

# DISCOUNTERSOLUTIONS





# DISCOUNTER REQUIREMENTS

## TEKO SOLUTIONS



Image source:  
By courtesy of GTM Gebäudetechnik Management



### TEKO systems for active environmental protection.

The GWP is a significant indicator for global warming due to refrigerant leakages. It shows important parameter for determining the environmental friendliness of refrigeration systems in use.

The global warming effect of commercial F-gases in the average sector is four-digits above natural refrigerant solutions.

TEKO offers systems for active environmental protection with natural refrigerants (CO<sub>2</sub> with GWP = 1 and propane with GWP = 3).

These systems are absolutely future-proof, can be used for sure after 2030 from an environmental point of view and are not affected by the F-Gas Regulation.

Of course TEKO offers also systems with other refrigerants, such as LOW-GWP refrigerants.

### Requirements of a discounters: 600 to 1,200 square meters.

Safe operation with always fresh and chilled goods.

### Commercial refrigeration.

- Cabinets for medium temperatures (glazed or unglazed)
- Low temperature refrigerated islands (mostly plug-in)
- Low and medium temperature cold rooms

### Temperatures in the market.

- Heating
- Air conditioning

### Installation of the machinery.

- Indoor or outdoor installation
- Sound insulation for noise-sensitive areas

### Compliance with the operator obligations.

- HACCP – Live monitoring of foodstuff temperatures (MT/LT)
- LT Quick frozen Foodstuffs Regulations EC 37/2005
- Fault analysis – Transparent evaluation
- Energy management (DIN ISO 50001)

### Low Total Cost of Ownership.

### Solution from TEKO: Tailored to the needs of Discounters.

High-quality system technology produced in series. To ensure the quality of chilled goods – „Freshness First“.

### Future-proof refrigeration technology.

- Standardized machine series
- Combine unit numbers, use price advantages
- Also indirect systems possible
- Specialist for natural refrigerants – alternative solutions with LOW-GWP refrigerants
- Long lifetime
- Compliance with legal requirements

### Always correct temperatures.

Anytime correct temperature conditions in the goods as well as temperature safety at the workplace (sales and social rooms)

#### Heating.

Using the waste heat from the refrigeration process to support the heating system - alternatively using an integral system for complete market heating.

#### Air conditioning.

Air-conditioning function via refrigeration system and night flushing via building management.

### Installation of refrigeration system.

TEKO offers solutions for flexible installations. Whether in machine rooms, outside the building or on the roof. Various soundproofing variants are available.

### Compliance with required temperatures (HACCP).

- Integrated Wurm control system
- Platform- and location-independent processing, evaluation and qualification of large data sets
- Redundant backup via Wurm server

### Energy-efficient, electricity-saving systems.

- Low maintenance and operating costs
- Operational safety – No system outage / no goods damage

# CO<sub>2</sub> - NATURALLY FUTURE-PROOF

## ROXSTA CO<sub>2</sub>/R 744.

Optimal solution for discounters, convenience stores, organic shops and gas stations

## ROXSTAcube mini.

- Extension or retrofitting of cooling applications with lower medium and low temperature cooling requirement
- Indoor and outdoor installation
- Different soundproofing variants
- Machine can be placed extremely flexibly due to divisible frame

### Capacities.

- MT up to 40 kW. 2 transcritical CO<sub>2</sub> compressors
- LT up to 7 kW. 0... 1 subcritical CO<sub>2</sub> compressors
- Frequency converter included



ROXSTAcube mini

## ROXSTAcube.

- Small services – serial applications
- Compact design
- Indoor and outdoor installation
- Different soundproofing variants
- Saving of the machine room
- More storage space usable

### Capacities.

- Medium cooling up to 74 kW. 3 transcritical CO<sub>2</sub> compressors
- Low cooling up to 9 kW. 0...1 subcritical CO<sub>2</sub> compressors
- Frequency converter included



ROXSTAcube

## ROXSTAsmart.

- Standardized, compact, easy to use
- Simple and understandable in application
- Future-oriented solution at attractive prices

### Capacities.

- MT up to 112 kW
- LT up to 32 kW



ROXSTAsmart

Capacities at to MT -5°C / to LT -30 °C / t<sub>GC</sub> 36°C





## Series manufacturing at TEKO.

- More than 2,400 CO<sub>2</sub>-units successfully running in the field
- Years of experience with transcritical CO<sub>2</sub>-units
- System solutions for every scope of application
- High level of hermeticity
- Fast delivery
- Unit engineering with TÜV-approval

### ROXSTAir.

- Extension or retrofitting of cooling applications with lower medium temperature cooling requirement
- Compact design: 965 x 1.575 mm
- For outdoor installation
- No machine room needed
- With light sound insulation
- 54 db(A) in 10 m

### Capacities.

- MT up to 20 kW
- 1 transcritical CO<sub>2</sub> compressor
- Frequency converter included
- 2 EC fans



Capacities at to MT -5°C / t<sub>GC</sub> 36°C

# WHITELINE CO<sub>2</sub> HEAT EXCHANGERS



High-quality materials and well thought-out details stand for safety, simple operation, long service life and hygiene.

## CO<sub>2</sub> wedge evaporator for 45, 60 and 80 bar.

### Maintenance-friendly.

Drip tray and fan plate can be swivelled or removed with a safety hinge and offers you full access for installation and service. You can clean the evaporators very comfortably and keep them hygienically clean.

The refrigeration connections are arranged in a maintenance-friendly manner and can be easily connected to the pipe leading to the evaporator. Sufficient space is available in the side compartment for the installation of valves.

### Safe and robust.

Strong pipe walls and fins ensure a high degree of safety and robustness and extends the service life.

### Capacities.

- MT 1,4 up to 6 kW
- LT 1,1 up to 4,7 kW

### Design.

- Pressing air flow
- Fin spacing: 4.2 / 6.3 mm
- 1 to 4 EC or AC fans (1-phase)
- Diameter: 300 mm
- Single or double insulated drip tray
- Fin thickness: 0,15 to 0,20 mm
- Pipe wall thickness: 0,41 to 1,10 mm
- Ceiling mounts made of steel
- Optional epoxid coated fins for aggressive atmosphere applications

## Gas cooler WGR 120 bar.

### Efficient. Adjustable. Flexible.

All gas coolers of the Whiteline series contain a special copper pipe with very small diameters. An advantage of this pipe geometry is a small pipe volume, which offers a high primary surface area. The units therefore offer high efficiency with a small footprint.

EC technology offers a further plus in terms of efficiency. The Whiteline gas coolers (WGR) are equipped with continuously variable EC fans with their own control system, that adapt perfectly to the fluctuating capacity requirements of the application.

The refrigerant connections are easy to install and to process for the continuing pipelines. The fans are pre-wired in a common terminal box.

The gas coolers can be operated in horizontal and vertical air flow directions. This offers you a high degree of flexibility in installation.

### Capacities.

$Q_{0\text{ min}}$  31 kW at 25 db(A) in 10 m

$Q_{0\text{ max}}$  230 kW at 40 db(A) in 10 m

### Design.

- 1 to 4 EC fans (1- or 3-phase)
- Fan:  $\varnothing$  630 / 800 / 910 mm
- Fin spacing: 2,1 mm





TEKO Gesellschaft für Kältetechnik mbH  
Carl-Benz-Straße 1  
63674 Altstadt  
Germany

Tel.: +49 (0) 60 47 / 96 30-100  
Fax: +49 (0) 60 47 / 96 30-100  
info@teko-gmbh.com  
www.teko-gmbh.com

