

SMART DUPLEX

CO₂ COMPACT COMPRESSOR RACK

Smart Duplex compressor racks offer the highest powers for the commercial refrigeration range with CO₂ at 2 temperatures, MT and LT. They are two-level transcritical cycle booster machines, and this reduces the space required for their assembly and ensures modulation and operational reliability thanks to the number of compressors they house. Optional: up to 3 exchangers and 1 parallel compressor.

COOLING CAPACITY: 80 to 250 KW

APPLICATION: 1000 to 2.500 M²

- » FOOD RETAIL (CONVENIENCE STORES).
- » SUPERMARKETS.
- » REFRIGERATED WHAREHOUSES.
- » SEMI-INDUSTRIAL APPLICATIONS.

- ✓ Profitability and energy savings.
- ✓ 100% CO₂ = low enviromental impact.
- ✓ Compact and simple design (only 1 m depth).
- ✓ High capacity up to 9 compressors.
- ✓ Vertical liquid receiver with high capacity (up to 2x250 l).
- ✓ Extreme flexibility.
- ✓ Remote control (accessible anywhere).
- ✓ Easy commissioning and maintainance.
- ✓ Possibility of 2 RHX, one for DHW and one for air conditioning.



STANDARD EQUIPMENT

- Tubular chassis.
- Oil separator accumulator.
- High capacity liquid receiver (up to 2x250 l).
- Up to 9 compressors.
- Frequency inverter for MT & LT.
- Two electronic sensors for refrigerant levels.
- All copper connections.



OPTIONS

- Parallel compressor.
- RHX (Recovery Heat Exchanger) up to 190 kW.
- IHX (Internal Heat Exchanger).
- Double high pressure and gas bypass valves.
- Emergency unit on board.
- 10" touchpad TMS (Tewis Machine Supervisor).
- Possibility of 2 RHX, one for DHW and one for air conditioning.
- Also available with ECOLINE+ compressors (permanent magnet motor compressors - LSPM).



DESIGN PRESSURES C02

- MP (MT suction): 52 bar.
- LP (LT suction): 30 bar.
- IP (Receiver and liquid line): 60 bar.
- HP (Discharge): 120 bar.

CONTROLLERS

- Tewis (EWCM9000pro).
- Danfoss (AK-PC782).
- Carel (pRack PR300T Large).

COMPRESSORS

- BITZER.

Its design allows easy access to all the components of the unit, reducing installation and maintenance time and costs.

MODELS & DATA

BASE CODE	APPLICATION	CAPAC. KW MT* 70 HZ	CAPAC. KW LT* 70 HZ	MT COMPRESSORS	PARALLEL COMPRESSOR	LT COMPRESSORS
GSD3KJ_048ZBX	MT	179,56	-	1x 4HTE-20K (V.F. @70 Hz) + 4x 4FTE-30K	-	-
GSD3MJ_049ZBX	MT	266,6	-	1x 4FTE-30K (V.F. @70 Hz) + 4x 4CTE-30K	-	-
TSD3JJ_028ZBX	MT+LT	52	20,37	1x 4JTE-15K (V.F. @70 Hz) + 2x 4HTE-20K	-	1x 2JSL-2K (V.F. @70 Hz) + 2x 2JSL-2K
TSD3JJ_030ZBX	MT+LT	64,41	31,32	1x 4JTE-15K (V.F. @70 Hz) + 3x 4HTE-20K	-	1x 2GSL-3K (V.F. @70 Hz) + 2x 2GSL-3K
TSD3JJ_031ZBX	MT+LT	77,52	26,38	1x 4HTE-20K (V.F. @70 Hz) + 2x 4FTE-30K	-	1x 2HSL-3K (V.F. @70 Hz) + 2x 2HSL-3K
TSD3KJ_033ZBX	MT+LT	105,43	34,14	1x 4HTE-20K (V.F. @70 Hz) + 3x 4FTE-30K	-	1x 2HSL-3K (V.F. @70 Hz) + 3x 2HSL-3K
TSD3JJ_035ZBX	MT+LT	122,55	18,62	1x 4HTE-20K (V.F. @70 Hz) + 3x 4FTE-30K	-	1x 2HSL-3K (V.F. @70 Hz) + 1x 2HSL-3K
TSD3JJ_034ZBX	MT+LT	113,46	26,81	1x 4HTE-20K (V.F. @70 Hz) + 3x 4FTE-30K	-	1x 2JSL-2K (V.F. @70 Hz) + 2x 2GSL-3K
TSD3JJ_050ZBX	MT+LT	155,36	36,44	1x 4HTE-20K (V.F. @70 Hz) + 3x 4CTE-30K	-	1x 2GSL-3K (V.F. @70 Hz) + 2x 2FSL-4K
TSD3JJ_051ZBX	MT+LT	172,74	36,44	1x 4FTE-30K (V.F. @70 Hz) + 3x 4CTE-30K	-	1x 2GSL-3K (V.F. @70 Hz) + 2x 2FSL-4K
TSD3MJ_052ZBX	MT+LT	184,04	75,88	1x 4FTE-30K (V.F. @70 Hz) + 4x 4CTE-30K	-	1x 2DSL-5K (V.F. @70 Hz) + 3x 2DSL-5K
TSD3MJ_053ZBX	MT+LT	213,73	48,21	1x 4FTE-30K (V.F. @70 Hz) + 4x 4CTE-30K	-	1x 2GSL-3K (V.F. @70 Hz) + 3x 2FSL-4K
TSD3JJ_037ZBX	MT+LT	85,97	31,32	1x 4JTE-15K (V.F. @70 Hz) + 2x 4HTE-20K	1x 4JTE-15K (V.F.)	1x 2GSL-3K (V.F. @70 Hz) + 2x 2GSL-3K
TSD3JJ_039ZBX	MT+LT	110,01	26,81	1x 4HTE-20K (V.F. @70 Hz) + 2x 4HTE-20K	1x 4HTE-20K (V.F.)	1x 2JSL-2K (V.F. @70 Hz) + 2x 2GSL-3K
TSD3JJ_042ZBX	MT+LT	123,56	14,38	1x 4HTE-20K (V.F. @70 Hz) + 2x 4HTE-20K	1x 4HTE-20K (V.F.)	1x 2JSL-2K (V.F. @70 Hz) + 1x 2JSL-2K
TSD3JJ_040ZBX	MT+LT	119,33	35,02	1x 4JTE-15K (V.F. @70 Hz) + 2x 4FTE-30K	1x 4HTE-20K (V.F.)	1x 2ESL-4K (V.F. @70 Hz) + 1x 2ESL-4K
TSD3JJ_044ZBX	MT+LT	130,4	24,67	1x 4JTE-15K (V.F. @70 Hz) + 2x 4FTE-30K	1x 4HTE-20K (V.F.)	1x 2GSL-3K (V.F. @70 Hz) + 1x 2FSL-4K
TSD3KJ_041ZBX	MT+LT	123,71	36,44	1x 4HTE-20K (V.F. @70 Hz) + 3x 4HTE-20K	1x 4HTE-20K (V.F.)	1x 2GSL-3K (V.F. @70 Hz) + 2x 2FSL-4K
TSD3JJ_045ZBX	MT+LT	130,05	31,32	1x 4HTE-20K (V.F. @70 Hz) + 2x 4FTE-30K	1x 4HTE-20K (V.F.)	1x 2GSL-3K (V.F. @70 Hz) + 2x 2GSL-3K
TSD3KJ_046ZBX	MT+LT	174,7	49,61	1x 4HTE-20K (V.F. @70 Hz) + 3x 4FTE-30K	1x 4FTE-30K (V.F.)	1x 2ESL-4K (V.F. @70 Hz) + 2x 2ESL-4K
TSD3KJ_047ZBX	MT+LT	188,76	36,44	1x 4HTE-20K (V.F. @70 Hz) + 3x 4FTE-30K	1x 4FTE-30K (V.F.)	1x 2GSL-3K (V.F. @70 Hz) + 2x 2FSL-4K
TSD3KJ_096ZBX	MT+LT	213,25	18,62	1x 4GTE-30K (V.F. @70 Hz) + 2x 4DTE-25K	1x 4HTE-20K (V.F.) + 1x 4HTE-20K	1x 2HSL-3K (V.F. @70 Hz) + 1x 2HSL-3K
TSD3KJ_097ZBX	MT+LT	160,52	22,11	1x 4HTE-20K (V.F. @70 Hz) + 2x 4FTE-30K	1x 4JTE-15K (V.F.) + 1x 4JTE-15K	1x 2GSL-3K (V.F. @70 Hz) + 1x 2GSL-3K

*Calculation conditions: T_{ev} MT -8°C, T_{ev} LT -32°C, T_{sgc} +35°C.

