



2024

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



NS 21

Vertical CO2 Central Unit with Remote Gas Cooler [p.6]



nuevo!

NV 58+

Transcritical CO2 system functioning as a Booster [p.8]



NV 66+

Solution for up to 1200 m2 for 1 or 2 temperatures (Booster) [p.10]

ECOSMART

An exclusive high efficiency CO2 system by Tewis. Mechanical Subcooler [p.12]



SMART RACK

The most versatile CO2 central unit for retail [p.14]



nuevo!

Mini-SD

Efficiency, cooling power, and compact dimensions [p.16]



SMART DUPLEX

Maximum power and performance for commercial refrigeration [p.18]



INDUSTRIAL

Semi-industrial and industrial solutions, customised, efficient, and sustainable [p.20]



KDX

Controls for cold rooms with electronic expansion valve [p.23]





a member of **DAIKIN** group



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

NS 21

VERTICAL CENTRAL UNIT FOR APPLICATIONS
UP TO 600 M2 ONLY 1 M2 FOOTPRINT

- **Applications:** from 200 to 600 m²
- **Cooling Powers:** 18 to 45 kW (MT) / 0 to 10 kW (LT)



Highly compact and complete central unit, perfect for retail with very small machine rooms

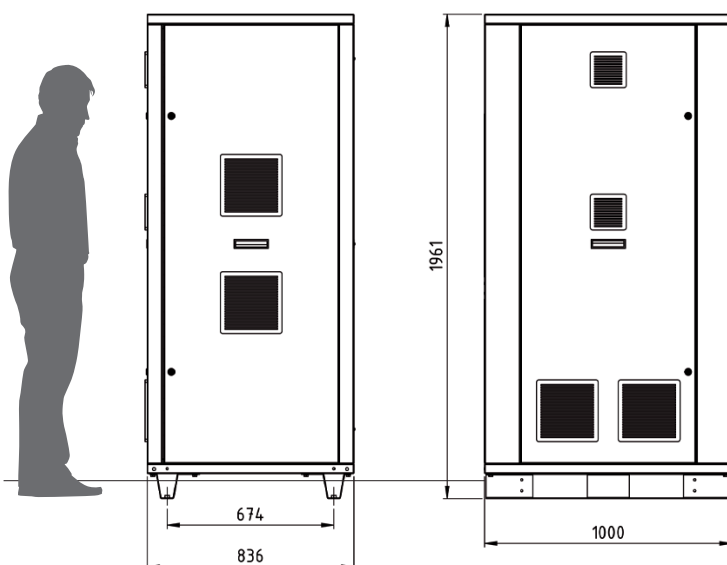
A "mini" unit but with great capacity, perfect for convenience stores and small supermarkets. Its tower design with openings on two sides allows access to the interior from any point, which speeds up and reduces maintenance costs. It can operate as a booster at 1 or 2 temperatures and features a 48-litre liquid receiver with an internal heat exchanger. All within less than 1 m² of depth.

Applications

- Convenience Stores
- Small Supermarkets
- Petrol Station Retail
- Refrigerated Rooms
- Horeca Channel

Benefits

- 1] "Mini" unit with 360° accessibility offering great profitability and savings.
- 2] Suitable for indoor and outdoor installations, with excellent acoustic insulation.
- 3] Service at 1 or 2 temperatures (working as a booster).
- 4] Up to 2 compressors for MT and 1 for LT.
- 5] Remote, axial, or radial gas cooler, making it a very versatile unit.
- 6] Quick delivery and easy maintenance, reducing wait times and costs.



A Plug & Play unit with a vertical design and multiple openings that facilitate access to all its components, thereby reducing installation and maintenance times and costs.

> Standard Equipment

- Up to 2 MT compressors and 1 LT compressor.
- MT Variable Frequency Drive.
- Complete electrical panel.
- Electronic refrigerant level sensors.
- Oil separator accumulator.
- 48-litre liquid receiver with internal heat exchanger for connection to emergency unit.

> Available Drivers

- Tewis (EWCM9000pro)
- Danfoss (AK- PC772)
- Carel (pRack PR300T Medium)

> Available Options

- LT Variable Frequency Drive.
- Outdoor chassis option.
- Option for connections to external RHX

> Design Pressures

- MP (MT Suction): 52 bar.
- LP (LT Suction): 30 bar.
- IP (Receiver and Liquid Line): 70 bar.
- HP (Discharge): 120 bar.

> Compressors

- Bitzer
- Dorin



BITZER											
BASE CODE	APPLI.	MT CAP. KW*	LT CAP. KW*	MT CAP. KW*	LT CAP. KW*	MT CAP. KW*	LT CAP. KW*	GC POW max	MT COMPRESSORS	LT COMPRESSORS	LP DB (A)**
GNS21J*302XBX	MT	18,18	—	16,83	—	14,22	—	32,08	1x 2MTE-5K + 1x 2KTE-7K	—	38,7
GNS21J*872YBX	MT	23,39	—	21,56	—	18,15	—	39,96	1x 4PTE-7K + 1x 4MTE-7K	—	46,7
GNS21J*882YBX	MT	35,05	—	32,34	—	27,25	—	62,08	1x 4MTE-10K + 1x 4KTE-10K	—	47,3
TNS21J*304XBX	MT+LT	15,03	2,83	13,69	2,83	11,07	2,83	32,08	1x 2MTE-5K + 1x 2KTE-7K	1x 2MSL-07K	39,4
TNS21J*881YBX	MT+LT	31,88	2,83	29,2	2,83	24,1	2,83	62,08	1x 4MTE-10K + 1x 4KTE-10K	1x 2NSL-05K	47,4
TNS21J*880YBX	MT+LT	32,54	2,13	29,86	2,13	24,76	2,13	62,08	1x 4MTE-10K + 1x 4KTE-10K	1x 2MSL-07K	47,4

DORIN											
BASE CODE	APPLI.	MT CAP. KW*	LT CAP. KW*	MT CAP. KW*	LT CAP. KW*	MT CAP. KW*	LT CAP. KW*	GC POW max	MT COMPRESSORS	COMPRES. LT	LP DB (A)**
GNS21J*677XDX	MT	25,58	—	23,8	—	20,16	—	45,17	1x CD475-4,7H + 1x CD475-6,4M	—	39,6
GNS21J*684XDX	MT	36,35	—	33,91	—	28,79	—	64,18	1x CD490-6,4H + 1x CD490-9,2M	—	41,2
GNS21J*750XDX	MT	44,71	—	41,78	—	35,51	—	78,95	1x CD4120-9,2H + 1x CD490-9,2M	—	42,1
TNS21J*670XDX	MT+LT	22,2	3,3	20,42	3,3	16,78	3,3	45,17	1x CD475-4,7H + 1x CD475-6,4M	1x CDS101B	39,7
TNS21J*679XDX	MT+LT	30,05	6,15	27,61	6,15	22,49	6,15	64,18	1x CD490-6,4H + 1x CD490-9,2M	1x CDS181B	41,3
TNS21J*678XDX	MT+LT	31,85	4,4	29,41	4,4	24,29	4,4	64,18	1x CD490-6,4H + 1x CD490-9,2M	1x CDS151B	41,3
TNS21J*658XDX	MT+LT	32,97	3,3	30,53	3,3	25,41	3,3	64,18	1x CD490-6,4H + 1x CD490-9,2M	1x CDS101B	41,3
TNS21J*753XDX	MT+LT	36,73	7,78	33,8	7,78	27,53	7,78	78,95	1x CD4120-9,2H + 1x CD490-9,2M	1x CDS301B	42,2
TNS21J*659XDX	MT+LT	41,33	3,3	38,4	3,3	32,13	3,3	78,95	1x CD4120-9,2H + 1x CD490-9,2M	1x CDS101B	42,1

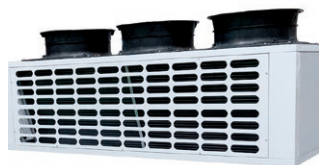
■ MT ev.Temp.: -8°C/Tev LT: -32°C/TSGC: +35°C ■ MT ev.Temp.: -8°C/Tev LT: -32°C/TSGC: +38°C ■ MT ev.Temp.: -8°C/Tev LT: -32°C/TSGC: +42°C

** Sound pressure at 10 m, considering a spherical surface in an open field and with soundproofing. Tolerance ±2 dB.

The remote, axial, or radial Gas Cooler allows our NS21 to easily adapt to the different needs of each store, establishment, or customer.



GNV58



GNV66



GNV58



GNV66

CODE	CAPACITY* [KW]	FLOW RATE [M3/H]	SOUND PRESSURE 10M [DB(A)]	NUMBER OF FANS
GNV58PE	58,84	16.400	52	2x Ø500 EC
GNV58PE LPS	52,15	12.800	46	2x Ø500 EC
GNV66PE	88,40	24.000	53	3x Ø500 EC
GNV66PE LPS	79,27	19.200	45	3x Ø500 EC

CODE	CAPACITY* [KW]	FLOW RATE [M3/H]	SOUND PRESSURE 10M [DB(A)]	NUMBER OF FANS
GNV58NE	56,28	15.000	49	2x Ø500 EC
GNV66NE	85,61	22.500	50	3x Ø500 EC

* Calculation conditions: Air T. 35°C, GC outlet 37°C, Gas Inlet T. 115°C, Gas Pressure 92 bar. Available pressure radial models. 100 Pa

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 10 kW (LT)



New compact central, perfect for small supermarkets

Tewis' new compact central unit with minimal footprint, excellent for small supermarkets. A transcritical CO₂ unit that functions as a **booster**, servicing refrigeration at one or two temperatures. A complete solution that can house **up to 3 compressors** in a reduced structure that **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] Excellent acoustic insulation. Night mode included.
- 5] Larger heat exchange surface = Lower flow rate.
- 6] With a design pressure of 130 bar, it can operate at high temperatures, making the emergency unit unnecessary.
- 7] Up to 3 compressors.



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.
- Oil separator accumulator.
- 90-litre liquid receiver.
- Electrical panel with control unit and external selector.
- 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 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).
- Low temperature compressors can be switched to high pressure (ME Series).

> Compressors

- Bitzer

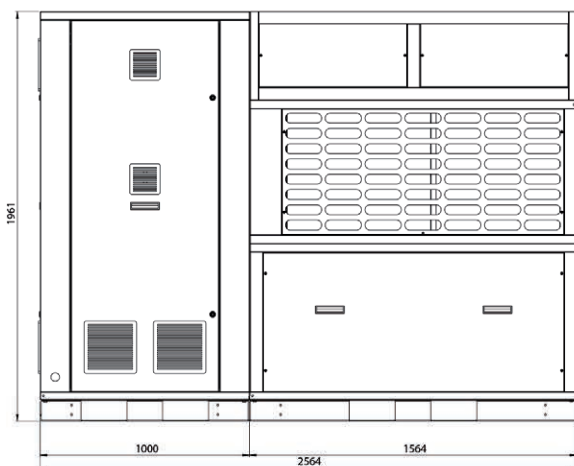
> Design Pressures

- MP (MT Suction): 52 / 60 bar.
- LP (LT Suction): 30 / 60 bar.
- IP (Receiver and Liquid Line): 90 bar.
- HP (Discharge): 130 bar.

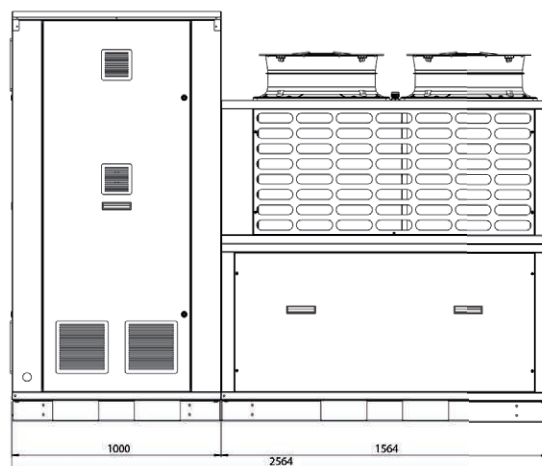
> Available Drivers

- Tewis (EWCM9000pro)
- Danfoss (AK- PC782A)
- Carel (pRack PR300T)

DIMENSIONS NV58+ RADIAL VERSION



DIMENSIONS NV58+ AXIAL VERSION



MODELS & DATA										
BASE CODE	APPLI.	COMPR.	MT CAP. KW*	LT CAP. KW*	MT CAP. KW*	LT CAP. KW*	MT CAP. KW*	LT CAP. KW*	MT COMPRESSORS	LT COMPRESSORS
GNV58__923YBX	MT	BITZER	49	—	47	—	45	—	1x4MTE-10K (INV)+2x4KTE-10K	—
GNV58__882YBX	MT	BITZER	38	—	35	—	32	—	1x4MTE-10K (INV)+1x4KTE-10K	—
GNV58__202ZBX	MT	BITZER	32	—	29	—	26	—	1x4MTE-10K (INV)+1x4MTE-10K	—
TNV58__203ZBX	MT+LT	BITZER	19	4	17	4	14	4	1x2KTE-7K (INV)+1x2KTE-7K	1x2MSL-07K
TNV58__879YBX	MT+LT	BITZER	30	7	27	7	24	7	1x4MTE-10K (INV)+1x4KTE-10K	1x2KSL-1K (INV)
TNV58__202ZBX	MT+LT	BITZER	38	8	36	8	33	8	1x4JTE-15K (INV)+1x4HTE-20K	1x2JSL-2K (INV)

■ MT ev.Temp.: -8°C/TeV LT: -32°C/TSGC: +35°C

■ MT ev.Temp.: -8°C/TeV LT: -32°C/TSGC: +38°C

■ MT ev.Temp.: -8°C/TeV LT: -32°C/TSGC: +42°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 extensive equipment for CO₂ cooling generation in a transcritical cycle, serving areas up to 1200 m² at one or two temperatures, working as a booster. It is a very comprehensive plug & play solution that can be installed both indoors and outdoors, with excellent acoustic insulation. The NV66+ incorporates up to 5 compressors and is available in both axial and radial versions.

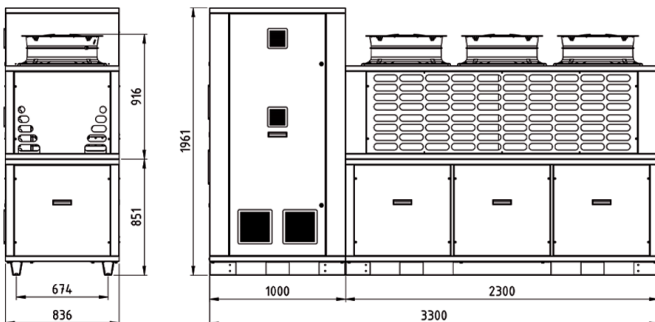
Applications

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

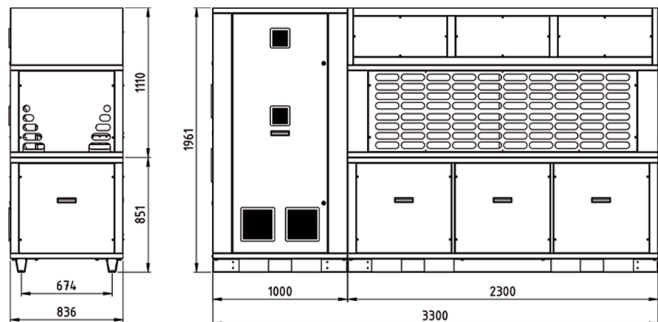
Benefits

- 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] Larger heat exchange surface = Lower flow rate.
- 5] 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.
- Oil separator accumulator.
- 90-litre liquid receiver.
- Electrical panel with control unit and external selector.
- 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 LT compressor.

> Available Drivers

- Tewis (EWCM9000pro)
- Danfoss (AK- PC772)
- Carel (pRack PR300T)

> Available Options

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

> Design Pressures

- MP (MT Suction): 52 / 60 bar.
- LP (LT Suction): 30 / 60 bar.
- IP (Receiver and Liquid Line): 90 bar.
- HP (Discharge): 130 bar.

> Compressors

- Bitzer



MODELS & DATA										
BASE CODE	APPLI.	COMPR.	MT CAP. KW*	LT CAP. KW*	MT CAP. KW*	LT CAP. KW*	MT CAP. KW*	LT CAP. KW*	MT COMPRESSORS	LT COMPRESSORS
GNV66__148ZBX	MT	BITZER	75	—	72	—	70	—	1x4JTE-15K (VF)+2x4HTE-20K	—
GNV66__020ZBX	MT	BITZER	69	—	65	—	60	—	1x4JTE-15K (VF)+2x4JTE-15K	—
GNV66__230ZBX	MT	BITZER	59	—	55	—	50	—	1x4MTE-10K (VF)+2x4JTE-15K	—
TNV66__228ZBX	MT+LT	BITZER	21	14,5	18	14,5	14	14,5	1x4PTE-7K (VF)+2x4MTE-10K	1x2JSL-2K (VF)+1x2JSL-2K
TNV66__540YBX	MT+LT	BITZER	43	10	39	10	35	10	1x4MTE-10K (VF)+2x4JTE-15K	1x2KSL-1K (VF)+1x2KSL-1K
TNV66__139ZBX	MT+LT	BITZER	52	14,5	47	14,5	42	14,5	1x4JTE-15K (VF)+2x4JTE-15K	1x2JSL-2K (VF)+1x2JSL-2K
TNV66__224ZBX	MT+LT	BITZER	58	14,5	54	14,5	50	14,5	1x4JTE-15K (VF)+2x4HTE-20K	1x2JSL-2K (VF)+1x2JSL-2K
TNV66__229ZBX	MT+LT	BITZER	52	18,5	48	18,5	44	18,5	1x4JTE-15K (VF)+2x4HTE-20K	1x2HSL-3K (VF)+1x2HSL-3K

■ MT ev.Temp.: -8°C/TeV LT: -32°C/TSGC: +35°C
 ■ MT ev.Temp.: -8°C/TeV LT: -32°C/TSGC: +38°C
 ■ MT ev.Temp.: -8°C/TeV LT: -32°C/TSGC: +42°C

MECHANICAL SUBCOOLER THAT MULTIPLIES THE EFFICIENCY OF OUR CO₂ CENTRAL UNITS

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

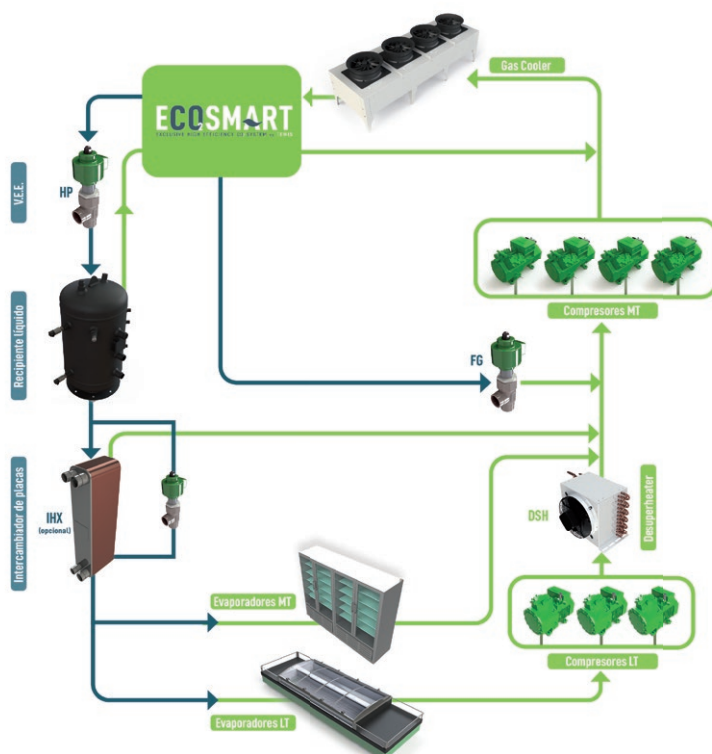
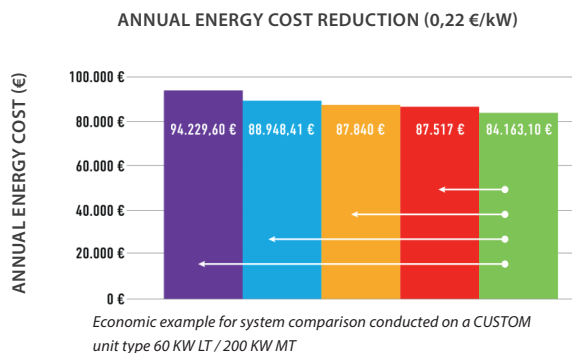
ECO2SMART is a mechanical subcooling system for our compressor central unit that solves and multiplies efficiency at very high ambient temperatures. It reduces energy consumption costs associated with refrigeration by using only CO₂, requiring no additional components or complementary systems to ensure its performance.

EFFICIENCY + ENERGY SAVINGS

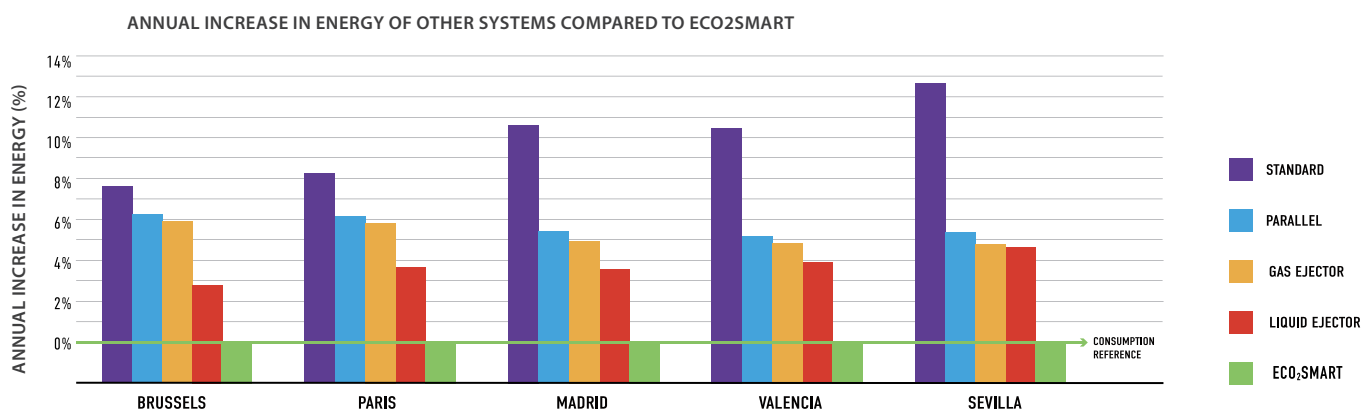
Main Benefit

Our ECO2SMART system, compared to other systems on the market, helps to reduce the energy consumption costs associated with refrigeration. Even at high temperatures, it consumes much less without losing capacity.

It uses standard components, which keeps the investment low and multiplies efficiency, achieving a payback period of less than 3 years.



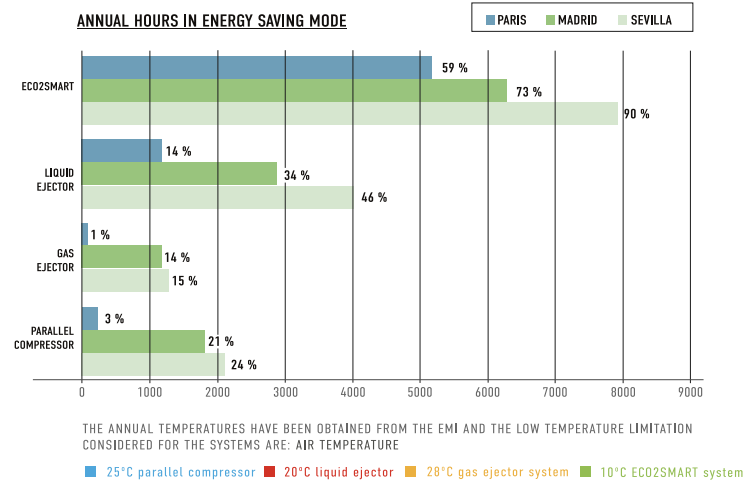
In just one year since its launch, ECO2SMART systems have been implemented in various parts of the world: Spain, Portugal, France, Belgium, Germany, Chile, and Israel.



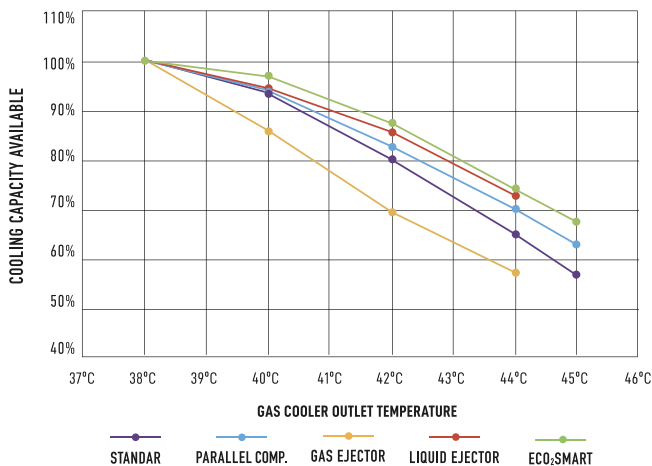
More Benefits

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



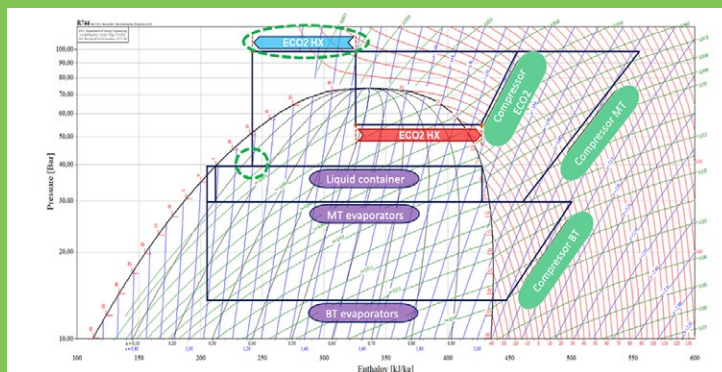
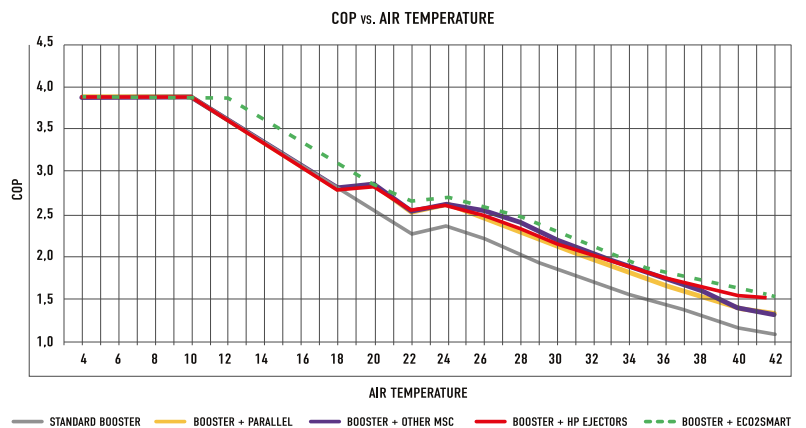
2 Efficient even with extreme temperatures

In high temperature situations or peaks, ECO2SMART loses less power than any other system, maintaining its efficiency by using only CO₂. This eliminates the need for investment in additional components and avoids wasting water for subcooling (= Minimal footprint).

3 Best COP in the market at high temperatures

ECO2SMART improves the COP at high temperatures by more than 15% compared to parallel compression and by more than 30% compared to standard systems.

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



ECO2SMART

- 1) The ECO2SMART system applies subcooling to the main refrigerant flow.
- 2) Minimises vapour content in the liquid receiver >>> Minimum flash-gas.
- 3) Reduced compression ratio.
- 4) Lower compressor energy consumption and less mechanical stress.
- 5) Lower discharge temperature.

SMART RACK

THE COMPACT CENTRAL UNIT THAT BEST ADAPTS TO RETAIL REQUIREMENTS

- **Applications:** from 400 to 1500 m²
- **Cooling Powers:** 40 to 140 kW (MT) / 0 to 28 kW (LT)



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

Smart Rack es la central compacta de CO₂ de Tewis que más se adapta a la mayoría de necesidades y requisitos del retail. Su diseño y dimensiones facilitan la instalación y mantenimiento. Además, sus prestaciones y su gran número de opcionales la convierten en una solución “muy completa” para la mayoría de supermercados, cámaras o Applications semi-industriales, garantizando un alto rendimiento y grandes ahorros energéticos.

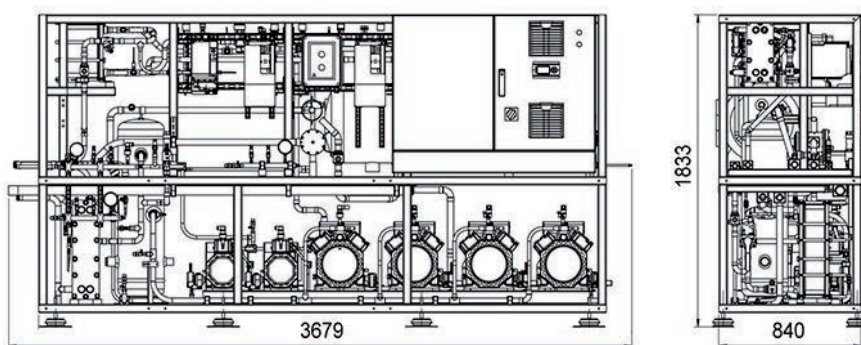
| Applications |

- 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] Can incorporate ECO2SMART.

SMART RACK CAN INCORPORATE



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
- 120 / 160 litre liquid receiver
- Up to 6 compressors
- Variable frequency drive for the first MT compressor, optional for the LT
- All connections in K65 copper
- Electronic refrigerant level sensors

Design Pressures

- MP (MT Suction): 52 bar
- LP (LT Suction): 30 bar
- IP (Receiver and Liquid Line): 70 bar
- HP (Discharge): 120 bar

Available Options

- Parallel compressor
- ECO2SMART system
- RHX (Heat Recovery Exchanger)
- IHX (Internal Heat Exchanger)
- Double bypass and high-pressure valves
- Emergency unit (supplied)
- Desuperheater (supplied)
- LT Inverter
- 10" TMS touch screen (Tewis Machine Supervisor).
- Fully enclosed for outdoor use.

Available Drivers

- Tewis (EWCM9000pro)
- Danfoss (AK- PC772 o 782)
- Carel (pRack PR300T Medium o Large)
- Wurm.

Compressors

- Bitzer



MODELS & DATA										
BITZER COMPRESSORS										
BASE CODE	MT CAP. KW*	LT CAP. KW*	MT CAP. KW*	LT CAP. KW*	MT CAP. KW*	LT CAP. KW*	GC POW max	MT COMPRESSORS	PARALLEL COMP.	LT COMPRESSORS
GSR2FJ_093YBX	93,2	—	86,67	—	73,38	—	177,72	1x 4JTE-15K (INV) + 2x 4JTE-15K	1x 4MTE-10K (INV)	—
GSR2FJ_041YBX	114,84	—	106,94	—	90,6	—	189,82	1x 4HTE-20K (INV) + 1x 4FTE-20K	1x 4JTE-15K (INV)	—
TSR2FJ_311XBX	37,71	14,38	33,59	14,38	25,76	14,38	81,39	1x 4MTE-10K (INV) + 2x 4KTE-10K		1x 2JSL-2K (INV) + 1x 2JSL-2K
TSR2FJ_092XBX	64	4,7	59,03	4,7	49,1	4,7	104,08	1x 4HTE-20K (INV) + 1x 4FTE-20K		1x 2KSL-1K
TSR2FJ_086YBX	76,56	4,7	70,75	4,7	59,03	4,7	122,71	1x 4HTE-20K (INV) + 2x 4HTE-20K		1x 2KSL-1K
TSR2FJ_089YBX	80,94	4,7	74,79	4,7	62,45	4,7	157,81	1x 4HTE-20K (INV) + 1x 4HTE-20K	1x 4MTE-10K (INV)	1x 2KSL-1K
TSR2FJ_439YBX	69,26	11,28	63,45	11,28	51,73	11,28	122,71	1x 4HTE-20K (INV) + 2x 4HTE-20K		1x 2KSL-1K (INV) + 1x 2KSL-1K
TSR2FJ_128XBX	48,68	18,62	43,71	18,62	33,77	18,62	104,08	1x 4HTE-20K (INV) + 1x 4FTE-20K		1x 2HSL-3K (INV) + 1x 2HSL-3K
TSR2FJ_490YBX	58,07	14,38	52,86	14,38	42,29	14,38	125,45	1x 4JTE-15K (INV) + 1x 4JTE-15K	1x 4MTE-10K (INV)	1x 2JSL-2K (INV) + 1x 2JSL-2K
TSR2FJ_090YBX	64,98	12,9	59,38	12,9	48,07	12,9	138,93	1x 4JTE-15K (INV) + 1x 4HTE-20K	1x 4MTE-10K (INV)	1x 2GSL-3K (INV)
TSR2FJ_489YBX	70,08	14,38	63,93	14,38	51,59	14,38	157,81	1x 4HTE-20K (INV) + 1x 4HTE-20K	1x 4MTE-10K (INV)	1x 2JSL-2K (INV) + 1x 2JSL-2K
TSR2FJ_364XBX	84,22	18,62	76,68	18,62	61,63	18,62	157,63	1x 4HTE-20K (INV) + 2x 4FTE-20K		1x 2HSL-3K (INV) + 1x 2HSL-3K
TSR2FJ_193YBX	80,47	22,11	72,92	22,11	57,88	22,11	157,63	1x 4HTE-20K (INV) + 2x 4FTE-20K		1x 2GSL-3K (INV) + 1x 2GSL-3K
TSR2FJ_444YBX	43,81	28,25	38,54	28,25	27,86	28,25	112,34	1x 4JTE-15K (INV) + 2x 4HTE-20K		1x 2FSL-4K (INV) + 1x 2FSL-4K
TSR2FJ_088YBX	73,8	28,25	66,26	28,25	51,21	28,25	157,63	1x 4HTE-20K (INV) + 2x 4FTE-20K		1x 2FSL-4K (INV) + 1x 2FSL-4K
TSR2GJ_001ZBX	62,18	6,79	56,97	6,79	46,89	6,79	114,55	1x 4MTE-10K (INV) + 2x 4MTE-10K	1x 4MTE-10K (INV)	1x 2MSL-07K (INV) + 1x 2MSL-07K
TSR2GJ_002ZBX	69,7	11,28	63,54	11,28	51,64	11,28	147,53	1x 4MTE-10K (INV) + 2x 4KTE-10K	1x 4MTE-10K (INV)	1x 2KSL-1K (INV) + 1x 2KSL-1K
TSR2GJ_003ZBX	104,83	14,38	96,81	14,38	79,75	14,38	207,22	1x 4JTE-15K (INV) + 2x 4HTE-15K	1x 4JTE-15K (INV)	1x 2JSL-2K (INV) + 1x 2JSL-2K
TSR2GJ_004ZBX	115,85	22,11	106,35	22,11	86,5	22,11	226,1	1x 4HTE-20K (INV) + 2x 4HTE-15K	1x 4HTE-20K (INV)	1x 2GSL-3K (INV) + 1x 2GSL-3K
BITZER COMPRESSORS + ECO2SMART										
BASE CODE	MT CAP. KW*	LT CAP. KW*	MT CAP. KW*	LT CAP. KW*	MT CAP. KW*	LT CAP. KW*	GC POW max	MT COMPRESSORS	ECO2SMART COMP.	LT COMPRESSORS
TSR2FE_115ZBX	82,87	6,54	79,8	6,54	68,9	6,54	168,3	1x 4HTE-20K (INV) + 1x 4HTE-20K	1x 2KTE-7K (INV)	1x 2KSL-1K (INV)
TSR2FE_116ZBX MT+LT	64,02	12,82	61,26	12,82	51,99	12,82	135,94	1x 4JTE-15K (INV) + 1x 4HTE-20K	1x 4PTE-7K (INV)	1x 2GSL-3K (INV)
TSR2FE_116ZBX MT+LT	57,12	14,29	52,84	14,29	45,54	14,29	122,35	1x 4JTE-15K (INV) + 1x 4JTE-15K	1x 4PTE-7K (INV)	1x 2JSL-2K (INV) + 1x 2JSL-2K
TSR2FE_118ZBX	74,36	14,29	71,09	14,29	60,62	14,29	165,85	1x 4HTE-20K (INV) + 1x 4HTE-20K	1x 2KTE-7K (INV)	1x 2JSL-2K (INV) + 1x 2JSL-2K

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

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

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

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

The MINI-SMART DUPLEX units meet a specific demand from our customers, being the perfect combination of three factors: **EFFICIENCY + POWER + ADAPTABILITY TO MACHINE ROOMS** (compact dimensions and limited height). The Mini-SD units are **transcritical booster central units in a double-height configuration** that can house **up to 6 compressors**. Optionally, they can include up to 1 heat exchanger and 1 parallel compressor.

Applications

- Food Retail
- Supermarkets
- Cold stores
- Industrial Applications

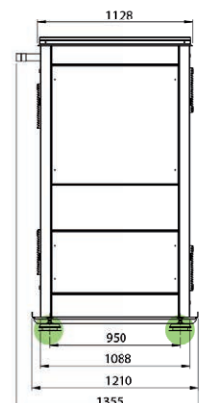
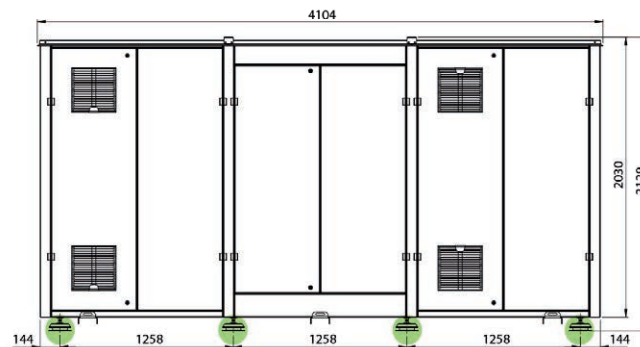
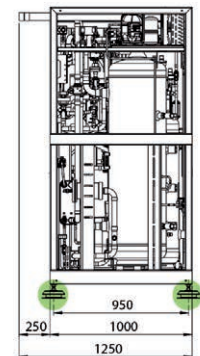
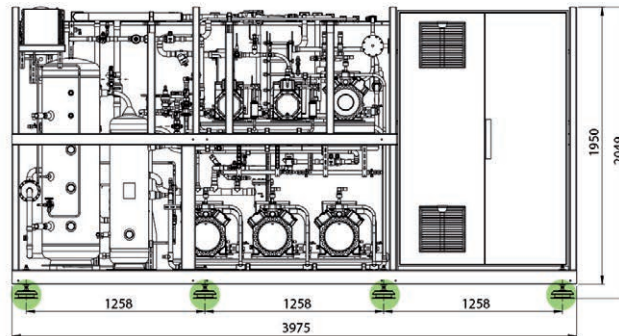
Our ECO2SMART system is included as standard in the Mini-SD central unit, generating large savings in energy consumption.

ECO2SMART
EXCLUSIVE HIGH EFFICIENCY CO. SYSTEM BY TEWIS



Benefits

- 1] High-power unit with a compact design and limited height for small spaces or rooms.
- 2] Can incorporate up to 6 compressors.
- 3] Large-capacity vertical receiver (up to 1x150 l).
- 4] Available options.
- 5] Remote, axial, or radial gas cooler. Great versatility and adaptability.
- 6] Option for 1 RHX.
- 7] Can be enclosed and soundproofed.
- 8] Incorporates ECO2SMART as standard.



Optional = delivered loose

Standard Equipment

- ECO2SMART Compressor
- Tubular chassis
- Oil separator accumulator
- Vertical liquid receiver (1x150 l)
- Up to 6 compressors

Variable frequency drive for the first MT compressor, first LT compressor, and ECO2SMART compressor

- All connections in K65 copper
- Manometers

Compressors

- Bitzer

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.

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)
- Also available with ECOLINE+ compressors
(permanent magnet motor – 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 (EWCM9000pro)
- Danfoss (AK- PC782)
- Carel (pRack PR300T Large)



MODELS & DATA											
COMPRESORES BITZER											
BASE CODE	MT CAP. KW*	LT CAP. KW*	MT CAP. KW*	LT CAP. KW*	MT CAP. KW*	LT CAP. KW*	GC POW max	MT COMPRESSORS	ECO2SMART COMP.	LT COMPRESSORS	
TSD3HE_1032BX-1	60,95	6,74	56,51	6,74	51,1	6,74	94,8	1x 4MTE-10K (INV) + 2x 4MTE-10K	1x 4PTE-7K-40S (INV)	1x 2MSL-07K-40S (INV) + 1x 2MSL-07K-40S	
TSD3HE_1032BX-2	70,96	6,74	67,72	6,74	57,9	6,74	108,05	1x 4KTE-10K (INV) + 2x 4MTE-10K	1x 4PTE-7K-40S (INV)	1x 2MSL-07K-40S (INV) + 1x 2MSL-07K-40S	
TSD3HE_1032BX-3	96,31	6,74	90,32	6,74	84,66	6,74	144,88	1x 4JTE-15K (INV) + 2x 4JTE-15K	1x 4MTE-10K-40S (INV)	1x 2MSL-07K-40S (INV) + 1x 2MSL-07K-40S	
TSD3HE_1032BX-4	111,19	6,74	105,18	6,74	92,41	6,74	158,98	1x 4JTE-15K (INV) + 2x 4HTE-20K	1x 4MTE-10K-40S (INV)	1x 2MSL-07K-40S (INV) + 1x 2MSL-07K-40S	
TSD3HE_1032BX-5	118,19	6,74	113,45	6,74	97,84	6,74	169,38	1x 4HTE-20K (INV) + 2x 4HTE-20K	1x 4MTE-10K-40S (INV)	1x 2MSL-07K-40S (INV) + 1x 2MSL-07K-40S	
TSD3HE_1032BX-6	55,25	11,21	50,94	11,21	45,81	11,21	94,8	1x 4MTE-10K (INV) + 2x 4MTE-10K	1x 4PTE-7K-40S (INV)	1x 2KSL-1K (INV) + 1x 2KSL-1K	
TSD3HE_1032BX-7	66,48	11,21	63,24	11,21	53,42	11,21	108,05	1x 4KTE-10K (INV) + 2x 4MTE-10K	1x 4PTE-7K-40S (INV)	1x 2KSL-1K (INV) + 1x 2KSL-1K	
TSD3HE_1032BX-8	91,83	11,21	85,84	11,21	80,18	11,21	144,88	1x 4JTE-15K (INV) + 2x 4JTE-15K	1x 4MTE-10K-40S (INV)	1x 2KSL-1K (INV) + 1x 2KSL-1K	
TSD3HE_1032BX-9	106,71	11,21	100,7	11,21	87,93	11,21	158,98	1x 4JTE-15K (INV) + 2x 4HTE-20K	1x 4MTE-10K-40S (INV)	1x 2KSL-1K (INV) + 1x 2KSL-1K	
TSD3HE_1032BX-10	113,71	11,21	108,97	11,21	93,36	11,21	169,38	1x 4HTE-20K (INV) + 2x 4HTE-20K	1x 4MTE-10K-40S (INV)	1x 2KSL-1K (INV) + 1x 2KSL-1K	
TSD3HE_1032BX-11	51,33	14,29	47,01	14,29	41,89	14,29	94,8	1x 4MTE-10K (INV) + 2x 4MTE-10K	1x 4PTE-7K-40S (INV)	1x 2JSL-2K (INV) + 1x 2JSL-2K	
TSD3HE_1032BX-12	91,92	14,29	58,66	14,29	49,45	14,29	108,05	1x 4KTE-10K (INV) + 2x 4MTE-10K	1x 4PTE-7K-40S (INV)	1x 2JSL-2K (INV) + 1x 2JSL-2K	
TSD3HE_1032BX-13	88,74	14,29	82,75	14,29	77,09	14,29	144,88	1x 4JTE-15K (INV) + 2x 4JTE-15K	1x 4MTE-10K-40S (INV)	1x 2JSL-2K (INV) + 1x 2JSL-2K	
TSD3HE_1032BX-14	103,62	14,29	97,6	14,29	84,84	14,29	158,98	1x 4JTE-15K (INV) + 2x 4HTE-20K	1x 4MTE-10K-40S (INV)	1x 2JSL-2K (INV) + 1x 2JSL-2K	
TSD3HE_1032BX-15	110,62	14,29	105,88	14,29	90,27	14,29	169,38	1x 4HTE-20K (INV) + 2x 4HTE-20K	1x 4MTE-10K-40S (INV)	1x 2JSL-2K (INV) + 1x 2JSL-2K	
TSD3HE_1032BX-16	46,37	18,5	42,06	18,5	36,93	18,5	94,8	1x 4MTE-10K (INV) + 2x 4MTE-10K	1x 4PTE-7K-40S (INV)	1x 2HSL-3K (INV) + 1x 2HSL-3K	
TSD3HE_1032BX-17	56,96	18,5	53,71	18,5	44,49	18,5	108,05	1x 4KTE-10K (INV) + 2x 4MTE-10K	1x 4PTE-7K-40S (INV)	1x 2HSL-3K (INV) + 1x 2HSL-3K	
TSD3HE_1032BX-18	82,44	18,5	76,66	18,5	71,28	18,5	144,88	1x 4JTE-15K (INV) + 2x 4JTE-15K	1x 4MTE-10K-40S (INV)	1x 2HSL-3K (INV) + 1x 2HSL-3K	
TSD3HE_1032BX-19	97,72	18,5	91,86	18,5	79,9	18,5	158,98	1x 4JTE-15K (INV) + 2x 4HTE-20K	1x 4MTE-10K-40S (INV)	1x 2HSL-3K (INV) + 1x 2HSL-3K	
TSD3HE_1032BX-20	106,39	18,5	101,64	18,5	86,03	18,5	169,38	1x 4HTE-20K (INV) + 2x 4HTE-20K	1x 4MTE-10K-40S (INV)	1x 2HSL-3K (INV) + 1x 2HSL-3K	
TSD3HE_1032BX-21	42,21	21,97	37,89	21,97	32,77	21,97	94,8	1x 4MTE-10K (INV) + 2x 4MTE-10K	1x 4PTE-7K-40S (INV)	1x 2GSL-3K (INV) + 1x 2GSL-3K	
TSD3HE_1032BX-22	52,8	21,97	49,55	21,97	40,33	21,97	108,05	1x 4KTE-10K (INV) + 2x 4MTE-10K	1x 4PTE-7K-40S (INV)	1x 2GSL-3K (INV) + 1x 2GSL-3K	
TSD3HE_1032BX-23	78,28	21,97	72,5	21,97	67,12	21,97	144,88	1x 4JTE-15K (INV) + 2x 4JTE-15K	1x 4MTE-10K-40S (INV)	1x 2GSL-3K (INV) + 1x 2GSL-3K	
TSD3HE_1032BX-24	93,56	21,97	87,7	21,97	75,74	21,97	158,98	1x 4JTE-15K (INV) + 2x 4HTE-20K	1x 4MTE-10K-40S (INV)	1x 2GSL-3K (INV) + 1x 2GSL-3K	
TSD3HE_1032BX-25	101,11	21,97	96,38	21,97	81,77	21,97	169,38	1x 4HTE-20K (INV) + 2x 4HTE-20K	1x 4MTE-10K-40S (INV)	1x 2GSL-3K (INV) + 1x 2GSL-3K	
TSD3HE_1032BX-26	39,14	24,51	34,82	24,51	29,69	24,51	94,8	1x 4MTE-10K (INV) + 2x 4MTE-10K	1x 4PTE-7K-40S (INV)	1x 2GSL-3K (INV) + 1x 2FSL-4K	
TSD3HE_1032BX-27	49,73	24,51	46,47	24,51	37,25	24,51	108,05	1x 4KTE-10K (INV) + 2x 4MTE-10K	1x 4PTE-7K-40S (INV)	1x 2GSL-3K (INV) + 1x 2FSL-4K	
TSD3HE_1032BX-28	75,21	24,51	69,42	24,51	64,05	24,51	144,88	1x 4JTE-15K (INV) + 2x 4JTE-15K	1x 4MTE-10K-40S (INV)	1x 2GSL-3K (INV) + 1x 2FSL-4K	
TSD3HE_1032BX-29	90,49	24,51	84,63	24,51	72,66	24,51	158,98	1x 4JTE-15K (INV) + 2x 4HTE-20K	1x 4MTE-10K-40S (INV)	1x 2GSL-3K (INV) + 1x 2FSL-4K	
TSD3HE_1032BX-30	98,03	24,51	93,31	24,51	78,69	24,51	169,38	1x 4HTE-20K (INV) + 2x 4HTE-20K	1x 4MTE-10K-40S (INV)	1x 2GSL-3K (INV) + 1x 2FSL-4K	
TSD3HE_1032BX-31	34,83	28,07	30,52	28,07	25,39	28,07	94,8	1x 4MTE-10K (INV) + 2x 4MTE-10K	1x 4PTE-7K-40S (INV)	1x 2FSL-4K (INV) + 1x 2FSL-4K	
TSD3HE_1032BX-32	45,42	28,07	42,17	28,07	32,95	28,07	108,05	1x 4KTE-10K (INV) + 2x 4MTE-10K	1x 4PTE-7K-40S (INV)	1x 2FSL-4K (INV) + 1x 2FSL-4K	
TSD3HE_1032BX-33	70,9	28,07	65,12	28,07	59,74	28,07	144,88	1x 4JTE-15K (INV) + 2x 4JTE-15K	1x 4MTE-10K-40S (INV)	1x 2FSL-4K (INV) + 1x 2FSL-4K	
TSD3HE_1032BX-34	86,18	28,07	80,32	28,07	68,36	28,07	158,98	1x 4JTE-15K (INV) + 2x 4HTE-20K	1x 4MTE-10K-40S (INV)	1x 2FSL-4K (INV) + 1x 2FSL-4K	
TSD3HE_1032BX-35	93,73	28,07	89	28,07	74,39	28,07	169,38	1x 4HTE-20K (INV) + 2x 4HTE-20K	1x 4MTE-10K-40S (INV)	1x 2FSL-4K (INV) + 1x 2FSL-4K	

■ MT ev.Temp.: -8°C/TeV LT: -32°C/TS GC: +35°C

■ MT ev.Temp.: -8°C/TeV LT: -32°C/TS GC: +38°C

■ MT ev.Temp.: -8°C/TeV LT: -32°C/TS GC: +42°C

SMART DUPLEX

THE HIGHEST CO₂ CAPACITIES FOR
COMMERCIAL REFRIGERATION

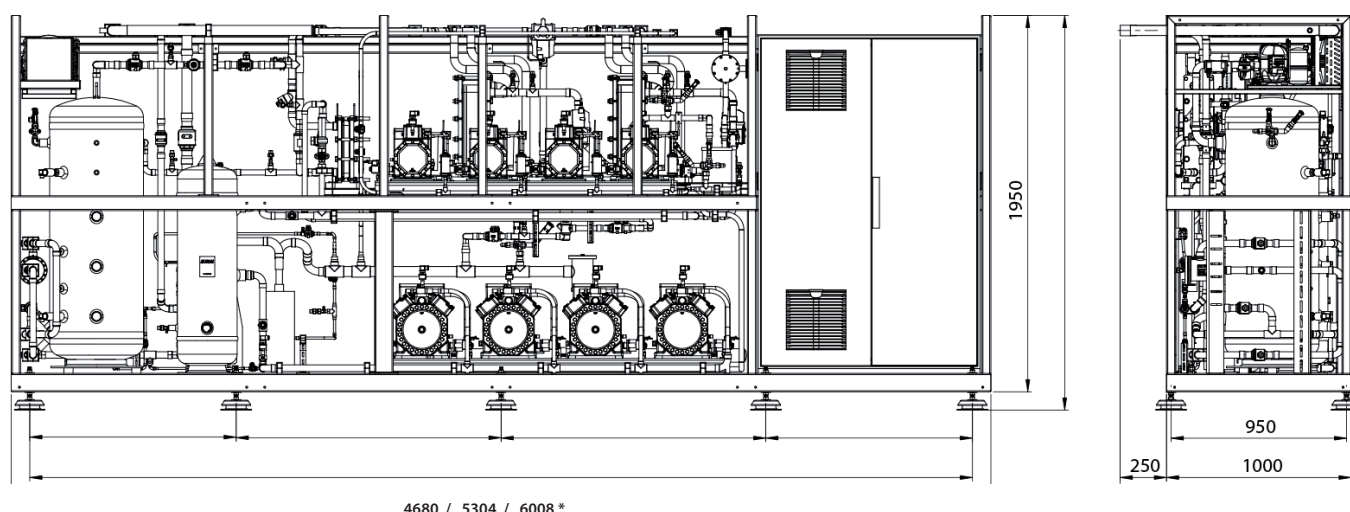
- > **Applications:** from 1500 to 3000 m²
- > **Cooling Powers:** 35 to 250 kW (MT) / 0 to 35 kW (LT)



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

An optimised unit for full
CO₂ power with a minimal
footprint. SD can also
incorporate

ECOSMART
EXCLUSIVE HIGH EFFICIENCY CO₂ SYSTEM BY TEWIS



➤ 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 up to 190 kW (Heat Recovery Exchanger, one for ACS and one for climate control)
- IHX (Internal Heat Exchanger)
- Double gas and high-pressure bypass valves
- Onboard emergency unit
- 10" touch screen (TMS)(Tewis Machine Supervisor)
- Enclosed and soundproofed.
- Also available with ECOLINE+ compressors (permanent magnet motor – LSPM)

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

MODELS & DATA										
BITZER COMPRESSORS										
BASE CODE	MT CAP. KW*	LT CAP. KW*	MT CAP. KW*	LT CAP. KW*	MT CAP. KW*	LT CAP. KW*	GC POW max	MT COMPRESSORS	PARALLEL COMPRESSORS	LT COMPRESSORS
GSD3KJ_048ZBX	179,56	0	167,31	0	141,82	0	266,6	1x 4HTE-20K (INV) + 4x 4FTE-30K	—	—
GSD3MJ_049ZBX	266,6	0	248,09	0	210,11	0	399,82	1x 4FTE-30K (INV) + 4x 4CTE-30K	—	—
TSD3JJ_028ZBX	52	20,37	46,73	20,37	36,04	20,37	112,34	1x 4JTE-15K (INV) + 2x 4HTE-20K	—	1x 2JSL-2K (INV) + 2x 2JSL-2K
TSD3JJ_030ZBX	64,41	31,32	57,43	31,32	43,29	31,32	148,43	1x 4JTE-15K (INV) + 3x 4HTE-20K	—	1x 2GSL-3K (INV) + 2x 2GSL-3K
TSD3JJ_031ZBX	77,52	26,38	70,19	26,38	55,04	26,38	158,56	1x 4HTE-20K (INV) + 2x 4FTE-30K	—	1x 2HSL-3K (INV) + 2x 2HSL-3K
TSD3KJ_033ZBX	105,43	34,14	95,64	34,14	75,32	34,14	212,58	1x 4HTE-20K (INV) + 3x 4FTE-30K	—	1x 2HSL-3K (INV) + 1x 2HSL-3K
TSD3JJ_035ZBX	122,55	18,62	112,76	18,62	92,43	18,62	212,58	1x 4HTE-20K (INV) + 3x 4FTE-30K	—	1x 2HSL-3K (INV) + 1x 2HSL-3K
TSD3JJ_034ZBX	113,46	26,81	103,68	26,81	83,35	26,81	212,58	1x 4HTE-20K (INV) + 3x 4FTE-30K	—	1x 2JSL-2K (INV) + 2x 2GSL-3K
TSD3JJ_051ZBX	172,74	36,44	158	36,44	127,7	36,44	318,77	1x 4FTE-30K (INV) + 3x 4CTE-30K	—	1x 2GSL-3K (INV) + 2x 2FSL-4K
TSD3MJ_052ZBX	184,04	75,88	165,53	75,88	127,55	75,88	399,82	1x 4FTE-30K (INV) + 4x 4CTE-30K	—	1x 2DLS-5K (INV) + 3x 2DLS-5K
TSD3MJ_053ZBX	213,73	48,21	195,21	48,21	157,23	48,21	399,82	1x 4FTE-30K (INV) + 4x 4CTE-30K	—	1x 2GSL-3K (INV) + 2x 2FSL-4K
TSD3JJ_037ZBX	85,97	31,32	77,78	31,32	60,69	31,32	204,69	1x 4JTE-15K (INV) + 2x 4HTE-20K	1x 4JTE-15K (INV)	1x 2GSL-3K (INV) + 2x 2GSL-3K
TSD3JJ_039ZBX	110,01	26,81	100,33	26,81	80,45	26,81	223,57	1x 4HTE-20K (INV) + 2x 4HTE-20K	1x 4HTE-20K (INV)	1x 2JSL-2K (INV) + 2x 2GSL-3K
TSD3JJ_042ZBX	123,56	14,38	113,88	14,38	93,99	14,38	223,57	1x 4HTE-20K (INV) + 2x 4HTE-20K	1x 4HTE-20K (INV)	1x 2JSL-2K (INV) + 1x 2JSL-2K
TSD3KJ_041ZBX	123,71	36,44	112,32	36,44	88,99	36,44	289,32	1x 4HTE-20K (INV) + 3x 4HTE-20K	1x 4HTE-20K (INV)	1x 2GSL-3K (INV) + 2x 2FSL-4K
TSD3JJ_045ZBX	130,05	31,32	118,87	31,32	95,55	31,32	291,11	1x 4HTE-20K (INV) + 2x 4FTE-30K	1x 4HTE-20K (INV)	1x 2GSL-3K (INV) + 2x 2GSL-3K
TSD3KJ_046ZBX	174,7	49,61	159,45	49,61	127,11	49,61	390,64	1x 4HTE-20K (INV) + 3x 4FTE-30K	1x 4FTE-30K (INV)	1x 2FSL-4K (INV) + 2x 2FSL-4K
TSD3KJ_047ZBX	188,76	36,44	173,51	36,44	141,18	36,44	390,64	1x 4HTE-20K (INV) + 3x 4FTE-30K	1x 4FTE-30K (INV)	1x 2GSL-3K (INV) + 2x 2FSL-4K
TSD3KJ_096ZBX	213,25	18,62	197,06	18,62	163,79	18,62	369,13	1x 4GTE-30K (INV) + 2x 4DTE-25K	1x 4HTE-20K (INV) + 1x 4HTE-20K	1x 2HSL-3K (INV) + 1x 2HSL-3K
TSD3KJ_097ZBX	160,52	22,11	148,18	22,11	122,04	22,11	291,11	1x 4HTE-20K (INV) + 2x 4FTE-30K	1x 4JTE-15K (INV) + 1x 4JTE-15K	1x 2GSL-3K (INV) + 1x 2GSL-3K
BITZER COMPRESSORS + ECOSMART										
BASE CODE	MT CAP. KW*	LT CAP. KW*	MT CAP. KW*	LT CAP. KW*	MT CAP. KW*	LT CAP. KW*	GC POW max	MT COMPRESSORS	ECOSMART COMPRESSORS	LT COMPRESSORS
TSD3JET104ZBX	83,26	31,13	75,74	31,13	64,42	31,13	162,81	1x 4JTE-15K (INV) + 2x 4HTE-20K	1x 4MTE-10K (INV)	1x 2GSL-3K (INV) + 2x 2GSL-3K
TSD3JET105ZBX	96,47	26,64	90,03	26,64	75,78	26,64	172,07	1x 4HTE-20K (INV) + 2x 4HTE-20K	1x 4MTE-10K (INV)	1x 2JSL-2K (INV) + 2x 2GSL-3K
TSD3JET106ZBX	111,26	14,29	104,99	14,29	90,97	14,29	172,07	1x 4HTE-20K (INV) + 2x 4HTE-20K	1x 4MTE-10K (INV)	1x 2JSL-2K (INV) + 1x 2JSL-2K
TSD3KET109ZBX	127,22	36,21	116,58	36,21	102,91	36,21	232,96	1x 4HTE-20K (INV) + 3x 4HTE-20K	1x 4JTE-15K (INV)	1x 2GSL-3K (INV) + 2x 2FSL-4K
TSD3JET110ZBX	134,58	31,13	124,35	31,13	110,92	31,13	230,99	1x 4HTE-20K (INV) + 2x 4FTE-30K	1x 4JTE-15K (INV)	1x 2GSL-3K (INV) + 2x 2GSL-3K
TSD3JET114ZBX	145,54	21,97	135,44	21,97	122,18	21,97	230,99	1x 4HTE-20K (INV) + 2x 4FTE-30K	1x 4JTE-15K (INV)	1x 2GSL-3K (INV) + 1x 2GSL-3K
TSD3KET111ZBX	168,63	49,3	157,85	49,3	136,64	49,3	307,07	1x 4HTE-20K (INV) + 3x 4FTE-30K	1x 4HTE-20K (INV)	1x 2FSL-4K (INV) + 2x 2FSL-4K
TSD3KET112ZBX	184,29	36,21	173,7	36,21	152,73	36,21	307,07	1x 4HTE-20K (INV) + 3x 4FTE-30K	1x 4HTE-20K (INV)	1x 2GSL-3K (INV) + 2x 2FSL-4K
TSD3JET113ZBX	194,8	18,5	181,66	18,5	164,8	18,5	297,19	1x 4GTE-30K (INV) + 2x 4DTE-25K	1x 4HTE-20K (INV)	1x 2HSL-3K (INV) + 1x 2HSL-3K

■ MT ev.Temp.: -8°C/TeV LT: -32°C/TSGC: +35°C

■ MT ev.Temp.: -8°C/TeV LT: -32°C/TSGC: +38°C

■ MT ev.Temp.: -8°C/TeV LT: -32°C/TSGC: +42°C

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.

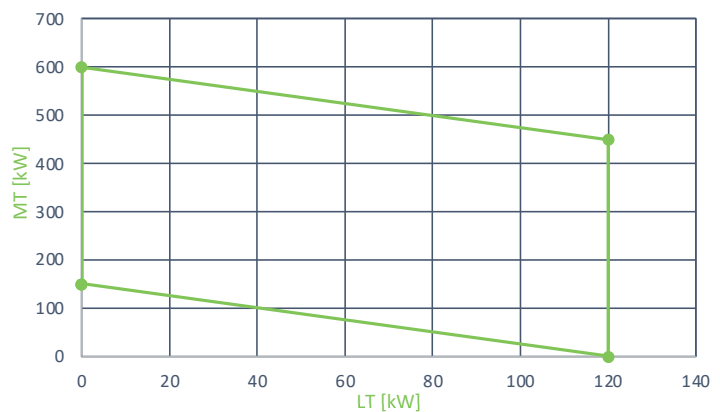
- Tailored customisation.
- Reduced delivery times (estimated 12 weeks)
- Power ranges: 150 kW to 600 kW total.
- Limited number of compressors:
6 in MT / 3 in CP / 4 in LT

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.

> industrial CN - NH3

Tewis NH3 Units feature a high degree of standardisation, which subsequently facilitates maintenance and ensures manufacturing quality. This includes the continuous level system and electronic injection, which enable more reliable regulation, and the Tewis automatic oil recovery system, which simplifies maintenance tasks.

Additionally, Tewis NH3 coolers are designed to achieve significant annual benefits for every 500 kW compared to other systems, such as air condensation or direct expansion.





CONTROLS FOR COLD ROOMS WITH
ELECTRONIC EXPANSION VALVE



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





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.
- **Objective:** prevent the emissions of fluorinated gases, contributing to the EU's climate goals. Ensure compliance with the Montreal Protocol regarding HFCs.



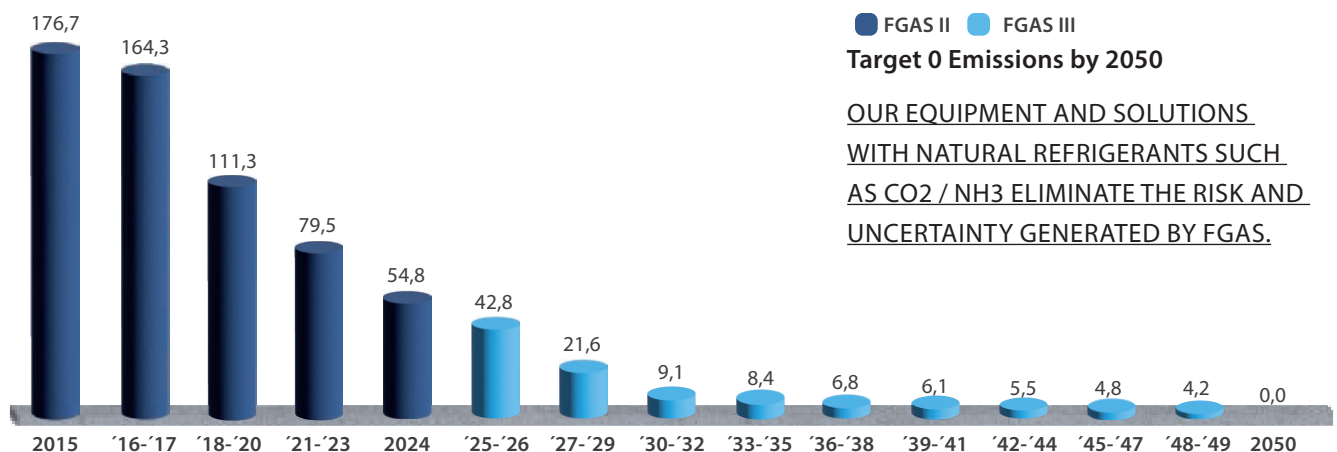
REFRIGERATION & AIR CONDITIONING

MAIN CHANGES

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

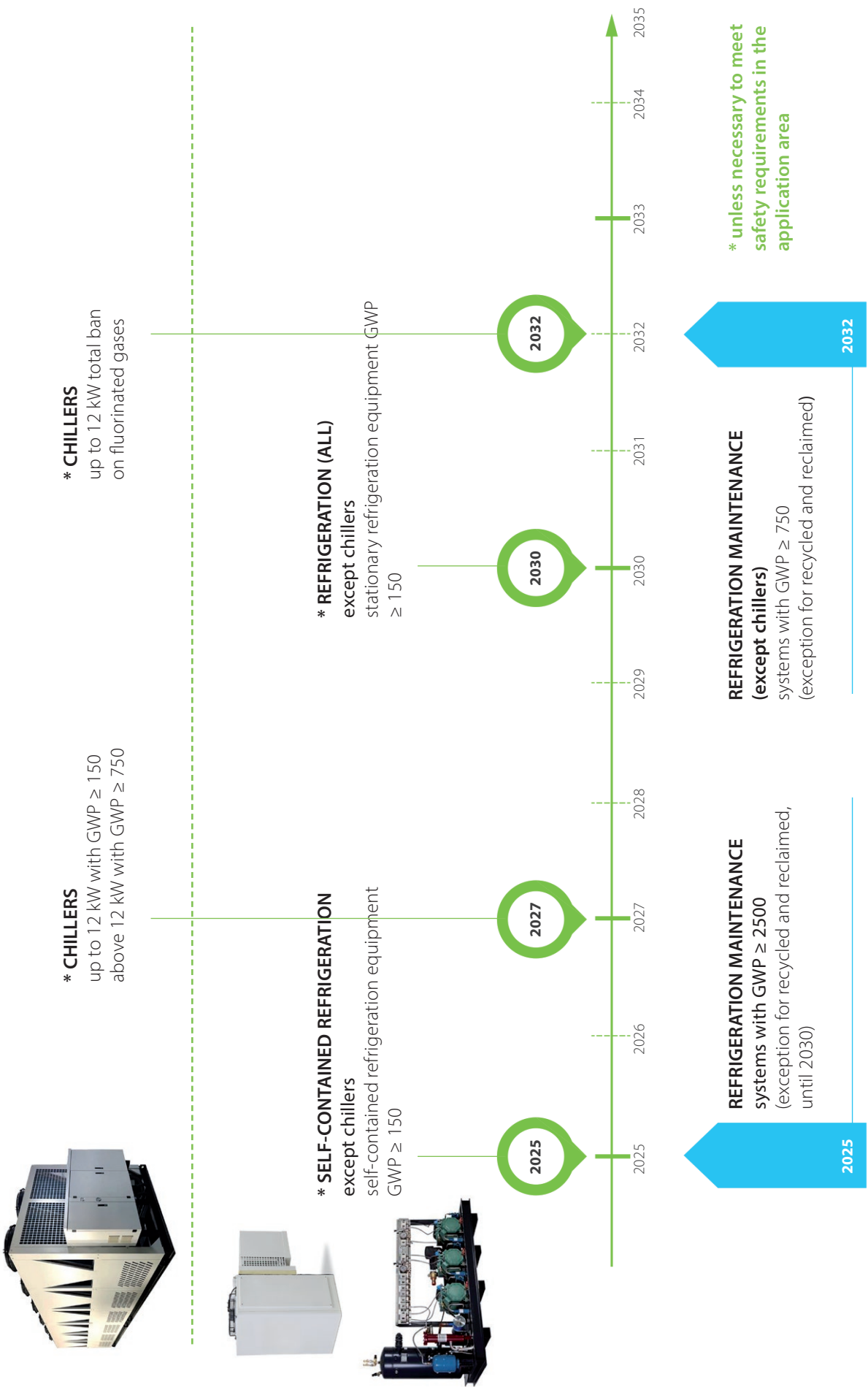
MARKETABLE QUOTA

in million tonnes of CO₂ eq. per year



● FGAS II ● FGAS III
Target 0 Emissions by 2050

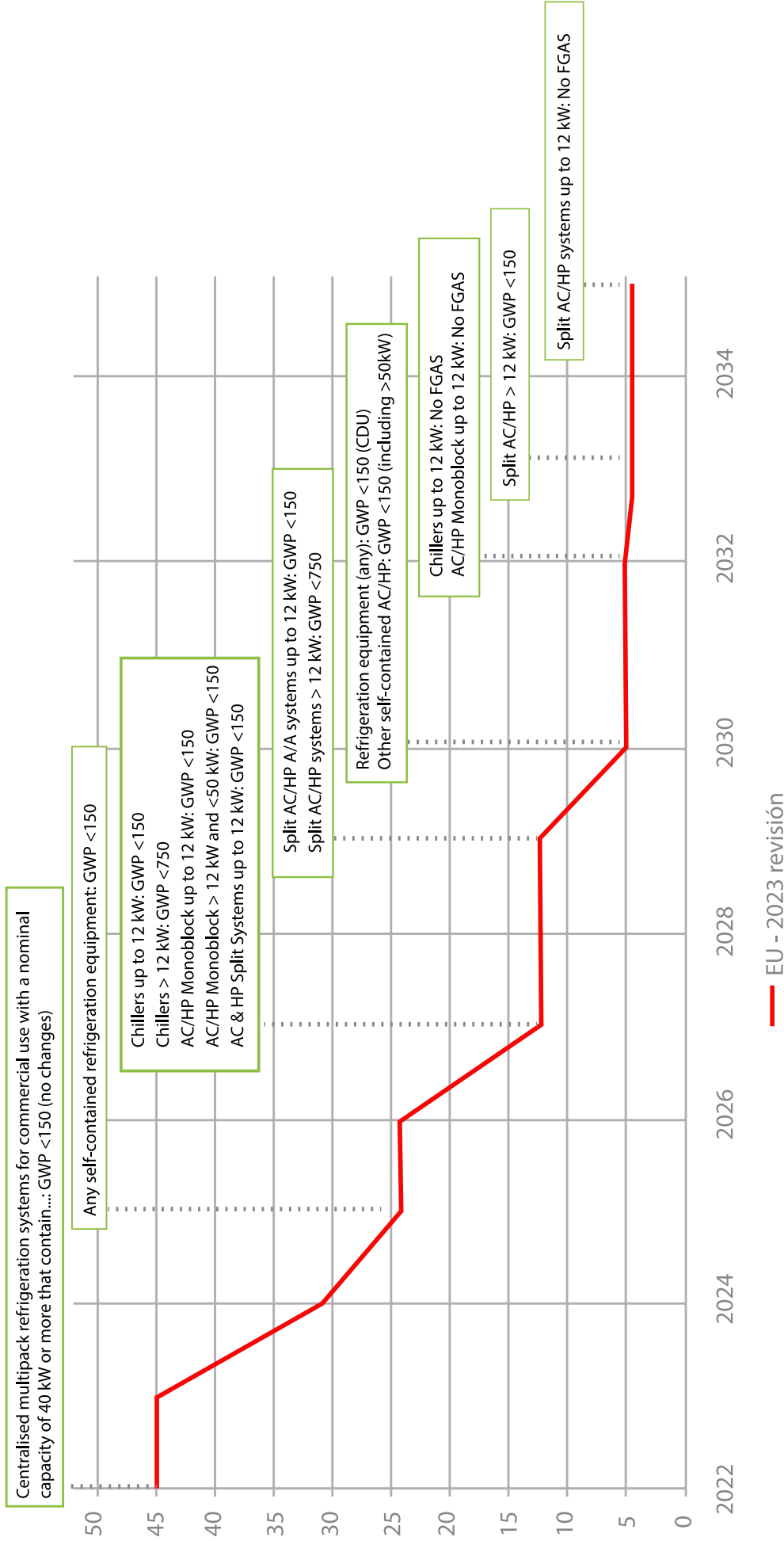
OUR EQUIPMENT AND SOLUTIONS
WITH NATURAL REFRIGERANTS SUCH
AS CO₂ / NH₃ ELIMINATE THE RISK AND
UNCERTAINTY GENERATED BY FGAS.



Source of the graphic: AEPYT

FGAS: the phase down and the bans

All bans are conditioned on sufficient safety requirements and exemptions for low temp (<-50 °C)





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.

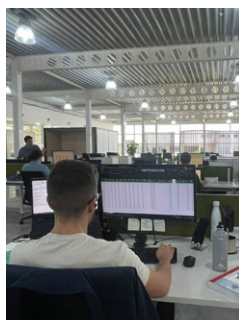
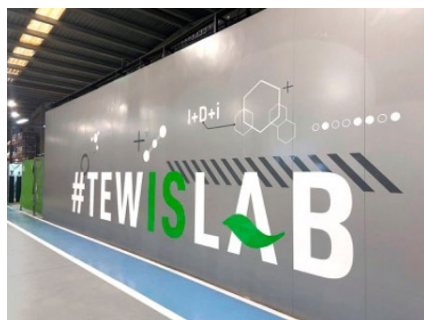
Medium and long-term solutions, with a WIN-WIN philosophy, developed so that our clients can focus on the growth of their businesses, achieving significant savings and benefits.

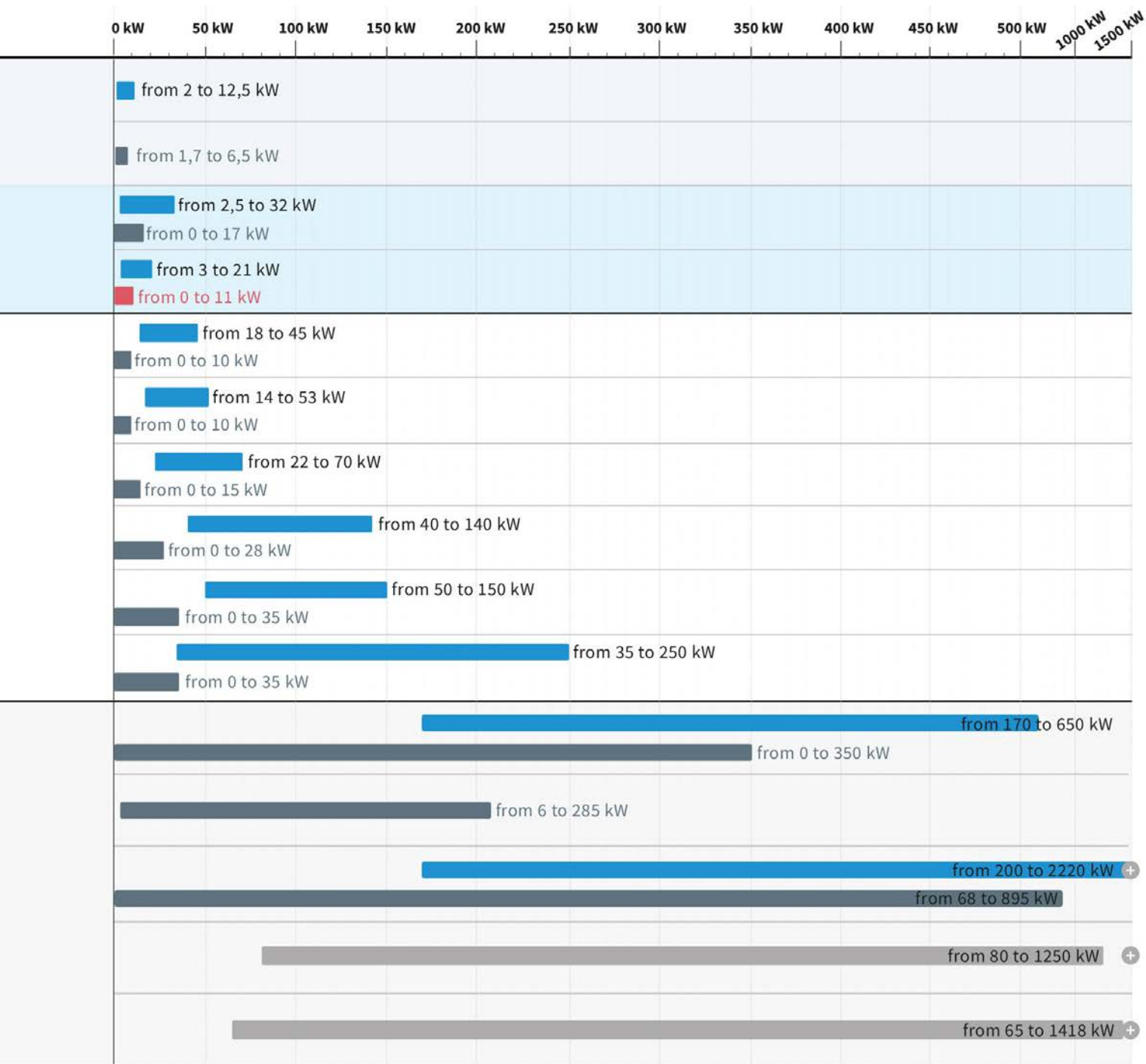


every project is special,
every project requires a
unique solution

	MODEL		REFRIGERATION	SURFACE	
HUBBARD DAIKIN STANDARD SOLUTIONS	GCU-PXB1	■	MT	< 399 m ²	
	HCU-PXB1	■	LT	< 399 m ²	
	CO2 ZEAS	■	MT / LT	< 399 < 600 m ²	
	CO2 CONVENI-PACK	■	MT	200 < 300 m ²	
Tewis DAIKIN CONFIGURABLE SOLUTIONS	NS21	■	MT / BOOSTER	200 < 600 m ²	
	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 DAIKIN 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	

■ CO₂ ■ NH₃ ■ AC





■ MT ■ LT





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