

TECHNICAL FEATURES

Model Sun	ECO ₂ KARE
Type of refrigerant	R744
Display	7" colour touchscreen
Service valves	Automatic
Thermal printer	Standard
Hybrid	Standard
Pressure test forming gas / nitrogen	Standard, max pressure 100 bar
Analyzer (KIT.GAS)	not applicable
Connectivity Wi - Fi	Standard
Flushing Kit	not applicable
Vacuum leak detection	Standard
Recharge method	CAR
CO2 measurement" discharged	yes
Pressure gauges	100 ø mm
Hoses	3 meters
Data Base	base + custom records
Safety Sensor environmental CO2 level	yes
Oil injection	Automatic
Dye injection	Automatic
Hermetic and refillable containers for oil and dye	Standard 2 + 1
Hermetic disposable containers for oil and dye	Option 2 + 1
Refillable standard containers for oil and dye	Not available
Refrigerant configuration	not applicable
Non condensable gas purge	not applicable
Volt	220 - 240V 50/60 Hz (CE), 110V 60 Hz (ETL)
Vacuum pump	142 l/min double stage, 3 Pa / 0,03 mbar
Sealed compressor	not applicable
Recovery speed	not applicable (discharge speed is applicable)
Tank Scale resolution	10 gr
Oil scale resolution	5 gr
Working temperature range	10/48°C
Filter system	not applicable
Refrigerant tank	no internal tank. Scale max gross weight 50 kg
Bottle heater	Standard (with setting option for extended heating)
Status light	Standard
Quick couplers	SAE J639
Refrigerant scale max load	50 kg / 110 lb
Max operating pressure	160 bar
Exhausted oil container capacity	500 ml
Refrigerant charge	automatic
Emergency Stop button	Standard
Casing	Metal with robust plastic cover (thermoformed)
Dimension / weight	cm 67 x 88 x 110, 90 kg
Dimension / weight with packaging	cm 74 x 112 x 125, 100 kg, no double stacking

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Part of the machines is illustrated with optional extras which are available at extra cost. Technical and visual modifications reserved.



ECO2KARE

TOUCH THE FUTURE ORIENTED EXPERIENCE

CO₂
AIR CONDITIONING
KOOLKARE

POWERFUL
ROBUST
SAFE



EN

AIR CONDITIONING
SERVICE EQUIPMENT

THE STANDARD IN INFORMATION AND DIAGNOSTICS SYSTEMS



CO₂ AIR CONDITIONING SERVICE

ECO2KARE

TOUCH THE FUTURE ORIENTED EXPERIENCE

POWERFUL
ROBUST
SAFE

Constant changing of automotive air conditioning systems

The technological development of vehicles aims to continuously improve safety, efficiency and environmental impact. The most recent regulatory framework for vehicle cooling and heating systems, EU 517/2014, stipulated the reduction of refrigerants with a high global warming potential (GWP). Since 2017, vehicle air conditioning systems in many countries around the world must use refrigerants with a GWP <150. HFO1234yf gas with a GWP of 4 has become the popular solution with a GWP 350 times lower than its predecessor R134a with a GWP of 1.470.

The environmentally friendly alternative

Some car manufacturers have followed also the environmentally friendly alternative of using carbon dioxide as a refrigerant and are installing these systems in some of their vehicle models. Carbon dioxide (R744) occurs naturally, is biodegradable and offers the best possible ecological result with a GWP of 1 (zero impact on ozone depletion). Increased awareness of environmental protection, cost-effectiveness and the efficiency that can be achieved with the properties of R744 are further encouraging the use of R744 systems as a long-term and future-oriented solution in the premium vehicle sector.

The Sun R744 solution

Sun presents the new ECO₂KARE air conditioning service device for the growing workshop needs of specific maintenance and repair on R744 air conditioning systems.

The thermodynamics of R744 refrigerant differ fundamentally from the chemical refrigerants with new requirements for the air conditioning system itself and the necessary air conditioning service device. Particularly noteworthy are the very high pressures of up to 130 bar and additional safety precautions to avoid increased CO₂ concentrations in the vehicle or in the workshop's working environment.

ECO₂KARE has been developed for the specific safety and high-pressure requirements of R744 air conditioning systems. The device is distinguished by high-quality and powerful components, future-oriented standard features and extremely intuitive user friendliness via the 7" touchscreen.



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Fully automatic air conditioning service unit for emptying, servicing and filling R744 air conditioning systems

- Simple, fast and highly intuitive navigation on a 7" touchscreen with Linux operating system
Navigation is extremely easy through images, icons, short texts and the virtual keyboard
- Absolutely safe: software guided processes include all necessary control instructions and constant monitoring of the CO₂ concentration in the atmosphere
- Integrated Hybrid feature for the flushing of service hoses and internal circuits. Indispensable for the safe service on systems with an electric compressor
- Very powerful 142 l / min double-stage vacuum pump keep the station suitable for big systems, too (trains, buses) and guarantees a highly efficient vacuum phase for drying the system, particularly important for CO₂ systems
- Heating system with manual setting option for extended heating speeds up filling process and helps to save time
- Management of 3 high-quality, hermetic, refillable containers for compressor oil (1x PAG and 1x POE) and dye (included in the scope of delivery)
- Automatic pressure test with nitrogen or hydrogen/nitrogen mixture
- 3 m service hoses for a smart connection to the vehicle
- Large pressure gauges 100 mm
- Status light
- Easy changing of R744 tanks of different sizes, protection cover and fastening with Swift safety belt
- Possible refrigerant bottles: the gross weight of up to 50 kg allows the use of usual commercial sizes for refrigerant quantities from 1 to 22.6 kg, height from 35 cm to 120 cm including connections and a diameter from 10 cm to 21 cm.
- Connection to the bottle: hose 1 m, RAC8164 adapter W21, 7x1/14" – ¼ SAE male, RAC8165 adapter W21, 8x1/14" – ¼ SAE male
- Quick plug-in connection for CO₂ discharge hose (PA12 8x10 mm, TUB1259)
- Efficient internal ventilation against icing of internal components
- Online update via USB interface or directly in Wi-Fi connection
- Generous storage compartment for accessories
- Very service-friendly
- Very robust structure for best protection of the station
- Convenient and cost-effective due to low maintenance needs and minimal use of consumables
- Environmentally friendly packaging made of wood and paper without the use of polystyrene

STANDARD



Status Light
7" touchscreen
Safety switch



Quick couplers
SAE J639
Hybrid function



Nitrogen
pressure test



Strong Vacuum pump
142 l / min double stage



Holder for
storing the
service hoses



Protection
cover for
external tank



Double scale
lock easy to
reach



Swift safety
belt and
bottle heater



3 hermetic refillable containers
(1 x PAG, 1 x POE, 1 x dye)



Quick plug in
connection for CO₂
discharge hose



Used oil
container
500 ml