

**WELCOME TO  
WebEvent 26.04.2022**

**WABCOWÜRTH WORKSHOP SERVICES GMBH**

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# WEBEVENT AIR CONDITIONING SERVICE

#beCOOLius. Ready for the climate season



1 Product portfolio  
COOLIUS /  
Accessories

2 Air conditioning  
service from  
WABCOWÜRTH

3 Highlights  
COOLIUS Portal

4 Around  
Air conditioning  
service

- What do you need?
- Frequent source of errors
- Revenue generator

5 Key account  
- MAN adjustment

6 Outlook projects



# COOLIUS - AIR CONDITIONING SERVICE UNITS



## R134A

### COOLIUS A10 - W0501030

- Refrigerant tank 11 kg **Mobile entry model**
- Special features: mobile use possible thanks to compact dimensions and easy-to-operate scale locking, operation with voltage converter possible



## R1234YF

### COOLIUS Y10 - W05011030

- Refrigerant tank 11 kg **Mobile entry model**
- Special features: mobile use possible thanks to compact dimensions and easy-to-operate scale locking, operation with voltage transformer possible, emergency stop switch

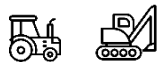


### COOLIUS A30 - W050103030

- Refrigerant tank 35 kg **Large volume**
- Special features: additional liquid pump, filling quantity database, large oil reservoir (500ml), powerful vacuum pump



Optional:



### COOLIUS Y50 - W050115030

- Refrigerant tank 20 kg **Intelligent workshop companion**
- Special features: "Low Emission": waste oil drain without refrigerant, integrated nitrogen/forming gas test, pressure gauge for refrigerant cylinder, emergency stop switch, 2 fresh oil containers, automatic cleaning process



### COOLIUS A50 - W050105030

- Refrigerant tank 20 kg **Intelligent workshop companion**
- Special features: "Low Emission": waste oil drain without refrigerant, integrated nitrogen/forming gas test, pressure gauge for refrigerant cylinder, 2 fresh oil containers, automatic cleaning process



### COOLIUS Y50A - W050115033

- Refrigerant tank 20 kg **High-end premium all-rounder**
- Special features: see COOLIUS Y50. In addition: integrated refrigerant analyser avoids contamination of the refrigerant supply, 2 fresh oil tanks.



# ACCESSORIES AIR CONDITIONING SERVICE



**Flushing kit**  
W067930010



**Bracket Flushing Kit**  
W067130135



**Adapter sets**  
W067130100-33



Flushing the  
A/C system

**Cover hood**

- Series of 10: W067130002
- 30/50 series: W067130003



**Hose extension 3m**

- R134a: W067230030
- R1234yf: W067130001



**Nitrogen bottle holder**  
W067130000



**Analyser R134a**  
W067030101



**Analyser R1234yf**  
W067030100



**Inspector**  
W067230002



Refrigerant  
analysis

**Disposal kit**  
W067230026



**Adapter sets hermetic bins**  
W067130170



No moisture  
penetration



→ More info at: <https://www.wabcowuerth.com/en/wabcowuerth/start.php>

# AIR CONDITIONING SERVICE FROM WABCOWÜRTH

Everything from one source



## Secure and mobile use

Scale design allows safe and mobile use.  
Application: terrain, agriculture

## Own production

Individual requirements of markets/customers/KAM can be implemented > Influence on marketing and strategic orientation



## High quality components

CE certification by TÜV-SÜD

## Refrigerant management

UMB	UHRZEIT	VIN	BEHÄLTNISSTAND	VERFLÜSSIGUNG	FRISCHÖL	LV	LECKAGE	REFILLSTAND	SERVICE	STATUS
017.2020	08.17.14	99	0	0	0	0	0	0	0	11
017.2020	08.17.15	99	0	0	0	0	0	0	0	11
017.2020	08.17.16	99	0	0	0	0	0	0	0	11
017.2020	08.17.17	99	0	0	0	0	0	0	0	11
017.2020	08.17.18	99	0	0	0	0	0	0	0	11
017.2020	08.17.19	99	0	0	0	0	0	0	0	11
017.2020	08.17.20	99	0	0	0	0	0	0	0	11
017.2020	08.17.21	99	0	0	0	0	0	0	0	11
017.2020	08.17.22	99	0	0	0	0	0	0	0	11
017.2020	08.17.23	99	0	0	0	0	0	0	0	11
017.2020	08.17.24	99	0	0	0	0	0	0	0	11
017.2020	08.17.25	99	0	0	0	0	0	0	0	11
017.2020	08.17.26	99	0	0	0	0	0	0	0	11
017.2020	08.17.27	99	0	0	0	0	0	0	0	11
017.2020	08.17.28	99	0	0	0	0	0	0	0	11
017.2020	08.17.29	99	0	0	0	0	0	0	0	11
017.2020	08.17.30	99	0	0	0	0	0	0	0	11
017.2020	08.17.31	99	0	0	0	0	0	0	0	11
017.2020	08.17.32	99	0	0	0	0	0	0	0	11
017.2020	08.17.33	99	0	0	0	0	0	0	0	11
017.2020	08.17.34	99	0	0	0	0	0	0	0	11
017.2020	08.17.35	99	0	0	0	0	0	0	0	11
017.2020	08.17.36	99	0	0	0	0	0	0	0	11
017.2020	08.17.37	99	0	0	0	0	0	0	0	11
017.2020	08.17.38	99	0	0	0	0	0	0	0	11
017.2020	08.17.39	99	0	0	0	0	0	0	0	11
017.2020	08.17.40	99	0	0	0	0	0	0	0	11
017.2020	08.17.41	99	0	0	0	0	0	0	0	11
017.2020	08.17.42	99	0	0	0	0	0	0	0	11
017.2020	08.17.43	99	0	0	0	0	0	0	0	11
017.2020	08.17.44	99	0	0	0	0	0	0	0	11
017.2020	08.17.45	99	0	0	0	0	0	0	0	11
017.2020	08.17.46	99	0	0	0	0	0	0	0	11
017.2020	08.17.47	99	0	0	0	0	0	0	0	11
017.2020	08.17.48	99	0	0	0	0	0	0	0	11
017.2020	08.17.49	99	0	0	0	0	0	0	0	11
017.2020	08.17.50	99	0	0	0	0	0	0	0	11
017.2020	08.17.51	99	0	0	0	0	0	0	0	11
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017.2020	08.17.57	99	0	0	0	0	0	0	0	11
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017.2020	08.17.59	99	0	0	0	0	0	0	0	11
017.2020	08.17.60	99	0	0	0	0	0	0	0	11
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017.2020	08.17.64	99	0	0	0	0	0	0	0	11
017.2020	08.17.65	99	0	0	0	0	0	0	0	11
017.2020	08.17.66	99	0	0	0	0	0	0	0	11
017.2020	08.17.67	99	0	0	0	0	0	0	0	11
017.2020	08.17.68	99	0	0	0	0	0	0	0	11
017.2020	08.17.69	99	0	0	0	0	0	0	0	11
017.2020	08.17.70	99	0	0	0	0	0	0	0	11
017.2020	08.17.71	99	0	0	0	0	0	0	0	11
017.2020	08.17.72	99	0	0	0	0	0	0	0	11
017.2020	08.17.73	99	0	0	0	0	0	0	0	11
017.2020	08.17.74	99	0	0	0	0	0	0	0	11
017.2020	08.17.75	99	0	0	0	0	0	0	0	11
017.2020	08.17.76	99	0	0	0	0	0	0	0	11
017.2020	08.17.77	99	0	0	0	0	0	0	0	11
017.2020	08.17.78	99	0	0	0	0	0	0	0	11
017.2020	08.17.79	99	0	0	0	0	0	0	0	11
017.2020	08.17.80	99	0	0	0	0	0	0	0	11
017.2020	08.17.81	99	0	0	0	0	0	0	0	11
017.2020	08.17.82	99	0	0	0	0	0	0	0	11
017.2020	08.17.83	99	0	0	0	0	0	0	0	11
017.2020	08.17.84	99	0	0	0	0	0	0	0	11
017.2020	08.17.85	99	0	0	0	0	0	0	0	11
017.2020	08.17.86	99	0	0	0	0	0	0	0	11
017.2020	08.17.87	99	0	0	0	0	0	0	0	11
017.2020	08.17.88	99	0	0	0	0	0	0	0	11
017.2020	08.17.89	99	0	0	0	0	0	0	0	11
017.2020	08.17.90	99	0	0	0	0	0	0	0	11
017.2020	08.17.91	99	0	0	0	0	0	0	0	11
017.2020	08.17.92	99	0	0	0	0	0	0	0	11
017.2020	08.17.93	99	0	0	0	0	0	0	0	11
017.2020	08.17.94	99	0	0	0	0	0	0	0	11
017.2020	08.17.95	99	0	0	0	0	0	0	0	11
017.2020	08.17.96	99	0	0	0	0	0	0	0	11
017.2020	08.17.97	99	0	0	0	0	0	0	0	11
017.2020	08.17.98	99	0	0	0	0	0	0	0	11
017.2020	08.17.99	99	0	0	0	0	0	0	0	11
017.2020	08.18.00	99	0	0	0	0	0	0	0	11

The data is read out and exported via a USB interface in order to document individual services and evaluate the total refrigerant consumption.



## Ready for hybrid and electrical vehicles

Easy change between PAG and POE oil thanks to the internal flushing function



# AIR CONDITIONING SERVICE FROM WABCOWÜRTH

## Warranty claim



### Why original parts?

- Correct and professional maintenance of high quality devices
- Maintenance with suitable, qualitative spare parts
- This is the only way to meet the **warranty requirements**
- Warranty is increased from 12 to 24 months
- **Quality** assurance over the entire service life



### Scope of delivery:

- a. W052130048 [MAINTENANCE PACKAGE-A10/Y10/A30/Y50/A50](#)
  - bottle of vacuum pump oil, 1 filter dryer, 1 service sticker and 1 gasket for oil drain plug vacuum pump
- b. W052930099 [MAINTENANCE PACKAGE-Y50A](#)
  - bottle of vacuum pump oil, 1 filter dryer, 1 service sticker, 1 gasket for oil drain plug vacuum pump, 1 coalescence filter, 1 external white filter, 1 flow restrictor and 2 o-rings

# COOLIUS PORTAL

Everything from one source



- Access for customers, technicians and distributors
- Helpful overview of all air conditioning service units
  - Map overview of registered air conditioning service units
- All important information is available



Manuals



Instructions



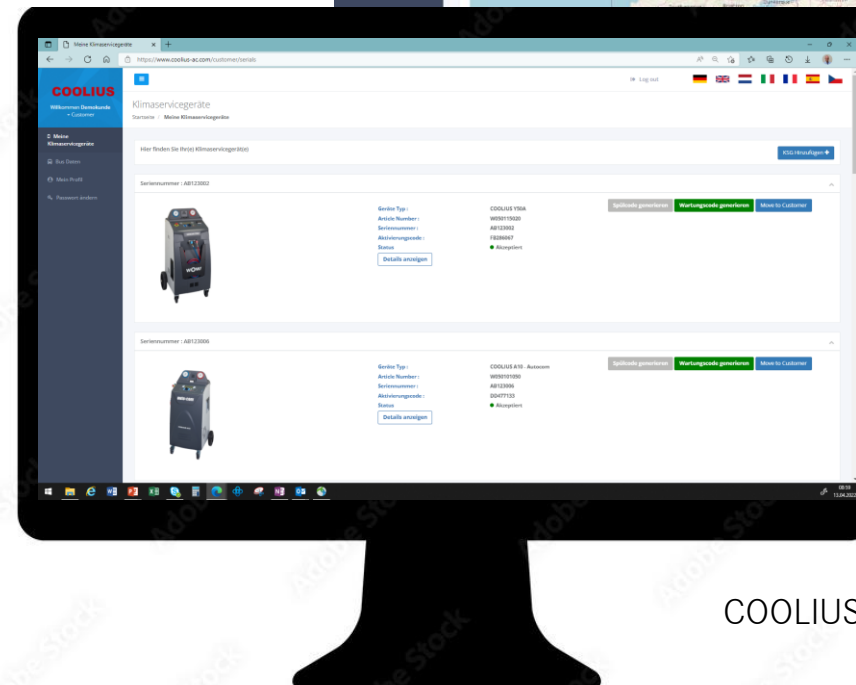
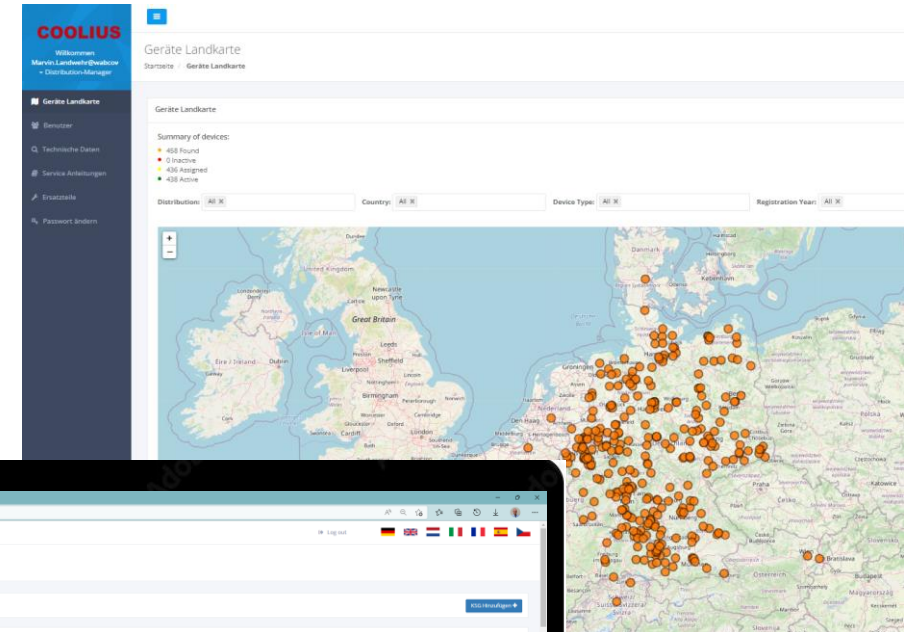
Spare parts




Software updates



Generation of maintenance and flushing code




COOLIUS portal 


# ALL ABOUT AIR CONDITIONING SERVICE

What do you need?







Refrigerant R134A  
Refrigerant R1234YF




PAG-OIL Premium  
POE-OIL 100  
Multigrade compressor oil  
Pay attention to the manufacturer's specifications



UV leak detection additive  
Pay attention to the manufacturer's specifications



Extraction adapter set R1234YF  
Extraction adapter set R134A



Personal security equipment

mandatory

		
Climate disinfection spray	Climate Leak Stop Additive	LED Flashlight UV
		
Climate leak detection additives	Hose extension External device	Recycle-Guard
		
Climate leak detection additives Stick	Climate Leak Stop	Hose package Recycle Guard
		
Vacuum pump oil	Contrast goggles	Electronic Leak Detector
		
Gas detector	Evapomat	O-ring assortment

supplementary



# AROUND THE AIR CONDITIONING SERVICE

## Frequent sources of error



- No certificate of competence (EC 307/2008)
- Working without protective equipment
- Condition and tight fit of the Schrader valves
- Error memory query
- Before the actual air conditioning service: Carry out a functional test of the AC system.
- Selection of wrong vehicle in database → incorrect filling quantity
- Refilling without repair of leakage (EG2006/40/Art.6) Pressure loss test necessary
- Air conditioning compressor replacement without flushing

# AROUND THE AIR CONDITIONING SERVICE

## Turnover generator



AMORTISATIONSBERECHNUNG FÜR KLIMASERVICE		
Legende:	Auszufüllen	Betrag wird errechnet
Anschaffungskosten	2.490,00 €	<i>Bitte Gerätepreis eingeben</i>
Monatl. Leasingrate	64,49 €	<i>Leasing bei 4 Jahren Laufzeit</i>
<b>Variable Kosten:</b>		
Kältemittel:	R1234yf	<i>Bitte Kältemittel auswählen</i>
Preis pro 12kg Flasche:	820,68 €	<i>Bitte Preise regelmäßig prüfen</i>
Kosten pro Klimaservice (bei Durchschnittsverbrauch 200g):	13,68 €	
UV-Additiv		
Kosten pro Klimaservice (bei Durchschnittsverbrauch 7ml):	0,63 €	
Kompressoröl	FAG-01	<i>Bitte Öl auswählen</i>
Kosten pro Klimaservice (bei Durchschnittsverbrauch 13ml):	0,17 €	
<b>Anteil Wartung Klimaservicegerät</b>		
Wartungsintervall nach ca. 100 Klimaservices bei 30 Minuten Vakuumzeit > 3000 min Vakuumzeit		
Kosten für Filtermaterial	160,00 €	
Arbeitszeit ca. 1 Std.	95,00 €	
Fahrzeugkosten/Anfahrt	113,00 €	<i>Anfahrkosten bei &gt;100 km. Bei &lt;100 km betragen die Kosten 99 €</i>
Summe Wartungskosten*1	374,00 €	<b>Hinweis: Mit <u>Wartungsvereinbarung</u> : 275,00 €</b>
<b>Arbeitszeit für An- u. Abklümmen des Gerätes</b>		
ca. 10 min. bei Stundensatz:	80,00 €	<i>Bitte Stundensatz eingeben</i>
Somit Personalkosten pro Klimaservice	13,33 €	
<b>Somit Wartungskosten anteilig je Klimaservice:</b>		
	3,74 €	<i>Teiler = 100 Servicejobs in 4 Jahren</i>
	2,75 €	<i>bei <u>Wartungsvereinbarung</u></i>
Somit variable Kosten pro Klimaservice: (zzgl. MwSt)	31,55 €	
<b>Einnahmen:</b>		
Der Marktpreis für Klimaanlagen-service variiert teilweise deutlich		
Bei einem Verkaufspreis (inkl. MwSt) von:	90,00 €	<i>Bitte Verkaufspreis der Werkstatte für den Klimaservice eingeben</i>
Somit Netto	75,63 €	
<b>Daraus resultiert ein Fordertrag pro Klimaservice von:</b>		
Das Gerät arbeitet kostendeckend ab	1,46	<b>2 Klimaservice pro Monat</b>
<b>Anzahl verkaufter Klimaservice um Anschaffungskosten zu decken</b>		
	56	<b>Klimaservice gesamt</b>
Das Gerät arbeitet kostendeckend nach		
Gewinn pro Jahr	28 AT	<i>Annahme: 2 Service / Tag bei 220 AT</i>
	8.453,07 €	
*1 Summe Wartungskosten setzt voraus, dass keine zusätzlichen Teile bzw. Arbeitszeit notwendig sind		
WABCO WÜRTH Workshop Services GmbH · Schöffenstraße 22 · 74653 Kitzeltau-Gaisbach · Telefon +497940389830 · info@wabcovwrth.com		
<b>Wichtig! Diese Excel-Datei nicht weiterleiten! Nur finale Berechnungen für den Kunden dürfen gedruckt werden!</b>		



Amortization calculator

# KEY ACCOUNT

## Adjustment MAN



- The MAN TGE has been using the refrigerant R1234yf in vehicle classes N1, M1, N2 and M2 since 02.2021.
- Article number: WW02800410
- Adjustments Y50A:
  - Only one oil connection: PAG oil (hermetically sealed)
  - TKR quick couplings with safety valve
  - Flushing kit included
    - Bracket optional W067130135
- Cover hood included
- Online device instruction included
- No official release yet, but meets all MAN requirements
  - Positive audit
  - Written confirmation for the use of the flyer and thus the start of the sale



# OUTLOOK

## CO2 as a refrigerant

"Future vehicles with electric drive will receive the refrigerant R744 (CO<sub>2</sub>) in the air conditioning system." (MAN statement July 2021)

"A rollout of CO<sub>2</sub> air conditioning is planned this year " (statement Mr. Huhn, Volvo Jan. 2022).



## E-vehicles with heat pump - rising trend

- Air conditioning = "Must-Have"

- All-electric and hybrid vehicles
- Thermal management system

→ The air conditioning system in the vehicle is changing!

→ Thermal management system failure = vehicle stops!

- CO<sub>2</sub> air conditioning service unit from WABCOWÜRTH

- Market launch summer 2022
- firstly for small-volume CO<sub>2</sub> systems
- Device for large-volume systems will follow



### CO<sub>2</sub> heat pump:

- Ie
- ID4
- ID3
- Q4 e-tron
- Enyaq



### CO<sub>2</sub> heat pump:

- eCitaro
- Urbino 15 LE
- Urbino Hydrogen
- Volvo/MVC

### Timely:

- Volvo in general

### E-Bus Manufacturer:

- Ebusco
- VDL
- BYD
- Skoda bus
- Quantron



### CO<sub>2</sub> heat pump:

- Claas II

### Timely:

- MAN

### E-Truck Manufacturer:

- Volta Trucks
- Volvo
- Iveco
- Nikola

# OUTLOOK

## Connectivity



### Market trend



- IoT and digitalization of workshops
- Smart air conditioning service units
- Wi-Fi and Bluetooth functions
- Callable real-time data such as refrigerant consumption via an app/browser
- Sending work orders from mobile application to air conditioning service unit

### Development WABCOWÜRTH

#### Step 1

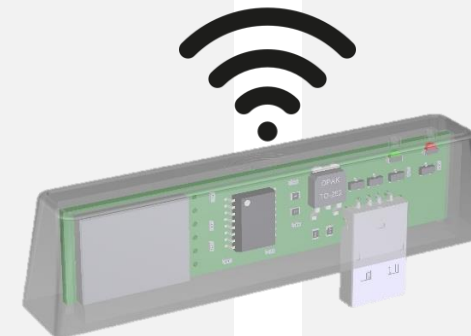
- Hardware development (connectivity module)
  - ✓ Adaptable via USB interface
  - ✓ creates virtual website
- COOLIUS Select and display is shown on cloud
- Interaction via the application is possible
- External printer connection
- Update firmware and software
- Readout of error codes via hotline

#### Step 2

- Interface to existing DMS systems
- Connection with VCI

#### Step 3

- "Digital twin" simulator
  - ✓ Sales support
  - ✓ Training opportunities for customers
  - ✓ Hotline support







**THANK YOU FOR YOUR ATTENTION!**