

SMART DUPLEX

THE MOST POWERFUL AND EFFICIENT COMPACT CO₂ UNIT

Transcritical CO₂ booster machines for commercial refrigeration and small industry. Additionally, the SMART DUPLEX units offer **the highest capacities for the commercial CO₂ refrigeration range, up to 250 kW**, a perfect solution with maximum performance for medium temperature (MT) and low temperature (LT). They can include **up to 9 compressors** and, optionally, 3 heat exchangers and 2 parallel compressors.

COOLING POWER: 80 to 250 kW

APPLICATIONS: 1.500 to 3.000 m². MT / LT

RETAIL

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- » SUPERMARKETS
- » LARGE SUPERMARKETS
- » COLD STORAGE WAREHOUSES
- » INDUSTRIAL APPLICATIONS

ECO2SMART

EXCLUSIVE HIGH EFFICIENCY CO₂ SYSTEM by TEWIS

The Smart Duplex can incorporate our exclusive ECO2SMART system, a mechanical sub-cooling solution that **significantly improves the efficiency of our CO₂ units**, even at extremely high temperatures. **It is the only system on the market that starts operating at 10°C**, which translates into energy savings for a large part of the year. **It operates exclusively with CO₂**, so no additional components or add-on systems are required to ensure its performance.

- ✓ 100% CO₂ = minimal environmental footprint.
- ✓ Compact and simple design (only 1 m depth).
- ✓ Maximum power with 9 compressors.
- ✓ Large-capacity vertical receiver (2 x 250 L).
- ✓ Remote control (accessible from anywhere).
- ✓ Ease of commissioning and maintenance.
- ✓ Option for 2 RHX for tap water or heating.
- ✓ Total length of less than 4 m.



STANDARD EQUIPMENT

- Tubular chassis.
- Vertical liquid receiver (2x150 L).
- Oil separator and accumulator.
- 9 compressors.
- Frequency inverter for the first MT compressor and first LT compressor
- Electronic refrigerant level sensors.
- All connections made of copper.
- Manometers.

COMPRESSORS

- BITZER.

AVAILABLE OPTIONS

- Parallel compressor
- RHX (Heat Recovery Exchanger) up to 190 kW
- IHX (Internal Heat Exchanger)
- Dual bypass valves for gas and high pressure
- Onboard emergency unit
- 10" touchscreen (TMS)
- Fully enclosed and soundproofed
- 2 RHXs, one for tap water and another for heating
- Available with ECOLINE+ compressors (permanent magnet motor – LSPM)

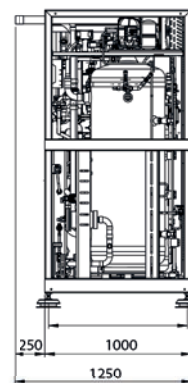
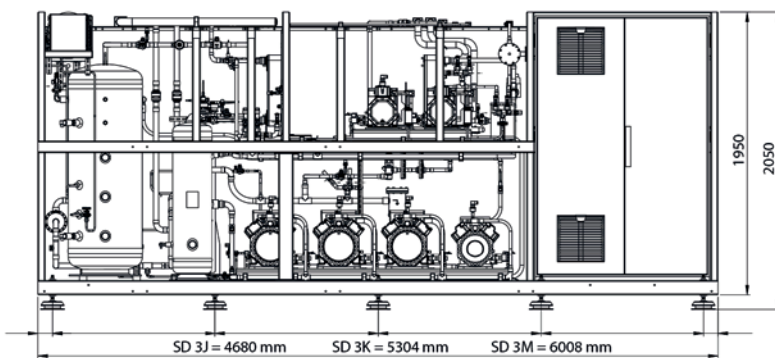
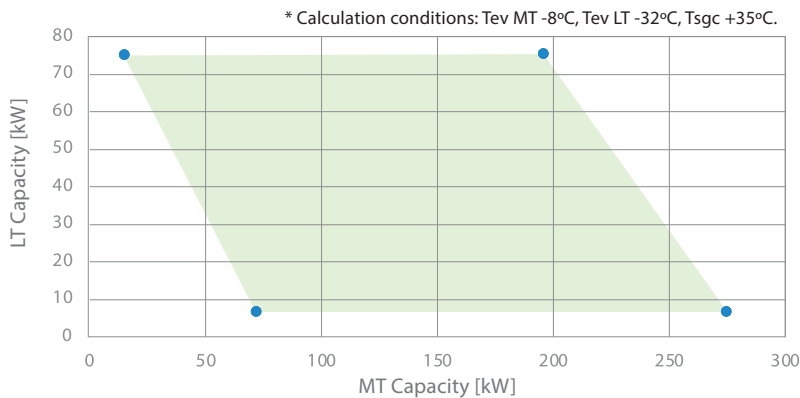
- Safety valve manifold.
- Suction separator.
- ECO2Smart compressor.

CO2 DESIGN PRESSURES

- MP (MT Suction): 52 bar.
- LP (LT Suction): 30 bar.
- IP (Receiver and Liquid Line): 60 bar.
- HP (Discharge): 120 bar.

AVAILABLE DRIVERS

- Tewis.
- Danfoss.
- Carel.
- Wurm.



With just 1 m depth, its design allows easy access to all machine components, reducing installation and maintenance times and costs. Additionally, the Smart Duplex can be fully enclosed and soundproofed for outdoor installation.

