



a member of **DAIKIN** group



2025

comercial
COOLING
catalogue



Efficiency and reliability at the service of retail and the food industry



> TEWIS SMART SYSTEMS, S.L.U.

A company with over 30 years of experience specialising in the development of efficient and sustainable commercial and industrial refrigeration solutions. Solutions with a wide range of temperatures that adapt to the space and power needs of each project, with the lowest possible Tewi index, reducing investment, consumption, and maintenance costs.

Since 2018, it has been a member of the Daikin Group, increasing its capacity for innovation and response throughout Europe.

Tewis has three working systems based on active listening processes, allowing them to undertake any type of project within food retail and industrial processes:

- Standardised solutions
- Comprehensive solutions
- Customised solutions

Its constant collaboration with universities and associations, as well as its commitment to training and research, enables them to offer exclusive solutions and highly efficient equipment, positioning them among the preferred manufacturers in the sector.

> DAIKIN INDUSTRIES

Located at its headquarters in Japan, Daikin Industries LTD employs 15,000 people working in Japan, Europe, South Asia, Oceania, and the USA.

Daikin's exclusive position as a leading manufacturer of air conditioning equipment allows us to remain at the forefront of manufacturing and evolving these products in line with our environmental awareness.

In this regard, Daikin Industries LTD has been developing new refrigeration-oriented applications for ten years. The European subsidiaries, notably Daikin AC Spain, have started working along the lines set by Japan with technological solutions that excel in aspects such as:

- Greater energy savings
- Quieter equipment
- Higher performance
- More compact units



CONTENT

CO2, a strategic decision for commercial retail

The refrigeration sector is undergoing a transformation marked by increasingly demanding regulation. The phasing out of HFCs imposed by the F-GAS, the fiscal pressure on high GWP gases, the drastic reduction of gas quotas and the future ban on PFASs have led to an uncertain scenario in which the end user must make decisions that may compromise their regulatory and economic situation, reducing their profitability in the medium term.

Natural refrigerants, especially CO₂ (R744), with GWP=1, without PFAS formation and without future restrictions, are positioned as the safest, unrestricted and profitable solution for the sector. In addition, the evolution of the systems, as well as new developments - such as our ECO2SMART system - have increased their efficiency even in hot climates, reducing operating costs and making it a strategic decision. In this context, it is logical to ask the following question: why bet on solutions that may fall outside the regulatory framework in a few years?

	MODEL	REFRIGERATION	SURFACE		KW	PAGE
CONFIGURABLE SOLUTIONS	■ NOVA 58+	MT / BOOSTER	300 < 800 m ²		■ 14 to 53 kW ■ 0 to 8 kW	6
	■ NV66+	MT / BOOSTER	700 < 1200 m ²		■ 22 to 70 kW ■ 0 to 15 kW	8
	■ SMART RACK	MT / BOOSTER	600 < 1500 m ²		■ 40 to 130 kW ■ 0 to 28 kW	10
	■ MINI - SD	MT / BOOSTER	1000 < 2000 m ²		■ 50 to 150 kW ■ 0 to 35 kW	14
	■ SMART DUPLEX	MT / BOOSTER	1500 < 3000 m ²		■ 80 to 250 kW ■ 0 to 35 kW	16
	■ CO ₂ INDUSTRIAL	MT / BOOSTER	2500 < 4999 m ²		■ 170 to 650 kW ■ 0 to 35 kW	18
SYSTEMS & SOLUTIONS	ECO2SMART An exclusive high efficiency CO2 system by Tewis. Mechanical Subcooler					12
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■ CO2 ■ R290 ■ AC

■ MT ■ LT



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At Tewis we have a strong commitment to caring for our environment. As members of the Daikin Group, we believe that "we cannot grow if we do not contribute to solving global environmental problems". We are also committed to our commitment to our customers: creating increasingly efficient equipment, developing systems that reduce their energy bills and accelerating the return on their investment.



natural
refrigerants

NOVA 58+

NEW COMPACT CENTRAL FOR APPLICATIONS UP TO 800 M2 WITH INTEGRATED GAS COOLER

- > **Applications:** from 300 to 800 m²
- > **Cooling Powers:** 14 to 53 kW (MT) / 0 to 8 kW (LT)



New compact unit, perfect for small supermarkets (up to 800 m²)

NV58+ is a compact and modular unit with a wide range of equipment with CO₂ in transcritical cycle (Ps. 130 bar.) surfaces up to 800 m² in one or two temperatures, working as a booster. A very complete solution that incorporates up to 3 compressors, with axial and radial versions (it can be installed outdoor) and does not require an emergency unit.

| Applications |

- Convenience stores.
- Supermarkets.
- Specialised food stores.
- Fast food outlets.
- Refrigerated rooms.
- Horeca channel.

| Benefits |

- 1] Compact and 360° accessible unit with included Gas Cooler.
- 2] Suitable for indoor and outdoor installations.
- 3] Plug & Play, all-in-one.
- 4] Perfect for small machine rooms.
- 5] High acoustic insulation ensuring significantly less external noise.
- 6] No emergency unit required.
- 7] Up to 3 compressors.
- 8] Heat recovery and internal liquid subcooler available as options.



NV58+ & TMS 10" [Tewis Machine Supervisor]

NV58+ can incorporate our TMS, a supervision and remote management system for central units with a touch screen interface.

| Highlighted Features |

- Real-time monitoring.
- Configuration of central unit parameters.
- Alarm management.
- Data logger.
- Historical data reporting.
- Synoptic visualization.
- Internal web server.
- Integration with third parties.



NV58+ is a very compact solution with high efficiency and power, capable of handling applications up to 800 m² without the need for an emergency unit and with design pressures of 130 bar.



> Standard Equipment

- Double V-shaped coil.
- 3 air outlet configurations (radial Gas Cooler).
- Oil separator accumulator.
- 90-litre liquid receiver.
- Integrated electrical panel.
- Two electronic refrigerant level sensors (high and low).
- K65 copper pipes and connections.
- Variable frequency drive for the first MT compressor.
- Variable frequency drive for the the LT compressor.

> Available Options

- Axial Version or Radial Version.
- RHX for heat recovery.
- IHX internal liquid subcooler.
- Double HP and FG valves.
- Safety valve manifold.
- 10" TMS touch screen (Tewis Machine Supervisor).

> Design Pressures

- MP (MT Suction): 52 bar.
- LP (LT Suction): 30 bar.
- IP (Receiver and Liquid Line): 90 bar.
- HP (Discharge): 130 bar.

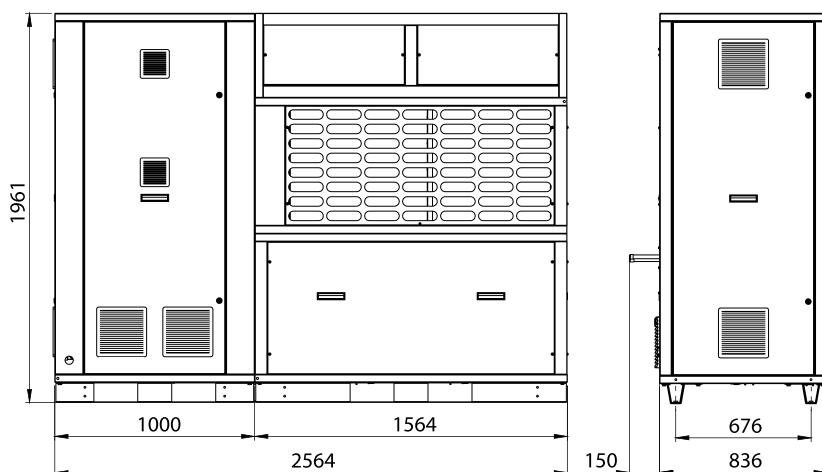
> Available Drivers

- Tewis
- Danfoss
- Carel

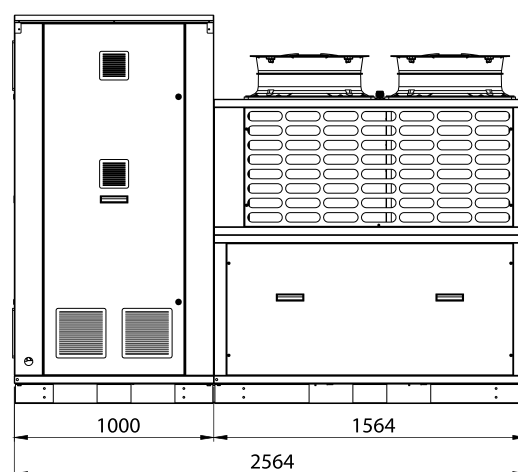
> Compressors

- Bitzer

DIMENSIONS NV58+ RADIAL VERSION



DIMENSIONS NV58+ AXIAL VERSION



MODELS & DATA									
BASE CODE	APPLICATION	MT CAP. KW*	LT CAP. KW*	MT CAP. KW*	LT CAP. KW*	MT CAP. KW*	LT CAP. KW*	MT COMPRESSORS	LT COMPRESSORS
GNV58_923YQX	MT	51	—	49	—	45	—	1x 4MTE-10Z (INV) + 2x 4KTE-10Z	—
GNV58_882YQX	MT	38	—	36	—	32	—	1x 4MTE-10Z (INV) + 1x 4KTE-10Z	—
GNV58_202ZQX	MT	32	—	30	—	24	—	1x 4MTE-10Z (INV) + 1x 4MTE-10Z	—
TNV58_203ZQX	MT+LT	18	4	17	4	14	4	1x 2KTE-7Z (INV) + 1x 2KTE-7Z	1x 2MSL-07Z (INV)
TNV58_879YQX	MT+LT	30	7	28	7	24	7	1x 4MTE-10Z (INV) + 1x 4KTE-10Z	1x 2KSL-1Z (INV)
TNV58_220ZQX	MT+LT	35	8	32	8	28	8	1x 4JTE-15Z (INV) + 1x 4HTE-20K	1x 2JSL-2Z (INV)

■ Tev MT: -8°C/Tev LT: -32°C/TSGC: +32°C

■ Tev MT: -8°C/Tev LT: -32°C/TSGC: +35°C

■ Tev MT: -8°C/Tev LT: -32°C/TSGC: +40°C

NOVA 66+

COMPACT CO2 CENTRAL UNIT THAT WORKS AS A BOOSTER

- > **Applications:** from 700 to 1200 m²
- > **Cooling Powers:** 22 to 70 kW (MT) / 0 to 15 kW (LT)



Up to 1200 m² at one or two temperatures with an all-in-one compact solution

The NV66+ is a compact and modular unit with a wide range of equipment with CO₂ in transcritical cycle (Ps. 130 bar.) **surfaces of up to 1200 m²** in one or two temperatures, **working as a booster**. A very complete solution that incorporates **up to 5 compressors**, with axial and radial versions (it can be installed outdoor) and **does not require an emergency unit**.

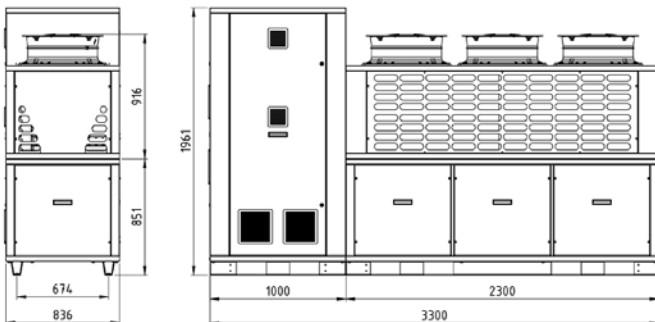
Applications

- Small supermarkets.
- Medium supermarkets.
- Cold storage warehouses.
- Small industry.

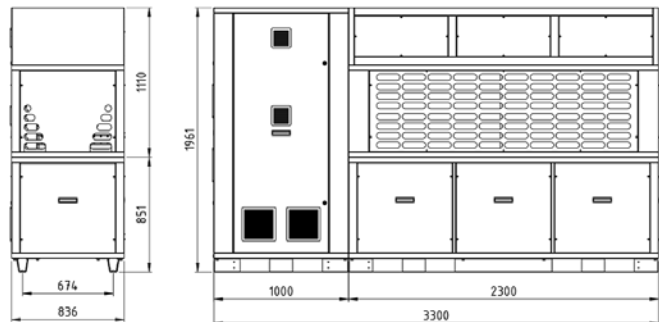
Benefits

- 1] Compact Plug & Play unit with included Gas Cooler and fully 360° accessible design.
- 2] Suitable for indoor and outdoor installations, with excellent acoustic insulation and very low noise levels.
- 3] Incorporates up to 5 compressors.
- 4] With a design pressure of 130 bar, it can operate at high temperatures, and receiver pressure at 90 bar, making the emergency unit unnecessary.

NV 66+ axial version



NV 66+ radial version



NV66+ is a highly complete unit that functions as a transcritical booster with an integrated gas cooler. It is a perfect solution for supermarkets and small industries, offering sustainability and efficiency.



> Standard Equipment

- Double V-shaped coil.
- 3 air outlet configurations (radial Gas Cooler).
- Oil separator accumulator.
- 90-litre liquid receiver.
- Integrated electrical panel.
- Two electronic refrigerant level sensors (high and low).
- K65 copper pipes and connections.
- Variable frequency drive for the first MT compressor.
- Variable frequency drive for the the LT compressor.

> Available Drivers

- Tewis
- Danfoss
- Carel

> Available Options

- Axial Version or Radial Version.
- RHX for heat recovery.
- IHX internal liquid subcooler.
- Double HP and FG valves.
- Safety valve manifold.
- 10" TMS touch screen (Tewis Machine Supervisor)
- Design pressure 130 bar for operating at high temperatures.

> Design Pressures

- MP (MT Suction): 52 bar.
- LP (LT Suction): 30 bar.
- IP (Receiver and Liquid Line): 90 bar.
- HP (Discharge): 130 bar.

> Compressors

- Bitzer



MODELS & DATA									
BASE CODE	APPLICATION	MT CAP. KW*	LT CAP. KW*	MT CAP. KW*	LT CAP. KW*	MT CAP. KW*	LT CAP. KW*	MT COMPRESSORS	LT COMPRESSORS
GNV66_148ZQX	MT	77	—	71	—	66	—	1x 4JTE-15Z (INV) + 2x 4HTE-20Z	—
GNV66_020ZQX	MT	67	—	64	—	52	—	1x 4JTE-15Z (INV) + 2x 4JTE-15Z	—
GNV66_230ZQX	MT	59	—	54	—	47	—	1x 4MTE-10Z (INV) + 2x 4JTE-15Z	—
TNV66_228ZQX	MT+LT	21	14	19	14	15	14	1x 4PTE-7K (INV) + 2x 4MTE-10Z	1x 2JSL-2Z (INV) + 1x 2JSL-2Z
TNV66_540YQX	MT+LT	44	11	39	11	33	11	1x 4MTE-10Z (INV) + 2x 4JTE-15Z	1x 2KSL-1Z (INV) + 1x 2KSL-1Z
TNV66_139ZQX	MT+LT	49	14	46	14	35	14	1x 4JTE-15Z (INV) + 2x 4JTE-15Z	1x 2JSL-2Z (INV) + 1x 2JSL-2Z
TNV66_224ZQX	MT+LT	51	14	48	14	42	14	1x 4JTE-15Z (INV) + 2x 4HTE-20Z	1x 2JSL-2Z (INV) + 1x 2JSL-2Z
TNV66_229ZQX	MT+LT	47	18	44	18	38	18	1x 4JTE-15Z (INV) + 2x 4HTE-20Z	1x 2HSL-3Z (INV) + 1x 2HSL-3Z

■ Tev MT: -8°C/Tev LT: -32°C/TSGC: +32 °C

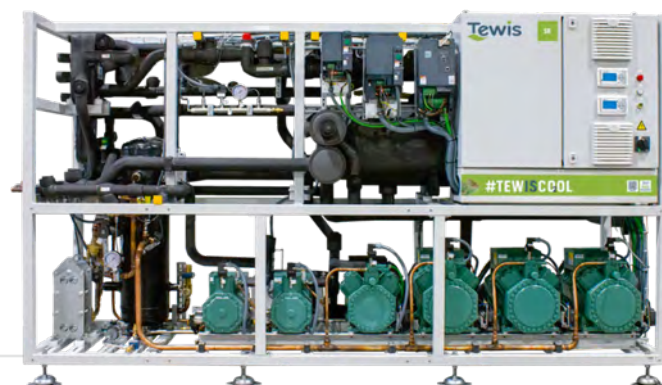
■ Tev MT: -8°C/Tev LT: -32°C/TSGC: +35°C

■ Tev MT: -8°C/Tev LT: -32°C/TSGC: +40°C

SMART RACK

THE COMPACT CENTRAL UNIT THAT BEST ADAPTS TO RETAIL REQUIREMENTS

- > **Applications:** from 400 to 1500 m²
- > **Cooling Powers:** 40 to 130 kW (MT) / 0 to 28 kW (LT)



Up to 1500 m² with a fully optimised unit based on retail needs

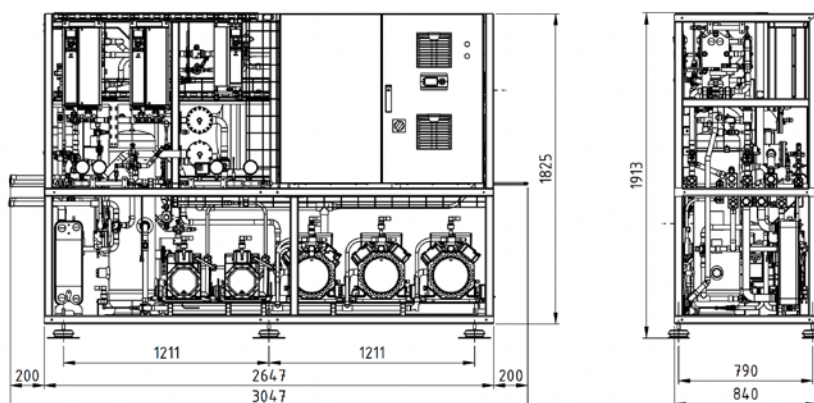
The Tewis **compact CO2 unit that best meets retail needs**. Its optimized design and dimensions make installation and maintenance easier. Its features ensure high performance and **significant energy savings for medium-sized supermarkets and small industrial applications**.

Applications

- Food retail (convenience stores).
- Supermarkets
- Cold storage. Warehouses.
- Work rooms.
- Industrial applications

Benefits

- 1] Ensures profitability and energy savings.
- 2] Ease of commissioning and maintenance, with full accessibility.
- 3] Incorporates up to 6 compressors.
- 4] K65 copper connections.
- 5] Remote, axial, or radial gas cooler. Great versatility and adaptability.
- 6] Remote control (accessible from anywhere).
- 7] Wide range of available options, adapting to most retail needs.
- 8] 160 litre liquid receiver



Smart Rack features a compact and simple design, with a width of only 84 cm. It is the most complete option for supermarkets in new construction and retrofit projects. It can be enclosed and soundproofed, increasing the possibilities for the sales area.



> Standard Equipment

- Tubular chassis
- Oil separator accumulator
- 160 litre liquid receiver
- Up to 6 compressors
- Frequency inverter for the first MT compressor (standard in LT).
- All connections in K65 copper
- Electronic refrigerant level sensors
- Manometers

> Available Options

- Parallel compressor
- RHX (Heat Recovery Exchanger)
- IHX (Internal Heat Exchanger)
- Dual bypass valves for gas and high pressure
- Emergency unit (supplied)
- Desuperheater (supplied)
- 10" touchscreen TMS (Tewis Machine Supervisor)
- Gas cooler bypass
- Enclosure

> Compressors

- Bitzer Standard.
- Bitzer Eco-Line.
- Bitzer ME.

> Design Pressures

- MP (MT Suction): 52 bar
- LP (LT Suction): 30 bar
- IP (Receiver and Liquid Line): 60 bar
- HP (Discharge): 130 bar

> Available Drivers

- Tewis
- Danfoss
- Carel
- Wurm.



MODELS & DATA										
BASE CODE	APP.	MT CAP. KW*	LT CAP. KW*	MT CAP. KW*	LT CAP. KW*	MT CAP. KW*	LT CAP. KW*	MT COMPRESSORS	IT COMPRESSORS	LT COMPRESSORS
GSR2FJ_093YQX	MT	93,20	—	86,67	—	73,38	—	1x 4JTE-15Z (INV) + 2x 4JTE-15Z	1x 4MTE-10Z (INV)	—
GSR2FJ_041YQX	MT	114,84	—	106,94	—	90,60	—	1x 4HTE-20Z (INV) + 1x 4FTE-20Z	1x 4JTE-15Z (INV)	—
TSR2FJ_092XQX	MT+LT	64,00	4,70	59,03	4,70	49,10	4,70	1x 4HTE-20Z (INV) + 1x 4FTE-20Z	—	1x 2KSL-1Z (INV)
TSR2FJ_086YQX	MT+LT	76,56	4,70	70,75	4,70	59,03	4,70	1x 4HTE-20Z (INV) + 2x 4HTE-20Z	—	1x 2KSL-1Z (INV)
TSR2FJ_439YQX	MT+LT	69,26	11,28	63,45	11,28	51,73	11,28	1x 4HTE-20Z (INV) + 2x 4HTE-20Z	—	1x 2KSL-1Z (INV) + 1x 2KSL-1Z
TSR2FJ_311XQX	MT+LT	37,71	14,38	33,59	14,38	25,76	14,38	1x 4MTE-10Z (INV) + 2x 4KTE-10Z	—	1x 2JSL-2Z (INV) + 1x 2JSL-2Z
TSR2FJ_128XQX	MT+LT	48,68	18,62	43,71	18,62	33,77	18,62	1x 4HTE-20Z (INV) + 1x 4FTE-20Z	—	1x 2HSL-3Z (INV) + 1x 2HSL-3Z
TSR2FJ_364XQX	MT+LT	84,22	18,62	76,68	18,62	61,63	18,62	1x 4HTE-20Z (INV) + 2x 4FTE-20Z	—	1x 2HSL-3Z (INV) + 1x 2HSL-3Z
TSR2FJ_193YQX	MT+LT	80,47	22,11	72,92	22,11	57,88	22,11	1x 4HTE-20Z (INV) + 2x 4FTE-20Z	—	1x 2GSL-3Z (INV) + 1x 2GSL-3Z
TSR2FJ_444YQX	MT+LT	43,81	28,25	38,54	28,25	27,86	28,25	1x 4JTE-15Z (INV) + 2x 4HTE-20Z	—	1x 2FSL-4Z (INV) + 1x 2FSL-4Z
TSR2FJ_088YQX	MT+LT	73,80	28,25	66,26	28,25	51,21	28,25	1x 4HTE-20Z (INV) + 2x 4FTE-20Z	—	1x 2FSL-4Z (INV) + 1x 2FSL-4Z
TSR2FJ_089YQX	MT+LT	80,94	4,70	74,79	4,70	62,45	4,70	1x 4HTE-20Z (INV) + 1x 4HTE-20Z	1x 4MTE-10Z (INV)	1x 2KSL-1Z (INV)
TSR2FJ_090YQX	MT+LT	64,98	12,90	59,38	12,90	48,07	12,90	1x 4JTE-15Z (INV) + 1x 4HTE-20Z	1x 4MTE-10Z (INV)	1x 2GSL-3Z (INV)
TSR2FJ_490YQX	MT+LT	58,07	14,38	52,86	14,38	42,29	14,38	1x 4JTE-15Z (INV) + 1x 4JTE-15Z	1x 4MTE-10Z (INV)	1x 2JSL-2Z (INV) + 1x 2JSL-2Z
TSR2FJ_489YQX	MT+LT	70,08	14,38	63,93	14,38	51,59	14,38	1x 4HTE-20Z (INV) + 1x 4HTE-20Z	1x 4MTE-10Z (INV)	1x 2JSL-2Z (INV) + 1x 2JSL-2Z
TSR2GJ_001ZQX	MT+LT	62,18	6,79	56,97	6,79	46,89	6,79	1x 4MTE-10Z (INV) + 2x 4MTE-10Z	1x 4MTE-10Z (INV)	1x 2MSL-07Z (INV) + 1x 2MSL-07Z
TSR2GJ_002ZQX	MT+LT	69,70	11,28	63,54	11,28	51,64	11,28	1x 4MTE-10Z (INV) + 2x 4KTE-10Z	1x 4MTE-10Z (INV)	1x 2KSL-1Z (INV) + 1x 2KSL-1Z
TSR2GJ_003ZQX	MT+LT	104,83	14,38	96,81	14,38	79,75	14,38	1x 4JTE-15Z (INV) + 2x 4HTE-15Z	1x 4JTE-15Z (INV)	1x 2JSL-2Z (INV) + 1x 2JSL-2Z
TSR2GJ_004ZQX	MT+LT	115,85	22,11	106,35	22,11	86,50	22,11	1x 4HTE-20Z (INV) + 2x 4HTE-15Z	1x 4HTE-20Z (INV)	1x 2GSL-3Z (INV) + 1x 2GSL-3Z

■ Tev MT: -8°C/Tev LT: -32°C/TSGC: +35°C

■ Tev MT: -8°C/Tev LT: -32°C/TSGC: +38°C

■ Tev MT: -8°C/Tev LT: -32°C/TSGC: +42°C

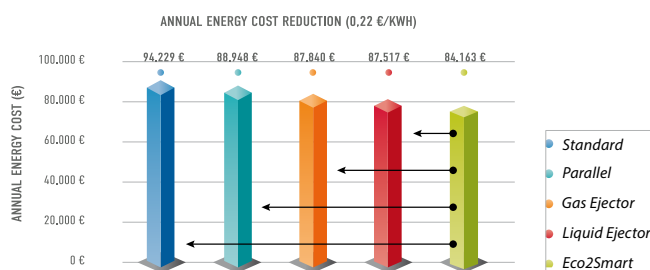
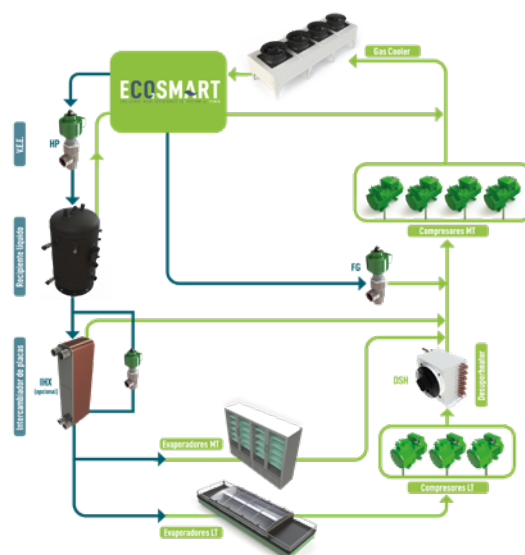
MECHANICAL SUBCOOLING THAT MULTIPLIES THE EFFICIENCY OF OUR CO₂ UNITS AND HELPS TO REDUCE ANNUAL ENERGY COSTS.

An exclusive Tewis system that saves up to 35% of the energy consumed in refrigeration

ECO2SMART are **mechanical subcooling systems** for our compressor units that **enhance efficiency even in very high ambient temperatures and reduce energy consumption costs associated with refrigeration**. They operate using only CO₂, requiring no adiabatic systems or additional investments to ensure performance.

Main Benefits

- 1] Improves efficiency** in very high temperatures without the need for adiabatic systems or additional components.
 - 2] Superheat = 0 K in MT/LT.** Enables operation with low superheat levels in both MT and LT **using standard components** (only ECO2SMART+).
 - 3] Energy savings (35%)**
 - 4] The only system on the market** that starts operating at an ambient temperature of 10°C
 - 5] Best COP on the market**
(>15% compared to parallel compression, >30% compared to standard systems)
 - 6] Compatible** with the most recognized electronics brands (Danfoss, Carel, Eliwell, and Wurm)
 - 7] Perfect balance** between efficiency and investment with a very simple system (CO₂ + standard components).
- Payback in less than 3 years.**

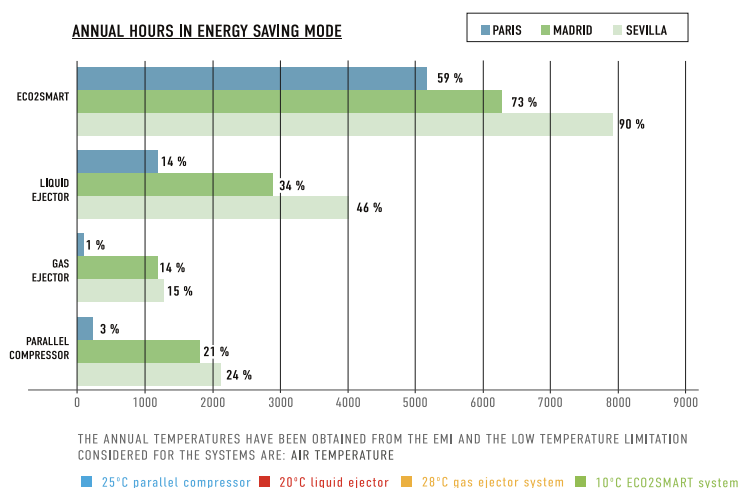


Comparison between systems carried out over 60 KW LT / 200 KW MT

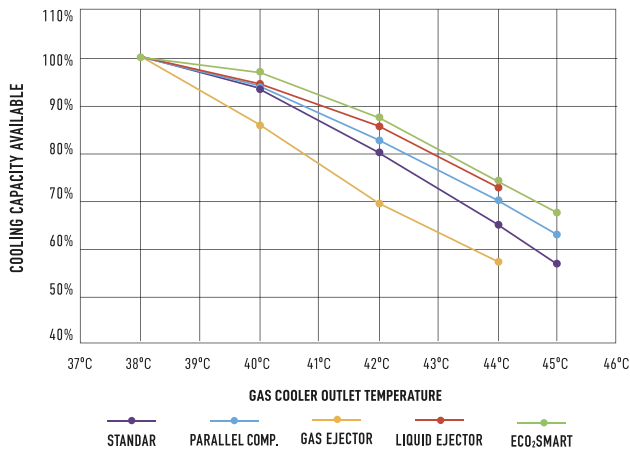
More Benefits

1 Works more hours in energy saving mode

ECO2SMART starts working as a mechanical subcooling system at an ambient temperature of 10°C, which is lower than other market solutions (which typically start at 25°C). This way, ECO2SMART optimises the refrigeration production operation for longer periods than any other system. In other words, it saves energy for more hours each year.



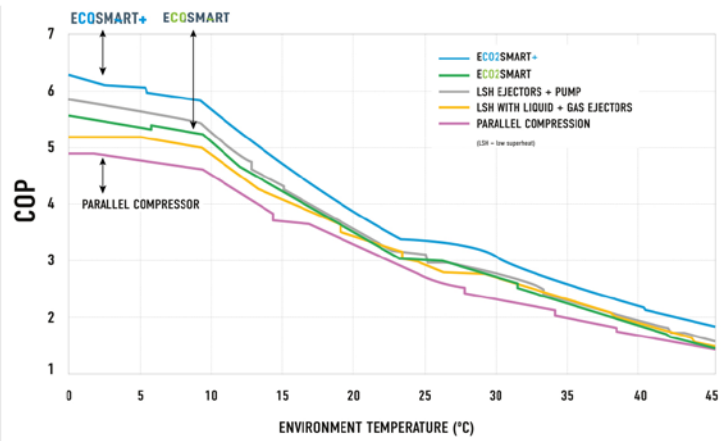
AVAILABLE COOLING CAPACITY AT TEMPERATURES ABOVE DESIGN CONDITIONS



3 Best COP in the market at high temperatures

ECO2SMART improves the COP at elevated temperatures by more than 15% over parallel compression and by more than 30% over standard systems.

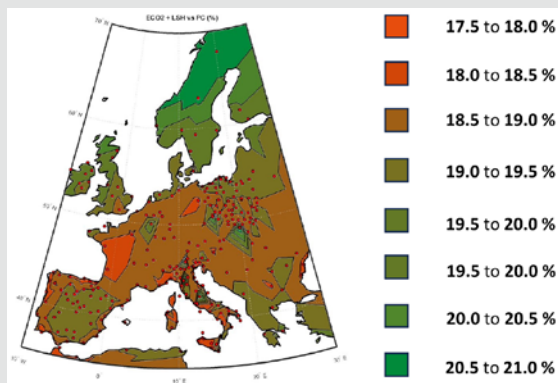
To achieve this, ECO2SMART optimises the suction pressure and efficiency of the additional compressors based on the outlet temperature of the cooler gas, improving the working pressure and overall plant efficiency.



ECO2SMART+ low superheat

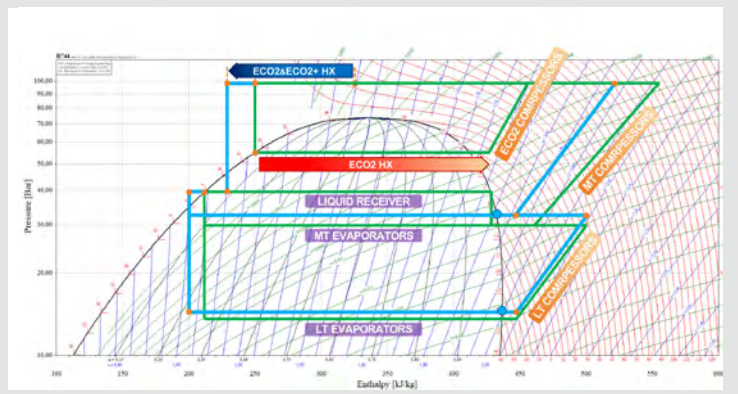
ECO2SMART+ is the evolution of our ECO2 system that allows working with ultra-low superheat in both MT and LT operation, increasing evaporation temperatures. For each degree increase, energy savings of approximately

Energy savings: ECO2SMART+ Vs. parallel compression



How ECO2SMART+ works

- 1] Subcooling is applied upstream of the HP valve
- 2] Minimises the Flash-Gas generated in the liquid receiver.
- 3] Evaporating temperature increase
- 4] Compression ratio reduction
- 5] Reduced compressor energy consumption
- 6] Reduced mechanical stress



Mini SMART DUPLEX

NEW BOOSTER CENTRAL UNIT WITH HIGH POWER AND COMPACT DIMENSIONS

- > **Applications:** from 1000 to 2000 m²
- > **Cooling Powers:** 50 to 150 kW (MT) / 0 to 35 kW (LT)



Mini-SD: Efficiency, power, and compact dimensions for applications up to 2000 m²

Our Mini SMART DUPLEX is a CO₂ booster unit with **6 compressors and an integrated ECO2SMART system**. A unit that combines 3 key factors highly demanded by the market: **EFFICIENCY + POWER + ADAPTATION to MACHINE ROOMS** (its compact dimensions and low height make it suitable for small machine rooms). The Mini-SD delivers outstanding performance with 3 compressors for medium temperature (MT), 2 compressors for low temperature (LT), **and 1 ECO2SMART compressor**.

Applications

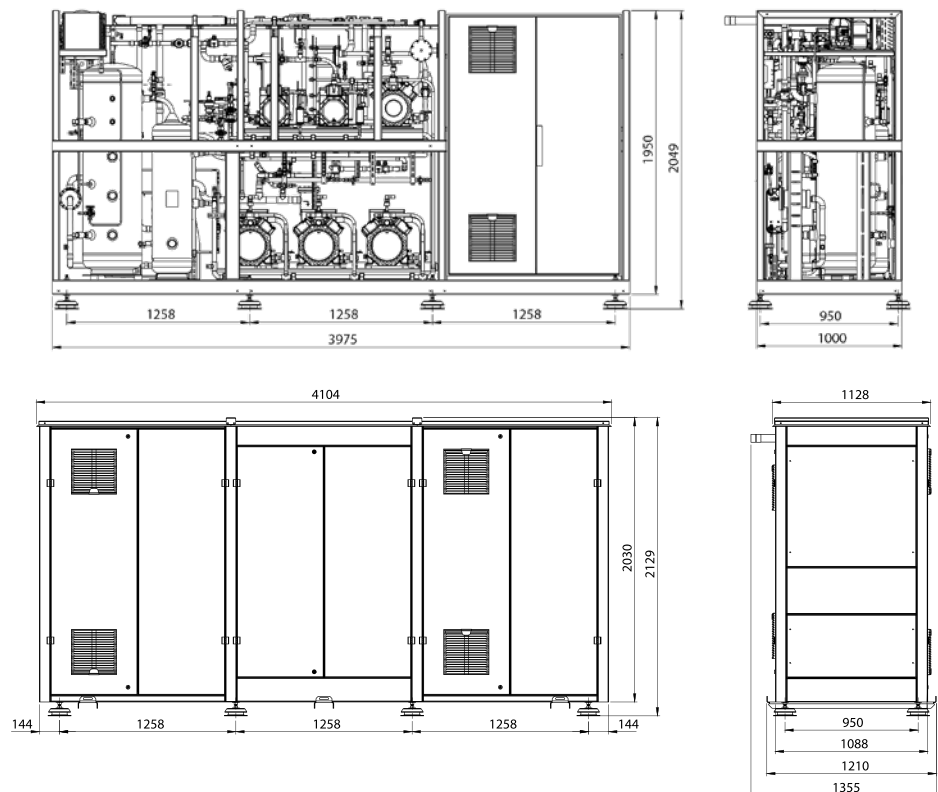
- Food Retail
- Supermarkets
- Cold stores
- Industrial Applications

Our ECO2SMART system is included as standard in the Mini-SD central unit, generating large savings in energy consumption.



Benefits

- 1] High-power unit with a compact design and limited height for small spaces or rooms.
- 2] Maximum power with 6 compressors.
- 3] Large-capacity vertical receiver (up to 1x150 l).
- 4] Total length of less than 4 m.
- 5] Remote control (accessible from anywhere).
- 6] Option for 1 RHX for tap water or heating.
- 7] Can be enclosed and soundproofed.
- 8] Incorporates ECO2SMART as standard.



> Standard Equipment

- ECO2SMART Compressor
- Tubular chassis
- Oil separator accumulator
- Vertical liquid receiver (1x150 l)
- 6 compressors
- Frequency inverter for the first MT compressor, first LT compressor, and ECO2SMART compressor.
- Electronic refrigerant level sensors.
- All connections made of copper.
- Manometers.

> Compressors

- Bitzer

> Available Options

- RHX (Heat Recovery Exchanger)
- Gas cooler bypass
- IHX (Internal Heat Exchanger)
- Double gas and high-pressure bypass valves
- Onboard emergency unit
- 10" touch screen (TMS) (Tewis Machine Supervisor)
- Option for ECOLINE+ compressors (permanent magnet motors – LSPM).
- Enclosed and soundproofed

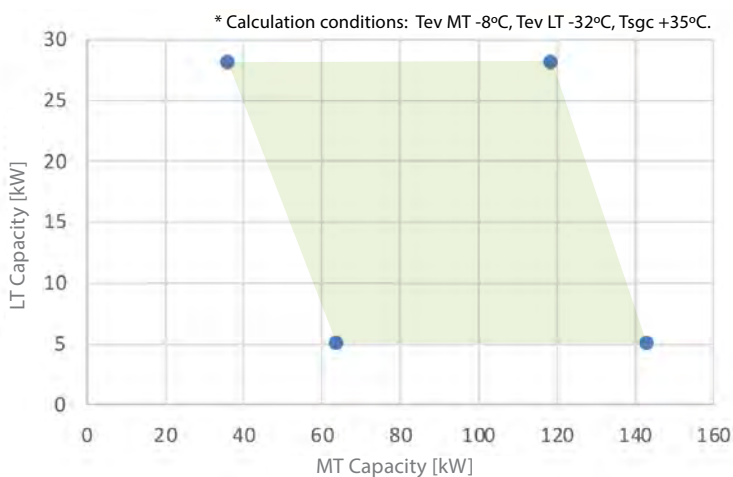
> Design Pressures

- MP (MT Suction): 52 bar.
- LP (LT Suction): 30 bar.
- IP (Receiver and Liquid Line): 60 bar.
- ECO2 (ECO2SMART Suction): 80 bar.
- HP (Discharge): 120 bar.

> Available Drivers

- Tewis
- Danfoss
- Carel

Its compact and space-saving design allows for a highly efficient and powerful unit in machine rooms with very tight spaces, which is perfect for retrofitting supermarkets.



With just 1 m depth, all components are easily accessible, significantly reducing installation and maintenance times and costs. Additionally, the Mini Smart Duplex can be fully enclosed and soundproofed for outdoor installation.



SMART DUPLEX

THE HIGHEST CO₂ CAPACITIES FOR
COMMERCIAL REFRIGERATION

- > **Applications:** from 1500 to 3000 m²
- > **Cooling Powers:** 80 to 250 kW (MT) / 0 to 35 kW (LT)



The compact central unit with the highest power and performance in CO₂

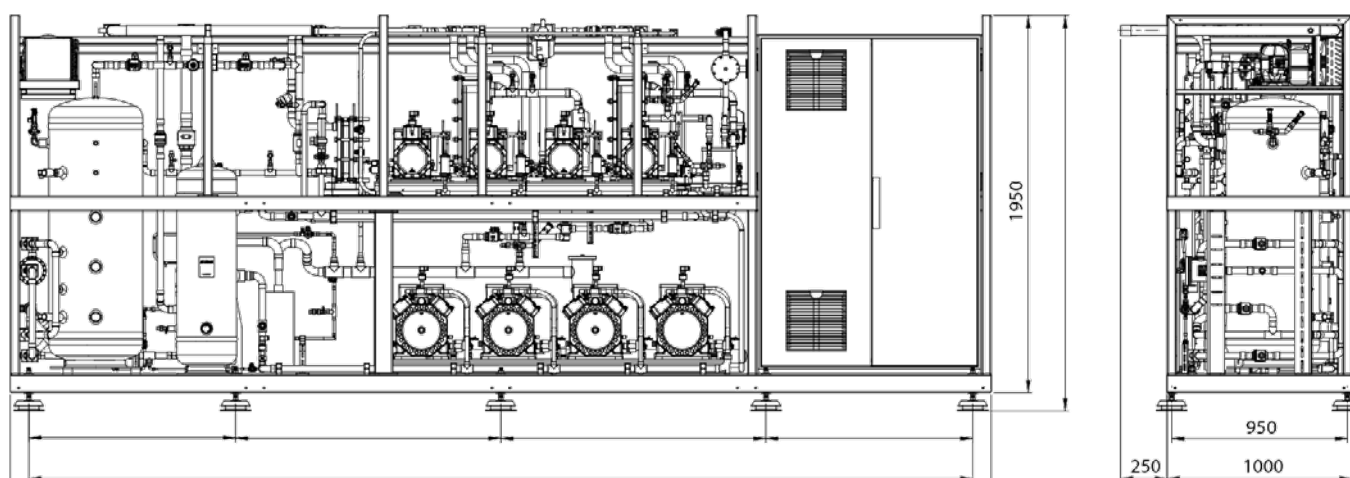
Transcritical CO₂ booster machines for commercial refrigeration and small industry. Additionally, the SMART DUPLEX units offer the highest capacities for the commercial CO₂ refrigeration range, **up to 250 kW**, a perfect solution with maximum performance for medium temperature (MT) and low temperature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

Applications

- Food retail (convenience stores).
- Supermarkets.
- Large supermarkets.
- Cold storage.
- Warehouses.
- Industrial applications

Benefits

- 1] Compact and simple design that facilitates commissioning and maintenance.
- 2] Can incorporate up to 9 compressors.
- 3] Large-capacity vertical receiver (up to 2x250 l).
- 4] Available options.
- 5] Remote, axial, or radial gas cooler.
- 6] Option for 2 RHXs, one for ACS and one for climate control.
- 7] Can be enclosed and soundproofed.
- 8] Can incorporate ECO2SMART.
- 9] Remote control (accessible from anywhere).



4680 / 5304 / 6008 *

* SMART DUPLEX can have 3 types of chassis sizes.

With only 1 meter of depth, its design allows easy access to all the machine's components, reducing installation and maintenance times and costs.

A unit that is extremely easy to install, offering great capacity, performance, and a compact size for small spaces.



> Standard Equipment

- Tubular chassis
- Oil separator accumulator
- Vertical liquid receiver (up to 2x250 l.)
- Up to 9 compressors
- Variable frequency drive for the first MT compressor and for the LT
- All connections in K65 copper
- Electronic refrigerant level sensors

> Compresores

- Bitzer

> Available Options

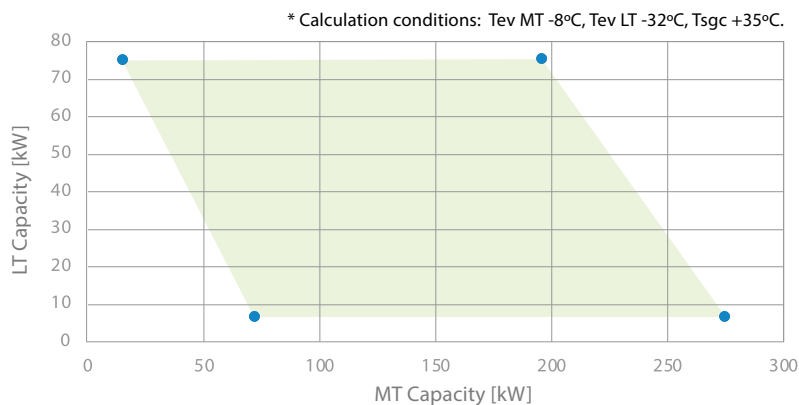
- Parallel compressor
- RHX (Heat Recovery Exchanger) up to 190 kW
- IHX (Internal Heat Exchanger)
- Dual bypass valves for gas and high pressure
- Onboard emergency unit
- 10" touchscreen (TMS)
- Fully enclosed and soundproofed
- 2 RHXs, one for tap water and another for heating
- Available with ECOLINE+ compressors (permanent magnet motor – LSPM)
- ECO2Smart compressor.

> 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.



INDUSTRIAL

SEMI-INDUSTRIAL AND INDUSTRIAL SOLUTIONS,
CUSTOMISED, EFFICIENT, AND SUSTAINABLE

- > **SEMI-INDUSTRIAL = CO2 CUSTOM LIGHT:** tailored customisation + reduced delivery times + up to 12 compressors
- > **INDUSTRIAL = CUSTOMISABLE :** extensive customisation (according to needs) + CO2 / NH3 / GLYCOL



Structures and features designed to meet most specific power and space requirements with very low consumption.



Applications

- Industrial processes
- Logistics platforms
- Cold rooms
- Freezing tunnel
- Cold storage
- Hypermarkets

Solutions

- 1] Subcritical CO2 condensing units with glycol
- 2] Transcritical CO2 racks
- 3] Transcritical CO2 booster units
- 4] Transcritical CO2 LT units for cold rooms or freezing tunnels
- 5] CO2 chillers for refrigeration
- 6] NH3 chillers

> semi-industrial CUSTOM LIGHT CO2

CUSTOM LIGHT CO2 is a new family of industrial machines with a **highly standardised and modular design and manufacturing system**, allowing us to customise their features to meet the specific needs of each project.

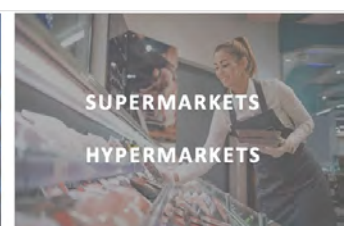
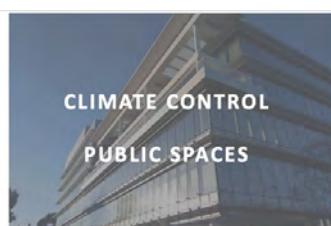
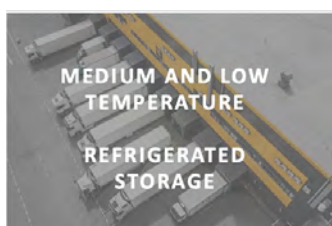
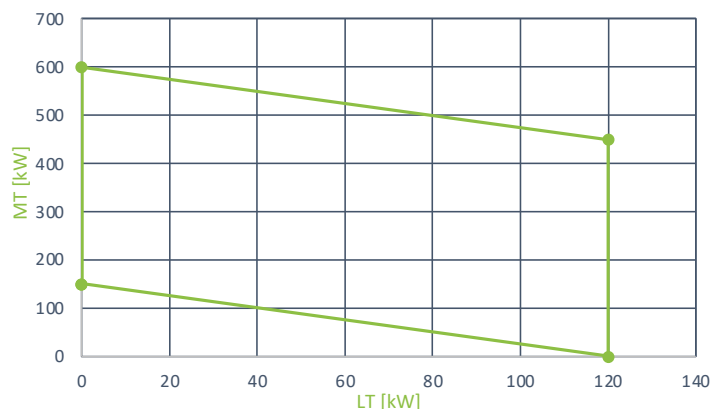
- Tailored customisation.
- Reduced delivery times (estimated 12 weeks)
- Power ranges: 150 kW to 600 kW total.
- Limited number of compressors:
6 in MT / 3 in CP / 4 in LT

Applications

- 1] Pure LT
- 2] LT + MT Booster
- 3] Pure MT

Configurations

- BOOSTER
- Parallel Compressor
- ECO2SMART



> General Features

- Reduced investment and maintenance costs,
- Natural refrigerant, non-corrosive, no risk to electrical and electronic equipment.
- Lighter weights, reducing costs in structures and construction.
- Compact, plug & play design, with the possibility of indoor and outdoor placement to reduce installation times.
- Specific design for freezing tunnel and blast chiller applications (study of medium, peak, and transient power).
- Direct expansion to improve efficiency.
- Can incorporate ECO2SMART.
- HIGH COP



- Excellent ratio between cooling capacity and footprint (kW / m2)
 - Heat recovery at various temperature levels:
55°C / 65°C, 40°C / 45°C, 25°C / 30°C
 - High reliability in suction / evaporation conditions through predictive algorithms.
 - Compressors and frequency drives in the lead compressor of each suction line.
 - Connection to separator with CO2 pumps*.
 - Separate chiller modules for cooling process water or brine.
- Improved overall efficiency by optimising the design point.
- Hot gas defrost as an option



> industrial CO2

The range of Tewis CO2 industrial SOLUTIONS consists of a series of powerful machines, with Transcritical or Subcritical CO2, chassis and features that are highly customisable, designed to meet the different requirements of particularly demanding installations.

| Main Benefits |

- 1]** Integrated electrical panel. Easy to use, with a touch screen and exclusive control software.
- 2]** Optional parallel compressor that significantly increases system efficiency.
- 3]** Low, medium, and high-temperature compressors.

4] Economiser: allows the MT compressor to transfer part of its power to the LT compressors, thereby increasing system efficiency.

5] Proportional modulation: a variable frequency drive in each compressor group adapts its operation to the specific needs of the moment.

6] Can incorporate ECO2SMART.





CONTROLS FOR COLD ROOMS WITH ELECTRONIC EXPANSION VALVE



Alarm PE SB

Alarm
Person locked in
No Battery



Alarm PE CB

Alarm
Person locked in
With Battery

Pulse Models	Description	Prices
CKZEVAEI0MCS	KDX EVA 0-MC Small with RTX 600 and without protections*	to be consulted
CKZEVAEI220S	KDX EVA 2-20 Small with RTX 600 and with protections + accessories (Circuit Breaker Switch II 6A and Circuit Breaker Heaters II - 20A)	to be consulted
CKZEVAEI0MCB	KDX EVA 0-MC Big with RTX 600 and without protections* + accessories	to be consulted
CKZEVAEI320B	KDX EVA 3-20 Big with RTX 600 and with protections + accessories (Circuit Breaker Switch II 6A and Circuit Breaker Heaters III - 20A)	to be consulted
Steps Models	Description	Prices
CAJAPASOSPROT	Valve control box with RTX 600 V/S and without protections* + accessories	to be consulted
CAJAPASOSPROT	Valve control box with RTX 600 V/S and with protections + accessories (Circuit Breaker Switch to be defined and Circuit Breaker Heaters to be defined)	to be consulted

EVA AIR – KDX EVA

Everything under control

Box example BIG model with options (marked with a dotted line)



Essential Kit for the Installer

Person Trapped Alarm with Battery	ACCEVAEIACB
Person Trapped Alarm without Battery	ACCEVAEIASB
CO2 Leak Alarm (detector must be purchased separately)	ACCEVAEIFFR (alarm), LKDN67IR00BSK (detector)
Door Open Alarm	ACCEVAEIPIUA
Service Sticker	ETISERVIEVAEIB
Customer Sticker	ETICUSTOMEVAEI
Impact Protector (Big Enclosure)	PROCAJAEI220
Relay (mandatory if used with ZEAS)	ACCEVAEICVE
Transformer	ACCVAEITF35



REAL-TIME MONITORING OF TEWIS
UNITS WITH CLOUD-BASED IOT
FUNCTIONALITIES.

Have you ever considered comparing two racks in real time simultaneously and verifying their performance without waiting for historical data? Our new SRC version integrates advanced IoT functionalities, enabling owners and installers/maintenance technicians to remotely monitor their racks safely and easily, without the need to connect to any external web device.

1 HISTORICAL
ANALYSIS IN
ONE CLICK



Tewis racks can **record and send data to SRC periodically with a time precision of 1 minute**. This allows you to analyze and compare the performance of your racks in detail. Additionally, you can save your most frequently used analyses for quick access with just one click.

2 GEOLOCATED
KPI
VISUALIZATION



Transform analyses into KPIs to display on your **asset map**. You can **geographically compare your racks based on the selected KPI** while also knowing the position of each unit in the KPI ranking.

3 REMOTE
REAL-TIME
MONITORING



Select the machine or machines you need to check in real time. You will instantly see their performance. Additionally, you can graphically visualize the evolution of the variables you need, **even for different racks simultaneously**.



In Spain and Portugal alone, over 24,000 stores will be affected by FGAS, with many more across the rest of Europe. They have one need: to renew or replace their systems using fluorinated gases. At TEWIS, we want to accompany and assist you in this process.

Tewis
a member of **DAIKIN** group

FGAS

WHAT YOU MUST KNOW

REGULATION (EU) 2024/573

ON FLUORINATED GREENHOUSE GASES. MANDATORY COMPLIANCE

- **Effective Date:** 11 march 2024
- **Scope of application:** pure or mixed fluorinated greenhouse gases, as well as equipment and their parts containing them.



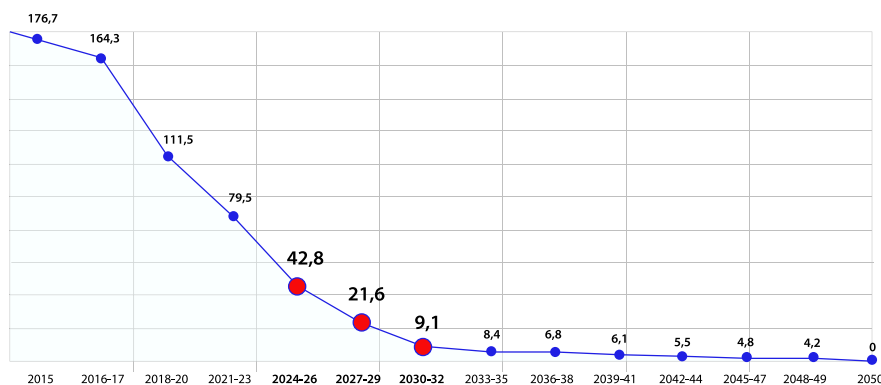
RESTRICTIONS
REDUCTION OF QUOTAS
HIGH GAS PRICES
LACK OF SUPPLY

MAIN CHANGES

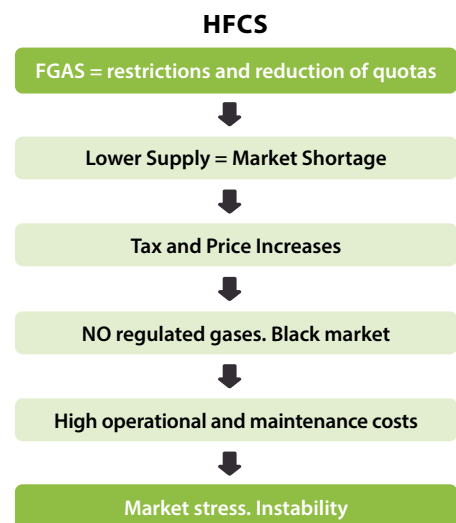
- 1] Drastic reduction of marketable quota.
→ » There will be no gas available for existing installations
» Significant increase in refrigerant prices
- 2] Allocation by marketing quota of €3/Ton. CO₂eq.
- 3] New restrictions on new construction and maintenance.
→ » Mandatory renewal of systems with HFCs and >GWP
» Existing HFC systems cannot be inspected or maintained
- 4] Training of operators, certification, and leak containment.
→ » Applies to both individuals and companies
» Stricter preventive measures, increased control
- 5] Recovery, recycling, and regeneration of the product.
→ » By certified persons, with records and histories

Target 0 Emissions by 2050

MARKETABLE QUOTA in million tonnes of CO₂ eq. per year



- CO₂** → **CO₂** >> GWP = 1. Does not damage the ozone layer. Does NOT generate PFAS
CO₂ >> NON-toxic. NON flammable
CO₂ >> Always available. No quotas. No restrictions.



OUR EQUIPMENT AND SOLUTIONS WITH NATURAL REFRIGERANTS SUCH AS CO₂ / NH₃ ELIMINATE THE RISK AND UNCERTAINTY GENERATED BY FGAS.

PFAS

PFASs are synthetic chemicals with extreme resistance to degradation in the environment.

Many synthetic refrigerants, such as R-134a, or even new alternatives designed to have a low GWP are themselves PFASs, degrade into TFA, which poses a problem.

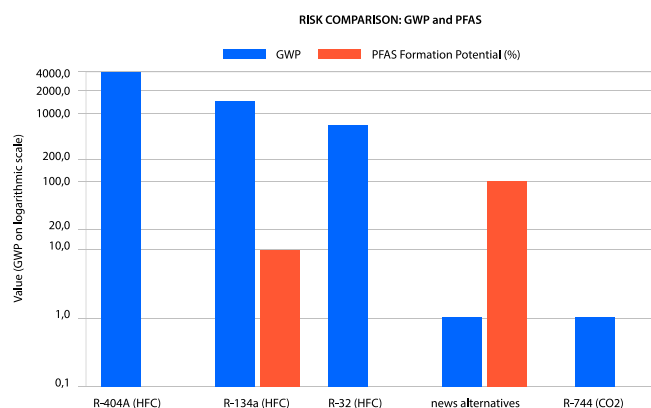
There is a proposed EU ban on PFASs (REACH), which could come into force from 2028, with a total phase-out in the refrigeration sector by 2035.

The revised F-Gas Regulation (EU 2024/573) also makes an explicit link between F-gases and PFASs, reinforcing the pressure to look for alternatives that do not generate these chemicals.

CO2 stands out as the only one with minimal GWP and zero PFAS risk.

Natural refrigerants such as CO2 (R744) are the only option that does not contribute to PFAS contamination, making them the "only future-proof option".

Why bet on solutions that may fall outside the regulatory framework in a few years' time?



FGAS BANS IN REFRIGERATION



*CHILLERS

up to 12 kW with GWP ≥ 150
greater than 12 kW with GWP ≥ 750



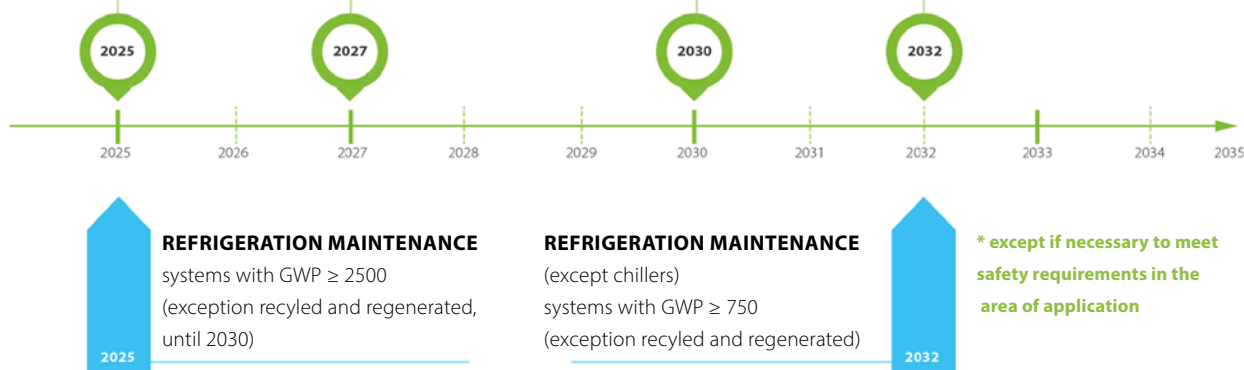
*STAND ALONE REFRIGERATION

except chillers
equipment GWP ≥ 150



*REFRIGERATION (ALL)

except chillers
stationary refrigeration
equipment GWP ≥ 150



** except if necessary to meet safety requirements in the area of application*

Fuente gráfico: AEFYT



At Tewis, we design and manufacture commercial and industrial refrigeration solutions. Moreover, we operate under the principle that not all projects are the same, and that implementing and maintaining the right solution for each case is key.

For this reason, at **TEWIS** we develop **innovative and customised solutions, efficient and sustainable, with a wide temperature range that adapts to the needs of each client and their environment**, reducing investment, consumption, and maintenance costs compared to other systems.

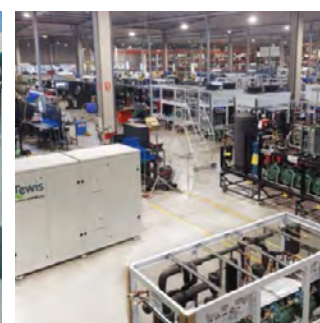
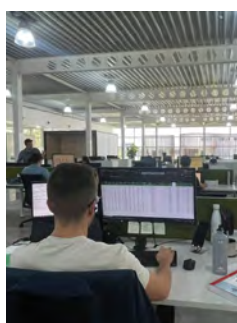
Medium and long-term solutions, with a WIN-WIN philosophy, developed so that our clients can focus on the growth of their businesses, achieving significant savings and benefits.

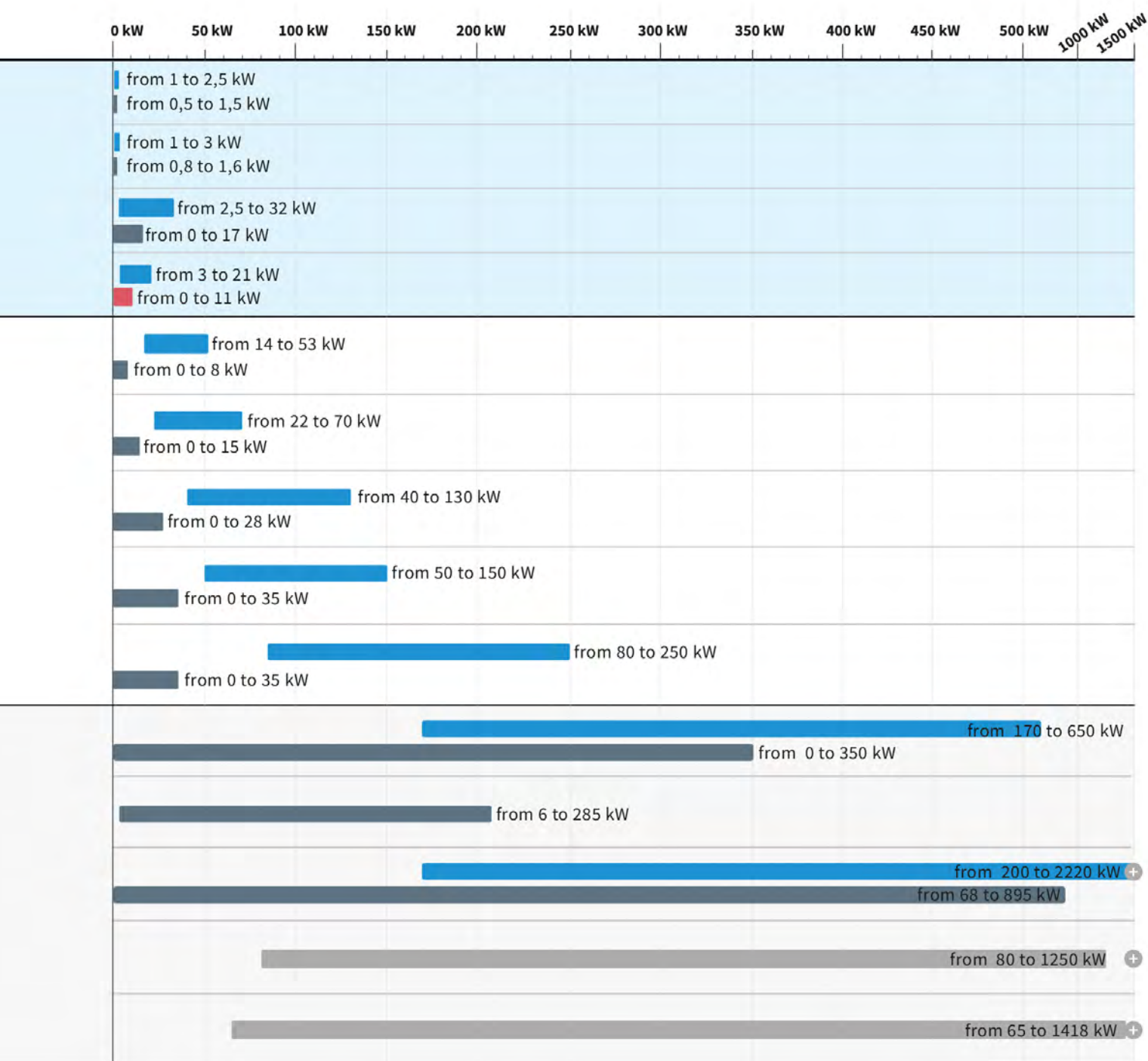


every project is special,
every project requires a
unique solution

	MODEL		REFRIGERATION	SURFACE	
DAIKIN STANDARD SOLUTIONS	LMS	■	MT / LT	4/30 m ³	
	LMC	■	MT / LT	4/30 m ³	
	CO2 ZEAS	■	MT / LT	< 399 < 600 m ²	
	CO2 CONVENI-PACK	■	MT	200 < 300 m ²	
Tewis CONFIGURABLE SOLUTIONS	NOVA 58+	■	MT / BOOSTER	300 < 800 m ²	
	NV66+	■	MT / BOOSTER	700 < 1200 m ²	
	SMART RACK	■	MT / BOOSTER	600 < 1500 m ²	
	MINI - SD	■	MT / BOOSTER	1000 < 2000 m ²	
	SMART DUPLEX	■	MT / BOOSTER	1500 < 3000 m ²	
Tewis INDUSTRIAL SOLUTIONS	CO ₂ INDUSTRIAL	■	MT / BOOSTER	2500 < 4999 m ²	
	CUO / UNIT / RACK	■	LT SUBCRITICAL	5000 < 10000 m ²	
	CN UNIT	■	INDUSTRIAL	INDUSTRIAL	
	CN CHILLER	■	INDUSTRIAL	INDUSTRIAL	
	CN RACK	■	INDUSTRIAL	INDUSTRIAL	

■ R290 ■ CO₂ ■ NH₃ ■ AC





■ MT ■ LT



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If you wish, we have at your disposal the document with our general conditions of sale.



a member of **DAIKIN** *group*

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