



Future-proof CO₂ Solutions

Rack Systems & Technologies
with the Natural Refrigerant CO₂



Roxsta



CO₂ Expertise Built on Experience

Since 1982, TEKO has stood for refrigeration technology with substance. More than four decades of experience form the foundation of in-depth expertise in the development and implementation of modern CO₂ systems. Thousands of successfully installed systems, combined with close collaboration with contractors, planners, and operators, shape our solutions – practical, reliable, and designed for long-term operation.

Precision Manufacturing – Quality by Design

CO₂ refrigeration technology places the highest demands on design and manufacturing. TEKO rack systems are produced at our headquarters in Altenstadt – featuring a high level of in-house production, clearly defined processes, and consistent quality control. Our manufacturing follows established standards, is certified to DIN EN ISO 9001, and was further strengthened in 2023 with the addition of a state-of-the-art tube processing center.

- Series and project manufacturing – Made in Germany
- Advanced tube processing center for precise and reproducible piping systems
- Combination of automation and skilled craftsmanship
- High-quality materials and clearly defined workflows
- Fully piped, wired, and CE-compliant systems
- Designed for durability and continuous operation

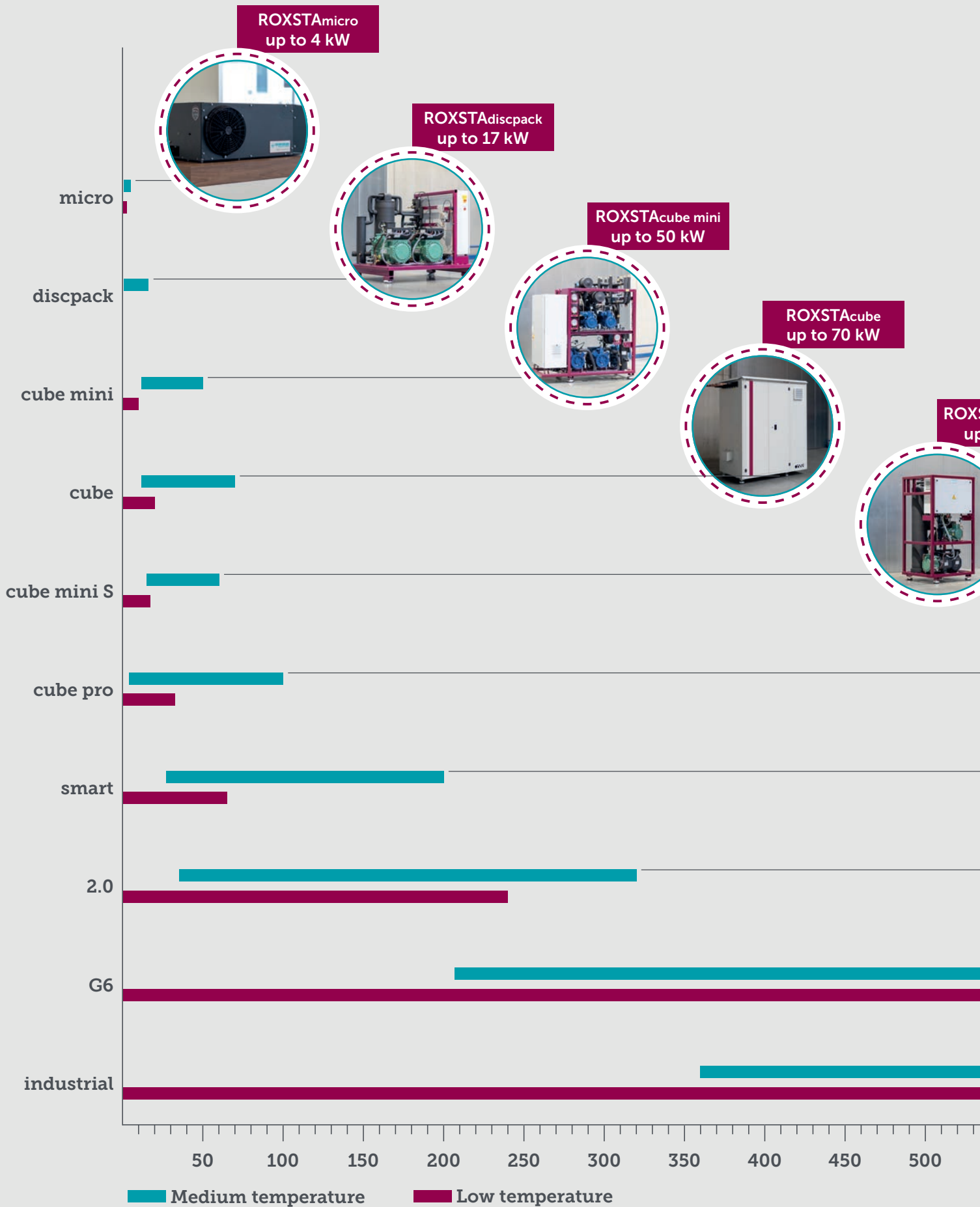
Holistic System Solutions

TEKO approaches CO₂ systems as complete solutions. In-house developments such as EVALIFT, TECO₂nditioner, TECO₂mulator, and the TEKO Gold Cartridge filter are integral components of many system concepts. They support stable operation, enhance reliability, and contribute to a clean and long-lasting refrigeration cycle – ensuring dependable CO₂ performance in daily operation.



Discover our ROXSTA series on the following pages – CO₂ rack systems designed for maximum efficiency and operational reliability.

ROXSTA Series



Efficient Solutions for a Wide Range of Applications

- **ROXSTAmicro** – extension unit for installation with plug-in equipment and cold rooms
- **ROXSTAdiscompact** – solution for small-scale applications such as bakeries and butcher shops
- **ROXSTAcube mini & ROXSTAcube mini S** – compact solution for discounters, organic markets, or small retailers with store sizes up to 1,000 m²
- **ROXSTAcube & ROXSTAcube pro** – compact solution for discounters or supermarkets with store sizes up to 1,200 m²
- **ROXSTAsmart** – proven solution for supermarkets with store sizes up to 2,500 m²
- **ROXSTA 2.0** – high-performance solution for supermarkets with store sizes up to 5,000 m²
- **ROXSTA G6** – powerful solution for cash & carry and hypermarkets with store sizes up to 10,000 m²
- **ROXSTAindustrial** – solution for industrial applications such as logistics warehouses and industrial/process cooling

ROXSTAcube mini S
up to 90 kW

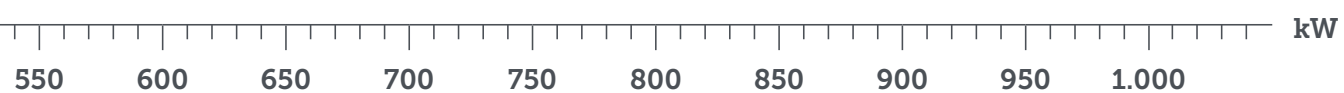
ROXSTAcube pro
up to 100 kW

ROXSTAsmart
up to 200 kW

ROXSTA2.0
up to 320 kW

ROXSTAG6
up to 640 kW

ROXSTAindustrial
up to 960 kW





Capacities
up to 4 kW

ROXSTAmicro

CO₂ retrofit/expansion solution – for direct installation on plug-and-play refrigeration and freezer units, as well as cold storage rooms.

Capacities

(t_0 MT -7 °C / t_0 LT -30 °C / t_{GC} 32 °C)

- **Medium temperature** 0.9...4.0 kW
1 two-stage CO₂ rotary compressor
- **Low temperature** 0.5...2.2 kW
1 two-stage CO₂ rotary compressor

Air-cooled & Water-cooled version

- **Air-cooled:** Gas cooler/intercooler combination suitable for retail food stores, commercial kitchens, and ice production
- **Water-cooled:** Plate heat exchanger for combination with chiller units and drycoolers

Operating behavior

The speed-controlled, two-stage CO₂ rotary compressor offers real time optimisation to the required cooling capacity with the lowest possible energy consumption.

Design pressure

- 90 bar suction line (MT/LT)
- 90 bar medium pressure
- 120 bar high pressure

Model	Dimensions (mm)			Weight (≈kg)
	Length	Depth	Height max.	
Air-cooled				
63 AC-S	750	500	325	30
163 AC-S				
163 AC-L				
303 AC-L			360	35
Water-cooled				
63 LC-S	750	500	325	30
163 LC-S				
163 LC-L				
303 LC-L			360	35

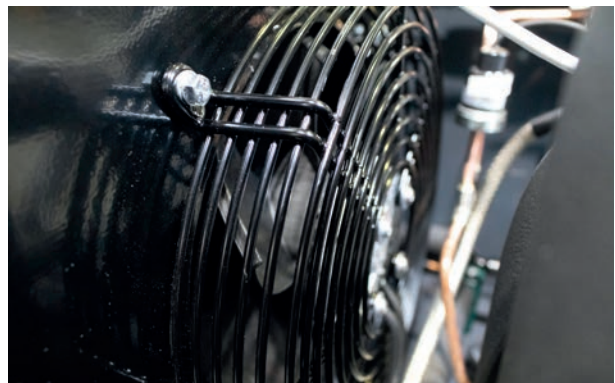
Scope of delivery

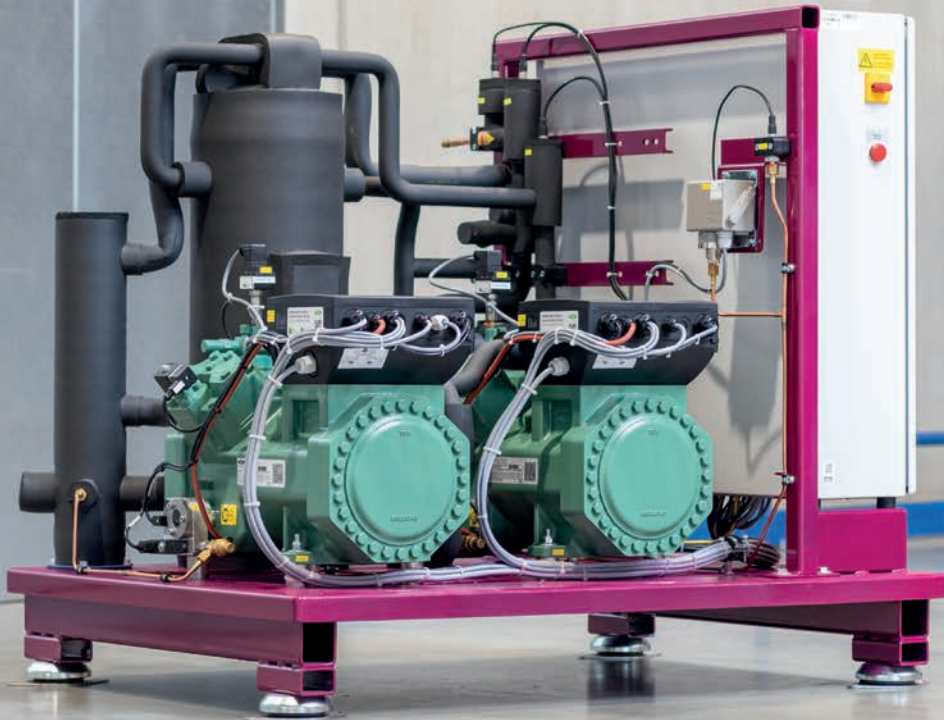
Installed as standard

- 2-stage variable-speed BLDC (Brushless Direct Current) Panasonic rotary compressor
- Intermediate pressure vessel
- High-pressure valve
- Filter dryer including sight glass
- Two service valves
- Insulation on suction and intermediate pressure sides
- Air-cooled intercooler (Type 63/163)
- Powder-coated housing
- Control electronics
- Air-cooled version: Gas cooler (to be installed on site)
- Water-cooled version: Plate heat exchanger (to be installed on site)

Optional

- Check valve and safety valve 60/80 bar (consider evaporator design pressure)





Capacities
up to 17 kW

ROXSTAdiscpack

CO₂ system in a compact design. Designed for discount stores, organic markets or small retailers. Ideal for smaller applications such as bakeries and butcheries.

Capacities

(t₀ MT -5 °C / t₀ LT -30 °C / t_{GC} 38 °C)

- **Medium temperature** 0.9...17 kW
2 transcritical CO₂ compressors

Benefits

- Improved system stability & increased operational safety through TECO₂ conditioner
- Flexible setup – indoor & outdoor
- Quiet operation through various sound protection options
- Compact construction, easy to install & maintenance-friendly

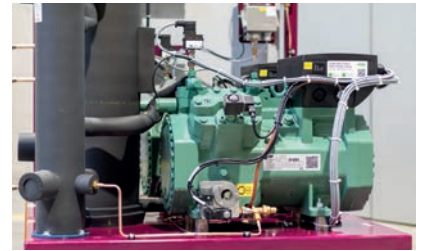
Design pressure

- 45/53 bar Suction line (MT)
- 80 bar Medium pressure
- 120 bar High pressure

Model Installation options	Switchboard	Dimensions (mm)			Receiver (litres)	Weight* (≈kg)
		Length	Depth ¹	Height		
Indoor – without sound protection	Mounted	1.200	900	1.100	25	480

¹ Plus 200 mm pipe connections

* Depending on the equipment, the weight can vary significantly



Scope of delivery

Installed as standard

- Transcritical compressors
- Capacity control for each MT lead compressor
- TECO₂ conditioner
- Active oil management
- Suction side insulation
- Vibration feet for optimal, low-vibration positioning
- Safety valves for HP & MP and suction side
- Safety devices according to DIN EN 378

Switchboard and control

- All switching devices necessary for fully automatic operation
- Main switch
- Independent power supply closes the HP and MP valves in case of a power failure
- Electrical components marked according to German standards

Optional

Weather/sound protection housing for indoor & outdoor installation

– Capacity control

- Lead compressor MT: Mechanical power control (10...100)
- Follow-up compressor MT: Mechanical power control (50/100)
- EVALIFT+stand-alone



Capacities
up to 50 kW

ROXSTAcube mini

CO₂ system in a compact design. Designed for discount stores, organic markets, or small retailers with a market size of up to 1,000 m².

Capacities

(t₀ MT -5 °C / t₀ LT -30 °C / t_{GC} 38 °C)

- **Medium temperature** 12...50 kW
2 transcritical CO₂ compressors
- **Low temperature** 0...14 kW
0-2 subcritical CO₂ compressors

Benefits

- Improved system stability & increased operational safety through TECO₂ conditioner
- Flexible setup – indoor & outdoor
- Quiet operation through various sound protection options
- Compact construction, easy to install & maintenance-friendly

Betriebsdruck

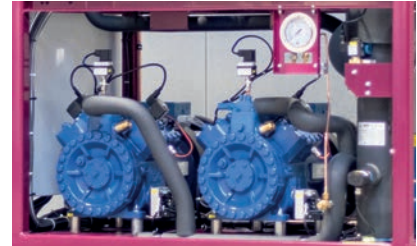
- 30/60 bar Suction line (LT)
- 45/60 bar Suction line (MT)
- 45/60 bar Medium pressure
- 120/130 bar High pressure

Model Installation options	Switchboard	Dimensions (mm)			Receiver (litres)	Weight* (≈kg)
		Length ¹	Depth	Height		
Indoor – without sound protection	mounted	1.670	800	1.620	80	900
Indoor & Outdoor – sound protection 40 mm		1.945	1.219 ²	1.624		1.200
Outdoor – sound protection 100 mm		2.355	1.355 ²	1.830		1.900

¹ Plus 200 mm pipe connections

² Incl. 200 mm ventilation hood

* Depending on the equipment, the weight can vary significantly



Scope of delivery

Installed as standard

- Trans- & subcritical compressors
- Capacity control for each MT lead compressor
- TECO₂ conditioner
- Active oil management
- Minimum level indicator
- Shut-off ball valve before and after HP & MP valves
- Suction filter in combination with shut-off ball valve in the MT suction line (supplied separately)
- Liquid set consisting of two shut-off ball valves, liquid filter, and sight glass
- Suction side insulation
- Vibration feet for optimal, low-vibration positioning
- Safety valves for HP & MP and suction side (optional redundant)
- Safety devices according to DIN EN 378

Switchboard and control

- All switching devices necessary for fully automatic operation
- Ventilated switchboard
- Main switch
- Control transformers
- Independent power supply closes the HP and MP valves in case of a power failure
- Electrical components marked according to German standards
- Shared energy metering (optional)

Optional

- Controlled post-injection
- Weather/sound protection housing for indoor & outdoor installation
 - Basic sound protection 40 mm
 - Increased sound protection 100 mm
 - Special sound protection housing for extra quiet operation

– Capacity control

- Lead compressor MT: Frequency converter or mechanical power control
- Follow-up compressor MT: Mechanical power control (50/100)
- Lead compressor LT: Frequency converter

– Heat recovery

- COOL2HEATbasic including 3-way motorized valve and insulation of the discharge line, oil separator, and plate heat exchanger (domestic or heating water)
- COOL2HEATbasic as stand-alone (second water circuit)



Capacities
up to 70 kW

ROXSTAcube

CO₂ system in a compact design. Designed for discount stores or supermarkets with a market size up to 1,200 m².

Capacities

(t₀ MT -5 °C / t₀ LT -30 °C / t_{GC} 38 °C)

- **Medium temperature** 12...70 kW
3 transcritical CO₂ compressors
- **Low temperature** 0...20 kW
0-2 subcritical CO₂ compressors

Benefits

- Improved system stability & increased operational safety through TECO₂ conditioner
- Flexible setup – indoor & outdoor
- Quiet operation through various sound protection options
- Compact construction, easy to install & maintenance-friendly

Design pressure

- 30 bar Suction line (LT)
- 45 bar Suction line (MT)
- 45/60 bar Medium pressure
- 120/130 bar High pressure

Model Installation options	Switchboard	Dimensions (mm)			Receiver (litres)	Weight* (≈kg)
		Length	Depth	Height		
Indoor – without sound protection	without	1.340 ¹	900	1.904 ³	80	1.050
		1.810 ¹	900	1.904 ³		1.500
Outdoor – sound protection 40 mm	mounted	2.045 ^{1/2}	1.180 ²	1.944 ³		1.500
Outdoor – sound protection 100 mm		2.320 ^{1/2}	1.355 ²	2.410		1.800

¹ without pipe outlets / ² incl. projections (scoops, gutters) / ³ incl. machine feet

* Depending on the equipment, the weight can vary significantly



Scope of delivery

Installed as standard

- Trans- & subcritical compressors
- Capacity control for each MT lead compressor
- TECO₂ conditioner
- Active oil management
- Minimum level indicator
- Shut-off ball valve before and after HP & MP valve
- Suction filter in combination with shut-off ball valve in the MT suction line (supplied separately)
- Liquid set consisting of two shut-off ball valves, liquid filter, and sight glass
- Suction side insulation
- Vibration feet for optimal, low-vibration positioning
- Safety valves for HP & MP and suction side (optional redundant)
- Safety devices according to DIN EN 378

Switchboard and control

- All switching devices necessary for fully automatic operation
- Ventilated switchboard
- Main switch
- Control transformers
- Independent power supply closes the HP and MP valves in case of a power failure
- Electrical components marked according to German standards
- Shared energy metering MT/LT (optional)
- Residual current device (optional)

Optional

- Maximum level indicator
- Controlled post-injection
- Weather/sound protection housing for outdoor installation
 - Basic sound protection 40 mm
 - Increased sound protection 100 mm
 - Special sound protection housing for extra quiet operation

– Capacity control

- Lead compressor MT: Frequency converter or mechanical power control
- Follow-up compressor MT: Mechanical power control (50/100)
- Lead compressor LT: Frequency converter

– Heat recovery

- COOL2HEATbasic including 3-way motorized valve and insulation of the discharge line, oil separator, and plate heat exchanger (domestic or heating water)
- COOL2HEATbasic as stand-alone (second water circuit)



Capacities
up to 90 kW

ROXSTAcube mini S

Many features in a compact design. Designed for discount stores, organic markets, or small retailers with a market size of up to 1,000 m².

Capacities

(t₀ MT -5 °C / t₀ LT -30 °C / t_{GC} 38 °C)

- **Medium temperature** 15...90 kW
1 IT / 2 MT transcritical CO₂ compressors
- **Low temperature** 0...17 kW
0-2 subcritical CO₂ compressors

Benefits

- Small footprint of 1 m²
- Improved system stability & increased operational safety through TECO₂nditioner & TECO₂mulator
- All compressors with IQ module
- High efficiency due to parallel compressor, ejector & permanent magnet motor

Design pressure

- 30/60 bar Suction line (LT)
- 45/60 bar Suction line (MT)
- 60 bar Medium pressure
- 120/130 bar High pressure

Model	Dimensions (mm)			Receiver (litres)	Weight* (≈kg)
	Length	Depth	Height ¹		
2/0-1	1.100	880	1.990	92	1.200

¹ Pipe connections: Length plus 320 mm / Height plus 150 mm (easily detachable)
* Depending on the equipment, the weight can vary significantly



Scope of delivery

Installed as standard

- Trans- & subcritical compressors including IQ module CM-RC-02/CM-IO-A and built-in oil level regulator OLM-IQ
- Capacity control CR11 for each MT lead compressor
- TECO₂ conditioner
- Active oil management – TECO₂ mulator
- Minimum level indicator
- Shut-off ball valve before and after HP & MP valve
- Strainer in the suction line – each MT/LT
- Suction side insulation
- Enclosure for indoor installation
- Vibration feet for optimal, low-vibration positioning
- Safety valves for HP & MP and suction side
- Safety devices according to DIN EN 378

Switchboard and control

- All switching devices necessary for fully automatic operation
- Ventilated switchboard
- Main switch
- Control transformers
- Independent power supply closes the HP and MP valves in case of a power failure
- Electrical components marked according to German standards
- Shared energy metering (optional)

Optional

- Soundproofing for indoor installation
- Weather/sound protection housing for outdoor installation
- Mounted safety valves including blow-off line

– Capacity control

- Lead compressor MT: Frequency converter or mechanical power control
- Follow-up compressor MT: Mechanical power control (50/100)
- Lead compressor LT: Frequency converter

– Efficiency enhancer

- Parallel compressors (capacity-controlled)
- Permanent magnet motor
- Ejector

– Heat recovery

- Waste heat recovery including 3-way motorized valve and temperature sensor (stand-alone)



Capacities
up to 100 kW

ROXSTAcube pro

CO₂ system in a compact design. Designed for discount stores or supermarkets with a market size up to 1,200 m².

Capacities

(t₀ MT -5 °C / t₀ LT -30 °C / t_{GC} 38 °C)

- **Medium temperature** 3...100 kW
2-3 transcritical CO₂ compressors
- **Low temperature** 0...32 kW
0-3 subcritical CO₂ compressors

Benefits

- Improved system stability & increased operational safety through TECO₂nditioner
- Compact construction, easy to install & maintenance-friendly
- Simple integration through divisible composite frame

Design pressure

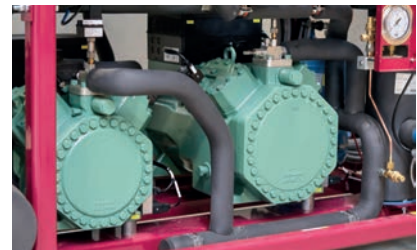
- 30/60 bar Suction line (LT)
- 45/53/60 bar Suction line (MT)
- 45/60 bar Medium pressure
- 120/130 bar High pressure

Model	Dimensions (mm)				Receiver (Liter)	Weight* (≈kg)
	Comp. frame	Length MP frame	Switchboard	Depth		
2-3/0-3	1.240	900	580	880 / 1.000 ¹ / 1.200 ¹	165	1.460

¹ Depending on switchboard options

² Divisible composite frame at height 1,045 mm

* Depending on the equipment, the weight can vary significantly



Scope of delivery

Installed as standard

- Trans- & subcritical compressors
- Capacity control for each MT lead compressor
- TECO₂ conditioner
- Active oil management
- Minimal level indicator
- Shut-off ball valve before and after HP & MP valve
- Strainer in the suction line – each MT/LT
- Liquid set consisting of two shut-off ball valves, liquid filter, and sight glass
- Suction side insulation
- Controlled post-injection
- Vibration-damping feet for optimal, low-vibration installation
- Safety valves for HP & MP and suction side (optional redundant)
- Safety devices according to DIN EN 378

Switchboard and control

- All switching devices necessary for fully automatic operation
- Ventilated switchboard
- Main switch
- Control transformers
- Independent power supply closes the HP and MP valves in case of a power failure
- Electrical components marked according to German standards
- Shared energy metering MT/LT (optional)
- Residual current device (optional)

Optional

- Maximum level indicator
- Gas cooler bypass (delivered separately)
- Active cooling for machine housing
- Sound protection housing for indoor installation
- Weather/sound protection housing for outdoor installation

– Capacity control

- Lead compressor MT: Frequency converter or mechanical power control
- Follow-up compressor MT: Mechanical power control (50/100)
- Lead compressor LT: Frequency converter

– Heat recovery

- COOL2HEATbasic including 3-way motorized valve and insulation of the discharge line, oil separator, and plate heat exchanger (domestic or heating water)
- COOL2HEATbasic as stand-alone (second water circuit)
- Pump for heat recovery



Capacities
up to 200 kW

ROXSTAsmart

CO₂ system in a compact design. Designed for supermarkets with a market size up to 2,500 m².

Capacities

(t₀ MT -5 °C / t₀ LT -30 °C / t_{GC} 38 °C)

- **Medium temperature** 28...200 kW
3-4 transcritical CO₂ compressors
- **Low temperature** 0...65 kW
0-3 subcritical CO₂ compressors

Benefits

- Improved system stability & increased operational safety through TECO₂ conditioner
- Rack frame, medium-pressure station & optionally separable parallel compressor
- Compact construction, easy to install & maintenance-friendly

Design pressure

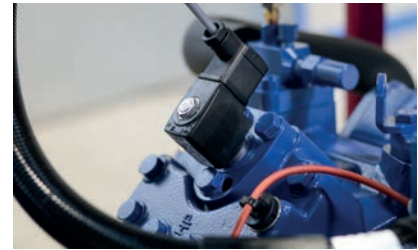
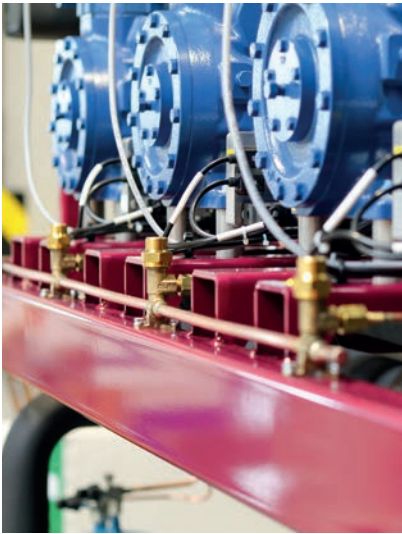
- 30/60 bar Suction line (LT)
- 45/53/60 bar Suction line (MT)
- 60/80 bar Medium pressure
- 120/130 bar High pressure

Model	Dimensions (mm)			Receiver (litres)	Weight* (≈kg)		
	Comp. frame	Length MP frame	Switchboard				
Incl. switchboard, mounted on compressor frame							
3/0-2	2.100	900	auf Rahmen montiert	880	1.952	165	1.340
4/0-3	2.500					197	
Incl. switchboard, mounted on side							
3/0-2	2.100	900	700	935 / 1.000 / 1.200	1.952 (Rack) 2.200 (Switchboard)	165	1.340
4/0-3	2.500					197	

¹ With parallel compressor: length plus 600 mm

² For vertically mounted switchboard: depth & height depending on the option

* Depending on the equipment, the weight can vary significantly



Scope of delivery

Installed as standard

- Trans- & subcritical compressors
- Capacity control for each MT lead compressor
- TECO₂ conditioner
- Active oil management
- Minimal level indicator
- Shut-off ball valve before and after HP & MP valve
- Shut-off ball valve for the common discharge line MT before oil separator
- Suction filter in combination with shut-off ball valve in the suction line – each MT/LT
- Liquid set consisting of two shut-off ball valves, liquid filter, and sight glass
- Suction side insulation
- Controlled post-injection
- Vibration-damping feet for optimal, low-vibration installation
- Safety valves for HP & MP and suction side (optional redundant)
- Safety devices according to DIN EN 378

Switchboard and control

- All switching devices necessary for fully automatic operation
- Ventilated switchboard
- Main switch
- Control transformers
- Independent power supply closes the HP and MP valves in case of a power failure
- Electrical components marked according to German standards
- Shared energy metering MT/LT (optional)
- Residual current device (optional)

Optional

- Maximum level indicator
- Gas cooler bypass (delivered separately)
- Passive liquid subcooling LT
- Standstill cooling (delivered separately, connections provided at the receiver)
- Active cooling for machine housing
- Bypass liquid filter
- Sound protection housing for indoor installation
- Weather/sound protection housing for outdoor installation

– Capacity control

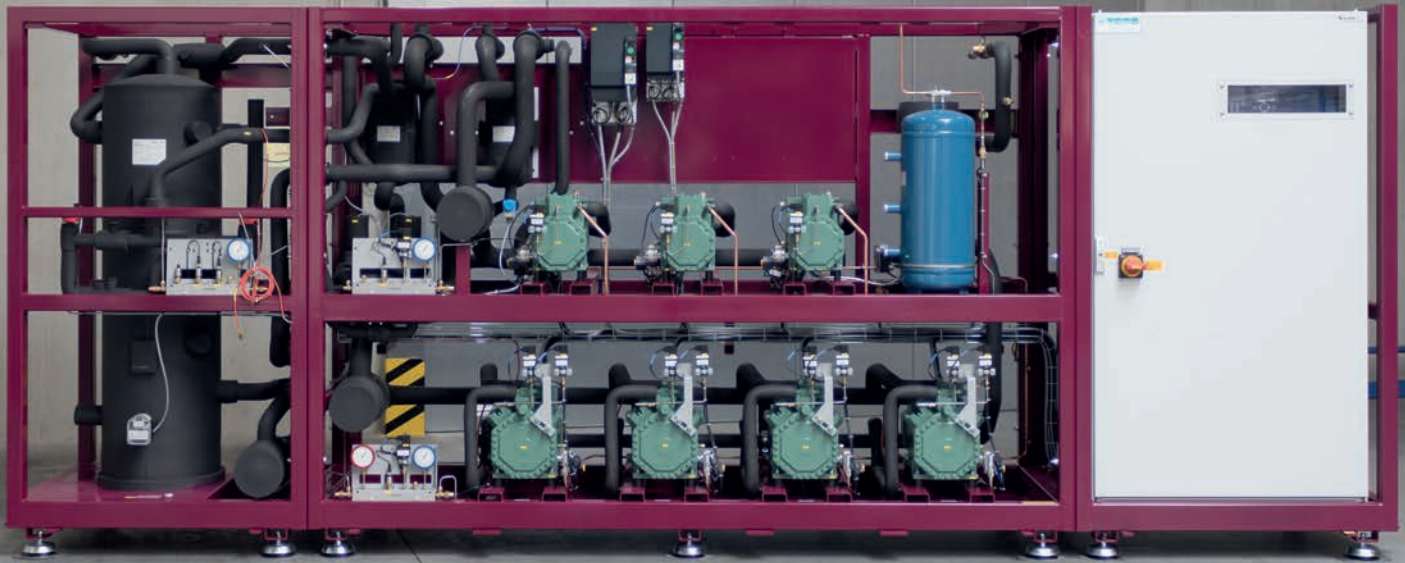
- Lead compressor MT: Frequency converter or mechanical power control
- Follow-up compressor MT: Mechanical power control (50/100)
- Lead compressor LT: Frequency converter

– Efficiency enhancer

- Parallel compressor (capacity-controlled)
- Permanent magnet motor
- Ejector
- EVALIFT

– Heat recovery

- COOL2HEATbasic including 3-way motorized valve and insulation of the discharge line, oil separator, and plate heat exchanger (domestic or heating water)
- COOL2HEATbasic as stand-alone (second water circuit)
- Pump for heat recovery



Capacities
up to 320 kW

ROXSTA 2.0

CO₂ system for higher capacities. Designed for supermarkets with a market size up to 5,000 m².

Capacities

(t₀ MT -5 °C / t₀ LT -30 °C / t_{GC} 38 °C)

- **Medium temperature** 36...320 kW
3-6 transcritical CO₂ compressors
- **Low temperature** 0...240 kW
0-5 subcritical CO₂ compressors

Benefits

- Improved system stability & increased operational safety through TECO₂ conditioner
- Rack frame, medium-pressure station, and switchboard can be separated
- Maintenance-friendly & easy to install
- Fully piped and wired
- Completely tested and CE compliant

Design pressure

- 30 bar Suction line (LT)
- 45/53/60 bar Suction line (MT)
- 45/60/80 bar Medium pressure
- 120/130 bar High pressure

Model	Dimensions (mm)			Depth ²	Height	Receiver (litres)	Weight* (≈kg)
	Comp. frame ¹	Length MP frame ²	Switchboard				
3/0-2	3.750	1.100 (250 L) 1.233 (420 L)	1.400 ³	890 (250 L) 1.050 (420 L)	2.030	250 420	on request
4/0-3	4.200		1.800				
5/0-4	5.100						
6/0-5	5.600						

¹ Incl. switchboard

² Depending on receiver volume

³ 1,800 mm over 400A

* Depending on the equipment, the weight can vary significantly



Scope of delivery

Installed as standard

- Trans- & subcritical compressors
- Capacity control for each MT lead compressor
- TECO₂ conditioner
- Active oil management
- Minimal level indicator
- Shut-off ball valve before and after HP & MP valve
- Suction filter in combination with shut-off ball valve in the suction line – each MT/LT
- Liquid set consisting of two shut-off ball valves, liquid filter, and sight glass
- Suction side insulation
- Second HP and MP valve
- Controlled post-injection
- Vibration-damping feet for optimal, low-vibration installation
- Safety valves for HP & MP and suction side (optional redundant)
- Safety devices according to DIN EN 378

Switchboard and control

- All switching devices necessary for fully automatic operation
- Ventilated switchboard
- Main switch
- Control transformers
- Independent power supply closes the HP and MP valves in case of a power failure
- Electrical components marked according to German standards
- Shared energy metering MT/LT (optional)
- Residual current device (optional)

Optional

- Maximum level indicator
- Gas cooler bypass (delivered separately)
- Second HP and MP valve (redundant)
- Standstill cooling (delivered separately, connections provided at the receiver)

– Capacity control

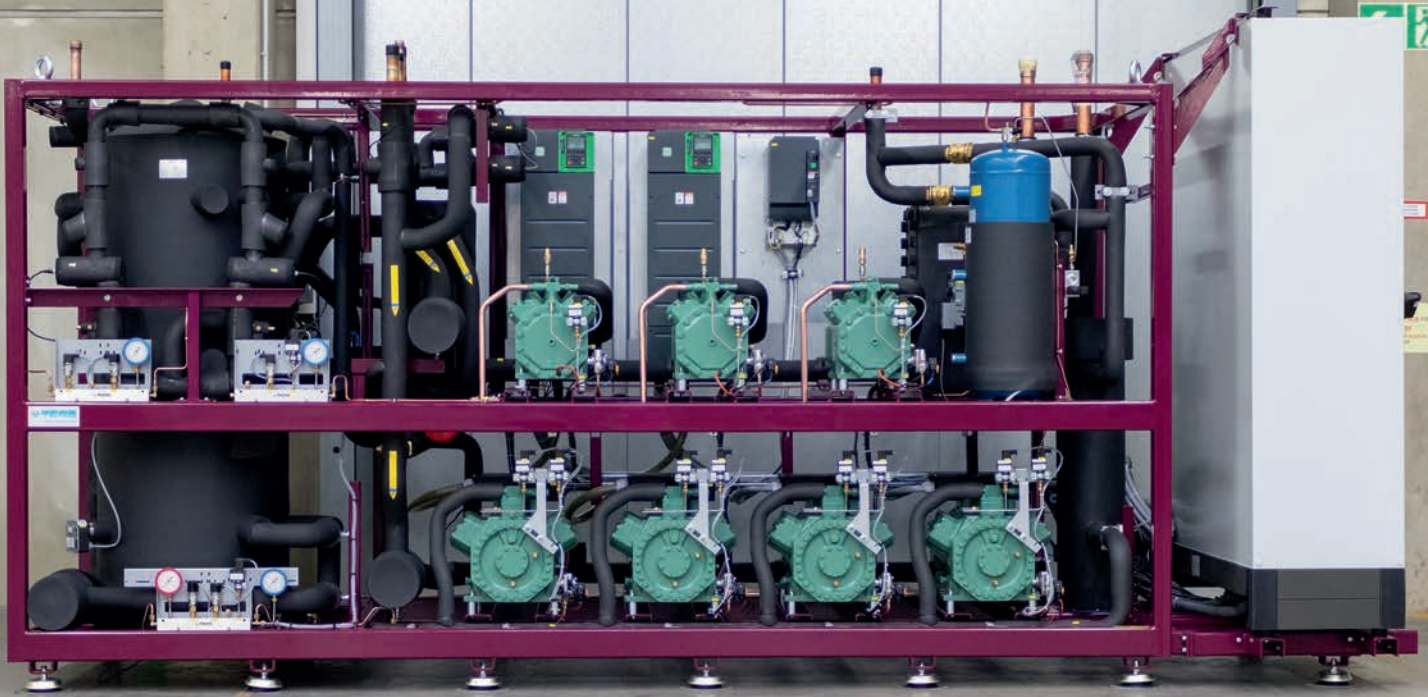
- Lead compressor MT: Frequency converter or mechanical power control
- Follow-up compressor MT: Mechanical power control (50/100)
- Lead compressor LT: Frequency converter

– Efficiency enhancer

- Parallel compressors (capacity-controlled)
- Permanent magnet motor
- Gas-Ejektor (high-lift)

– Heat recovery

- COOL2HEATbasic including 3-way motorized valve and insulation of the discharge line, oil separator, and plate heat exchanger (domestic or heating water)
- COOL2HEATbasic as stand-alone (second water circuit)
- Pump for heat recovery



Capacities
up to 640 kW

ROXSTA G6

CO₂ system for high capacities. Designed for Cash & Carry and hypermarkets with a market size up to 10,000 m².

Capacities

(t₀ MT -5 °C / t₀ LT -30 °C / t_{GC} 38 °C)

- **Medium temperature** 207...640 kW
3-7 transcritical CO₂ compressors
- **Low temperature** 0...590 kW
0-6 subcritical CO₂ compressors

Benefits

- 6-cylinder compressor
- Compact design
- Easy to install
- Fully piped and wired
- Completely tested and CE compliant

Betriebsdruck

- 30/60 bar Suction line (LT)
- 45/53/60 bar Suction line (MT)
- 45/60/80 bar Medium pressure
- 120/130 bar High pressure

Model	Dimensions (mm)				Receiver (litres)	Weight* (≈kg)
	Rack	Length 2. Receiver	Switchboard	Depth		
3/0-2	3.440 ¹	1.150	770 (up to 630 A)	1.250 (Rack)	2.030 (Rack)	250 420 2x420 on request
4/0-3	3.900					
5/0-4	4.440					
6/0-5	4.980					
7/0-6	5.520					

¹ Model 3/0-2 incl. parallel compression – mounted on frame 4/0-3

² Switchboard: 9-11 compressor, 400-630 A

* Depending on the equipment, the weight can vary significantly



Scope of delivery

Installed as standard

- Trans- & subcritical compressors
- Capacity control for each MT lead compressor
- Active oil management
- Minimal level indicator
- Shut-off ball valve before and after HP & MP valve
- Suction filter in combination with shut-off ball valve in the suction line – each MT/LT
- Liquid set consisting of two shut-off ball valves, liquid filter, and sight glass
- Suction side insulation
- Second HP and MP valve
- Controlled post-injection
- Vibration-damping feet for optimal, low-vibration installation
- Safety valves for HP & MP and suction side (optional redundant)
- Safety devices according to DIN EN 378

Switchboard and control

- All switching devices necessary for fully automatic operation
- Ventilated switchboard
- Main switch
- Control transformers
- Independent power supply closes the HP and MP valves in case of a power failure
- Electrical components marked according to German standards
- Shared energy metering MT/LT (optional)
- Residual current device (optional)

Optional

- Maximum level indicator
- Gas cooler bypass
- TECO₂ conditioner
- Flash gas & suction gas heat exchanger (MT/LT)
- Active liquid subcooling
- Liquid separator (60 bar, 70/150 litres)
- Standstill cooling (delivered separately, connections provided at the receiver)
- Active cooling for machine housing
- Weather/sound protection housing for outdoor installation

– Capacity control

- Lead compressor MT: Frequency converter or mechanical power control
- Follow-up compressor MT: Mechanical power control (50/100)
- Lead compressor LT: Frequency converter

– Efficiency enhancer

- Parallel compressors (capacity-controlled)
- Permanent magnet motor
- Ejector
- EVALIFT

– Heat recovery

- COOL2HEATbasic including 3-way motorized valve and insulation of the discharge line, oil separator, and plate heat exchanger (domestic or heating water)
- COOL2HEATbasic as stand-alone (second water circuit)
- Pump for heat recovery



Capacities
up to 960 kW

ROXSTaindustrial

CO₂ system for industrial applications such as hypermarkets, Cash&Carry, logistics warehouses, or industrial and process cooling.

Capacities

(t_0 MT -5 °C / t_0 LT -30 °C / t_{GC} 38 °C)

- **Medium temperature** 360...960 kW
4-10 transcritical CO₂ compressors
- **Low temperature** 0...590 kW
0-6 subcritical CO₂ compressors

Benefits

- Flexible
- Easy to install & maintenance-friendly
- Fully piped and wired
- Completely tested and CE compliant

Design pressure

- 30 bar Suction line (LT)
- 45/53/60 bar Suction line (MT)
- 45/60/80 bar Medium pressure
- 120/130 bar High pressure

Model	Dimensions (mm) ¹			Depth	Height	Receiver (litres)	Weight* (≈kg)
	Comp. frame	Length MP frame	Switchboard ²				
4/0-3	3.100	1.500 (250/420 L) 2.200 (2x420 L)	1.400 (up to 630 A)	1.300	2.300	250 420 2x420	on request
5/0-4	3.700		1.800 (up to 800 A)				
6/0-5	4.300		2.600 (up to 1.000 A)				
7-10/0-6	on request						

Further configurations on request

¹ Dimensions may vary depending on the configuration

² Incl. frame parts

* Depending on the equipment, the weight can vary significantly



Scope of delivery

Installed as standard

- Trans- & subcritical compressors
- Capacity control for each lead compressor
- Muffler for pulsation damping in the total pressure line (LT)
- Active oil management
- Minimal level indicator
- Shut-off ball valve before and after HP & MP valve
- Suction filter in combination with shut-off ball valve in the suction line – each MT/LT
- Liquid set consisting of two shut-off ball valves, liquid filter, and sight glass
- Suction side insulation
- Second HP and MP valve
- Controlled post-injection
- Vibration-damping feet for optimal, low-vibration installation
- Safety valves for HP & MP and suction side (optional redundant)
- Safety devices according to DIN EN 378

Switchboard and control

- All switching devices necessary for fully automatic operation
- Ventilated switchboard
- Main switch
- Control transformers
- Independent power supply closes the HP and MP valves in case of a power failure
- Electrical components marked according to German standards
- Shared energy metering MT/LT (optional)
- Residual current device (optional)

Optional

- Maximum level indicator
- Gas cooler bypass
- TECO₂ conditioner
- Flash gas & suction gas heat exchanger (MT/LT)
- Active liquid subcooling
- Gascooler subcooler plate
- Additional suction pressure stage for (MT and/or LT)
- Liquid separator (60 bar, 70/150 litres)
- Standstill cooling (delivered separately, connections provided at the receiver)
- Active cooling for machine housing

– Capacity control

- Lead compressor MT: Frequency converter or mechanical power control
- Follow-up compressor MT: Mechanical power control (50/100)
- Lead compressor LT: Frequency converter

– Efficiency enhancer

- Parallel compressors (capacity-controlled)
- Permanent magnet motor
- Gas-Ejektor (high-lift)
- EVALIFT

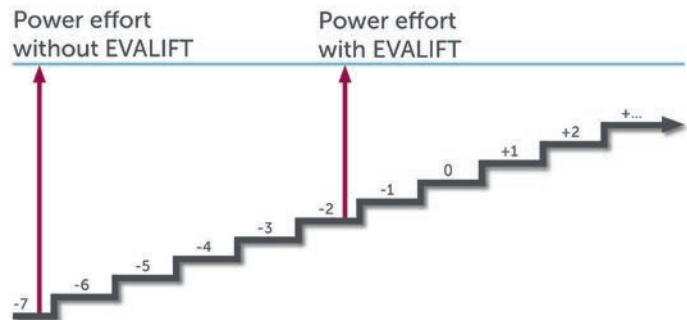
– Heat recovery

- COOL2HEATbasic including 3-way motorized valve and insulation of the discharge line, oil separator, and plate heat exchanger (domestic or heating water)
- COOL2HEATbasic as stand-alone (second water circuit)
- Pump for heat recovery
- Heat pump compressor / AC function

EVALIFT

The innovative solution EVALIFT effortlessly and cost-effectively enhances the efficiency of your refrigeration system for medium and low temperature applications. Thanks to our TEKO patent (since April 2019), we offer you a straightforward application where the required expertise is already available to the user.

Experience return on investment in less than 2 years and benefit from numerous additional advantages. In addition to the obvious efficiency increase, you enjoy higher system stability, greater operational safety, and an extended lifespan for your refrigeration system.



Technology

Functions

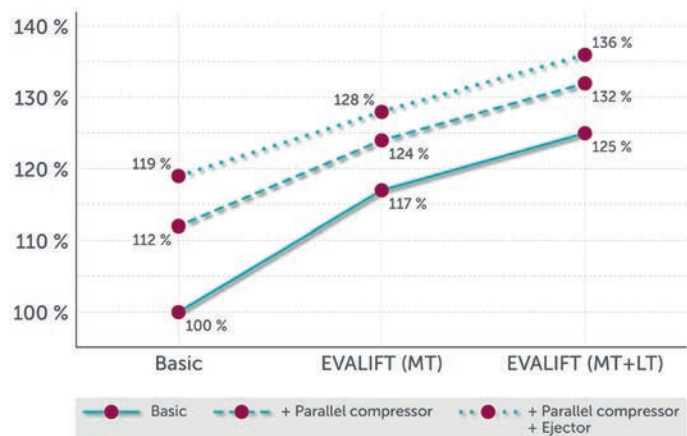
- Semi-flooded evaporators – higher evaporation temperatures
- All climate zones possible: sub-/transcritical, winter/summer & day/night
- Additional efficiency improvement of the low-temperature suction line
- No additional measures required in the oil system

Components

- TECO₂ conditioner for optimal suction gas conditioning in combination with EVALIFT
- In combination with an intelligent control system



Efficiency



TECO₂nditioner

The patented heat exchanger TECO₂nditioner optimizes the suction and discharge temperatures of the low-stage compressors in transcritical CO₂ booster systems. By lowering and stabilizing the oil temperature, we achieve improved lubrication and an extended lifespan of the compressors.

The advantages at a glance:

- Improvement of system stability
- Increase in operational safety
- Extended lifespan for reciprocating compressors (MT)
- Replacement of the air-cooled superheater for high-pressure gas (LT)

Technology

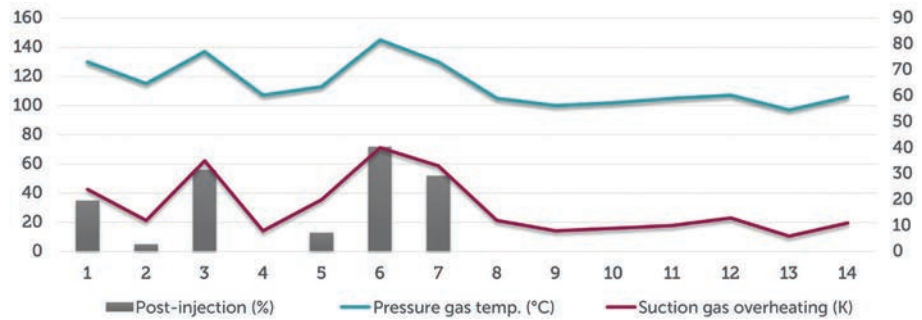
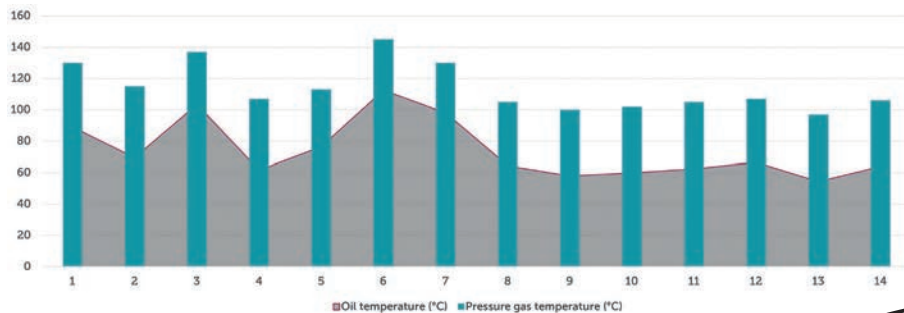
Functions

- Optimally conditioned suction gas at the inlet of the medium cooling compressor
- No additional control effort required

Components

- Specially developed heat exchanger
- In combination with an intelligent control system

Advantage



TEKO Refrigeration

www.teko-gmbh.com

Frankfurt am Main, Germany



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