - | - | 42 | 164.9 | 32.0 | 164.8 | 17.2 | 105 | 545 | 1,200 | 45 | YES | 33 | A/B/C |
| MWS 096+065 MTDX | 32.3 | 126.8 | - | - | 52 | 204.1 | 38.4 | 179.4 | 21.5 | 105 | 550 | 1,213 | 46 | YES | 34 | A/B/F |
| MWS 2x096 MTDX | 38.6 | 151.5 | - | - | 62 | 243.3 | 44.8 | 194.0 | 25.8 | 105 | 555 | 1,224 | 46 | YES | 35 | A/B/F |
| MWS 096+2x065 MTDX | 45.3 | 177.8 | - | - | 73 | 286.5 | 54.4 | 261.8 | 30.1 | 105 | 690 | 1,521 | 47 | YES | 35 | A/B/F |
| MWS 2x096+065 MTDX | 51.6 | 202.5 | - | - | 83 | 325.7 | 60.8 | 276.4 | 34.4 | 105 | 700 | 1,543 | 47 | YES | 38 | A/B/F |
| MWS 3x096 MTDX | 57.9 | 227.2 | - | - | 93 | 365 | 67.2 | 291.0 | 38.7 | 105 | 710 | 1,565 | 48 | YES | 42 | A/B/F |
| MWS 120+2x096 MTDX | 63.9 | 250.8 | - | - | 102 | 400.3 | 71.9 | 326.0 | 42.0 | 150 | 777 | 1,713 | 52 | NO | - | D/E |
| MWS 3x120 MTDX | 75.9 | 297.9 | - | - | 120 | 470.9 | 81.3 | 396.0 | 48.6 | 150 | 911 | 2,009 | 56 | NO | - | D/E |
| MWS 2x043 MTDX + UMCE 007 HBT | 11.9 | 46.7 | 3.3 | 13 | 27 | 106 | 24.5 | 150.4 | 12.9 | 105 | 650 | 1,433 | 46 | YES | 34 | A/B/C |
| MWS 065+043 MTDX + UMCE 007 HBT | 17 | 66.8 | 3.3 | 13 | 35 | 137.4 | 29.7 | 170.6 | 15.6 | 105 | 655 | 1,444 | 46 | YES | 34 | A/B/C |
| MWS 2x065 MTDX + UMCE 007 HBT | 22.2 | 87.2 | 3.3 | 13 | 43 | 168.8 | 34.9 | 190.8 | 18.3 | 105 | 660 | 1,455 | 46 | YES | 33 | A/B/C |
| MWS 2x065 MTDX + UMCE 010 HBT | 19.7 | 77.4 | 5.4 | 21.2 | 43 | 168.8 | 35.7 | 190.8 | 19.1 | 105 | 662 | 1,460 | 46 | YES | 33 | A/B/C |
| MWS 096+065 MTDX + UMCE 010 HBT | 25.9 | 101.7 | 5.4 | 21.2 | 53 | 208 | 42.1 | 205.4 | 23.4 | 105 | 667 | 1,471 | 47 | YES | 35 | A/B/F |
| MWS 2x096 MTDX + UMCE 010 HBT | 32.2 | 126.4 | 5.4 | 21.2 | 63 | 247.3 | 48.5 | 220.0 | 27.7 | 105 | 670 | 1,477 | 47 | YES | 35 | A/B/F |
| MWS 2x096 MTDX + UMCE 020 HBT | 30.5 | 119.7 | 6.9 | 27.1 | 63 | 247.3 | 50.1 | 231.0 | 28.3 | 105 | 675 | 1,488 | 47 | YES | 35 | A/B/F |
| MWS 2x096 + 065 MTDX + UMCE 020 HBT | 43.5 | 170.7 | 6.9 | 27.1 | 84 | 329.7 | 66.1 | 313.4 | 36.9 | 105 | 845 | 1,863 | 48 | YES | 38 | A/B/F |
| MWS 3x096 MTDX + UMCE 020 HBT | 49.8 | 195.5 | 6.9 | 27.1 | 94 | 368.9 | 72.5 | 328.0 | 41.2 | 105 | 850 | 1,874 | 49 | YES | 42 | A/B/F |
| MWS 2x096+065 MTDX + UMCE 030 HBT | 41.2 | 161.7 | 8.9 | 35 | 84 | 329.7 | 67.0 | 320.4 | 37.5 | 105 | 853 | 1,881 | 49 | YES | 38 | A/B/F |
| MWS 3x096 MTDX + UMCE 030 HBT | 47.5 | 186.4 | 8.9 | 35 | 94 | 368.9 | 73.4 | 335.0 | 41.8 | 105 | 857 | 1,890 | 49 | YES | 42 | A/B/F |
| MWS 3x120 MTDX + UMCE 030 HBT | 65.5 | 257.1 | 8.9 | 35 | 122 | 478.8 | 87.5 | 440.0 | 51.7 | 105 | 1043 | 2,300 | 56 | NO | - | D/E |
| MWS 096+065 MTDX + UMCE 2x007 HBT | 24.6 | 96.6 | 6.5 | 25.6 | 53 | 208 | 44.2 | 231.4 | 23.7 | 105 | 805 | 1,775 | 47 | YES | 35 | A/B/F |
| MWS 2x096 MTDX + UMCE 2x007 HBT | 30.9 | 121.3 | 6.5 | 25.6 | 63 | 247.3 | 50.6 | 246.0 | 28.0 | 105 | 810 | 1,786 | 48 | YES | 35 | A/B/F |
| MWS 2x120 MTDX + UMCE 2x007 HBT | 42.9 | 168.4 | 6.5 | 25.6 | 81 | 317.9 | 60.0 | 316.0 | 34.6 | 105 | 940 | 2,073 | 54 | NO | - | A/B |
| MWS120+2x096 MTDX+U-MCE020+030HBT | 45.4 | 178.2 | 15.8 | 62 | 104 | 408.1 | 83.4 | 407.0 | 47.6 | 150 | 1100 | 2,425 | 53 | NO | - | D/E |
| MWS3x120MTDX+UMCE020+030HBT | 57.4 | 225.3 | 15.8 | 62 | 122 | 478.8 | 92.8 | 477.0 | 54.2 | 150 | 1235 | 2,723 | 56 | NO | - | D/E |

(a) Compressor models:

| | |
|----------------------|----------------------|
| MT CP 043 - 4PTE-6K | LT CP 007 - 2MME-07K |
| MT CP 065 - 4MTE-7K | LT CP 010 - 2KME-1K |
| MT CP 096 - 4KTE-10K | LT CP 020 - 2JME-2K |
| MT CP 120 - 4HTE-15K | LT CP 030 - 2HME-3K |

(b) Calculated at -8°C / 18 °F SST, 35°C / 95 °F ambient temperature, and 37°C / 99 °F gas cooler outlet temperature.

(c) Calculated at -30°C / -22 °F SST and condensation @ -8°C / 18 °F SST

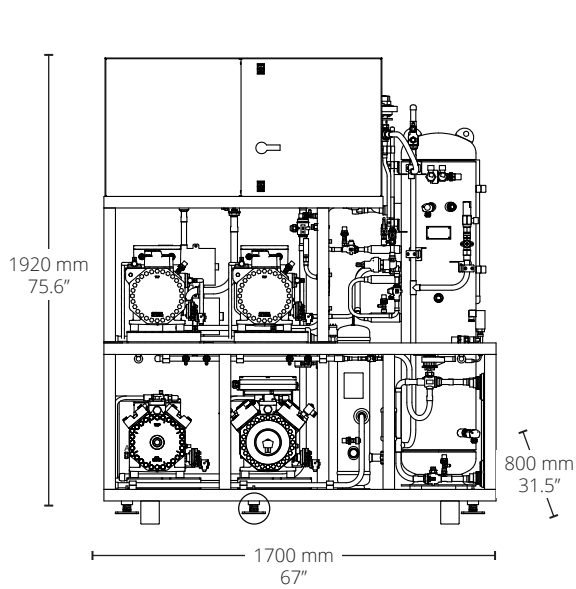
(d) Data valid for free-field conditions with a block-shaped reference area at a distance of 10 meters (~33ft).

(e) The low-noise version of the enclosure is certified to ensure a sound level between 31-33 dB(A), based on free field area with semi-spherical sound emission in 10m (~33ft) distance.

(f) The PNC enclosure is low noise certified, based on free field area with semi-spherical sound emission in 10m (~33ft) distance.

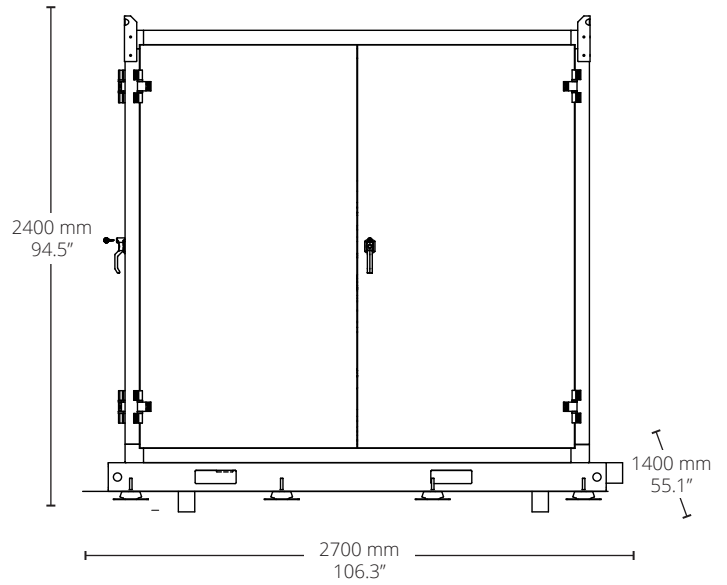
Dimensional Data

(Fig. A) Indoor Unit

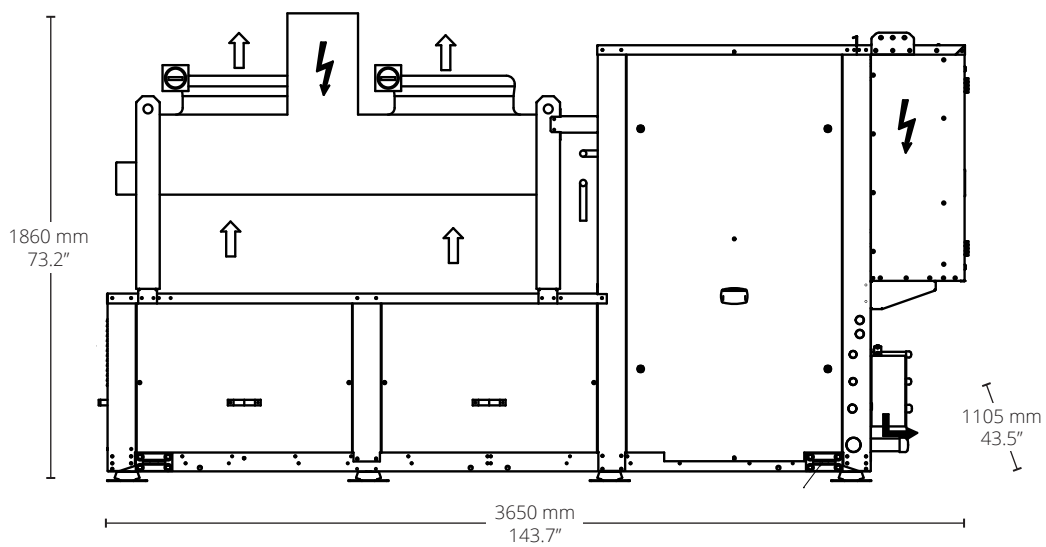


(Fig. B) Outdoor Unit

Enclosed available in standard or low-noise versions

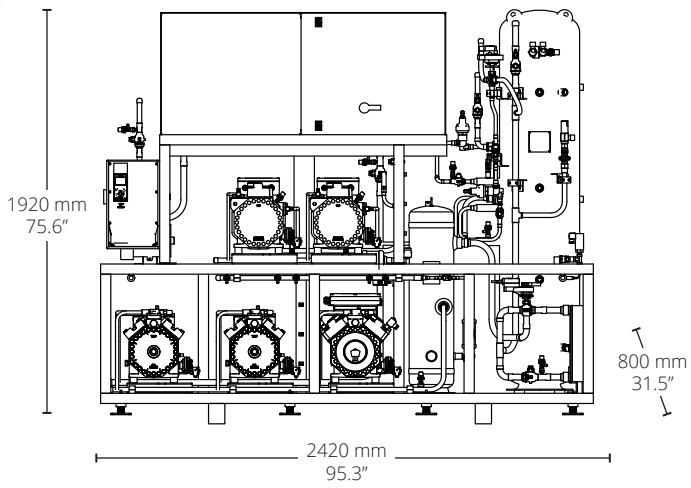


(Fig. C) PNC Version with Integrated Gas Cooler



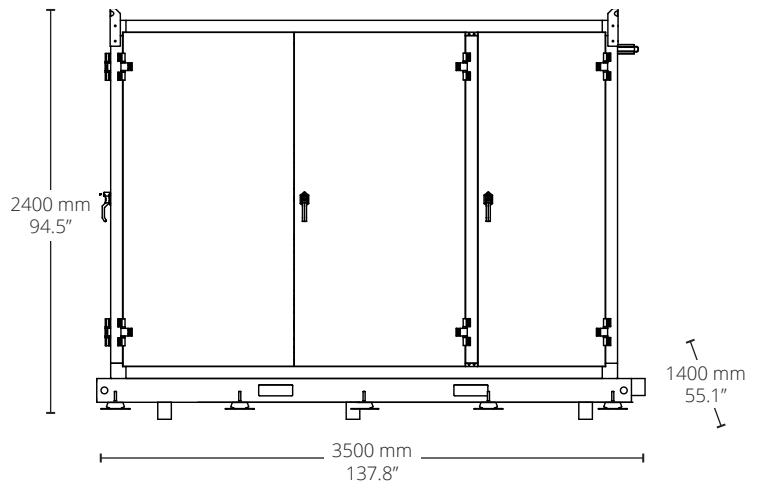
Dimensional Data

(Fig. D) Indoor Unit

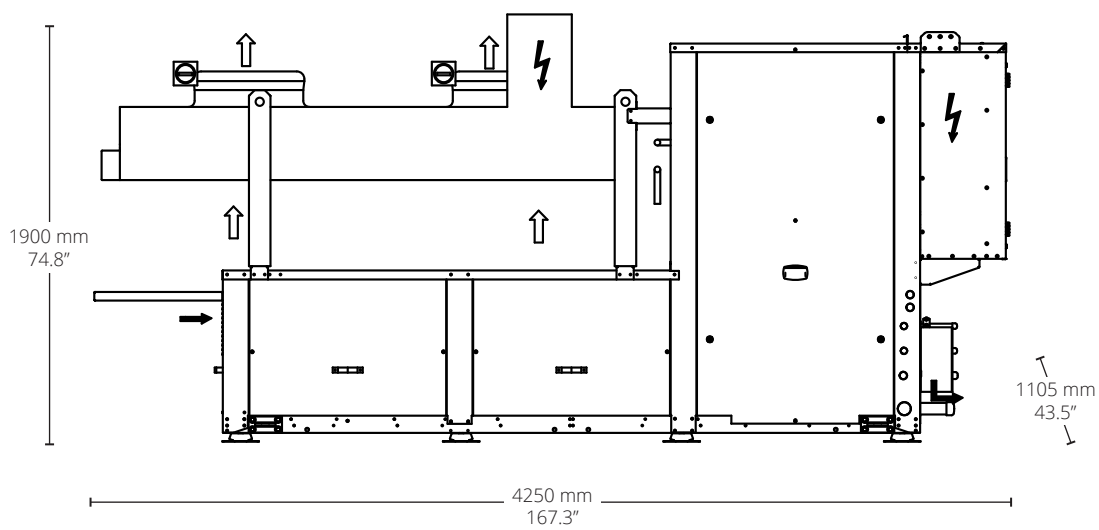


(Fig. E) Outdoor Unit

Enclosed available in standard or low-noise versions



(Fig. F) PNC Version with Integrated Gas Cooler



CO₂ / R744

NATURAL REFRIGERATION CHOICE



Non-flammable

The electrical panel can be located in the same room as the refrigeration equipment. This reduces space requirements and lowers installation costs.

Non-toxic

With no charge limitations or safety concerns, CO₂ can be used across a wide range of applications.

Built-in Resilience

CO₂ packs typically include multiple compressors, ensuring continued operation even if one compressor fails. This built-in redundancy enhances reliability and reduces the risk of downtime.

Standard refrigerant option

CO₂ is now a standard refrigerant in commercial installations, making the transition to industrial applications seamless. A wider selection of companies and qualified engineers is available for installation and servicing.



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