# MOBILE LIVING MADE EASY



# ON THE ROAD BOLTS & TOOLS CENTER... BTCO **AGAIN**

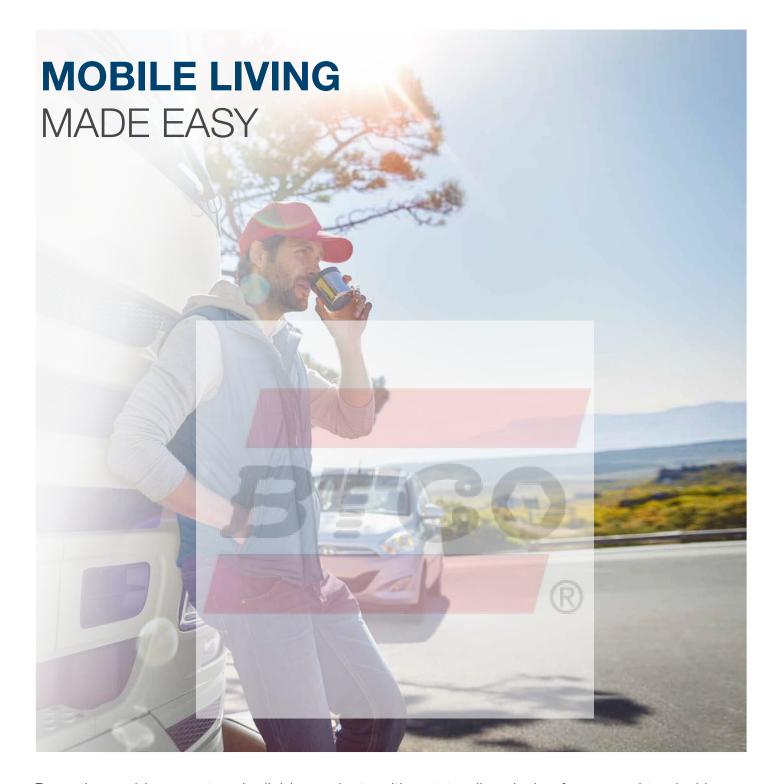


2016



# THE LARGE ACCESSORY RANGE

FOR CAR / TRUCK / VAN www.boltsandtools.com



Dometic provides smart and reliable products with outstanding design for car and truck drivers.

Dometic is one of the leading suppliers of comfort products to the commercial and passenger vehicles segment.

Dometic offers standard and customised products for commercial vehicles (trucks) and passenger vehicles, delivering to the major manufacturers of cars, trucks, agricultural and construction vehicles.

For car and truck drivers our offering consists of cooling related products within the areas of Climate (air conditioners) and Food & Beverage (refrigerators) as well as generators and inverters.



Air conditione

Safety solutions

# **AWARD-WINNING PRODUCTS**

**COMFORT FACTORY DIRECT** 

PARTNER TO THE AUTOMOTIVE

Chances are that your vehicle was already fitted with a Dometic

for instance, or with an integrated cooling compartment. As a

or WAECO product when it left the factory. With a 230-volt socket,

recognised OEM partner of leading vehicle manufacturers we have been creating vehicle-specific car coolers and electronic products

INDUSTRY

for decades.

Dometic and WAECO products are regular winners in design prizes and best brand competitions. This is something that makes us proud. At the same time, it motivates us to keep going and improve what we have achieved so far.



# AIR CONDITIONERS

6 - 17

Tel: (+974) 443 54 298 www.boltsandtools.comtents

- Truck roof parking coolers
- · Truck split parking coolers



# VEHICLE ACCESSORIES

18 - 43

- · Alarm systems, gas detector
  - Safes
  - Cruise control
  - Radio remote controls
  - · Seating comfort
  - · Parking aids
  - Blind spot



# **SAFETY SOLUTIONS**

44 - 81

# **TECHNICAL SUPPORT**

TECHNICAL ADVICE. PRODUCT DOCUMENTATION

(installation instructions, spare part lists, etc.)

Tel. +49 (0) 2572 879-191 TKD@dometic-waeco.de

WHICH ACCESSO

**MY VEHICLE?** 

designed for use in trucks.

**ESPECIALLY FOR TRUCKS** 



### Reversing cameras

- Reversing camera systems
- Connection to original displays
- Moniceiver and reversing video function
- Interior cameras
- Heavy-duty components
- · Accessories for reversing video systems



# **MOBILE COOLING**

82 - 105

- Compressor coolers and freezers
- Vehicle-specific compressor coolers
- Thermoelectric coolers
- Iceboxes



# **ENERGY SYSTEMS**

106 - 139

- · Sine wave inverters, inverters
- Battery chargers
- IU0U automatic chargers
- · Charging converters, voltage converters
- · Battery care
- Generators



# **ESPECIALLY FOR CARS AND VANS**

Products marked with the truck symbol were specially

The car/van symbol indicates which products are designed for use in cars or vans.

Products not marked with one of these symbols are suitable for universal use.



# KITCHEN SOLUTIONS

140 - 151

- Microwave oven
- · Coffee makers, electric kettle
- Wet/dry vacuum cleaner

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Ready for you to discover, besides many other new products: the new generation truck parking coolers CoolAir RTX, a blind spot system especially for trucks and a WiFi transmitter for sending video signals to mobile devices.



**NEW!** WAECO PerfectView CAM 55

High-end camera with extended input voltage range



NEW! WAECO PerfectView VT 100WiFi

WiFi transmitter for transmitting video signals to smart phones and tablets (iOS + Android)



NEW! WAECO PerfectCharge MCP

The new charger automatically adapts to the battery's charging condition. Battery charging has never been this easy!

More details on p. 62

More details on p. 118

More details on p. 56

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NEW! Dometic RTX 1000 / 2000

Truck parking coolers, 24-volt stationary air conditioning

More details on p. 8









**NEW!** WAECO TropiCool TCX

Thermoelectric coolers with TC special electronics for 12/24 volts DC and 230 volts AC

electronics for 12/24 volts DC and 230 volts AC

More details on p. 94 - 95

**NEW!** WAECO BordBar TF 14

Thermoelectric car coolers in stylish champagne colour with reinforced insulation

More details on p. 97

**NEW! WAECO CoolFun SC 38** 

Thermoelectric coolers, with wheels, telescopic handle, split lid and removable partition, 12 volts DC and 230 volts AC

More details on p. 99





Digital **rear** parking aid, 6 compact digital sensors, can be positioned as required

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More details on p. 37

NEW! WAECO MagicWatch MWE 7106F

Digital **front** parking aid, 6 compact digital sensors, can be positioned as required

More details on p. 37



NEW! WAECO MagicWatch MWE 4004

Blind spot system for trucks

More details on p. 39

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# **AIR CONDITIONERS**



Truck roof parking coolers

Truck split parking coolers

**Technical data** 

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# CoolAir - now twice as good

Twice the cooling power for the same runtime, or twice the cooling time for the same energy consumption: the two new CoolAir RTX roof air conditioners make it happen. They fit almost every truck cabin. Where they don't, we recommend our well proven CoolAir split

# **COOLAIR RTX - THE NEW GENERATION**

# MORE EFFICIENCY AND POWER

The third CoolAir generation comes with an entirely new technology to continue a unique success story. CoolAir compressor parking coolers have been around for over ten years to improve working conditions, safety and cost efficiency in the European utility vehicle industry. Now is the time to set new benchmarks.

The new, third generation CoolAir roof air conditioners do that in two convincing ways: CoolAir RTX 1000 provides **more cooling performance and runtime at the same energy consumption** than its predecessor model. CoolAir RTX 2000 generates **more than twice the cooling power at the same runtime.** All of this is possible thanks to the use of a variable speed inverter compressor, which makes for excellent cooling capacities and amazingly efficient and quiet operation.

Despite the technical improvements all well proven CoolAir benefits have been retained. Take the vehicle-specific installation concept, for instance, or the option to use a **CoolAir split system** (p. 13), if the roof version won't fit, or the roof window is to be retained.



# "IT SAVES ME A **LOT OF FUEL!"**

FOR FLEET OPERATORS, THE NEW COOLAIR IS A CALCULATION THAT WORKS OUT FINE.

A familiar picture in all parking areas: truck drivers leaving the engine running for hours to use the air conditioner or to recharge the batterys during their resting periods. This is bad for the environment, and it's also against the law. Tons of fuel are wasted, lots of exhaust fumes are blown into the atmosphere, and fleet operators pay dearly for it. Plus, it wears down the engine faster.

In other words, a parking cooler keeps operating costs down. Especially so if it has such an amazingly long running time like the new CoolAir RTX 1000. Equally important to fleet owners is the fact that it improves work safety and thus ensures that the driver and freight arrive safe and sound. Last but not least, fitting a truck with a parking cooler helps find satisfied employees and keep them loyal to the company.





# Reduced fuel consumption:

Engine is not running during the resting periods

### Sample calculation

Diesel price	1,19 €
Ø Truck running idle per day	6 hr
Average usage days per annum	100 days
Approx. fuel consumption per hour	
(when running idle)	3-4 l/hr
Fuel saving	

100 days x 5 hours x 3,5 l/hr. x 1,19 €/l 2.082,50 €

# "IT CAN DO IT WAY LONGER.

TRUCK DRIVERS ARE FASCINATED BY THE ENORMOUS STAYING POWER OF THE COOLAIR RTX.

Extra-long running time or extra-strong performance: two versions of the new CoolAir RTX parking cooler give every driver what he needs to enjoy relaxing breaks in his particular working environment. The RTX 1000 creates pleasant temperatures for up to twelve hours. The battery monitor gives advance warning until it finally cuts off the power supply to keep the engine ready to start. The more powerful RTX 2000 faces hot temperatures in the truck cabin for up to six hours.

Added to this, the new CoolAir is amazingly quiet in operation. The two-cylinder compressor works unnoticeably, leaving the driver perfectly at rest and letting him enjoy all the comforts of the parking cooler: the large, high-contrast display, the individually adjustable air distribution, the four operating modes - and the adaptive automatic mode of the air conditioner.

The RTX series has been tested in Australia under extreme temperatures and environmental conditions to ensure best product quality and performance.



# COOLAIR RTX ... ... RUNS QUIETLY AND FOR LONGER

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# **COOLAIR RTX 1000**

# COOLS FOR UP TO 12 HOURS!

This roof-mounted truck parking cooler makes very economical use of the onboard power resources. Advanced inverter compressor technology makes for almost noiseless, vibration-free operation, so drivers can rest and relax in complete comfort. Besides the technical improvements, CoolAir RTX 1000 offers the typical CoolAir benefits: powerful performance, elegant design, easy installation with vehicle-specific accessories.



# Dometic CoolAir RTX 1000

Truck roof parking cooler, 24-volt stationary air conditioning

- 1200 watts cooling capacity rated to ISO 5151
- Running time up to 12 hours
- · Very quiet running
- 4 operating modes (Auto, Eco, Manual, Boost)
- Ideal for longer trips in moderate climates

Ref. No. 9105306210





### Compressor technology that fits almost every truck

Being a self-contained air conditioner, the CoolAir RTX offers a key benefit: all components are integrated in a single housing. This speeds up installation and makes maintenance unnecessary, because the system is closed and hermetically tight. So there's no need to fill up with refrigerant.

Good to know: the CoolAir RTX fits almost every truck. There's a tailor-made installation kit for all common truck models.

# **MY BENEFITS**

- 1200 watts cooling capacity
- Up to 12 hours running time
- Reliable and precise voltage monitor with sensing line
- for highest energy efficiency
- components integrated in roof unit
- ADR-compliant
- Vehicle-specific installation kits
- At 30°C ambient temperature only 8 A power consumption in ECO mode

# COOLAIR RTX 2000 DOUBLE POWER!

CoolAir RTX 2000 is a genuine power pack. Generating a full 2000 watts for up to six hours, it cools down even larger cabins in no time at all. The speed controlled inverter compressor is pleasantly quiet in operation giving drivers and crews a truly relaxing break. Tested and approved in Australia, the RTX 2000 is perfect for everyone resting at daytime or going to hot regions.



# Dometic CoolAir RTX 2000

Truck roof parking cooler, 24-volt stationary air conditioning

- 2000 watts cooling capacity rated to ISO 5151
- Running time up to 6 hours
- Very quiet running
- 4 operating modes (Auto, Eco, Manual, Boost)
- Ideal for hot climates and when it is used during the day

Ref. No. 9105306212



# DE SON DOMERIC DE SERVICIO DE

# MY BENEFITS

- 2000 watts cooling capacity
- Up to 6 hours running time
- Reliable and precise voltage monitor with sensing line
- Variable speed inverter compressor for highest energy efficiency
- Self-contained air conditioner all A/C components integrated in roof unit
- ADR-compliant
- Vehicle-specific installation kits
- At 30°C ambient temperature only 9.5 A power consumption in ECO mode

### For extreme heat and large cabins

Heavy goods vehicles mostly travel at night and keep standing in the sun for hours during the day. It takes quite a powerful parking cooler to give drivers and their companions a truly relaxing break. An easy task for the new CoolAir RTX 2000. It is also great for the large crew cabins of fire brigades, emergency services and the likes. With an ample 2000 watts it creates a cabin climate where crews can feel at ease even in heavy protective clothing.

Vehicle specific

installationkits see list on page 16

# WHICH PARKING COOLER

# FITS WHICH TRUCK?

# Dometic CoolAir RTX 1000 / RTX 2000

Truck roof parking cooler, 24-volt stationary air conditioning

# Dometic CoolAir SP 950T

Split parking cooler with roof evaporator unit for trucks, 24-volt stationary air conditioning

# Dometic CoolAir SP 950I

Split parking cooler with interior evaporator unit for trucks, 24-volt stationary air conditioning







- Self-contained air conditioner all A/C components integrated in one roof unit
- Fitted on the roof (roof air conditioner replaces roof window)
- Suitable for nearly all vehicle models!
- RTX 2000 also fits Iveco Stralis
- ADR-compliant (certificate upon request). No refitting needed!



- Fitted on the roof (roof evaporator unit replaces roof window) and to the rear wall of the cabin (compressor unit)
- For trucks with tall cabins, with roof
   spoiler or with roof-mounted
   structures (e.g. car transporters)
- Super-flat roof evaporator unit no problems adhering to the maximum permissible height



- Fitted to the rear wall of the cabin (roof evaporator inside, compressor unit outside)
- For trucks where a roof set-up is not possible or not desirable (large roof slope, tall cabins, with roof spoiler or with roof-mounted structures, roof window should remain)
- No problems adhering to the maximum permissible height

Fast and easy installation

# **VEHICLE-SPECIFIC INSTALLATION CONCEPT:**

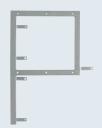


 Vehicle-specific installation kits (example)



 Vehicle-specific installation kits (example)





Vehicle-specific fastening frames for the SP 950C compressor unit (example)

# **SPLIT PARKING COOLER SP 950**

# TWO VERSIONS - MAKE YOUR CHOICE!

# Modular system concept: super-flat roof unit or nothing on the roof.

Simply choose which split air conditioner suits you best. The CoolAir assembly kit gives you the option to combine the Dometic CoolAir SP 950C compressor unit with two different evaporator units. For the CoolAir SP 950I the evaporator unit is fitted on the inside of the cabin's rear wall, for the CoolAir SP 950T it's inside a super-flat roof unit.





reddot design award winner 2012

# Dometic CoolAir SP950C

Compressor unit for truck split parking coolers, 24 volt stationary air conditioning

Quick and clean installation with vehicle-specific assembly accessories

Ref. No. 9105305550



2.09



2.09

# Dometic CoolAir SP950T

Roof evaporator unit for truck parking cooler, 24-volt stationary air conditioning

- Cooling capacity: 850 watts (rated to ISO 5151)
- Space-saving installation under spoilers or roof-mounted structures
- 100% clean removal when vehicle-specific installation kits are used

Ref. No. 9105305549

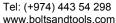
# Dometic CoolAir SP950I

Interior evaporator unit for truck parking cooler, 24-volt stationary air conditioning

- Cooling capacity: 850 watts (rated to ISO 5151)
- For installation to the inside of the cabin's rear wall

Ref. No. 9105305612







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# "... WELL THOUGHT-OUT AND PRACTICAL TO USE"

Simply ingenious: The CoolAir installation concept



Today's trucks are extremely complex structures. Therefore, it is important for service technicians that retrofit products to be perfectly adapted to the vehicle at hand. ... "With CoolAir parking coolers, installation works a treat with no need to drill a single hole. The roof units are supplied completely preassembled, their base already includes the hole patterns of all common types of trucks. All we have to do is insert the unit, wire it up and attach the cover frame."

# **VEHICLE-SPECIFIC INSTALLATION KITS**

Speedy installation, neat finish, hassle-free dismantling – with vehicle-specific installation kits for the roof-mount systems RTX 1000/2000 or the roof unit SP 950T.



# **SNUG-FITTING FASTENING FRAMES**

Fast and aesthetically pleasing installation of the SP 950C compressor unit

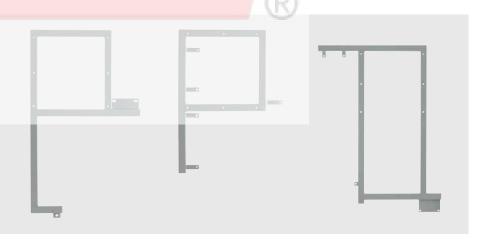


A typical CoolAir benefit: **during the installation** of the SP-950C compressor unit **existing fastening points are used.** In our case the mounting holes and bolts on the outside rear of the cabin.

The fastening frame for the compressor unit perfectly matches the fastening pattern of the vehicle at hand. The obvious advantages are: speedy installation, perfect finish, hassle-free dismantling.







Snug-fitting accessories: vehicle-specific fastening frames for the compressor unit SP 950C. Designed to fit the vehicle's existing fastening points.



# CoolAir 2016

All details about the new CoolAir RTX generation can be found in the new CoolAir brochure. You can download a PDF copy at www.dometic.eu.



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# 16

### 2.09 // Dometic CoolAir

# **Roof parking coolers**



	CoolAir RTX 1000	CoolAir RTX 2000	
Ref. No.	9105306210	9105306212	
Voltage (volts DC)	24	24	
Current consumption (A)	5 – 25	5 – 29	
Cooling capacity rated to ISO 5151 (W)	1200	2000	
Refrigerant (pre-charged)	R 134a	R 134a	
System	Self-contained and battery operated truck parking cooler to be installed in the existing roof hatch. Hermetically sealed and maintenance free refrigerant circuit with inverter compressor. Adjustable low-voltage cut-out.  CoolAir installation concept for easy and fast installation.		
Dimensions (WxHxD)	860 x 308 x 643 (height on roof: 169 mm – without gasket)		
Weight (kg)	approx. 22.8	approx. 31.5	
Colour / Material	Top cover: ASA/PC, white Base: ASA/PC, anthracite		
Quality features	Latest generation inverter compressor technology, low-voltage cut-out with sensing line, remote control, multi-line display		
Test marks	TÜV Rheinland Type approved, e-approved (Automotive EMC Directive)		
Scope of delivery	Parking cooler, remote control, operating manual		

# Accessories (optional)

Battery connection cable, 6 mm², 11 m long, for vehicles with power management

9100300108

9100300108

# Accessories (required)

venicle-specific	mstallation	KILSTIA	1000 / h I A 4	2000	
(covering frames,	seals, fixing	materials,	connection	cable, inst	allation
instructions)					

Vehicle	Ref. No.	
DAF XF 106, SC	9100300078	
DAF XF 106, SSC	9100300079	
Iveco Stralis HI-STEET, HI-ROAD 6	9100300087 (Only for RTX 2000)	
Iveco Stralis HI-WAY <sup>6</sup>	9100300088 (Only for RTX 2000)	
MAN TGS/TGX XL, XXL, LX1	9100300080	
MB Atego 1, 3	9100300081	
MB Actros, Antos, Arocs (SFTP) 1,5	9100300082	
Renault T + C, H1	9100300089	
Renault T + C, H24	9100300090	
Scania Topline, Highline <sup>2</sup>	9100300083	
Universal 1 (Schraubbefestigung)	9100300085	
Universal 2 (Bügelbefestigung)	9100300086	

All installation kits are designed for current vehicle models. More models on request. Please check "preconditions for installation" document for further installation information.

Scope of delivery: cover frame, seals, installation fittings, 4 m connection cable incl. sensing line, installation instructions

- MAN and MB kits with 11 m connection cable and matching installation material
- For mechanical roof hatch your will additionally require 2 original Scania brackets (Scania item number 1533737) for installation. Only for electrical roof hatch, for manual roof hatch use Universal 1, not for Gigaliner cab
- Only for cabins without air deflector
- Not for Compact and GigaSpace roof versions
  RTX 1000 only for flat roof, otherwise please use RTX 2000

# 2.09 // Dometic CoolAir

# Split parking coolers



	CoolAir SP 950T	CoolAir SP 950C	CoolAir SP 950l
	Roof evaporator unit	Compressor unit	Interior evaporator unit
	nooi evaporator unit	Compressor unit	interior evaporator unit
Ref. No.	9105305549	9105305550	9105305612
Voltage (volts DC)	24	24	24
Current consumption (A)	12 – 22	12 – 22	12 – 22
Cooling capacity rated to ISO 5151 (W)	850		850
Refrigerant (pre-charged)	R134a	R134a	R134a
System	Three blower levels and automatic mode	Rotary compressor for mobile use, soft- start electronics, adjustable low-voltage protection for vehicle battery, hermetically sealed refrigeration circuit	Three blower levels and automatic mode
Dimensions (WxHxD)	778 x 178 x 577 Height on roof: 58 mm without gasket	346 x 485 x 156	650 x 278 x 145
Weight (kg)	approx. 12	approx. 16	approx. 12

Colour white UV-resistant upper shell, can be spray-painted, control panel with digital UV-resistant upper shell, outstanding **Quality features** 

status readout, remote control, five individually adjustable nozzles, outstanding cooling performance and additional air dehumidification

e-approved (Automotive EMC Directive) Roof evaporator unit, remote control, operating manual

cooling performance and additional air dehumidification

e-approved (Automotive EMC Directive)

Compressor unit, installation fittings, installation instructions

Control panel with digital status readout, remote control, five individually adjustable nozzles, outstanding cooling performance and additional air dehumidification

anthracite

e-approved (Automotive EMC Directive)

Interior evaporator unit, exterior supply line cover, remote control, operating manual, fixing material

# Accessories (optional)

**Test marks** 

Scope of delivery

Battery connection cable, 8 mm<sup>2</sup>, 11 m long, for vehicles with power management

9100300027	_ (0)	_

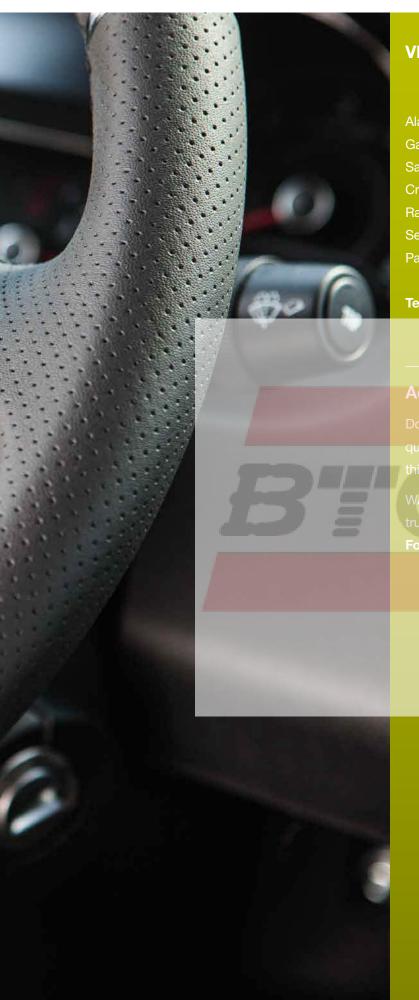
Accessories	Vehicle-specific installation kits for SP 950T (required)	Vehicle-specific fastening fr	ames for SP 950C (optional)
Vehicle	Ref. No.	Vehicle	Ref. No.
DAF XF105, XF106, SC	9100300029	DAF XF105	9100300046
DAF XF105, XF106, SSC	9100300030	MAN TGS/TGX L, LX, XL	9100300049
MAN TGS/TGX XL, XLX, XXL, LX1	9100300045	MAN TGS/TGX XLX, XXL	9100300050
MB Actros –2011 1, 2	9100300032	MB Actros Mega Space	9100300051
MB Actros, Arocs, Antos (SFTP) 1,5	9100300057	Actros SFTP	9100300060
MB Atego 1,2,4, Axor 1,2	9100300033	Renault Magnum	9100300052
Renault Magnum	9100300034	Renault Premium	9100300053
Renault Premium	9100300035	Renault T+C	9100300071
Renault T+C, H1	9100300066	Scania Highline/Topline	9100300054
Renault T+C, H2 High Sleeper Cab	9100300067	Volvo FH4 (Euro 6) <sup>4</sup>	9100300072
Scania Topline, Highline <sup>3</sup>	9100300036	Volvo L2H3	9100300055
Volvo L2H3, nicht für FH4	9100300037		
Universal 1 (Schraubbefestigung)	9100300038		
Universal 2 (Bügelbefestigung)	9100300039		

All installation kits are designed for current vehicle models. More models on request. Please check "preconditions for installation" document for further installation information.

Scope of delivery: cover frame, seals, installation fittings, 4 m connection cable, installation instructions

- <sup>1</sup> MAN and MB kits with 11 m connection cable and matching installation material
- Only for electrical roof hatch (for mechanical roof hatch use Universal 1)
- For mechanical roof hatch you will additionally require 2 original Scania brackets (Scania item number 1533737) for installation.
- For cabs up to model year 2014
- <sup>5</sup> Not for CompactSpace roof versions





# **VEHICLE ACCESSORIES**



Alarm systems	22
Gas detector	22
Safes	23
Cruise controls	24
Radio remote controls	26
Seating comfort	27
Parking aids	30

Technical data

# Added driving pleasure

Do you feel like most vehicle owners? Actually, you are quite content with your vehicle, but there's one or two things you'd like to add ...

WAECO accessories are here to make your wish come true – quickly, without hassle and at fair prices.



# CARS, TRUCKS, VANS – MORE COMFORT FOR ALL VEHICLES!

# The size of your vehicle doesn't matter here. The question we'd like to ask is: How much comfort do you want?

Our new automotive catalogue provides you with retrofit accessories for all vehicle sizes. Many products are suitable for universal use. They run on a 12-volt car battery just as well as on a 24-volt system of a commercial vehicle, and they will change from one to another with ease.

We have marked all products with graphic symbols for you to know at a glance which accessory fits which vehicle.

Tel: (+974) 443 54 298 www.boltsandtools.com

# Alarm system

# **WAECO MagicSafe**

Analogue universal alarm system with add-on options.



# Gas detector

# **WAECO** MagicSafe MSG 150

Detects all common narcotic gases. Acoustic or visual alarm function (vehicle horn or red LED). Optional external siren.



# Safes

# **Dometic SAFE**

Compact and robust with mechanical locking system or as an automatic model with automatic locking by code entry.



# Cruise controls

# WAECO MagicSpeed

Maintain and restrict your speed automatically which is useful on long stretches and in construction site areas. Helps prevent speeding tickets.

# Remote controls

# WAECO MagicTouch

Ergonomic hand transmitter for unlocking system. Vehicle-specific or for universal use.

# Seating comfort

# WAECO MagicComfort

Seat covers - warm and cosy or with air conditioning effect. Insert seat heater for driver and front passenger seat. Also available as carbon version for ultra-fast heating up.



p. 24 – 25





# Parking aids

# **WAECO MagicWatch**

Eleven well proven systems - for front, rear or both. With extra-small sensors, they are reliable inexpensive and fitted in no time at all.

# Blindspot system

# WAECO MagicWatch

Play it safe, where the driver cannot see everything. Three installation options to choose from: side scan, corner and step scan, front scan.



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# **ANALOGUE UNIVERSAL ALARM SYSTEM**

# WITH ADD-ON OPTIONS

The analogue MagicSafe MS 660 universal car alarm is designed as a modular system. This gives you the opportunity to create your own security concept. You can easily connect additional sensors or wireless contact switches to secure roof boxes or (bike) trailers for example.

3.08

# WAECO MagicSafe MS 660

Comfort car alarm

- Monitoring of doors, bonnet, boot
- Ultrasonic interior surveillance (can be switched off)
- Visual alarm via hazard lights

Ref. No. 9101600001

### Scope of delivery:

2 radio hand transmitters, alarm control unit, ultrasonic interior protection, bonnet contact switch, status LED, emergency switch, relay for vehicle horn, pre-configured cable set and fixing material, installation and operating instructions, 2 alarm stickers



Hand transmitter



Motion sensor



Radio contact switch

# Optional extras

Siren // Ref. No. 9101600008

Motion sensor // Ref. No. 9101600003

Hand transmitter // Ref. No. 9101300009

Radio contact switch // Ref. No. 9101600002

Gas detector MSG 150 // Ref. No. 9103555858

# PROTECT YOURSELF FROM GAS ATTACKS!

Don't worry about robberies involving gas attacks! With the MagicSafe MSG 150 gas detector onboard you have a reliable warning system in place. The device triggers the alarm as soon as it detects any hazardous substances in the ambient air.

The noise of its integrated buzzer just can't be ignored. A red LED lights up for extra warning. It's extremely easy to use: once it has been activated, the gas detector starts its self-testing mode and automatically adjusts itself to the ambient air.

3.08

### WAECO MagicSafe MSG 150

Gas detector 12 and 24 volts

- Responds to all common narcotic gases
- Acoustic and visual alarm
- Adjusts automatically to the room atmosphere
- External siren available as optional accessory

Gas detector MSG 150 // Ref. No. 9103555858

# Optional extras:

External siren // Ref. No. 9101600008





### Our tip!

MagicSafe recognises all common narcotic gases based on ether, chloroform, butane, ethane, or trichloroethane.

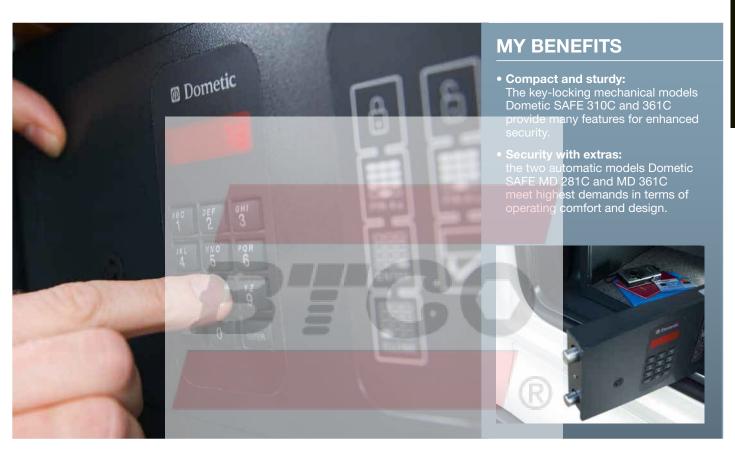


# A SAFE BET

# FOR STORING YOUR VALUABLES

**Dometic safes leave no point of attack for thieves and burglars.** Keep your valuables secure while on the move with laser-cut doors (SAFE 361C / SAFE MD 281C/ SAFE MD 361C) and two 18 mm steel bolts. The ideal security concept for your vehicle – designed by a company that sets the quality benchmarks for hotel safe security worldwide.

Select from two comfort classes: with mechanical or automatic locking system, compact or laptop-size model.







• Electronic locking by code entry with 5-minute memory function

3.34

# Dometic SAFE 310C / 361C

Safes with mechanical locking system

- High-grade finish for maximum security
- · Easy operation with a key
- Dometic SAFE 361C in laptop size

SAFE 310C // Ref. No. 9106600543 SAFE 361C // Ref. No. 9106600002 SAFE MD 281C // Ref. No. 9106600003 SAFE MD 361C // Ref. No. 9106600004

• Dometic SAFE MD 361C in laptop size

Dometic SAFE MD 281C / MD 361C

• Attractive design with illuminated LED display

Safes with automatic locking system

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3.34

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# CAN BUS INTERFACE YOUR DIGITAL-ANALOGUE TRANSLATOR

Do you want to retrofit an analogue accessory, but the vehicle has a digital CAN bus system? Go ahead, it's no problem at all: the MagicSpeed CAN bus interface ensures smooth communication between the analogue and digital worlds.

MagicSpeed CBI 150 "translates" the digital CAN bus signals into analogue impulses and transmits them to the retrofitted accessory. The universal CAN bus interface can be used for all common vehicle models, and it automatically recognises the type of vehicle connected. Designed for installation of Dometic comfort and safety accessories, it can also be used for similar products of other makes that require an analogue signal. The interface is able to process up to six analogue output signals.





3.06

### WAECO MagicSpeed CBI 150

Interface for converting digital CAN bus signals into analogue signals

- 6 analogue output signals
- Automatically identifies the type of vehicle
- Universal product for all types of vehicles

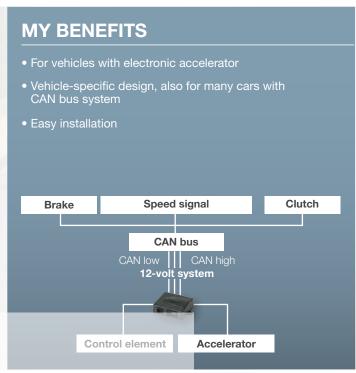
Ref. No. 9101400060



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Vehicle accessories





# AN EASY WAY TO KEEP A STEADY SPEED

VEHICLE-SPECIFIC CRUISE CONTROL

MagicSpeed MS 880 is suitable for almost all vehicles with electronic accelerator, analogue and CAN bus alike. Installation is very easy and requires the matching cable set for the vehicle.



3.06

# WAECO MagicSpeed MS 880

# Comfort cruise control

- Set speed, reset previous speed, fine speed adjustment (tap up/down)
- For vehicles with electronic accelerator
- Designed for specific vehicles

Ref. No. 9101400078





# 3.06

# WAECO MagicSpeed Accessory

MS-BE4, Control lever to be fitted on the steering column

- Attractive design, looks like an original fitting
- ON/OFF switch with status indication, fine speed adjustment





3.06

# WAECO MagicSpeed Accessory

**MS-BE7**, Control lever to be fitted on the steering column (for MS 880 only)

- Cross control (push/pull/up/down)
- Memory for two speeds
- With "Cancel" function

Ref. No. 9103555853

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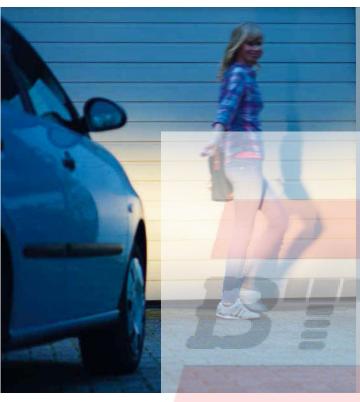
### Tel: (+974) 443 54 298 www.boltsandtools.com

# **CLICK: CAR'S LOCKED!**

# UNLOCKING, LOCKING, SAFELY HOME ...

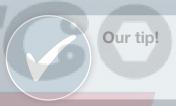
Remote controls with many extras for convenience. Both remote controls offer the basic functions "unlock" and "lock" in a range up to 20 metres. The car-specific MT 200 is easy to install. It can be fitted even by amateurs and provides high security against copying. MT 400 is a universal remote control with many convenient features.

Take the coming home function, for instance, which turns on the dipped headlights for ten seconds so you can see your way safely to your front door.



# **MY BENEFITS**

- Auto-relock: re-locks the car if none of the doors are opened after being unlocked by the hand transmitter.
- Interior light: switched on from unlocking the doors to starting the engine (max. 30 seconds).
- Safety lock: Locks the doors while driving, unlocks the doors when the ignition is turned off.
- Coming home function: Locking the vehicle activates see your way safely to





# WAECO MagicTouch MT 200

Radio remote control with vehicle-specific cable set

- Unlocking and locking of the central locking system with blinking hazard lights
- Maximum security against copying through rolling code system
- Ergonomic hand transmitter (20 m range) included
- Can be upgraded to include up to five hand transmitters



3.05

# WAECO MagicTouch MT 400

Radio remote control for universal use

- Unlocking and locking of the central locking system with blinking hazard lights
- Many extra functions for enhanced convenience
- Two ergonomic hand transmitters (20 m range) included
- Can be upgraded to include up to five hand transmitters
- Designed for universal use

Ref. No. 9101300007



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Vehicle accessories

3.23

# SEATING COMFORT FOR HOT AND COOL DAYS

A blessing for everyone heading for a holiday destination or business meeting: The air-conditioned seat cover MagicComfort MCS 20 creates gentle air circulation on the seat and backrest with a pleasant, slightly massaging and invigorating effect. Two cooling levels are possible. The anatomically designed seat cover ensures a comfortable, stable and safe seating position



# **MY BENEFITS**

- Suitable for cars with side airbags in the seats
- Optimal air circulation on the seat and backrest
- Attractive zipped bag for storage in winter

WAECO MagicComfort MCS 20

Air-conditioned seat cover made from a breathable cotton-polyester fabric

- · Comfortable, stable and safe seating position
- Simple and practical fixing
- Two cooling levels: quick chill and pleasant permanent cooling
- Suitable for cars with side airbags in the seats

Ref. No. 9101700043

An icy cold seat can easily spoil your mood on a cold day in autumn or winter. Treat yourself and your passenger to cosy warmth from underneath with the two-stage seat heating MagicComfort MH 40.



www.boltsandtools.com

# MY BENEFITS

- Fits, warms and protects
- Integrated temperature guard
- Integrated lumbar support pad
- Lockable DC plug
- Side airbag tested by TÜV Rheinland







3.23

# WAECO MagicComfort MH 40

Heated seat covers with two heat levels

- Integrated lumbar support pad
- Two easy fastening options
- Two heat levels: pleasant permanent heat or fast heat-up
- Lockable DC plug for a safe contact

Ref. No. 9101700023 // MH 40S, black

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### Tel: (+974) 443 54 298 www.boltsandtools.com

# **INTEGRATED HEATING**

# A WARM SEAT - FOR ONE OR TWO

Enjoy luxury-class seating comfort: WAECO MagicComfort MSH 60/601 gets your seat warm in a matter of seconds. As with seat heating integrated in the factory, the heating elements for the seat and the backrest are fitted between the upholstery and the seat cover; the retrofit doesn't alter the shape of the seats. Available for one or two seats.





3.23

# WAECO MagicComfort MSH 60/601

Insert seat heater for driver and/or front passenger seat

- Complete sets for one or two seats
- Two heat stages: pleasant permanent heat or fast heat-up
- Integrated temperature guard
- For seats with detachable cover
- With illuminated switch

Ref. No. 9101700025 (MSH 60, for two seats) Ref. No. 9101700026 (MSH 601, for one seat)



Concealed installation in the vehicle seats, like with an original seat heater, the shape of the seat remains unchanged



Simple installation: just insert the heating elements between the foam core and the cover



Illuminated universal switch for installation on the dashboard or seat trim

# **WARMTH AND COMFORT IN RECORD TIME:**

# **CUT-TO-SIZE CARBON HEATING**

Comfortable, super-fast seat heater for retrofitting in the driver and/or front passenger seat. The high quality carbon heating elements for the seat and backrest are simply fitted between the upholstery and the seat cover without altering the shape of the seat.





Switch when the ignition is turned on, or when the seat heater is turned "OFF"



Level 3 = High heat output for fast heat-up when you set off



Level 2 = Medium heat output



Level 1 = Low heat output for continuous operation

For vehicles with side air bags in the backrest please note the manufacturer's instructions for removing the seats and upholstery.





3.23

# WAECO MagicComfort MSH 300/301

Carbon insert seat heater for driver and/or front passenger seat

- Cut-to-size carbon heating elements, extremely fast heat-up
- Elegant, ergonomic push button with LED display
- 3 heat stages from 10 to 70 watts
- RESET when the ignition is turned off
- Four or two integrated temperature guards

MSH 300 (for two seats) // Ref. No. 9101700034

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# **THREE SYSTEM VERSIONS**

# THE MATCHING PARKING AID FOR EVERY CUSTOMER AND FOR EVERY VEHICLE!



# The complete solution

# Tiny sensors for rear and front

The smallest sensors for rear and front bumpers available in the market. The result: maximum manoeuvrability and great installation results! Comparative tests have shown that the 7 & 9-series parking aids exceed the performance of most serial systems by far. Available as "classic" hard-wired system or easy-to-install wireless model.

# The classical solution

# Popular retrofits

A total of seven MagicWatch rear systems cover almost all imaginable applications and requirements. Suitable for cars, vans and light trucks. From budget to premium. With Digital Signal Memory or the option to shift the stop line.



# The front solution

# Wireless or hard-wired

Three MagicWatch front systems are what we offer to all who want to protect themselves in the forward direction.

The wireless WPS 900F is based on the ultra-small sensors of the 9-series. If you prefer a hard-wired model, opt for the MWE 890 or MWE 7106F.

# Our tip!

# Fitted in record time – MagicWatch wireless parking aids

The signal transmission between the control unit and loudspeaker is via a wireless link. This spares you the effort of having to lay cables across the length of the vehicle, and there's no need to search for the ideal cable route either. On the front system as well as on the complete system, the robust control units (splash-proof according to IP54) are directly integrated into the bumpers. The centre and outer sensors can be set individually of one another to perfectly suit the vehicle you have.



Loudspeaker with LED display (acoustic and visual warning)

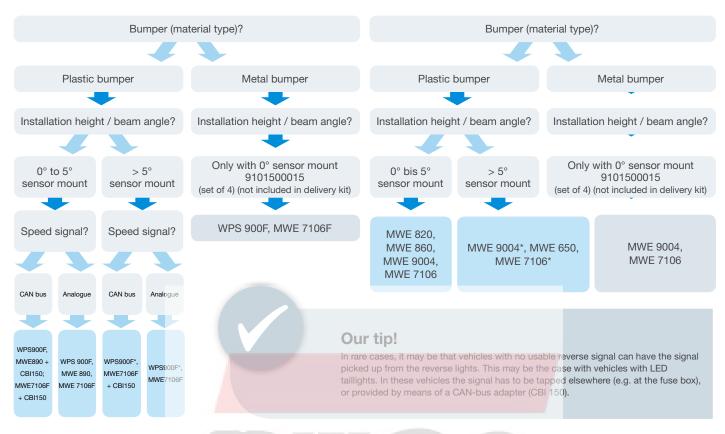


Control unit in the bumper

Tel: (+974) 443 54 298 www.boltsandtoଡ଼ିଣ ଓଡ଼ିମସ aids

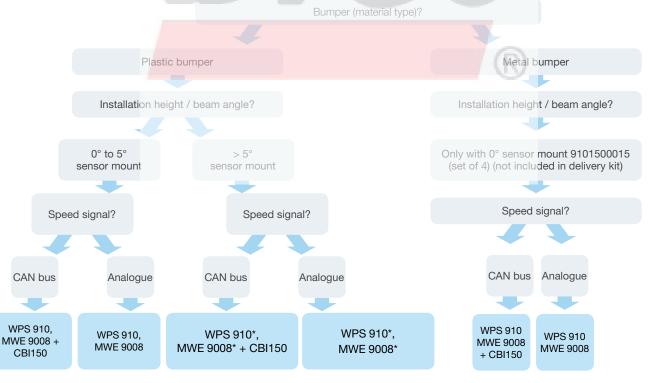
Vehicle accessories

# Front system Rear system



\* 20° sensor mount for 7 + 9-series: 9101500023 - set of 1 - not included in delivery kit

### Complete system



 $<sup>^{\</sup>star}$  20° sensor mount for 9-series: 9101500023 – set of 1 – not included in delivery kit

It is also possible to use MWE7106 + MWE 7106F for analog and MWE 7106 + MWE7106F + CBI150 for CAN Bus connection



# INCH PERFECT MANOEUVRING PARKING AIDS FOR CARS, VANS AND LIGHT TRUCKS

Save time, avoid damage and repairs – it's all possible with WAECO MagicWatch parking aids. Numerous system versions are available: parking aids for the front, rear, or front and rear, hard-wired or wireless models for ease of installation. For even better visibility, the MagicWatch MWE series now includes two new parking aids with six digital ultrasonic sensors and an extra-large detection range up to three metres (rear system MWE 7106). Another newcomer to the MagicWatch range is our blind spot system MWE 4004 for trucks, featuring four sensor eyes scanning the critical blind spot area next to the passenger side of the vehicle. It is a low-cost and effective retrofit solution that helps avoid fatal accidents while turning and changing direction.

Regardless of what vehicle you drive, WAECO MagicWatch parking aids give you inch perfect accuracy and complete peace of mind.



# NEW: Parking aids with 6 digital sensors

The new digital parking aids WAECO MagicWatch MWE 7106 (rear system) and 7106F (front system) come with six sensors. That means they can also scan the side area of the bumper, or provide optimal protection for wider vehicles. A technically convincing and safe retrofit solution, which looks like an original product fitted in the factory.





# THE BENEFITS

- 6 digital sensors like with an original factory parking aid
- Parameter Programming System (PPS)
- Sensor sensitivity, range and stop zone adjustable for each sensor
- Extra-large detection range up to 3 m
- Radio mute function
- Ideal for additionally securing the side area, or for wide vehicles

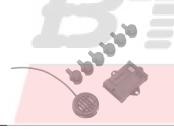
NEW
Digital parking aid with 6 sensors

# SIX SENSORS SEE MORE PARKING AIDS IN OEM QUALITY

The new MagicWatch parking aids (models available for the front and for the rear bumper) perfectly match the quality of an original system fitted in the factory. They have six digital ultrasonic sensors which can be placed as required to provide optimal manoeuvring safety for the respective vehicle. On a car or van, for instance, two sensors can be used to secure the sides of the bumper.

Using the Parameter Programming system (PPS), the sensitivity, detection range and stop zone can be set individually for each sensor. Even a tow-bar can be taken into account. The radio mute function silences the radio when concentrating on manoeuvring.

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# WAECO MagicWatch MWE 7106

Digital rear parking aid,

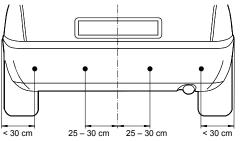
6 compact digital sensors, can be positioned as required

- 6 sensors like with an original factory parking aid
- Parameter Programming System (PPS)
- Sensor sensitivity adjustable
- Radio mute function
- Suitable for vehicles with a tow-bar
- Diagnosis function
- High-quality membrane loudspeaker
- Adjustable stop zone and adjustable range
- · Compact control unit
- Detection range up to 3 m

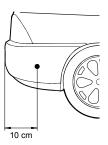
Ref. No. 9101500072

### Optional extra:

LED display // Ref. No. 9101500079



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# WAECO MagicWatch MWE 7106F

Digital front parking aid,

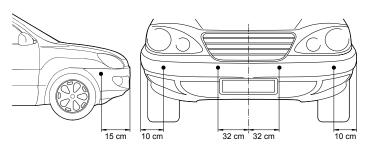
6 compact digital sensors, can be positioned as required

- 6 sensors like with an original factory parking aid
- Parameter Programming System (PPS)
- Sensor sensitivity adjustable
- Radio mute function
- Activation/deactivation via speed signal
- Diagnosis function
- High-quality membrane loudspeaker
- Adjustable stop zone and adjustable range
- Compact control unit
- Detection range up to 1,2 m

Ref. No. 9101500073

### Optional extra:

LED display // Ref. No. 9101500079



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# **WAECO SENSORS** ALMOST INVISIBLE

Car owners care about how their cars look. The parking aid sensors should work properly but be invisible if possible. The small WAECO sensors - painted over in the colour of the car body - come very, very close to fulfilling this wish. The sensors of the MagicWatch 9-series are among the smallest on the market. Much larger versions are often installed even as original equipment. The sensors of the 8 series are also more compact and easier to install than most competing products.



For fast and professional installation of the sensors, we offer specially developed punching tools. These allow the sensors of the 7-, 8- and 9-series to be installed in the bumper in the blink of an eye. And the work result is absolutely convincing! Smooth punching edges pulled toward the inside, no cracks or chips in the paint. The very recommendable punching tools are available in two versions (Ø 18 mm and Ø 22 mm) to fit 7-, 8- and 9-series sensors. Available individually or together in a complete set with various holders.



### WAECO MagicWatch Accessories

Punching tool for 18 mm sensors of the 7- and 9-series // Ref. No. 9101500013

Punching tool for 22 mm sensors with 10° mount // Ref. No. 9101500024

Fixing kit box containing: 18 mm punching tool, 22 mm punching tool, all standard mounts and all mounts for custom solutions // Ref. No. 9101500026





3.07

Vehicle accessories

3.07





### WAECO MagicWatch WPS 900F

Wireless parking aid for use in the front bumper of cars, for vehicles up to 2.20 m wide

- Distance measurement with 4 built-in sensors
- For vehicles with 12-volt or 24-volt power supply

Ref. No. 9101500019

### Optional extras:

Punching tool for 18 mm sensors // Ref. No. 9101500013
Punching tool (22 mm) for sensors with 10° mount punching tool // Ref. No. 9101500024

# **MY BENEFITS**

- Wireless front system
- Incl. loudspeaker with LED display
- Super-compact, paintable sensors
- Fast installation





# WAECO MagicWatch MWE 9004

Rear parking aid for cars,

4 built-in sensors for vehicles up to 2.20 m wide

- Distance measurement with 4 ultrasonic sensors
- For vehicles with 12-volt or 24-volt power supply

Ref. No. 9101500054

### Optional extras:

Display for visual distance indication (12 volts) // Ref. No. 9101500002

LED display // Ref. No. 9101500062

Punching tool for 18 mm sensors // Ref. No. 9101500013 Punching tool for 22 mm sensors with 10° mount //

Ref. No. 9101500024



**Optional:** The digital colour display indicates the distance with graphics and numbers.





WAECO MagicWatch WPS 910

Wireless parking aid for cars, 8 built-in sensors for front and rear, for vehicles up to 2.20 m wide

- Distance measurement with 8 ultrasonic sensors
- For vehicle with 12-volt or 24-volt power supply

Ref. No. 9101500020

### Optional extras:

Punching tool for 18 mm sensors // Ref. No. 9101500013
Punching tool (22 mm) for sensors with 10° mount punching tool // Ref. No. 9101500024

# **MY BENEFITS**

- Radio system for front and rear
- Centre and outer front and rear sensors can be set individually
- Fast installation



3.07

# WAECO MagicWatch MWE 9008

Parking aid for cars, 8 built-in sensors for front and rear for vehicles up to 2.20 m wide

- Distance measurement with 8 ultrasonic sensors
- For vehicles with 12-volt or 24-volt power supply

Ref. No. 9101500055

3.07

### Optional extras:

1.5 m extension cable for sensors // Ref. No. 9103555747 MagicSpeed CBI 150 // Ref. No. 9101400060

Punching tool // Ref. No. 9101500013

Punching tool for 22 mm sensors with  $10^{\circ}$  mount // Ref. No. 9101500024 ON/OFF switch for front parking aid // Ref. No. 9101500066



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# THE BENEFITS

- Entry-level-price models
- Built-in sensors for a perfect finish
- Paintable sensors
- Radio mute control
- Can be used on vehicles with tow-bars
- Option to shift the stop line

# REAR SOLUTIONS FOR CARS ENTRY-LEVEL-PRICE MODELS

Reliable "rear protection" for your car does not have to be expensive. With these two MagicWatch parking aids, you provide value-conscious customers with proof. Both are suitable for vehicles up to 2.20 m wide, are equipped with four sensors and have an acoustic warning. The MWE 860 also has a visual indicator: The distance to the obstacle is also indicated on a stylish LED display. Unlike many competitor products, 8-series sensors are supplied ready for installation, with exactly dimensioned cable sections, and they require only half the mounting depth (see photos below for comparison, enlarged view). Nothing stands in the way of quick and easy installation.



3.07



With elegant display

3.07

# WAECO MagicWatch MWE 820

Rear parking aid for cars,

- 4 built-in sensors for vehicles up to 2.20 m wide
- Distance measurement with 4 ultrasonic sensors
- Activation of the system via reverse gear
- Power supply with 12 volts and 24 volts
- Range: Stop zone 10 40 cm,
   Measuring range rear: 40 160 cm

WAECO MagicWatch MWE 860

Rear parking aid for cars, 4 built-in sensors with display, for vehicles up to 2.20 m wide

- Distance measurement with 4 ultrasonic sensors
- Activation of the system via reverse gear
- 12-volt and 24-volt power supply
- Range: Stop zone 10 40 cm,
   Measuring range rear: 40 160 cm

Ref. No. 9101500041



### The sensors of the 8-series

With many inexpensive parking aids, installation requires "tinkering". The sensors first need to be "jerry-rigged" onto the connection cable, which is also much too long. The sensors of the 8-series systems are optimally prepared for installation. Installation is completed very quickly using the the matching 22 mm punching tool (Ref. No. 9101500024).



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# FRONT PARKING AID FOR RETROFITTING GREAT ALSO AS AN ADD-ON TO EXISTING REAR SYSTEMS

Do you want to supplement your rear parking aid to get all-round protection for your car? Then you should opt for one of our optimisedrange front systems - e.g. the hard-wired MWE 890. It will only detect obstacles in the vehicle's dangerous zone (< 75 cm). Greater ranges quickly lead to unwanted signalling in the front area, especially in tight city traffic. The parking aid is activated and deactivated through the speed signal and reverse gear or an external switch (optional). For customers who want a visual warning system in addition to the acoustic one, there's an optional LED display.



3.07

#### WAECO MagicWatch MWE 890

Parking aid for use in the front car bumper

- Distance measurement with 4 ultrasonic sensors
- No need to switch it on: system is activated by the speed signal
- Self diagnosis with error indication
- Acdoustic (and, optionally, visual) warning function
- Range: Stop zone 10 35 cm, Measuring range: 35 - 75 cm
- Optimal detection of obstacles in the close range
- For all vehicles with 12 to 27 volts power supply
- Built-in sensors for a perfect finish, sensors can be painted

Ref. No. 9101500042

#### Optional extras:

LED display // Ref. No. 9101500045 External switch // Ref. No. 9101500049 Punching tool for 18 mm sensors // Ref. No. 9101500013 Punching tool for 22 mm sensors with 10° mount // Ref. No. 9101500024

#### MY BENEFITS

- Specially designed for installation in the front bumper
- The ideal add-on to existing rear parking aids
- Supplied with core bit



Optional: Elegant LED display (Included in MWE 860, for MWE 890 available as an optional extra)

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# **REAR SYSTEMS FOR LARGER VEHICLES** WITH SUB-MOUNTED OR BUILT-IN SENSORS

The proven parking aids MW 650 and MWE 650 were developed specifically for large vehicles (trucks up to 7.5 t). Their distinguishing features: a large range of 250 cm, acoustic and visual warning functions, free voltage supply from 10 - 32 volts, splash-proof components, extra-long sensor lines and of course, Digital Signal Memory (DSM function): The system "memorises" objects permanently fitted to the vehicle and distinguishes them from external obstacles when checking the area behind the vehicle. With the quickly installed MW 650, the sensors are mounted under the rear bumper, and with the MWE 650, the sensors are integrated in the rear bumper.

#### **MY BENEFITS**

- For 12 and 24 volts
- Easy fitting with sub-mounted sensors
- Splash-proof control unit
- Installation time: about 2 to 3 hours

## MY BENEFITS

- Built-in sensors for perfect installation results
- Installation time: about 3 to 4 hours













3.07

#### WAECO MagicWatch MW 650

Rear parking aid for trucks, with DSM function and 4 sub-mounted sensors

- Distance measurement with 4 sub-mounted sensors
- Free voltage supply from 10 volts to 32 volts
- Distance indication in 1-cm steps on the LED display
- Range: Stop zone 10 30 cm, Measuring range rear: 30 - 250 cm

Ref. No. 9103555875

• Sub-mounted sensors for flexible installation

#### WAECO MagicWatch MWE 650

Rear parking aid for trucks, with DSM function and 4 built-in sensors

- Distance measurement with 4 built-in sensors
- Free voltage supply from 10 volts to 32 volts
- Distance indication in 1-cm steps on the LED display
- Range: Stop zone 10 30 cm, Measuring range rear: 30 - 250 cm
- Specially designed for metal bumpers

Ref. No. 9103555886

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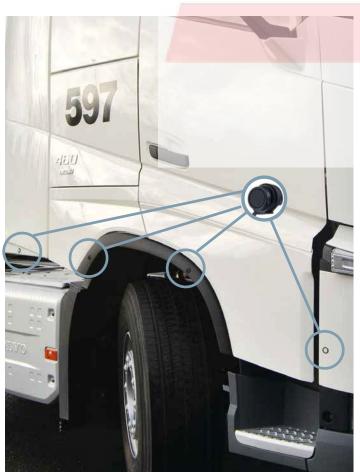
Contents, specifications and availability are subject to change due to the technical improvement. www.boltsandtools.com

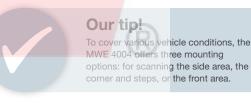


# BLIND SPOT SYSTEM FOR TRUCKS RETROFIT NOW AND AVOID ACCIDENTS!

Statistics say that about 15% of all traffic accidents involving heavy goods vehicles happen while turning or manoeuvring. In about 30% of all cases pedestrians or cyclists are affected, because when the vehicle is turning, they disappear into the blind spot area and therefore are out of the driver's view.

This is where the new WAECO MagioWatch MWE 4004 blind spot system proves very helpful. Four sensors watch the critical blind spot area and the passenger side while turning. They come on automatically when the vehicle moves at manoeuvring speed. The driver gets a double warning: visually via the 4-colour LED display in the cockpit, audibly via the beep from the loudspeaker.







0 00

WAECO MagicWatch MWE 4004

Blind spot system for trucks

- 4 sensors for side scan of the blind spot area
- Visual and acoustic warning
- Four-colour LED design display
- Detection range up to 120 cm
- Activation/deactivation by speed signal
- Deactivation possible via parking brake and/or push button
- Three installation options: side scan, corner and step scan, front scan
- Trigger line for Blind Spot Camera (optional)

Ref. No. 9101500052



3.08 // WAECO MagicSafe

Alarm system

Operating voltage (V DC)

Scope of delivery

#### 3.08 // WAECO MagicSafe



#### MS 660

9101600001

12

2 radio hand transmitters,
alarm control unit,
ultrasonic interior protection,
bonnet contact switch, status LED,
emergency switch,
relay for vehicle horn,
pre-configured cable set and fixing
material, installation
and operating instructions,
2 alarm stickers

e-certified (Automotive EMC Directive), R&TTE-approved with European operating permit

#### **Gas detector**



Ref. No.		

Battery voltage (V DC)

Power input (W)

Signal volume (dB)

Operating temperature (°C)

Dimensions (W x H x D)

Protection class

Optional extras

External siren

## 9103555858 12 – 24

1.3

MSG 150

approx. 85 at a distance of 3 m

0 to +50

80 x 156 x 51 mm

IP 20

Ref. No. 9101600008

## Test marks

Ref. No.

#### \_\_\_

Motion sensor

Hand transmitter

Optional extras

Radio contact switch

Gas detector MSG 150

Ref. No. 9101600008

Ref. No. 9101600003

Ref. No. 9101300009

Ref. No. 9101600002

Ref. No. 9103555858



#### 3.34 // Dometic Safe

#### **Safes**





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Ref. No. 9106600005



Ref. No. 9106600005

	310C	361C	MD 281C	MD 361C
Ref. No.	9106600543	9106600002	9106600003	9106600004
Capacity (I)	9	24.5	8.3	24.5
<b>Dimensions</b> (W x H x D, mm)	310 x 165 x 235	360 x 190 x 410	280 x 165 x 235	360 x 190 x 410
Steel wall thickness (mm)	Door: 5.0 Cabinet: 2.0	Door: 5.0 Cabinet: 1.5	Door: 5.0 Cabinet: 1.5	Door: 5.0 Cabinet: 1.5
Steel bolts (mm)	2 x 19	2 x 18	2 x 18	2 x 18
Colour	Anthracite	Anthracite	Anthracite	Anthracite
Quality features	Laser-cut door, very tight tolerances between door and cabinet, door locking with 2 steel bolts, robust inside hinges and locks without any plastic parts, vertical or horizontal installation	Laser-cut door, very tight tolerances between door and cabinet, door locking with 2 steel bolts, robust inside hinges and locks without any plastic parts, vertical or horizontal installation	Automatic motor locking system (battery-powered), electronic locking with 4-digit code (changeable) and 5-minute memory function, battery-low indication, laser-cut door, very tight tolerances between door and cabinet, door locking with 2 steel bolts, vertical or horizontal installation	code (changeable) and 5-minute memory function, battery-low indication, laser-cut door, very tight
Weight (kg)	7.4	12.7	6.5	12.8
Scope of delivery	Safe, 2 keys, operating instructions	Safe, 2 keys, operating instructions	Safe, 2 emergency access keys, plastic door knob, 4 Duracell batteries, operating instructions	Safe, 2 emergency access keys, plastic door knob, 4 Duracell batteries, operating instructions
Optional extras				

Ref. No. 9106600005

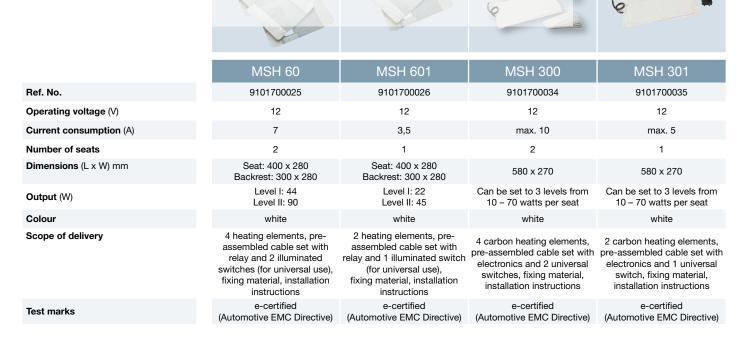
#### 3.23 // WAECO MagicComfort

Ref. No. 9106600005

## **Seating comfort**

(for retrofitting)

Fixing kit



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#### 3.23 // WAECO MagicComfort

## Seating comfort







	MCS 20	MH 40S	MH 40GS
Ref. No.	9101700043	9101700023	9101700024
Operating voltage (V)	12 via cigarette lighter	12 via cigarette lighter	12 via cigarette lighter
Dimensions (W x H x D) mm	1060 x 450	1000 x 450	1000 x 450
Output (W)	Level I: 6 Level II: 12	Level II: 20 Level II: 45	Level II: 20 Level II: 45
Colour	Black	Black	Grey/black
Test marks	e-certified (Automotive EMC Directive)	e-certified (Automotive EMC Directive)	e-certified (Automotive EMC Directive)
Optional extras			

Voltage converter DCDC06 for operation on 24 volts

Ref. No. 9103555787

Ref. No. 9103555787

Ref. No. 9103555787

#### 3.07 // WAECO MagicWatch

#### Parking aids









	WPS 900F	WPS 910	MWE 9004	MWE 9008
Ref. No.	9101500019	9101500020	9101500054	9101500055
Parameter Programming System (PPS)	•	•	/·_	•
Option to shift the stop line	•	•	(R)	•
Integrated CAN bus interface	•	•		-
Monitoring range Stop zone (cm)	approx. 10 – 25	<b>Rear:</b> approx. 10 – 30 <b>Front:</b> approx. 10 – 25	approx. 10 – 30	<b>Rear:</b> approx. 10 – 30 <b>Front:</b> approx. 10 – 25
Measuring range (cm)	approx. 25 – 95	<b>Rear:</b> approx. 30 – 180 <b>Front:</b> approx. 25 – 95	approx. 30 – 180	<b>Rear:</b> approx. 30 – 180 <b>Front:</b> approx. 25 – 95
Acoustic warning function	•	•	•	•
Visual warning function	LED display	LED display	LED display with distance indication (optional)	-
Radio mute control	-	-	•	•
Suitable for vehicles with tow-bar	-	•	•	•
Activation via	Speed signal or switch	Rear: reverse gear Front: speed signal or switch	reverse gear	Rear: reverse gear Front: speed signal or switch
Sensors	4 built-in sensors	8 built-in sensors	4 built-in sensors	8 built-in sensors
Visible sensor area (mm)	18	18	18	18
Cut-out for sensor (mm)	18	18	18	18
Optional extras				
•				
Display for visual distance indication (12 volts)	-	-	Ref. No. 9101500002	-
Display for visual distance indication	-	-	Ref. No. 9101500002 Ref. No. 9101500062	-
Display for visual distance indication (12 volts)	- - -	- - -		- - Ref. No. 9103555747
Display for visual distance indication (12 volts) LED display	- - - -	- - - -		- Ref. No. 9103555747 Ref. No. 9101400060

#### 3.07 // WAECO MagicWatch

## Parking aids





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	MWE 820	MWE 860	MWE 890	MW 650
Ref. No.	9101500040	9101500041	9101500042	9103555875
Parameter Programming System (PPS)	-	-	-	-
Option to shift the stop line	-	-	-	-
Integrated CAN bus interface	-	-	=	_
Monitoring range Stop zone (cm) Measuring range (cm)	approx. 10 – 40 approx. 40 – 160	approx. 10 – 40 approx. 40 – 160	approx. 10 – 35 approx. 35 – 75	approx. 10 – 30 approx. 30 – 250
Acoustic warning function	•	•	•	•
Visual warning function	-	LED display	LED display	LED display (with distance indication)
Radio mute control		•	•	_
nadio mate control	•			
Suitable for vehicles with tow-bar	•	•	-	•
		ereverse gear	speed signal optional switch	• reverse gear
Suitable for vehicles with tow-bar	•	-		reverse gear 4 sub-mounted sensors
Suitable for vehicles with tow-bar Activation via	ereverse gear	reverse gear	optional switch	·
Suitable for vehicles with tow-bar Activation via Sensors	reverse gear 4 built-in sensors	reverse gear 4 built-in sensors	optional switch 4 built-in sensors	4 sub-mounted sensors
Suitable for vehicles with tow-bar Activation via Sensors Visible sensor area (mm)	reverse gear 4 built-in sensors 25	reverse gear 4 built-in sensors 25	optional switch 4 built-in sensors 25	4 sub-mounted sensors 29
Suitable for vehicles with tow-bar Activation via  Sensors Visible sensor area (mm)  Cut-out for sensor (mm)	reverse gear 4 built-in sensors 25	reverse gear 4 built-in sensors 25	optional switch 4 built-in sensors 25	4 sub-mounted sensors 29

### 3.07 // WAECO MagicWatch

## Parking aids









	MWE 650	MWE 7106	MWE 7106F	MWE 4004
Ref. No.	9103555886	9101500072	9101500073	9101500052
	9103333660	9101300072	9101300073	9101300032
Parameter Programming System (PPS)	_	•	•	-
Option to shift the stop line	-	•	•	-
Integrated CAN bus interface	_	-	-	-
Monitoring range Stop zone (cm)	approx. 10 – 30	approx. 10 – 35	approx. 10 – 35	approx. 10 – 50
Measuring range (cm)	approx. 30 – 250	approx. 35 – 300	approx. 35 – 120	approx. 50 – 120
Acoustic warning function	•	•	•	•
Visual warning function	LED display (with distance indication)	LED display (optional)	LED display (optional)	LED display
Radio mute control	-	•	•	-
Suitable for vehicles with tow-bar	•	•	-	•
Activation via	reverse gear	reverse gear	speed signal (push button)	speed signal (push button)
Sensors	4 built-in sensors	6 built-in sensors	6 built-in sensors	4 bulit in sensors
Visible sensor area (mm)	29	18	18	18
Cut-out for sensor (mm)	24	18	18	18
■ Optional extras				
Rubber sensor holder	-	-	-	Ref. No. 9101500071
Metal substructure sensor holder	-	-	-	Ref. No. 9101500078
LED display	-	Ref. No. 9101500079	Ref. No. 9101500079	-

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## **SAFETY SOLUTIONS**

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Moniceiver and reversing video function	60
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## Another word for reliability!

The working day of professional drivers is tough. Safety systems, tailor-made to suit the requirements of drivers and their vehicles, take the stress out of difficult situations. Reversing video systems – stand-alone or complete with a navigation or multimedia system – allow your vehicle to complete every reversing manoeuvre without incident.

Especially for commercial vehicles. Products for panel vans are marked separately.

# **SAFETY ASSISTANT ON BOARD**FOUR SOPHISTICATED VERSIONS

Professional drivers have to manage a lot of things: find the best route and suitable stops, navigate their valuable vehicle safely through winding backstreets or into narrow parking spaces aswell as spending nights away from home. Support is needed – from mobile video systems by WAECO which can be installed with ease. The classic reversing video systems enable you to manoeuvre your vehicle stressfree, and they already pay for themselves the first time damage is avoided. Driving is even more convenient when WAECO reversing cameras are combined with a navigation system, a moniceiver or an original multimedia display.

Safe manoeuvring and entertainment - available in many system versions and to suit every demand.



## **REVERSING CAMERA + PARTNER**

# CHOOSE FROM: MONITOR, MONICEIVER OR EXISTING DISPLAY

One of these reversing cameras is there for you - whatever system version you choose. Possible combination options: classic LCD monitor, moniceiver or existing original multimedia display.

#### Cameras for close and long range vision



**CAM 604** Colour zoom camera



Colour twin camera



Colour camera



Cameras in compact design

Colour camera





Colour shutter camera

#### Special cameras for panel vans



**CAM 29BK** 



CAM 29BKS Camera with console Camera with console

These cameras make any system version possible and are also available individually.





### Reversing camera plus **LCD** monitor

One out of seven reversing combined with a slim and or 7" monitor, with many convenient functions. This is the way t reversing solutions that per

# Reversing cameras on



P. 56 - 59

Reversing camera olus entertainment

can combine the reversing f your choice with a great money moniceiver, which perfect entertainment on d plays back the picture the reversing camera captures while

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P. 50 - 55

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## **REVERSING CAMERAS**

## THAT WON'T MISS A THING

The range from camera specialist WAECO offers a perfect model for every demand. Standard cameras with good night-time vision and shutter cameras for installation in difficult-to-access areas. Special cameras for panel vans and heavy-duty cameras for commercial vehicles. Reversing safety tailor-made for the vehicle and the application! Clear pictures day and night, on cold winter days and in the summer sun. Most cameras are available as individual units, or combined with a monitor or moniceiver in a practical complete system.

3.19





#### **NEW!** WAECO PerfectView CAM 55

High-end camera with extended input voltage range

- Input voltage range: 10 32 volts
- Image sensor resolution: 2 megapixels
- Robust aluminium housing with stainless steel mounting bracket
- Optimised mounting base for a safe seal
- Protection class: IP 69K
- Connection to original multimedia systems and ISO bus terminals with vehicle-specific adapters
- CAM 55NAV including adapter for connection to multimedia systems or navigation devices

CAM 55 CAM 55W CAM 55NAV CAM 55W NAV Ref. No. 9102000064 (silver) Ref. No. 9102000068 (white) Ref. No. 9102000098 (silver) Ref. No. 9102000099 (white)

3.19



#### WAECO PerfectView CAM 604

Compact 2-step-zoom colour camera for optimal close and long range vision

- Extra-large diagonal picture angles: 153° in close range, 83° in long range
- Picture distoration correction in close range
- Operation via the two camera inputs of the monitor
- · Replaces the inside rear-view mirror if required
- Separate IR LEDs for optimal night vision
- Temperature-controlled heater
- Integrated microphone
- Replaceable lens cover
- · CAM 604NAV including adapter for connection to original multimedia systems or navigation devices

**CAM 604** Ref. No. 9102000071 CAM 604NAV Ref. No. 9102000057



with 83°

3.19







3.19

#### WAECO PerfectView CAM 44

Smallest colour twin camera with shutter and extra-wide picture angle

- Colour CMOS camera (PAL) with LED
- · Large picture angle in close range (140° diagonal)
- Telefunction in long range (50° diagonal)
- Operated via the two camera inputs in the monitor
- · Automatic, motor-operated camera cover
- Ideal for high-up or difficult-to-access areas thanks to motor-operated camera cover
- Microphone
- Distance marks in reversing mode
- CAM 44NAV including adapter for connection to original multimedia systems or navigation devices

WAECO PerfectView CAM 18

Flexible colour ball camera

- Picture sensor: 1/3" CMOS sensor (PAL)
- Picture angle: 140° diagonal
- 5 LEDs for improved night vision
- Microphone

3.19

- Can also be used as a side camera
- Protection class: IP 69K
- CAM 18NAV including adapter for connection to original multimedia systems or navigation devices

#### WAECO PerfectView CAM 80CM

Compact colour shutter camera with large 145° picture angle

- 1/3" Colour CCD camera (PAL) with LED
- Normal or mirrored picture function
- Automatic, motor-operated camera cover to protect the lens from dirt
- Ideal for installation in high-up or difficult-to-access areas
- Microphone
- Temperature-controlled heater
- LDR-controlled IR LEDs
- Wide-angle lens with large picture angle (145° diagonal)
- CAM 80NAV including adapter for connection to original multimedia systems or navigation devices

CAM 80CM Ref. No. 9102000066 CAM 80NAV Ref. No. 9102000023

Ref. No. 9102000061 **CAM 44** CAM 44NAV Ref. No. 9102000062 CAM 18 CAM 18NA

Ref. No. 9102000096 Ref. No. 9102000103

## SPECIAL CAMERAS FOR PANE

3.19



**CAM 40** 

for accurate alignment

• LDR-controlled IR LEDs



#### WAECO PerfectView CAM 29BK

Colour cylinder camera, integrated in a brake light console

- Colour cylinder camera (NTSC), 1/4"
- Wide-angle lens with large picture angle (150° diagonal)
- For FIAT Ducato X250, X290 and their sister models
- · Installed in the original brake light
- Water-proof equivalent to IP 68
- Housing can be painted
- CAM 29BK NAV including adapter for connection to original multimedia systems or navigation devices

CAM 29BK Ref. No. 9102000117 CAM 29BK NAV Ref. No. 9102000115

> Tel: (+974) 443 54 298 www.boltsandtools.com



3.19

WAECO PerfectView CAM 29BKS

Colour cylinder camera, integrated in a brake light console

- Colour cylinder camera (NTSC), 1/4"
- Fits VW Crafter and Mercedes-Benz Sprinter
- Technical data as for CAM 29BK

CAM 29BKS

CAM 29BKS NAV

• CAM 29BKS NAV including adapter for connection to original multimedia systems or navigation devices

CAM 30C Ref. No. 9102000045 CAM 40 Ref. No. 9102000047

to EU Mirror Directive 2003/97/EC

· Note: Available as single camera only

WAECO PerfectView CAM 30C /

• Colour CCD camera (PAL) with LED

• Normal or mirrored picture function

• Wide-angle lens with large picture angle

• CAM 40, in combination with monitor M 7LX,

certified as a front camera system according

• Electronic brightness adjustment

Colour ball cameras with very flexible mounts

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Ref. No. 9102000118

Ref. No. 9102000116



# TOP QUALITY IMAGE DISPLAY NOW IN A SUPER-FLAT COMPACT FORMAT

Flat, compact and easy to adjust thanks to the ball mount: The PerfectView monitors are the core component of all classic reversing video systems from WAECO. Four models are available – with 5" or 7" diagonal screen size, each as a standard version with three camera inputs or a heavy-duty model with four camera inputs and an attachable sun shield. **All tested and approved according to ISO 16750!** 

All monitors have the same premium picture display. Digital LCD technology with super-bright, energy-saving LED backlighting makes it possible. Advanced anti-reflex technology gives high-contrast images in all light conditions. Illuminated keys provide intuitive guidance through the clearly structured menu, day and night. A smart solution: The connection cable is invisibly routed through the monitor base.



# Super-flat LCD monitors: Standard version with 3 camera inputs



### WAECO PerfectView RVS monitors 5" and 7"

3.19

- Digital LCD panel with LED background illumination
- Optimum picture quality even at low temperatures
- Normal or mirrored picture function
- Three camera inputs, including 1 with signal recognition
- Picture settings can be saved for three camera inputs
- Connection of e.g. side cameras via the indicator
- Automatic recognition of a trailer camera
- Elegant monitor base with concealed cable routing

M 55L Ref. No. 9102100056 M 75L Ref. No. 9102100057

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Contents, specifications and availability are subject to charge sub to the technical improvement.

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3.19

Safety solutions

#### **HEAVY-DUTY MONITORS: WITH 4 CAMERA INPUTS**

The heavy-duty monitors from WAECO provide three additional benefits. First, they have four camera inputs. Second, they feature distance marks to define the borders of the danger zone. Third, each unit is supplied with an attachable sun shield.

Tel: (+974) 443 54 298

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#### WAECO PerfectView RVS monitors 5" and 7"

- Digital LCD panel with LED background illumination
- Optimum picture quality even at low temperatures
- OSD distance marks for convenient manoeuvring
- Normal or mirrored picture function
- Four camera inputs, including 1 with signal recognition
- Picture settings can be saved for each camera
- Connection of e.g. side cameras via the indicator
- Automatic recognition of a trailer camera
- Attachable sun shield
- Elegant monitor base with concealed cable routing

M 55LX: Ref. No. 9102100059

M 75LX: Ref. No. 9102100058





## Design and look

- Super-slim construction
- Design perfectly matches the vehicle interior
- Available with 5" or 7"





#### Technology

- Digital LCD monitor with LED backlighting for flicker-free image display
- High resolution for highly detailed images





Operation

- Intuitive menu guidance
- Illuminated keys
- Day/night switching





#### Connection

 Lockable plug-in connectors – IP 67 compliant





#### Picture quality

- Bright, high-contrast display
- Excellent readability in all light conditions (Anti Reflex Technology)





#### Concealed cable routing

 Prepared for concealed routing of the monitor cable under the monitor base



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#### Handling

• Precisely adjustable ball mount for optimal positioning





#### Adjustable distance scale

• Stop line, warning line and vehicle width can be set for safe manoeuvring

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#### **MY BENEFITS**

- Professional solution for heavy-duty use
- 7" LCD screen with LED background illumination
- Optimum picture quality even at low temperatures
- Heavy-duty reversing camera with robust aluminium housing (IP 69K)
- Option to connect up to four cameras
- Picture settings can be saved for three camera inputs
- Automatic trailer dection
- Distance marks

# THE PROFESSIONAL IN THE RANGE WITH HEAVY-DUTY REVERSING CAMERA

The flat screen monitors of the PerfectView LX series can be combined with a variety of cameras. The most common complete systems can be found on the next page (p. 53).

For tough requirements we recommend our professional solution PerfectView RVS 755X. The high quality 7" monitor excels with its outstanding picture quality. Adjustable distance marks allows you to park even a 40-ton truck backwards with ease. Up to four cameras can be connected – three of them with the option to save the settings separately. The set includes the compact and robust reversing camera PerfectView CAM 55 (p. 56). Designed for use in trucks and agricultural vehicles, it meets highest demands on operating safety and ease of installation.

3.19

#### **NEW!** WAECO PerfectView RVS 755X

#### Monitor:

- Flat 7" monitor with LED background illumination
- Four camera inputs, input four with trailer cam detection
- OSD distance marks for convenient manoeuvring
- ISO 16750 (environmental loads) approved
- Automatic recognition of a trailer camera

#### Camera:

- 2 MP CMOS color sensor for optimal picture performance
- Microphone
- Small sized housing 75 x 50 x 60 mm
- IP 69K + special cable sealing
- ISO 16750 (environmental loads) approved

Ref. No. 9101900062



#### **COMPLETE SYSTEMS WITH L-SERIES MONITOR**

Five high quality reversing cameras and two monitor models: that makes eight complete reversing camera systems. Three camera models can be supplied with the 5" as well as the 7" LCD monitor. The special cameras CAM 29BK and CAM 29BKS are already integrated in a brake light console, which makes it ideal for panel vans. We have combined them with the compact 5" monitor.

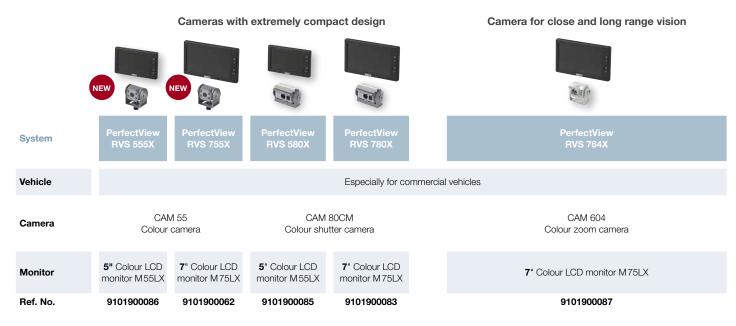
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### **COMPLETE SYSTEMS WITH LX-SERIES MONITOR**

The system versions with the LX-series monitors were specially designed for use in commercial vehicles. You can choose between five heavy-duty complete systems. The most suitable application is our professional solution PerfectView RVS 755X - explained in detail on p. 52.



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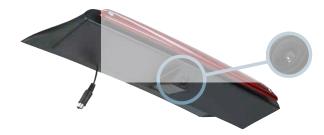


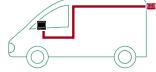


# CUSTOM SOLUTIONS FOR PANEL VANS

Many panel vans just don't have a suitable mounting surface for a camera on the rear. The obvious alternative is to fasten the camera on the roof or on the original brake light. For either configuration the PerfectView range offers a convincing solution based on an NTSC standard special camera that perfectly communicates with the original multimedia displays of modern-day panel van models. Alternatively, you can choose a complete system including the matching special camera and a compact PerfectView monitor (e.g. RVS 535, p. 53).

3.19





#### **NEW!** Camera CAM 29BKS

- Colour cylinder camera (NTSC)
- For roof installation on VW Crafter and Mercedes-Benz Sprinter
- Easy connection to the original multimedia display
- Factory pre-mirrored
- High light sensitivity
- Electronic brightness adjustment
- Protection class: IP 68
- Wide-angle lens with large picture angle (150° diagonal)

CAM 29BKS Ref. No. 9102000118 CAM 29BKS NAV Ref. No. 9102000116

Adapter for connection to original MB multimedia system (AUDIO 15): RVMB1: Ref. No. 9102200153 (for vehicles without video preparation)

IM 29BKS NAV Het. No. 9102000116

### **CAM 29BKS**

For our custom solution for VW Crafter and Mercedes-Benz Sprinter we have integrated the cylinder camera CAM 29BKS into a super-low-profile roof base-mounted housing.

Installation

Safety solutions











3.19

#### **NEW!** Camera CAM 29BK

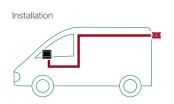
- Colour cylinder camera (NTSC)
- For installation on the original brake light of Fiat Ducato, Citroën Jumper, Peugeot Boxer (from year 2006)
- Easy connection to the original multimedia display
- Factory pre-mirrored
- · High light sensitivity
- Electronic brightness adjustment
- Protection class: IP 68
- Wide-angle lens with large picture angle (150° diagonal)

CAM 29BK Ref. No. 9102000117 CAM 29BKNAV Ref. No. 9102000115

Adapter for connection to original Fiat navigation system UConnect: Ref. No. 9102200184 (only for vehicles with video preparation)

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### **CAM 29BK**

For Fiat Ducato and its sister models Citroën Jumper and Peugeot Boxer (from year 2006) we have designed the special camera CAM 29BK. The small cylinder camera is enclosed in a console which is easily installed on the original brake light of the panel van.

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Heavwolutionsandonsholm5



#### **MY BENEFITS**

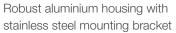
- Input voltage 10 32 V
- Image sensor resolution 2 megapixels
- Mechanical loads:
  - Shock test: 50 g / 6 ms - Vibration test: 10 g
- High-temperature test (up to +70°C, measured for 200 h)
- Low-temperature test (down to -30°C, measured for 48 h)
- Humidity test according to IEC 68-2-38
- Salt spray test according to ISO 9227
- Load dump test with modified starter pulse profile according to EN 40839 / ISO 7637
- High pressure cleaning at high temperatures: IP 69K test

# **HEAVY-DUTY CAMERA**

# SPECIALLY FOR TRUCKS AND AGRICULTURAL VEHICLES

Robust aluminium housing, dust-and water-proof according to IP 69K, separate LEDs for glare-free night vision, passed many environmental and mechanical tests ... the new CAM 55 from WAECO is perfectly equipped for heavy-duty use.

Featuring an input voltage range of 10 – 32 volts, the compact camera Water-proof powder connects to any on-board electrical system. There's no need for an coated die cast aluminium housing additional control box. A matching adapter is all it takes to link up the CAM 55 to the original multimedia display in the truck cabin or the ISO bus terminal of the agricultural vehicle. Anodised steinless steel <sup>2</sup>Mp 1/4" inage sensor (**10**0). Hardened Front Olass Side Cover 10\_32 V voltage regulator





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Optimised mounting base for a safe seal



Separately placed LEDs for glare-free night vision

#### SIMPLE CONNECTION - AN ADAPTER WILL DO!

Conventional reversing cameras require a control box to connect to the vehicle's original multimedia display or ISO bus terminal. The CAM 55NAV doesn't. All it takes here is the matching vehicle-specific adapter. This saves costs and facilitates installation, as there is no need to fit a control box. Check the table below to find matching adapters for many types of trucks and agricultural vehicles.

#### Adapters required for trucks in combination with CAM 55NAV or CAM 55

Merc Actros			Scania		Vo	lvo		MAN		Iveco
RVMB2	RVMB1	RVSC1	RVMAN1	RVSC2	RVVO1	RVVO2	RVMAN1	RV351LZ	RV351LZ2 (only CAM 55)	RVMAN1
J2D multimedia system with J9J video preparation	J2D multimedia system without J9J video preparation	Original SCANIA multimedia system	SCANIA premium radio	Original SCANIA monitor (Orlaco)	Older Volvo multimedia systems	Trailer camera, SID High with BUPMON	MAN Topline2 / MMT multimedia system	Topline2/ MMT with 351LZ video preparation	Topline2/ MMT with 351LZ video preparation	IVEconnect multimedia system
Ref. No. 9102200149	Ref. No. 9102200153	Ref. No. 9102200149	Ref. No. 9102200144*	Ref. No. 9102200150	Ref. No. 9102200151	Ref. No. 9102200180	Ref. No. 9102200144 *	Ref. No. 9102200178	Ref. No. 9102200191	Ref. No. 9102200144

<sup>\*</sup> requires CAM 55 + WAECO Switch 200VTO control box, Ref. No. 9102200156

#### Adapters required for agricultural vehicles in combination with CAM 55NAV or CAM 55

Fendt	John Deere		Krone & CCI Group	New Holland	New Holland, CNH, Case	Claas
RVFE1	RVJD1	RVJD2	RVCCI1	RVNH1	RVNH2	RVCL1
CAM 55 on Vario terminal	CAM 55NAV on CC4100 & CC 4600 terminal	CAM 55NAV on Green Star 3 2630 terminal	CAM 55 on CCI200 terminal	CAM 55 on FM-X, XCN-2050 terminal	CAM 55NAV on IntelliView III & IV (NH, CNH), AFS PRO700 (Case) terminal	CAM 55 on S10 terminal
Ref. No. 9102200123	Ref. No. 9102200207	Ref. No. 9102200215	Ref. No. 9102200210	Ref. No. 9102200211	Ref. No. 91022002012	Ref. No. 9102200213



3.19

### **NEW!** WAECO PerfectView CAM 55 / NAV

- Input voltage range: 10 32 volts
- Image sensor resolution: 2 megapixels
- Robust aluminium housing with stainless steel mounting bracket
- Optimised mounting base for a safe seal
- Protection class: IP 69K
- Connection to original multimedia systems and ISO bus terminals with vehicle-specific adapters
- CAM 55NAV including RCA adapter for connection to multimedia systems or navigation devices with RCA innput

CAM 55 Ref. No. 9102000064 CAM 55NAV Ref. No. 9102000098

Input voltage range: 10 - 32 volts

> Tel: (+974) 443 54 298 www.boltsandtools.com

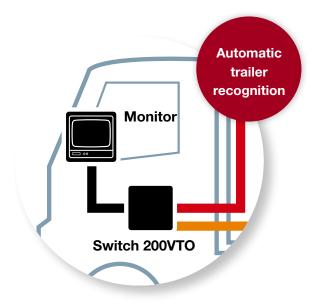
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# PERFECTVIEW TRUCK ADAPTER HOW TO BRING THE REVERSING CAMERA ON LINE

Many modern truck types are fitted with a multimedia system directly in the factory. The multi-functional display in the cab plays back navigation data, traffic information, preset radio stations and DVDs. If desired, it will also show the video signals coming from the reversing camera, which can be retrofitted with little effort. With the right PerfectView truck adapter and the SWITCH 200VTO, the connection is easy to set up. In most multimedia systems, one free video input for the camera is already provided but not yet assigned. In addition, Switch 200VTO already includes an automatic trailer detection.

The table on the next page shows you which PerfectView cameras is compatible with commonly used multimedia systems and which adapter fits which truck model and how.





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#### WAECO PerfectView Switch 200VTO

Control box with 2 camera inputs for OEM monitors

- Two camera inputs/video and audio output (Cinch/RCA)
- Reverse gear trigger input/video trigger output
- External switch for manual switchover between the cameras
- Adjustable switch time between video signal and trigger output
- Trailer recognition

Ref. No. 9102200156

Safety solutions

#### **PERFECTVIEW SWITCH 200VTO**

## CONNECTS UP TO TWO CAMERAS TO ORIGINAL MULTIMEDIA DISPLAYS

With the PerfectView SWITCH 200VTO control box and the matching vehicle-specific adapter you can connect two cameras to a pre-installed multimedia display. The cameras are activated automatically or manually. You can manually switch between the two views via the external switch.

Handy for towing vehicles: the PerfectView SWITCH 200VTO automatically detects when a trailer is coupled and ensures that the image of the trailer camera appears on the monitor. Unlike other control boxes available in the market, PerfectView SWITCH 200VTO can also control shutter cameras.





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	O		0		*/	0	6			0
RVMB2	RVMB1	RVSC1	RVMAN1	RVSC2		RVVO2	RVMAN1	RV351LZ	RV351LZ2 (only CAM 55)	RVMAN1
	J2D multimedia system without J9J video preparation	Original SCANIA multimedia system	SCANIA premium radio	Original SCANIA monitor (Orlaco)	Older Volvo multimedia systems	Trailer camera, SID High with BUPMON	MAN Topline2 / MMT multimedia system	Topline2/ MMT with 351LZ video preparation	Topline2/ MMT with 351LZ video preparation	IVEconnect multimedia system
Ref. No. 9102200149	Ref. No. 9102200153	Ref. No. 9102200149	Ref. No. 9102200144 *	Ref. No. 9102200150	Ref. No. 9102200151	Ref. No. 9102200180	Ref. No. 9102200144 *	Ref. No. 9102200178	Ref. No. 9102200191	Ref. No. 9102200144

<sup>\*</sup> Cannot be used with CAM 80CM and CAM 44













Camera	CAM 60ADR	CAM 80CM	CAM 55	CAM 30C	CAM40
Vehicle types			For trucks		
Camera type	Colour camera	Colour shutter camera	Colour camera	Colour ball camera	Colour ball camera
Ref. No.	9102000065	9102000066	9102000064	9102000045	9102000047



#### **MY BENEFITS**

- Moniceiver MC 402 ideal entry-level model for onboard entertainment
- Suitable for double DIN slot
- Can be used on its own or with a reversing camera
- Bluetooth 2.0 / smart phone compatible
- Integrated hands-free kit with access to telephone directory

# GREAT VALUE AT AN ENTRY-LEVEL PRICE MONICEIVER + REVERSING CAMERA

This inexpensive moniceiver offers well proven WAECO quality. It combines the functions of a car radio with those of a DVD / VCD / DivX®/ CD / MP3 / WMA player. When a reversing camera is added, it also makes manoeuvring safer. During reversing, the vehicle surroundings are shown on the display.



#### WAECO PerfectView MC 402

- 2-DIN moniceiver with 6.2" monitor, touch screen display and input for a reversing camera
- VHF/MW RDS tuner with 30 station presets and access to traffic services
- Integrated DVD / VCD / DivX® / CD / MP3 / WMA player
- Bluetooth audio streaming
- Prepared for compatible DAB receivers

Ref. No. 9102100024

Moniceiver also available separately

3.22













PerfectView

CAM 44NAV

Colour twin camera



PerfectView



PerfectView

PerfectView MC 455

For trucks

PerfectView

CAM 80NAV

PerfectView MC 464

For trucks

For panel vans
CAM 29BK NAV
Colour cylinder
camera in brake light
console

PerfectView MC 429

CAM 18NAV Colour camera 9103531018 CAM 55NAV Colour camera

9103531019

camera 9101900070

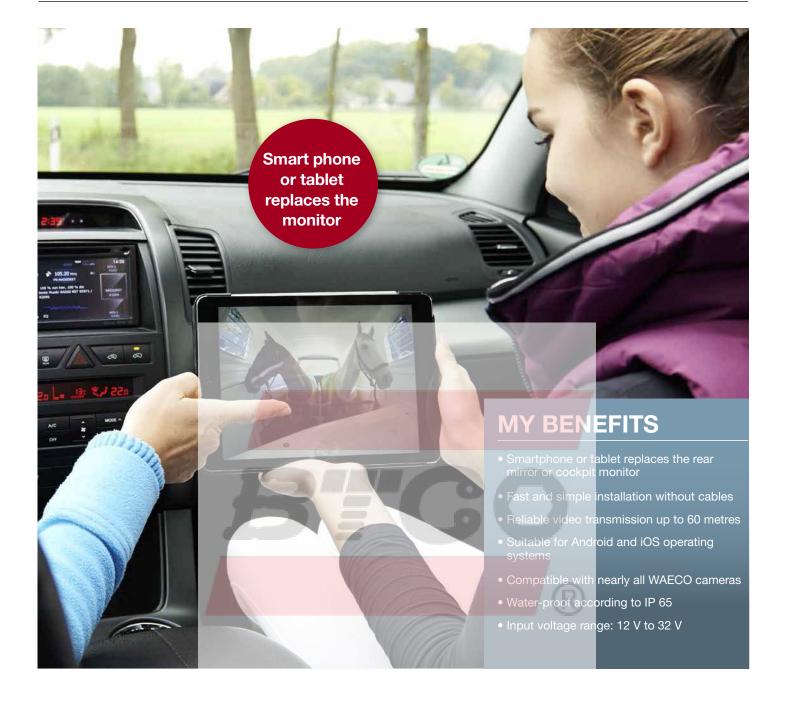
CAM 80NAV
Colour shutter
camera

CAM 604NAV
Colour zoom camera

9103531017 9101900072

amera in brake light console 9103531021 For panel vans
CAM 29BKS NAV
Colour cylinder
camera in brake light
console
9103531047



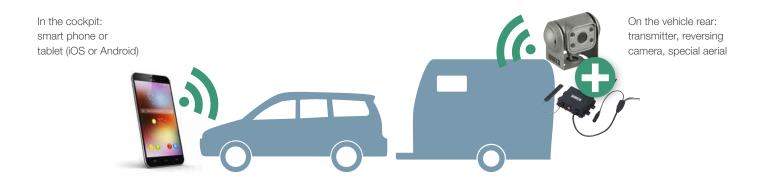


# **DRIVING SMART WITH A TRAILER IN TOW**WIFI VIDEO TRANSMITTER PLUS CAMERA

Here is a smart solution for the drivers of towing vehicles with a trailer. The new WiFi video transmitter beams the video data captured by a camera to the screen of a smart phone or tablet computer. Bridging a distance up to 60 metres, it is a reliable, wireless solution for all mid-sized vehicles – caravans, horse trailers, car trailers, etc. The camera can be fitted on rear of the trailer to give the driver a familiar rear-mirror view of what is going on behind the vehicle and would otherwise disappear in the blind spot. Alternatively, it is possible to install the camera inside the trailer to keep an eye on precious living freight or valuable transport goods while driving.







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#### **NEW!** WAECO PerfectView VT 100WiFi

WiFi transmitter for transmitting video signals to smart phones and tablets (iOS + Android)

- Detachable special antenna that can be aligned as required for uninterrupted transmission
- Transmission distance up to 60 m
- Ideal for use on caravans, trailers, horse transporters
- Reception delay under 200 ms
- Frame rate: up to 30/s
- Operation of several receivers possible
- Compatible with most WAECO PerfectView cameras
- Waterproof according to IP 65

Ref.No. 9102200217



The following reversing cameras can be combined with PerfectView VT 100WiFi.

#### **Extremely compact cameras**



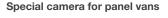
CAM 18 Colour camera



CAM 55 / 55W Colour camera



**CAM 80CM**Colour shutter camera





**CAM 29BK**Colour cylinder camera



# SAFE AND SECURE, INSIDE AND OUT WATCHFUL AND DISCREET

Numerous studies have shown: fitting public transport vehicles with video cameras is an effective way to prevent assaults and vandalism. The technology deters potential offenders and helps the police in investigations. With a resolution of 310,000 or 330,000 pixels and a light sensitivity of 0.01 lux, the PerfectView CAM 11 and CAM 12 cameras are recommended for use in vehicle interiors. The special design of the dome camera allows optimum alignment even if the camera is concealed. The 125° wide-angle lens reliably monitors safety-relevant areas in public means of transport, and also in buildings and manufacturing halls.

The fitting of CAM 11 (installation height 31 mm) is especially inconspicuous. The CAM 12 excels with infra-red LEDs, delivers high-contrast image quality even in poor light conditions. Ideal for use in badly illuminated interiors or as a reversing camera.









#### WAECO PerfectView CAM 11

#### Mini dome camera

- Colour CCD camera (PAL)
- Normal or mirrored picture function
- Very high resolution and light sensitivity
- Installation height of only 31 mm
- Wide-angle lens with large picture angle (125° diagonal)
- Ideally suited for indoor surveillance

Ref. No. 9102000052

Accessory: Adapter needed for connection to WAECO PerfectView monitors. ADAPT3 monitor adapter, new plug / old socket (6-pin mini-DIN, grey cable), Ref. No. 9102200046

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#### WAECO PerfectView CAM 12

#### LED dome camera

- . Colour CCD camera (PAL) with LED
- Normal or mirrored picture function
- Very high resolution and light sensitivity
- LDR-controlled IR LEDs
- Wide-angle lens with large picture angle (125° diagonal)
- Can be used for indoor surveillance or as a reversing camera

Ref. No. 9102000053

Accessory: Adapter needed for connection to WAECO PerfectView monitors. ADAPT3 monitor adapter, new plug / old socket (6-pin mini-DIN, grey cable), Ref. No. 9102200046

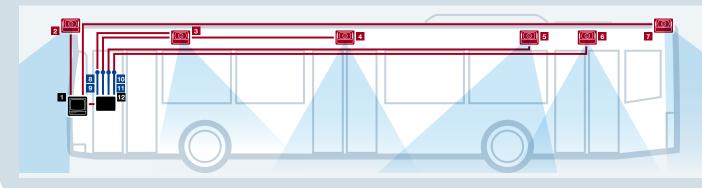


# Our tip!

# Complete solution for buses covering the entrance doors and back of the bus:

The large 7" LCD monitor shows the full security programme. Four CAM 11 interior cameras monitor the entrance areas. Thanks to the video splitter, up to four camera pictures can be displayed simultaneously on the monitor. As soon as reverse gear is engaged, the CAM 80CM delivers pictures from the critical area behind the vehicle.

#### Order scope - Bus I (complete solution) Ref. No. Monitor 1 PerfectView M75LX 9102100058 Cameras 2 PerfectView CAM 40 (incl. 5 m cable) 9102000047 9102000052 3 PerfectView CAM 11 (incl. 20 m cable) 4 PerfectView CAM 11 (incl. 20 m cable) 9102000052 5 PerfectView CAM 11 (incl. 20 m cable) 9102000052 6 PerfectView CAM11 (incl. 20 m cable) 9102000052 9102000066 7 PerfectView CAM80CM (incl. 20 m cable) Adapters 8 ADAPT3 monitor adapter, new plug/old socket 9102200046 (6-pin mini-DIN, grey cable) 9102200046 9 ADAPT3 monitor adapter, new plug/old socket (6-pin mini-DIN, grey cable) 10 ADAPT3 monitor adapter, new plug/old socket 9102200046 (6-pin mini-DIN, grey cable) 11 ADAPT3 monitor adapter, new plug/old socket 9102200046 (6-pin mini-DIN, grey cable) ■ Video splitter 12 PerfectView VS 400 9102200044 ■ Video recorder PerfectView REC 400 9102200138





#### **HEAVY-DUTY COMPONENTS: CAMERAS**

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Ball cameras with very flexible mounts for accurate alignment

- Colour CCD camera (PAL) with LED
- Normal or mirrored picture function
- Sturdy, water-proof aluminium housing
- Microphone (CAM30C only)
- LDR-controlled IR LEDs
- Wide-angle lens with large picture angle
- CAM 40: In combination with monitor M 7LX (version 9102100008), certified as a front camera system according to EU Mirror Directive 2003/97/EC

CAM 30C // Ref. No. 9102000045 CAM 40 // Ref. No. 9102000047





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#### WAECO PerfectView CAM 60ADR

With replaceable stone chip protection screen and non-corroding screw connection for use under extreme conditions.

- Anodised and powder-coated aluminium housing with stainless steel protection cap
- Microphone
- Replaceable lens cover
- Temperature-controlled permanent heater with 3 or 4 watts output
- Water-proof screw connectors
- Wide-angle lens with large picture angle (120° diagonal)
- LDR-controlled IR LEDs
- Protection class IP 69K

Ref. No. 9102000065 // Note: System cable not included in the scope of delivery!



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#### WAECO PerfectView CAM 604

Compact 2-step zoom colour camera for optimal close and long range vision.

- Extra-large diagonal picture angles:
   153° in close range, 83° in long range
- Picture distoration correction in close range
- Infra-red LEDs for improved night vision
- Temperature-controlled heater
- Integrated microphone
- Replaceable lens cover
- Camera requires 2 monitor signal inputs
- Protection class IP 69K

Ref. No. 9102000071 // Note: System cable not included in the scope of delivery!

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#### **HEAVY-DUTY COMPONENTS: MONITORS**

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5" (127 mm)
7" (178 mm)

#### WAECO PerfectView M 70IP

High-quality 7" digital colour LCD monitor

- For 12 and 24 volts operating voltage
- LED background illumination
- Aluminium housing
- Splash-proof according to IP 69K
- Detachable sun shield
- 3 camera inputs, normal or mirrored picture function
- Operation with sensor keys or by remote control
- Adjustable distance marks

## WAECO PerfectView M 75LX WAECO PerfectView M 55LX

High quality 5" / 7" digital colour LCD monitor with distance marks

- For 11 to 30 volts operating voltage
- LED background illumination
- Digital LCD
- Detachable sun shield
- 4 camera inputs, normal or mirrored picture function
- EMC approved according to ISO 7637-2 + ISO 16750
- Adjustable distance marks

## WAECO PerfectView M 9LQ

Heavy-duty monitor with quad splitter

- Large 9" monitor with touchscreen
- For 12-volt and 24-volt operating voltage
- LED background illumination
- 4 camera inputs

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- Quad splitter for simultaneous display of 4 camera images
- Operation via sensor keys (monitor) or touchscreen (quad splitter operation)
- Ideal for special vehicles, agricultural machinery, etc.

Ref. No. 9102100046

M 55LX: Ref. No. 9102100059 M 75LX: Ref. No. 9102100058 Ref. No. 9102100055

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# **ACCESSORIES FOR PERFECTVIEW REVERSING CAMERA SYSTEMS** VIDEO SPLITTER + PERFECTVIEW SWITCH

#### Video splitter for up to 4 cameras

- Displays the video images from up to 4 connected cameras on one monitor
- Automatic operation and camera switch-on times adjustable
- Cameras separately adjustable; automatic saving of the last setting
- Not suitable for CRT systems



#### WAECO PerfectView VS 400

Video splitter for up to 4 cameras

Ref. No. 9102200044

- Operating voltage: 12 to 32 volts DC • Camera inputs: 4-channel AV input
- Operating temperature: -30°C to 60°C
- Dimensions (WxHxD): 155 x 35 x 135 mm
- Scope of delivery: Video splitter with supply cable (1.0 m), control unit, operating manual

#### Connects what you want connected

With the SWITCH 300 control box you can run up to three cameras on a single monitor input and control them independently! The control box is compatible with almost any WAECO camera. The cameras can be activated either automatically or manually (e.g. the reversing camera via reverse gear, the side-mounted cameras via the indicator). It provides the option to connect a second monitor.



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#### WAECO PerfectView SWITCH 300

Control box for additional reversing video applications

- Cameras can be activated either automatically or manually (e.g. reversing camera via reverse gear, side cameras via the indicators)
- Power input: 0.84 watts max. (without cameras)
- Suitable for 12- and 24-volt vehicle electrics

Ref. No. 9102200105

Contents, specifications and availability are subject to change due to the technical improvement. www.boltsandtools.com

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#### **MY BENEFITS**

- 4 video inputs for simultaneous recording of signals from up to 4 camer<u>as</u>
- Storage on SD card (not included)
- GPS receiver tracks the position of the vehicle at the time of the incident
- An acceleration sensor measures the force of acceleration allowing it to be documented

# **VIDEO RECORDER PERFECTVIEW REC 400** FOR DOCUMENTATION OF IMPORTANT EVENTS

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#### In some situations it may be useful to capture events "live" on site.

Here, the PerfectView REC 400 video recorder offers many possibilities. The compact device is able to record video signals from up to four cameras simultaneously. The integrated GPS receiver records the exact position of the vehicle at the time of the event. The accelerometer measures the force of acceleration allowing it to be documented. The documentation is especially useful as evidence of the condition of the goods in the truck loading space, for example, but also in the area of passenger transport (bus or taxi), for the safety of passengers and drivers. Here the legal provisions in regard to video surveillance (data privacy) must be observed. The evaluation and management of images is possible via the recorder or via a connected PC.

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#### WAECO PerfectView REC 400

Digital video recorder for recording video and audio signals

- Compact design (fanless)
- Compatible with PAL and NTSC
- 4 video inputs for simultaneous recording of signals from up to 4 cameras
- Storage on SD card (not included)
- Recording time: up to 70 hours (CIF, 15 frames/second, 64 GB SD card)
- Integrated GPS receiver for position tracking
- An acceleration sensor measures the force of acceleration allowing it to be documented
- Recording management via PC or recorder
- Split image function as with VS 400

Ref. No. 9102200138

Adapter needed for connection to WAECO PerfectView monitors ADAPT7 // Ref. No. 9102200058





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# **DIGITAL RADIO LINK FOR REVERSING CAMERA SYSTEMS**

# FOR WIRELESS TRANSMISSION OF VIDEO AND AUDIO SIGNALS

With the digital radio link PerfectView VT 100DIG, video and audio signals can be transmitted over distances up to 120 metres (line of sight) without fail. The use of coded signals and automatic channel selection ensure very stable transmission.

The benefits of radio-based signal transmission are obvious: there's no need for time-consuming cable laying across the vehicle, and no need for cost-intensive cable maintenance either. The housing of the digital radio link is water-proof according to IP 65 and therefore suitable for installation on the outside of the vehicle - ideal for retrofitting.

Signal transmission

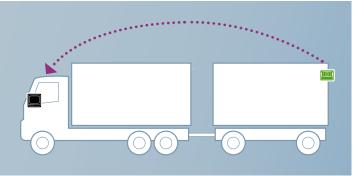
> wireless and trouble-free

#### WAECO PerfectView VT 100DIG

Digital radio link for transmitting video and audio signals

- Uninterrupted transmission
- Transmission distance of up to 120 m, line of sight
- Reception delay under 200 ms
- Frame rate up to 30/s
- Simultaneous operation of up to 6 radio links possible
- Water-proof IP 65
- 1 m antenna cable for optimal placing of the antenna

Ref. No. 9102200116



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# WIRING FOR REVERSING CAMERA SYSTEMS ALSO IN ADR-COMPLIANT, HEAVY-DUTY **DESIGN**

We offer system and extension cable with 6-pin screw connectors in three different lengths – 5, 10 or 20 metres.

For heavy-duty applications we recommend the ADR-compliant, heavy-duty versions.



Tel: (+974) 443 54 298

#### HD system and extension cables

HD system and extension cables, heavy-duty design, ADR-compliant

- 6-pin screw connector, water-proof
- Extra-robust/reinforced design
- ADR-compliant

HD cable 5 m; Ref. No. 9102200069 HD cable 10 m: Ref. No. 9102200070 HD cable 20 m: Ref. No. 9102200071

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### System and extension cables

System and extension cables, light-duty design

• 6-pin screw connector, water-proof

Cable 5 m: Ref. No. 9102200028 Cable 10 m: Ref. No. 9102200029 Cable 20 m: Ref. No. 9102200030

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# ACCESSORIES FOR TRAILERS AND TRACTOR-TRAILERS

## HEAVY-DUTY SPIRAL CABLE SETS, SYSTEM AND EXTENSION CABLES

You want to extend a reversing video system to include a rear-view camera for the trailer? Or fit a tractor-trailer with a camera-monitor system? On the following pages you will find everything you need for installation: system and extension cables, plug connections and heavy-duty cable sets. Perfectly coordinated, plug-in components make installation easy and flexible.



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#### WAECO PerfectView accessories

#### Heavy-duty spiral cable set for trailers incl. sockets

- Trailer cable 4 m, heavy-duty design, ready-to-use with sockets (plug/jack)
- · For towing vehicles with trailer/tractor-trailer
- Especially for commercial use
- SPK 170 is a spiral cable with 7 wires and allows the two cameras CAM 604 and CAM 44 to be used e.g. on a trailer.



Heavy-duty spiral cable set SPK 150 for trailers incl. sockets, compatible with spiral cable RV-500SPK (up to 2009) // Ref. No. 9102200031

Prepared system connections (available as single parts): Socket with system plug // Ref. No. 9102200065 Socket with system jack // Ref. No. 9102200064

Heavy-duty spiral cable set SPK 160 for trailers incl. sockets, compatible with spiral cable RV-100SPK (up to 2009) // Ref. No. 9102200077

Prepared system connections (available as single parts): Socket with system plug // Ref. No. 9102200087 Socket with system jack // Ref. No. 9102200086

Heavy-duty spiral cable set SPK 170 for trailers incl. sockets, also suitable for CAM 604 and CAM 44

Prepared system connections (available as single parts):

Ref. No. 9102200171

Socket with system plug // Ref. No. 9102200173 Socket with system socket // Ref. No. 9102200172





#### CAB 38 quick connector for trailer

 Trailer cable 2 x 30 cm, light-duty version, including ready-to-use surface-mounted sockets

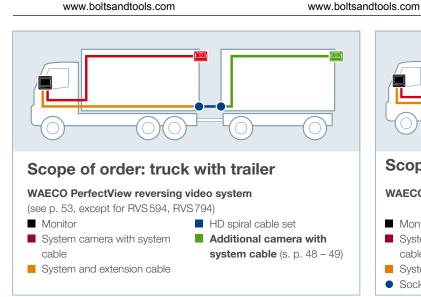
Ref. No. 9102200101



## Our tip!

You only need adapters for connecting the new monitors and cameras to older WAECO cabling. For any questions, please contact our technical service team.

Tel: (+974) 443 54 298





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#### WAECO PerfectView accessories

#### CAB 39 system and extension cable for trailers with low coupling

- Trailer cable 5 m for trailers with low coupling
- With ABS socket (12 V model)

Socket with system plug

CAB 39 system and extension cable for trailers with low coupling, 5 m, // Ref. No. 9102200110

Socket with system plug, compatible with spiral cable RV-100SPK (up to 2009) // Ref. No. 9102200087



## WAECO PerfectView accessories

## Cable adapters

- The two WAECO cable systems up to 2009 (black or grey) were replaced by a new uniform cable system from 2010.
- Adapters for adapting installed cables when existing components are replaced by new ones - no need to re-lay cables

### WAECO CRT cable up to 2009

ADAPT1 camera adapter, new socket/old plug // Ref. No. 9102200042

ADAPT6 monitor adapter, new plug/old socket // Ref. No. 9102200057

#### WAECO LCD cable up to 2009

ADAPT2 monitor adapter, new plug/old socket // Ref. No. 9102200043

ADAPT3 monitor adapter, new plug/old socket //

Ref. No. 9102200046

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ADAPT3 monitor adapter, (6-pin DIN, grey cable)

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Tel: (+974) 443 54 298 www.boltsandtools.com

# Tel: (+974) 443 54 298 www.boltsandtools.com

#### 3.19 // WAECO PerfectView RVS

# Reversing camera systems







	RVS 594	RVS 555 / 555X	RVS 580 / 580X	
Ref. No.	9101900002 9101900003 / 9101900086		9101900040 / 9101900085	
<b>⊞</b> Cameras	CAM 44 colour twin camera with CAM 55 colour camera shutter		CAM80CM colour shutter camera	
Dimensions (WxHxD, mm)	114 x 74 x 62 (incl. mount)	80 x 50 x 62 (incl. mount)	106 x 68 x 54 (incl. mount)	
Operating voltage (volts DC)	12 to 16	10 to 32	11 to 16	
Power input (watts)	approx. 1.2	max. 4.1	1.8 with heater	
Image sensor	1/3" CMOS (close range) 1/4" CMOS (long range)	1/4" CMOS	1/3" CCD	
Resolution (pixels)	290,000	2 megapixels	270,000	
Picture angle	Close range: 140° diagonal h: approx. 100° v: approx. 72° Long range: 50° diagonal h: approx. 35° v: approx. 28°	<b>120° diagonal</b> h: approx. 100°, v: approx. 70°	145° diagonal h: approx. 100° v: approx. 72°	
Light sensitivity (lux)	< 1 or 0 with LED	< 1 or 0 with LED	< 0.5 or 0 with LED	
Video standard (PAL)	•	•	•	
Operating temperature (°C)	-30 to +70	-30 to +70	-20 to +65	
Colour	silver	silver	silver	
Vibration resistance (g)	6	10	6	
Weight (g)	360	approx. 165 g	350	
Brightness adjustment	electronic	electronic	electronic	
Mirrored picture function	factory-preset	can be set	can be set	
Protection class	IP 68	IP 69K	IP 68	
Test mark E-certificate	•	• ISO 16750	• ISO 16750	
Quality features	Anodised and powder-coated aluminium housing with stainless steel protection cap and mount, motor-operated camera cover, microphone, LDR-controlled IR LEDs for improved night vision, distance marks (3 lines) in reversing mode	Robust aluminium housing with stainless steel mount, optimised mount base for reliable sealing of the cable feed-through, separately placed LEDs for glare-free night vision, temperature-controlled heater	Normal or mirrored picture function, automatic, motor-operated camera cover to protect the lens against dirt, anodised and powder-coated aluminium housing with stainless steel protection cap and mount, microphone, temperature-controlled heater, LDR-controlled IR LEDs	
<b>■</b> Monitors		5" Colour LCD monitor M 55L / M 55LX		
Dimensions (WxHxD incl. mount)		146 x 87 x 26 mm		
Diagonal screen dimension		5"/127 mm (visible picture), 16:9		
Operating voltage (volts DC)		11 to 30		
Power input (watts)		8		
Resolution (pixels)		384,000		
PAL/NTSC auto		•		
Operating temperature (°C)		-20 to +70		
Vibration resistance 6 g		•		
Weight (g)		350		
Brightness cd/m <sup>2</sup>		350		
Dimmer		automatic via LDR		
Camera inputs	2 + 1 with signal recognition (traile	r detection) (M 55L) / 3 + 1 with signal reco	ognition (trailer detection) (M 55LX)	
Mirrored picture function		can be set		
Test marks		E-certified, ISO 16750		
Quality features	Switches on automatically or manually, automatic day/night switching, normal or mirrored picture function, picture settings can be saved for each camera, loudspeaker, LED background illumination, LX version with adjustable distance marks			
Scope of delivery system	Monitor, camera, 20 m connection cable from the monitor to the camera, monitor cable set, installation fittings for all components, LX version with additional sun shield			



CAM 20PK colour cylinder camera	CAM 20RKS colour cylinder camera
9101900036	9101900001

OAW 23BK Colour Cyllinder Camera	OAW 29BNO COIOGI CYIIIGEI CAIIIEIA
330 x 70 x 100	370 x 50 x 290
with console	with console
11 to 16	11 to 16
approx. 1	approx. 1
1/4" CMOS	1/4" CMOS

150° diagonal, 150° diagonal, h: approx. 102° v: approx. 73° h: approx. 102° v: approx. 73°

<1	< 1
NTSC	NTSC
-20 to +70	-20 to +70
black	black
8	8
400	400
electronic	electronic
factory-preset	factory-preset
IP 68	IP 68

High light sensitivity, base-mounted housing included in the delivery kit

307.000

High light sensitivity, base-mounted housing included in the delivery kit

307.000

# 5" Colour LCD monitor M 55L

**146** x 87 x 26 mm

5"/127 mm (visible picture), 16:9

11 to 30

8

384,000

• -20 to +70

350

350

automatic via LDR

2 + 1 with signal recognition (trailer detection)

can be set

E-certified, ISO 16750

Switches on automatically or manually, automatic day/night switching, normal or mirrored picture function, picture settings can be saved for each camera, loudspeaker, LED background illumination

Monitor, camera, 20 m connection cable from the monitor to the camera, monitor cable set, installation fittings for all components

# Tel: (+974) 443 54 298 www.boltsandtools.com

#### 3.19 // WAECO PerfectView RVS

# Reversing camera systems







	RVS 764X	RVS794	RVS 755 / 755X		
Ref. No.	9101900087 9101900061		9101900078 / 9101900062		
Cameras	CAM 604 colour camera	CAM 44 colour twin camera with shutter	CAM80CM colour shutter camera		
Dimensions (WxHxD, mm)	83 x 70 x 57	114 x 74 x 62 (incl. mount)	80 x 50 x 62 (incl. mount)		
Operating voltage (volts DC)	10 to 16	12 to 16	11 to 32		
Power input (watts)	max. 6	approx. 1.2	max. 4.1		
Image sensor	1/4" CMOS	1/3" CMOS (close range) 1/4" CMOS (long range)	1/4" CMOS		
Resolution (pixels)	approx. 400,000	290,000	2 megapixels		
Picture angle	Close range: 153° diagonal h: approx. 140° v: approx. 94° Long range: 83° diagonal h: approx. 63° v: approx. 52°	Close range: 140° diagonal h: approx. 100° v: approx. 72° Long range: 50° diagonal h: approx. 35° v: approx. 28°	120° diagonal h: approx. 100° v: approx. 72°		
Light sensitivity (lux)	< 1 or 0 with LED	< 1 or 0 with LED	< 1 or 0 with LED		
PAL video standard	•	•	•		
Operating temperature (°C)	-30 to 70	-30 to +70	-30 to +70		
Colour	silver	silver	silver		
Vibration resistance (g)	10	6	10		
Weight (g)	approx. 300	360	165		
Brightness adjustment	electronic	electronic	electronic		
Mirrored picture function	factory-preset	factory-preset	can be set		
Protection class	IP 69K	IP 68	IP 69K		
Test mark E-certificate	• ISO 16750	•	• ISO 16750		
Quality features	IR LEDs or improved night vision, temperature- controlled heater, integrated microphone, replaceable stone chip protection screen, image correction, camera requires 2 monitor signal inputs	Anodised and powder-coated aluminium housing with stainless steel protection cap and mount, motor-operated camera cover, microphone, LDR-controlled IR LEDs for improved night vision, distance marks (3 lines) in reversing mode	Robust aluminium housing with stainless steel mount, optimised mount base for reliable sealing of the cable feed-through, separately placed LEDs for glare-free night vision, temperature-controlled heater		
<b>■</b> Monitors		7" Colour LCD monitor M75L / M 75LX			
Dimensions (WxHxD incl. mount)		190 x 110 x 26 mm			
Diagonal screen dimension	7"/178 mm (visible picture), 16:9				
Operating voltage (volts DC)		11 to 30			
Power input (watts)		8			
Resolution (pixels)		384,000			
PAL/NTSC auto		•			
Operating temperature (°C)		-20 to +70			
Vibration resistance 6 g		•			
Weight (g)		400			
Brightness cd/m <sup>2</sup>		400			
Dimmer		automatic via LDR			
Camera inputs	2 + 1 with signal recognition (traile	er detection) (M 75L) / 3 + 1 with signal reco	gnition (trailer detection) (M 75LX)		
Mirrored picture function		can be set			
Test marks		E-certified, ISO 16750			
Quality features	Switches on automatically or manually, automatic day/night switching, normal or mirrored picture function, picture settings can be saved for each camera, loudspeaker, LED background illumination, LX version with adjustable distance marks				
Scope of delivery system	Monitor, camera, 20 m connection cable from the monitor to the camera, monitor cable set, installation fittings for all components, LX version with additional sun shield				



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#### RVS 780 / 780X

#### 9101900084 / 9101900083

#### CAM 80CM colour shutter camera

106 x 68 x 54 (incl. mount)

11 to 16

1.8 with heater

1/3" CCD

270,000

145° diagonal

h: approx. 100° v: approx. 72°

#### < 0.5, 0 with LED

–20 to +65

silver

6

350

electronic

can be set

IP 68

ISO 16750

Normal or mirrored picture function, automatic, motor-operated camera cover to protect the lens against dirt, anodised and powder-coated aluminium housing with stainless steel protection cap and mount, microphone, temperature-controlled heater, LDR-controlled IR LEDs

## **1**90 x 110 x 26 mm

7"/178 mm (visible picture), 16:9

11 to 30

8

384,000

•

-20 to +70

•

400

400

## automatic via LDR

2 + 1 with signal recognition (trailer detection) (M 75L) / 3 + 1 with signal recognition (trailer detection) (M 75LX)

can be set

## E-certified, ISO 16750

Switches on automatically or manually, automatic day/night switching, normal or mirrored picture function, picture settings can be saved for each camera, loudspeaker, LED background illumination,

LX version with adjustable distance marks

Monitor, camera, 20 m connection cable from the monitor to the camera, monitor cable set, installation fittings for all components, LX version with additional sun shield

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#### 3.19 // WAECO PerfectView monitors

## **Monitors**











	M 55L	M 75L	M 55LX	M 75LX	M 70IP
Ref. No.	9102100056	9102100057	9102100059	9102100058	9102100046
<b>Dimensions</b> (WxHxD incl. mount) mm	146 x 87 x 26	190 x 110 x 26	146 x 87 x 26	190 x 110 x 26	197.2 x 132 x 30.5
Diagonal screen dimension (16:9) mm	5"/127	7"/178	5"/127	7"/178	7"/178
Operating voltage (volts DC)	11 to 30	11 to 30	11 to 30	11 to 30	12 to 32
Power input (watts)	8	8	8	8	6
Resolution (pixels)	384,000	384,000	384,000	384,000	384,000
PAL/NTSC auto	•	•	•	•	PAL
Operating temperature (°C)	-20 to +70	-20 to +70	-20 to +70	-20 to +70	-20 to +70
Vibration resistance 6 g	•	•	•	•	•
Weight (g)	350	400	400	400	680
Brightness (cd/m²)	350	400	400	400	400
Dimmer	automatic via LDR	automatic via LDR	automatic via LDR	automatic via LDR	automatic
Detachable sun shield	-	-	•	•	-
Camera inputs	2 + 1 with signal recognition	2 + 1 with signal recognition	3 + 1 with signal recognition	3 + 1 with signal recognition	3
Adjustable distance marks		_	•	•	•
Mirrored picture function	can be set	can be set	can be set	can be set	can be set
Test marks	E-certified, ISO 16750	E-certified, ISO 16750	E-certified, ISO 14982	E-certified, ISO 14982	E-certified, IP 69K

**Quality features** 

Switches on automatically or manually, automatic day/night switching, normal or mirrored picture function, picture settings can be saved for each camera, loudspeaker, LED background illumination

#### 3.19 // WAECO PerfectView monitors

#### **Monitors**



	M 9LQ
Ref. No.	9102100055
Dimensions (WxHxD) mm	234 x 158 x 40
Diagonal screen dimension (16:9) mm	9"/229
Operating voltage (volts DC)	11 to 32
Power input (watts)	8
Resolution (pixels)	385,000
PAL/NTSC auto	•
Operating temperature (°C)	-20 to +70
Vibration resistance 6 g	•
Weight (g)	800
Brightness (cd/m²)	350
Camera inputs	4
Camera switching	integrated quad module
Function control	sensor buttons / touch screen
Test marks	E-certified

#### 3.19 // WAECO PerfectView

## Reversing cameras





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	CAM 604 / CAM 604NAV	CAM 44 / CAM 44NAV	CAM 55 / CAM 55NAV	CAM 80CM / CAM 80NAV	CAM 29 / 29BK / 29 BK NAV
Ref. No.	9102000071 // 9102000057	9102000061 // 9102000062	9102000064 // 9102000098	9102000066 // 9102000023	9102000120 // 9102000117 // 9102000115
Dimensions (WxHxD, mm)	83 x 70 x 57	114 x 74 x 62 (incl. mount)	80 x 50 x 62 (incl. mount)	106 x 68 x 54 (incl. mount)	330 x 70 x 100 with console
Operating voltage (volts DC)	10 to 16	11 to 16	10 to 32	11 to 16	11 to 16
Power input (watts)	max. 6	approx. 1.2	max 4.1	1.8 with heater	approx. 1
Image sensor	1/4" CMOS	1/3" CMOS (close range) 1/4" CMOS (long range)	1/4" CMOS	1/3" CCD	1/4" CMOS
Resolution (pixels)	approx. 400,000	290,000	2 megapixels	270,000	307,000
Picture angle	Close range: 140° H, 94° V, 153° D Long range: 63° H, 52° V, 83° D	Close range: 140° diagonal, h: approx. 100°, v: approx. 72° Long range: 50° diagonal h: approx. 35°, v: approx. 28°	120° diagonal h: approx. 100° v: approx. 70°	145° diagonal h: approx. 100° v: approx. 72°	150° diagonal, h: approx. 102° v: approx. 73°
Light sensitivity (lux)	< 1 or 0 with LED	< 1 or 0 with LED	< 1 or 0 with LED	< 0.5 or 0 with LED	< 1
Video standard	PAL	PAL	PAL	PAL	NTSC
Operating temperature (°C)	-30 to 70	-30 to +70	−30 to +70	-20 to +65	-20 to +70
Colour	silver	silver	silver	silver	black
Vibration resistance	10 g	6 g	10 g	6 g	8 g
Weight	approx. 300 g	360 g	165 g	350 g	400 g
Brightness adjustment	electronic	electronic	electronic	electronic	electronic
Mirrored picture function	factory-preset	factory-preset	can be set	can be set	factory-preset
Protection class	IP 69K	IP 68	IP 69K	IP 68	IP 68
Test mark E-certificate	• ISO 16750		• ISO 16750	• ISO 16750	•

# Reversing cameras











	CAM 18 / CAM 18NAV			CAM 60ADR	CAM 29BKS / CAM 29BKS NAV
Ref. No.	9102000096 // 9102000103	9102000045	9102000047	9102000 <b>065</b>	9102000118 // 9102000116
Dimensions (WxHxD, mm)	84 x 58 x 44 (incl. mount)	72 x 60 x 63 (incl. mount)	72 x 60 x 63 (incl. mount)	80 x 75 x 62 (incl. mount)	370 x 50 x 290 (incl. console)
Operating voltage (volts DC)	12	11 to 16	11 to 16	11 to 16	11 to 16
Power input (watts)	max. 1	approx. 1.8	approx. 1.8	approx. 4.8 (with heater)	approx. 1
Image sensor	1/3" CMOS	1/4" CCD sensor	1/4" CCD sensor	1/3" CCD	1/4" CMOS
Resolution (pixels)	355,000	270,000	290,000	290,000	307,000
Picture angle	140° diagonal, h: approx. 90°, v: approx. 70°	120° diagonal h: approx. 90° v: approx. 70°	130° diagonal h: approx. 90° v: approx. 70°	120° diagonal h: approx. 108° v: approx. 92°	150° diagonal h: approx. 102° v: approx. 73°
Light sensitivity (lux)	< 1 or 0 with LED	< 1 or 0 with LED	< 0.1 or 0 with LED	< 1	< 1
PAL video standard	PAL	PAL	PAL	PAL	NTSC
Operating temperature (°C)	-20 to +70	-20 to +65	-20 to +65	-30 to +65	-20 to +70
Colour	black	black	black	silver	black
Vibration resistance (g)	6	8	8	10	8
Weight (g)	100	200	200	300	400
Brightness adjustment	electronic	electronic	electronic	electronic	electronic
Mirrored picture function	can be set	can be set	can be set	can be set	can be set
Protection class	IP 69K	IP 68	IP 68	IP 69K	IP 68
Test mark E-certificate	•	•	•	•	•

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#### 3.22 // WAECO PerfectView MC

# Moniceiver WAECO + reversing cameras







	MC 464	MC 444	MC 418			
Ref. No. System	9103531017	9101900072	9103531018			
Cameras	Colour camera CAM 604NAV	Colour twin camera with shutter CAM 44NAV	Colour ball camera CAM 18NAV			
Dimensions (WxHxD, mm)	83 x 70 x 57	114 x 74 x 62 (incl. mount)	84 x 58 x 44 (incl. mount)			
Operating voltage (volts DC)	10 to 16	12 to 16	12			
Power input (watts)	max. 6	approx. 1.2	max. 1			
mage sensor	1/4" CMOS	1/3" CMOS (close range) 1/4" CMOS (long range)	1/3" CMOS			
Resolution 270,000 (pixels)	approx. 400,000	290,000	355,000			
ricture angle	Close range: 153° diagonal h: approx. 140°, v: approx. 94° Long range: 83° diagonal h: approx. 63°, v: approx. 52°	Close range: 140° diagonal h: approx. 100°, v: approx. 72° Long range: 50° diagonal h: approx. 35°, v: approx. 28°	140° diagonal h: approx. 90°, v: approx. 70°			
ight sensitivity (lux)	< 1 or 0 with LED	< 1 or 0 with LED	< 1 or 0 with LED			
PAL video standard	•	•	•			
Operating temperature (°C)	-30 to 70	-30 to +70	-20 to +70			
Colour	silver	silver	black			
ibration resistance (g)	10	6	6			
/eight (g)	approx. 300	360	100			
rightness adjustment	electronic	electronic	electronic			
lirrored picture function	factory-preset	factory-preset	can be set			
rotection class	IP 69K	IP 68	IP 69K			
est mark E-certificate	● ISO 16750	•	•			
Quality features	Infra-red LEDs for improved night vision, temperature-controlled heater, integrated microphone, replaceable stone chip protection screen, image correction, camera requires 2 monitor signal inputs		rmal or mirrored picture function, sturdy A lastic housing, freely adjustable ball camer microphone, LDR-controlled IR LEDs, distance marks (3 lines)			
Multimedia monitor		PerfectView MC 402				
nstallation dimensions		Suitable for double DIN slot				
creen		6.2" LCD display with touch screen control				
desolution (pixels)		800 x 480				
ladio		FM, MW, LW tuner, 30 station presets				
luetooth		Parrot hands-free kit, audio streaming				
	with security code					
heft protection		man occurry code	DVD, MP4, Xvid			
•		,				
/ideo playback		,				
Theft protection Video playback Audio playback Quality features	Moniceiver with 6.2" double DIN m	DVD, MP4, Xvid	ltimedia functions and input for			



**Ref. No.**MC 402 moniceiver
9102100024

Moniceiver also available separately

9102200120 // Ford Transit, from 2006 9102200127 // IVECO Daily





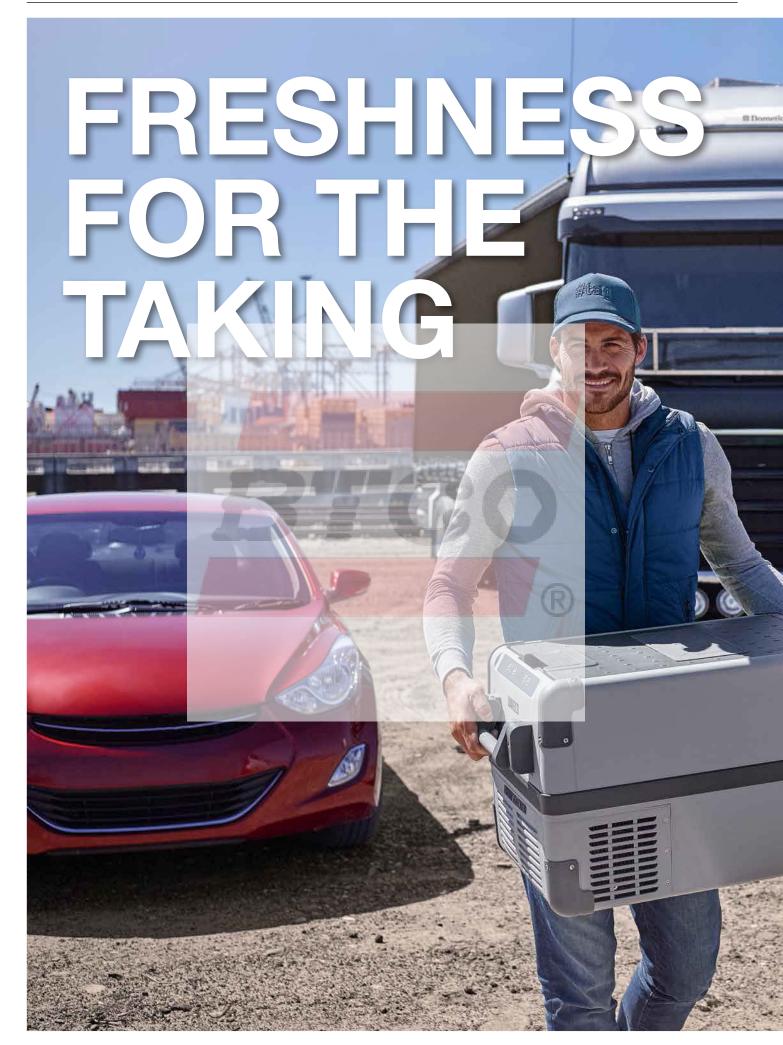




MC 455	MC 480	MC 460	MC 429			
9103531019	9101900070	9103531021	9103531047			
Colour camera CAM 55NAV	Colour shutter camera CAM 80NAV	Colour cylinder camera CAM 29BK NAV	Colour cylinder camera CAM 29BKS NAV			
80 x 50 x 62 (incl. mount)	106 x 68 x 54 (incl. mount)	330 x 70 x 100 with console	370 x 50 x 290 with console			
10 to 32	11 to 16	11 to 16	11 to 16			
max. 4.1	1.8 with heater	approx. 1	approx. 1			
1/4" CMOS	1/3" CCD	1/4" CMOS	1/4" CMOS			
2 megapixels	•	307,000	307,000			
120° diagonal h: approx. 100°, v: approx. 70°	145° diagonal h: approx. 100°, v: approx. 72°	150° diagonal, h: approx. 102°, v: approx. 73°	150° diagonal, h: approx. 102°, v: approx. 73°			
< 1 or 0 with LED	< 0.5 or 0 with LED	< 1	<1			
•	•	NTSC	NTSC			
-30 to +70	-20 to +65	-20 to +70	-20 to +70			
silver	silver	black	black			
10	6	8	8			
165	350	400	400			
electronic	electronic	electronic	electronic			
can be set	can be set factory-preset		factory-preset			
IP 69K	IP 68	IP 68	IP 68			
• ISO 16750	• ISO 16750	•	•			
Robust aluminium housing with stainless steel mount, optimised mount base for reliable sealing of the cable feed-through, separately placed LEDs for glare-free night vision, temperature-controlled heater	Normal or mirrored picture function, automatic, motor-powered camera cover to protect the lens against dirt, anodised and powder-coated aluminium housing with stainless steel protection cap and mount, microphone, temperature-	Normal or mirrored picture function, high light sensitivity, base-mounted housing included in the delivery kit	Normal or mirrored picture function, high light sensitivity, base-mounted housing included in the delivery kit			
	controlled heater, LDR-controlled IR LEDs					
	PerfectVie	ew MC 402				
	Suitable for do	puble DIN slot				
	6.2" LCD display with	touch screen control				
	800 x 48	0 pixels				
	FM, MW, LW tuner,	·				
	Parrot hands-free k					
	with secu	•				
	DVD, MF					
	MP3,					
Moniceiver with 6.2" of	louble DIN monitor, touchscreen display, inc	luding many multimedia functions and inpu	t for reversing camera			
Maria Company of the						

Moniceiver, camera, 20 m connection cable, installation fittings, IR remote control, adapter cable to the moniceiver Installation frames

Installation frames
9102200106 // FIAT Ducato, from 2007 9102200109 // Mercedes-Benz Sprinter, from 2006
9102200120 // Ford Transit, from 2006 9102200127 // IVECO Daily





# **MOBILE COOLING**



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Cooling technologies	84
Compressor coolers and freezers	86
Vehicle-specific compressor coolers	93
Thermoelectric coolers / car coolers	94
Iceboxes	97
Technical data	100

# Mobile cooling - the full range

Are you looking for the perfect cooler for your car or truck cabin? Take your pick from the world's largest range of products for mobile refrigeration! You will find coolers and freezers in all sizes and designs – including powerful champions and portable lightweights, drawer fridges and customised cooling compartments, and car coolers that will heat as well.

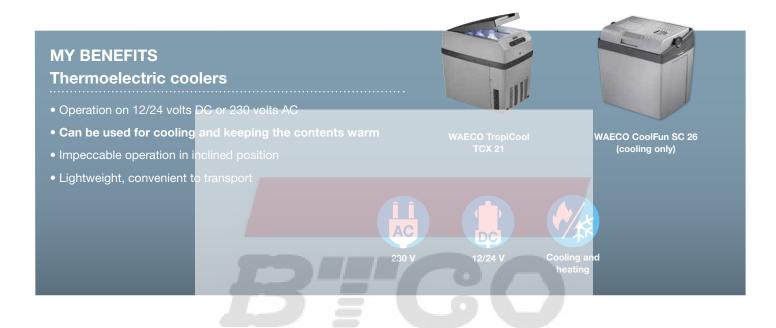
Even more options are available at www.dometic.eu

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# **COOLING AND HEATING**

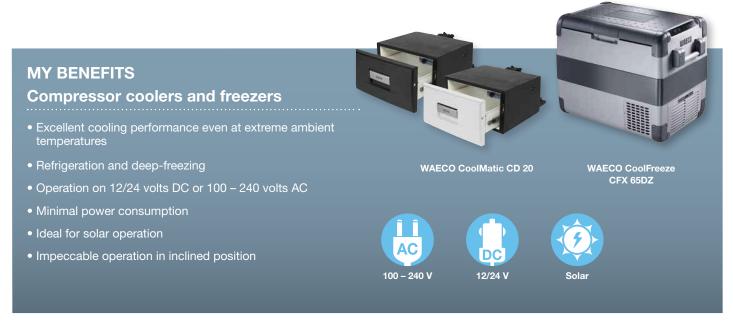
# **THERMOELECTRICS**

The thermoelectric principle was discovered by J. C. A. Peltier. The temperature generating parts of thermoelectric systems are therefore referred to as **Peltier elements.** Thermoelectrics are based on the fact that cold or heat energy is generated when a DC current is conducted between different types of metal. The **heating or cooling capacity** is further enhanced by heat exchangers and air fans. Ideal for small and medium cooling volumes.



# REFRIGERATION AND DEEP-FREEZING COMPRESSOR TECHNOLOGY

Compressor coolers operate using a refrigerant that changes from liquid to gaseous state in the evaporator. In the process heat is extracted from the interior of the cooling unit – the temperature drops. The compressor draws in the refrigerant, compresses it and passes it on to the condenser. Here, the absorbed heat is released to the atmosphere. The refrigerant liquefies again and flows to the evaporator, where the cycle begins again.



# WAECO CoolFreeze CFX



p. 86 – 89

Compressor coolers and freezers

# WAECO CoolFreeze CF / CDF



p. 90 – 91

Compressor coolers

# WAECO CoolMatic CD



p. 92

# Compressor coolers

# WAECO CoolFreeze



p. 92

Vehicle-specific compressor coolers

WAECO CoolMatic

Thermoelectric coolers

# WAECO TropiCool TCX



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n 94 – 95

## Thermoelectric car coolers

## **WAECO BordBar**



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## Iceboxes

## **WAECO Cool-Ice**



p. 97

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## Thermoelectric coolers

# **WAECO CoolFun**



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# **WAECO COOLFREEZE CFX**

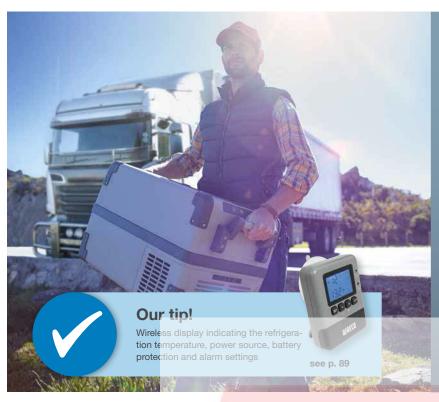
# THE LATEST GENERATION OF COOLERS AND FREEZERS!

Energy class A++ and freezer temperatures down to -22°C: available for mobile use for the very first time! With its WAECO Coolfreeze CFX series, refrigeration specialist Dometic WAECO is once again proving how milestones are made. Its specially-developed high-performance compressor and extra strong insulation have, once again, allowed the energy consumption to be reduced by up to 35% compared to its predecessors.

The hi-tech units comprise of some heavy-duty details: Reinforced corners, stainless-steel hinges and a robust lid lining ensure they can withstand the most demanding of loads, and yet the CFX coolers are remarkably lightweight and easy to transport.



The wire basket provided can even be divided using a grid divider.



## **MY BENEFITS**

- Suitable for deep freezing down to -22°C
- Excellent cooling performance even at extremely high outside temperatures
- 12/24 volts DC and 100 240 volts AC
- CFX special electronics with digital temperature display
- Extremely efficient and quiet operation
- USB port
- Drain plugs make cleaning simple
- Suitable for solar operation
- Heavy-duty design

Powerful coolers for universal use





Deep-freezing down to

Cooling compartment with wire basket and separate crisper for fruit, vegetables, etc.





Space-saving folding and detachable carrying handles





12/24 volts DC and 100 – 240 volts AC

DC cable guide: the cable fits securely and cannot come loose accidently





## Detachable lid

Heavy-duty design with reinforced corners, stainless steel hinges and a robust closing mechanism





Electronic thermostat with digital temperature display





USB port for charging small electronic devices



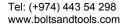


Energy-efficient LED interior light





WAECO high-performance compressor: sensational deep-freeze performance down to -22°C with minimal energy consumption!



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# **GENERATION "FROSTY":**

# THE MOST POWERFUL COMPRESSOR COOLERS EVER

WAECO CoolFreeze CFX – uncompromising compressor coolers





4.30

### NEW!

## WAECO CoolFreeze CFX 28

Cooler and freezer with CFX special electronics, 12/24 volts DC and 100-240 volts AC

- Storage volume: approx. 26 litres (including 3.5 litre crisper)
- Refrigeration from +10°C to -22°C
- Dimensions (W x H x D):620 x 342 x 425 mm

Ref. No. 9105305970 // UK 9105306327



4.30



#### WAECO CoolFreeze CFX 35

Cooler and freezer with CFX special electronics, 12/24 volts DC and 100–240 volts AC



- Refrigeration from +10°C to -22°C
- Dimensions (W x H x D): 692 x 411 x 398 mm

Ref. No. 9105304047 // UK 9105305645





## WAECO CoolFreeze CFX 40

Cooler and freezer with CFX special electronics, 12/24 volts DC and 100-240 volts AC

- Storage volume: approx. 38 litres (including 7.0 litre crisper)
- Refrigeration from +10°C to -22°C
- Dimensions (W x H x D):
   692 x 461 x 398 mm

Ref. No. 9105304048 // UK 9105305646





4.30

## WAECO CoolFreeze CFX 50

Cooler and freezer with CFX special electronics, 12/24 volts DC and 100–240 volts AC

- Storage volume: approx. 46 litres (including 8.5 litre crisper)
- Refrigeration from +10°C to -22°C
- Dimensions (W x H x D):
   725 x 471 x 455 mm

Ref. No. 9105304049 // UK 9105305647





4.30

## WAECO CoolFreeze CFX 65

Cooler and freezer with CFX special electronics, 12/24 volts DC and 100–240 volts AC

- Storage volume: approx. 60 litres (including 13.0 litre crisper)
- Refrigeration from +10°C to -22°C
- Dimensions (W x H x D):
   725 x 561 x 455 mm

Ref. No. 9105304050 // UK 9105305648

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# **WAECO COOLFREEZE CFX DZ**

# SIMULTANEOUS COOLING AND FREEZING

Whether you want to store fresh food and bottled drinks, or preferably frozen food, then this cooler will satisfy all your needs. This is not the question here. WAECO CoolFreeze CFX DZ series compressor cooler have two separate temperature zones which can be set to the temperature you want. Even simultaneous cooling and freezing is possible. On the new CFX 95DZ2 the temperature can be set and monitored with an easy-to-use WiFi app. Another unique feature of the larger box is that it has two compartments for cooling and freezing with separate controls.





4.30

#### NEW! WAECO CoolFreeze CFX 95DZ2

Cooler and freezer with CFX special electronics, 12/24 volts DC and 100-240 volts AC

- Storage volume: approx. 85 litres
- 2 compartments for cooling and freezing with separate controls, 50.5 and 34.5 litres
- Refrigeration from +10°C to -22°C
- Two temperature zones enable simultaneous cooling and freezing
- Separate lids for the two compartments
- Dimensions (W x H x D): 957 x 472 x 530 mm

Ref. No. 9105306181



4.30

Mobile cooling

#### WAECO CoolFreeze CFX 65DZ

Cooler and freezer with CFX special electronics, 12/24 volts DC and 100–240 volts AC

- Storage volume: approx. 53 litres (including 17 litre freezer compartment)
- Refrigeration from +10°C to -22°C
- Two temperature zones enable simultaneous cooling and freezing
- Dimensions (W x H x D): 725 x 561 x 455 mm

Ref. No. 9105304051 // UK 9105305649

# WAECO WIRELESS DISPLAY FOR ALL\* CFX COMPRESSOR COOLERS

WAECO wireless display

Wireless display for cooler temperature, power source, battery protection and alarm setting

- Visual and acoustic alarm
- Power supply from AAA batteries or 12/24 volt cigarette lighter socket

Ref. No. 9105304065

This wireless display shows data such as the current temperature, power supply and alarms at up to 15 m away from the CFX cooler.



\* except CFX 95DZ2

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Cooling and

same time!

freezing at the

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4.30



# "LIGHT" COMPRESSOR TECHNOLOGY EXTREMELY COMPACT DESIGNS

These remarkably lightweight compressor coolers are as easy to handle as a thermoelectric unit. Storage won't ever be a problem either, as the super-slim design means they will fill any niche perfectly. Performance is another plus factor: refrigeration and deep-freezing down to –18°C or –15°C, with minimal power consumption, regardless of the outside temperature.

The CoolFreeze CF series presents itself in a new design – ready for connection to 12/24 volts DC and 100 – 240 volts AC, and now even lighter in weight thanks to a new, more compact compressor. CoolFreeze CDF coolers come standard with a 12/24-volt connection. The CDF 18 was fitted with a lighter compressor, the two larger models were dressed in a new design to match the look of their CF sister models.



#### WAECO CoolFreeze CDF 18

Portable cooler and freezer, 12/24 volts DC

- Storage volume: approx. 18 litres
- Refrigeration from +10°C to −18°C
- Dimensions (W x H x D): 465 x 414 x 300 mm

Ref. No. 9105330241





## **MY BENEFITS**

- The energy efficiency box: improved insulation makes running times shorter: just 0.38 Ah/h at an inside temperature of +5°C and +20°C outside temperature
- Refrigeration and deep-freezing
- Vertical space for 2-litre bottles
- Detachable or fold-up lid
- Sturdy handle
- 230-volt connection with low priced mains adapter







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#### WAECO CoolFreeze CF 11

Cooler and freezer, 12/24 volts DC and 100 - 240 volts AC

Tel: (+974) 443 54 298

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- Storage volume: approx. 10.5 litres
- Refrigeration from +10°C to -18°C
- Dimensions (W x H x D): 540 x 358 x 235 mm

Ref. No. 9105330183



#### WAECO CoolFreeze CF 16

Cooler and freezer, 12/24 volts DC and 100 - 240 volts AC

- Storage volume: approx. 15 litres
- Refrigeration from +10°C to -18°C
- Dimensions (W x H x D): 549.5 x 366.9 x 260 mm

Ref. No. 9105330184



#### WAECO CoolFreeze CF 26

Cooler and freezer, 12/24 volts DC and 100 - 240 volts AC

- Storage volume: approx. 21.5 litres (including 4-litre crisper)
- Refrigeration from +10°C to -18°C
- Dimensions (W x H x D): 550 x 425 x 260 mm

Ref. No. 9105330185



Two integrated drink holders (CF 11)



Digital display



Lift-out wire basket (CF 26)







WAECO CoolFreeze CDF 36

Cooler and freezer, 12/24 volts DC

• Capacity: approx. 31 litres

• Cooling +10°C to -15°C

• Detachable lid

• LED interior light



4.10



WAECO CoolFreeze CDF 46

Cooler and freezer, 12/24 volts DC

- · Capacity: approx. 39 litres
- Cooling +10°C to -15°C
- Detachable lid
- LED interior light

Ref. No. 9105330186

Tel: (+974) 443 54 298 www.boltsandtools.com

Ref. No. 9105330187

Tel: (+974) 443 54 298 www.boltsandtools.com



4.10

# Our tip!

4.10

## Universal fixing kit

For fastening WAECO CoolFreeze coolers in vehicles. For CF 16, CF 26, CDF 36 and CDF 46

Ref. No. 9105303708

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# **MAKE IT COOL!**

# TURN STORAGE SPACE INTO A COOLING COMPARTMENT

Drawer fridge for inside and outside storage compartments. Easy to open, secure locking and elegant front panel.





#### WAECO CoolMatic CD 20

Compressor drawer fridge, 12 / 24 volts DC

- · Capacity approx. 20 litres
- Detachable cooling unit (1.5 m supply cable)
- Temperature range: +15°C to +0°C
- Dimensions (WxHxD): 438 x 250 x 565 mm (incl. cooling unit)

CD 20 // Ref. No. 9105330080

CD 20W (white front) // Ref. No. 9105330081

CD 20S (stainless steel front) // Ref. No. 9105330148

#### WAECO CoolMatic CD 30

Compressor drawer fridge, 12 / 24 volts DC

- Capacity approx. 30 litres
- Detachable cooling unit (1.5 m supply cable)
- Temperature range: +12°C to -2°C
- Dimensions (WxHxD): 440 x 250 x 730 mm (incl. cooling unit)

CD 30 // Ref. No. 9105330085

CD 30W (white front) // Ref. No. 9105330086

CD 30S (stainless steel front) // Ref. No. 9105330147



# WAECO CoolFreeze FC 40

Compressor cooler, 12 / 24 volts DC

- Sideways opening, detachable lid
- Temperature range: +5°C to -15°C
- Optional universal fixing kit

Ref. No. 9105203983







# 0000

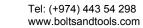
#### WAECO CoolFreeze CRD 50

Pull-out fridge and freezer

- \*\*-freezer compartment, can be detached to make more room for cooling
- Wire inset with brackets for bottled drinks
- Matching installation frames available (optional)

Ref. No. 9105304081





# **COMPRESSOR COOLING -**

# MADE TO MEASURE:

#### Tailor-made for three strong brands - developed by specialists in vehicle-specific refrigeration

The ColdMachine CS IV compressor cooling unit offers a cost-efficient way of converting the storage box between the seats in the Iveco Stralis into a fridge. The CoolMatic CS MPS compressor cooler fits neatly into the drawer under the driver's bed in Mercedes Actros 2 and 3. The CoolMatic RHD 50 is a perfect fit for the VOLVO FH.





4.07

#### WAECO ColdMachine CS IV

Tailor made compressor cooling unit for Iveco Stralis

- Great value cooling solution for the storage box between the seats
- Easy access to your food

Ref. No. 9105304105



4.12

#### WAECO CoolMatic CS MP2

Tailor made compressor drawer for permanent fitting in Mercedes-Benz Actros 2 and 3

- Top cooling performance from +10°C to 0°C
- With interior light
- Fits L-cabin or Megaspace cab

Ref. No. 9105203765



4.05

#### WAECO CoolMatic RHD 50

Tailor made compressor refrigerator for permanent fitting, tailor made for the Volvo FH

- Fits perfectly into the side storage compartment (optional mounting plate)
- Generous 50-litre capacity for food and drinks

Ref. No. 9105203982

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# WAECO TROPICOOL NOW IN A NEW DESIGN

Convenient DC / AC coolers with TC special electronics and a digital display

Fresh design with a new, digital display – this is the hallmark of the new WAECO TropiCool high-tech coolers. Naturally, all the inner values of the popular series have been retained: intelligent power-save circuit, individually adjustable temperature, cooling performance up to 30°C below the ambient temperature. If desired, the convenient units can also take care of keeping food warm: activating the heating function supplies temperatures of up to +65°C.







## WAECO TropiCool – HIGH-PERFORMANCE LUXURY

### Perfect down to the last detail



WAECO TropiCool coolers\* refrigerate down to 30°C below ambient temperature and heat up to +65°C. Using the soft-touch control panel, you can set the temperature individually - to seven different levels: from  $+1^{\circ}$ C to  $+15^{\circ}$ C in cooling mode or from  $+50^{\circ}$ C to +65°C in heating mode. The memory function stores the previous setting in each case.

\*All models except TC 07



\*TC 07: 12 / 230 Volt



4.01



4.36

### WAECO TropiCool TC 07

Thermoelectric cooler for 12 volts DC and 230 volts AC

- Storage volume: approx. 7 litres
- Cooling up to 25°C below ambient temperature, heating up to +65°C
- Dimensions (W x H x D): 333 x 278 x 190 mm

# **NEW! WAECO TropiCool TCX 14**

Thermoelectric cooler with TC special electronics for 12/24 volts DC and 230 volts AC

- Storage volume: approx. 14 litres
- Cooling up to 30°C below ambient temperature, heating up to +65°C
- Dimensions (W x H x D): 450 x 328 x 303 mm

Ref. No. 9105302036 // UK 9105303473



Ref. No. 9105330180 // UK 9105330317



## **NEW! WAECO TropiCool TCX 21**

Thermoelectric cooler with TC special electronics for 12/24 volts DC and 230 volts AC

- Storage volume: approx. 20 litres
- Cooling up to 30°C below ambient temperature, heating up to +65°C
- Dimensions (W x H x D): 450 x 420 x 303 mm

Ref. No. 9105330181 // UK 9105330318

## **NEW! WAECO TropiCool TCX 35**

Thermoelectric cooler with TC special electronics for 12/24 volts DC and 230 volts AC

- Storage volume: approx. 33 litres
- Cooling up to 30°C below ambient temperature, heating up to +65°C
- Dimensions (W x H x D): 550 x 460 x 376 mm

Ref. No. 9105330182 // UK 9105330319

Universal fixing kit

For TropiCool TCX 14, TCX 21, TCX 35: For fastening of TropiCool coolers in vehicles.

Ref. No. 9105303709

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4.01

4.36

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# **CAR COOLERS FOR EVERYONE**

# COMPACT UNITS FOR THE CAR

What was formerly reserved for luxury automobiles is now affordable for everyone. TB 08 and TB 15 provide drivers and passengers with cool snacks and drinks, and they can even keep hamburgers and chips warm. Placed on the front passenger seat or the centre of the rear seat, they are fastened with the safety belt.













Security

4.08

# WAECO BordBar TB 08

Thermoelectric car cooler with cooling and heating function

- 8 litres capacity, ready for connection to 12 volts
- Fits 0.33 litre cans and 0.5 litre bottles

Ref. No. 9105302016

#### WAECO BordBar TB 15

Thermoelectric car cooler with cooling and heating function

- approx. 15 litres capacity, ready for connection to 12 volts
- Fits 1.5 and 2 litre bottles

Ref. No. 9105302023

# **COOL VALUE FOR MONEY!**

Shopping, picnic, holiday, beach: the versatile WAECO BordBar AS 25 deals with any outing effectively. High-performance thermoelectrics at a bargain price, ready for use on 12 or 230 volts. Plus it has a 20 litre capacity, a sturdy housing with a textile skin, a shoulder strap, and diverse outside pockets.



#### WAECO BordBar AS 25

Thermoelectric car cooler with DC/AC auto switch

- 20 litres capacity, ready for connection to 12/230 volts
- Cooling up to 18°C below ambient temperature
- Fits 2 litre bottles standing upright
- Two zip-closure pockets, one net pocket, one cable compartment

Ref. No. 9105302816





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4.14

# FRESHNESS FOR THE TAKING

# SUPER-COOL, INSIDE AND OUT

Stylish looks in silky champagne colour, cooling performance up to 25°C below ambient: this classic car cooler keeps up with the times. The WAECO BordBar TF 14 fits perfectly on the front passenger seat or one of the seats in the rear. Energy for cooling comes from the cigarette lighter socket. Handy extra: closing outside pockets for small storage and anything that doesn't need cooling.





### **NEW! WAECO BordBar TF 14**

Thermoelectric car cooler with reinforced insulation

- 14 litres capacity
- Ready for connection to 12 volts
- Vertical space for standing 2 litre bottles
- Cooling up to 25°C below ambient temperature
- Exterior in high-quality Oxford nylon, sides in hard-wearing, rubber-coated nylon

Ref. No. 9105330172



New silky champagne look

# FIT FOR EVERYTHING!

# ICEBOXES IN HEAVY DUTY QUALITY

**High outside temperatures, uneven terrain, dust and mud?** The "indestructible" WAECO iceboxes will take this in their stride. The Cool-lce boxes are equipped with extremely effective insulation, and once the cool packs or ice cubes have been placed inside, they will keep groceries, fish, bait and wild game fresh. Depending on use and weather conditions, even for several days at a time!

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4.14



- WAECO Cool-Ice WCI-22
   Storage volume: approx. 22 litres
- Weight: 4.2 kg
- Dimensions (W x H x D): 388 x 313 x 365 mm

Ref. No. 9108400060

Tel: (+974) 443 54 298 www.boltsandtools.com



#### WAECO Cool-Ice WCI-42

- Storage volume: approx. 41 litres
- Weight: 7.5 kg
- Dimensions (W x H x D): 635 x 337 x 390 mm

Ref. No. 9108400062

Tel: (+974) 443 54 298 www.boltsandtools.com



# ACTIVE COOLING FOR WORK AND LEISURE

"Cool fun" at work and in your spare time – now available in three different sizes and with a USB port in the lid for charging mobile devices. The WAECO CoolFun SC series offers high-performance thermoelectrics at a good price. The practical universal coolers provide active cooling up to 18°C below the ambient temperature, the two larger models will also keep lunch warm if required. Our recommendation for cooling professionals is the SC 38, because it offers an ample storage capacity of 37 litres and many convenient extras: sturdy wheels and a telescopic handle for ease of transport, a flexible interior partition system, and a split lid for minimal cooling loss.



4.02



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4.02

#### NEW! WAECO CoolFun SC 26 / SCT 26

Thermoelectric cooler, carrying handle as lid support or lid lock SC 26: 12 volts DC, SCT 26: 12/24 volts DC

- Capacity: approx. 25 litres
- Cooling up to 18°C below ambient temperature
- Dimensions (W x H x D): 396 x 394 x 296 mm

SC 26 // Ref. No. 9103501289 SCT 26 // Ref. No. 9103501290

#### **NEW!** WAECO CoolFun SC 30

Thermoelectric cooler, carrying handle as lid support or lid lock, 12 volts DC and 230 volts AC

- Capacity: approx. 29 litres
- Cooling up to 18°C below ambient temperature. Heats up to + 65°C
- Dimensions (W x H x D): 396 x 444 x 296 mm

Ref. No. 9103501291



4.02

#### **NEW! WAECO CoolFun SC 38**

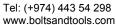
Thermoelectric cooler, with wheels, telescopic handle, split lid and removable partition, 12 volts DC and 230 volts AC

- Capacity: approx. 37 litres
- Cooling up to 18°C below ambient temperature. Heats up to + 65°C
- Dimensions (W x H x D): 565 x 391 x 295 mm

Ref. No. 9103501293









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#### Tel: (+974) 443 54 298 www.boltsandtools.com

#### 4.30 // WAECO CoolFreeze CFX

## Compressor coolers

Ref. No.

at +20°C

at +32°C

Insulation PU foam all around

System

Material

Colour

Weight (kg, approx.) Test marks

Scope of delivery Removable wire basket **Detachable carrying handles** 

Optional extras Mains adapter EPS 100, 230 V > 24 V Mains adapter MPS 35, 110 V - 240 V > 24 V

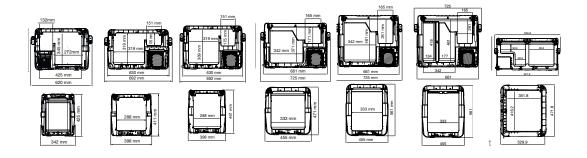
Fixing kit Wireless display



Fully hermetic compressor with integrated control electronics, low-voltage protection/electronic fuse, automatic reverse pole protection, electronic thermostat

			Cabinet: PP + ABS Lid: PE	5		
			Pale grey/dark gre	¥y		
13.1	17.5	18.5	20.4	22.3	23.2	32
		TÜV/GS, e-cei	rtified (Automotive	EMC Directive)		
•	•	•	•	•	•	•
•	•	•	•	16)	•	•
-	_	-	-	_	-	-
-	-	-	-	-	-	-
9105330252	_	_	_	-	-	-
9105304065	9105304065	9105304065	9105304065	9105304065	9105304065	_

<sup>\*</sup> Two compartments for cooling and freezing with separate controls



Mobile cooling

#### 4.35 // WAECO CoolFreeze CF

#### 4.10 // WAECO CoolFreeze CDF

#### 4.10 // WAECO CoolFreeze CF













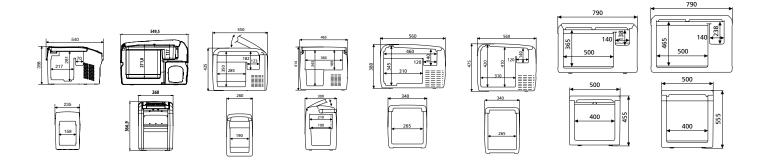




CF 11	CF 16	CF 26	CDF 18	CDF 36	CDF 46	CF 80	CF 110
9105330183	9105330184	9105330185	9105330241	9105330186	9105330187	9105303248	9105303102
10.5 -	15 -	21,5 4	18 -	31 -	39 -	79 7	105 13
12/24 V DC 100-240 V AC	12/24 V DC 100-240 V AC	12/24 V DC 100-240 V AC	12/24 V DC	12/24 V DC	12/24 V DC	12/24 V DC 100-240 V AC	12/24 V DC 100-240 V AC
+10 to -18	+10 to -18	+10 to −18	+10 to -18	+10 to -15	+10 to -15	+10 to -18	+10 to −18
35	35	35	35	45	45	65	65
0.29 0.61	0.21 0.44	<b>0.44</b> 0.67	<b>0.38</b> 0.64	<b>0.75</b> 1.13	<b>0.94</b> 1.31	0.65 1.19	0.76 1.35
A++	A++	A++	_	_	_	A+	A+
•	•	•	•	•	•	•	•

Fully hermetic compressor with integrated control electronics, low voltage protection / electronic fuse, automatic reverse pole protection, electronic thermostat

Cabinet: PP Lid: PE	Cabinet: PP Lid: PE	Cabinet: PP Lid: PE	Cabinet: PP Lid: PE	Cabinet: PP Lid: PE	Cabinet: PP Lid: PE	Upper/low	ed sheet steel, er part: PP : PE
Pale grey / dark grey	Pale grey / dark grey	Pale grey / dark grey	Pale grey / dark grey	Pale grey / dark grey	Pale grey / dark grey	Pale grey / dark grey	Pale grey / dark grey
8.5	9.5	10.5	9.5	17	20	31	33
e-certified (Automotive EMC Directive)			TÜV/GS	S, e-certified (Automotiv	e EMC Directive)		
_	_	•	_	_	- 49	•	•
_	-	_	_	_	- / (F	•	•
					V.	<i>y</i>	
_	_	_	9102600031	9102600031	9102600031	_	_
-	_	_	9103555825	9103555825	9103555825	_	_
_	9105303708	9105303708	_	9105303708	9105303708	_	_
-	_	_	_	_	_	_	_



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#### 4.10 // WAECO CoolMatic CD

#### 4.05 // WAECO CoolMatic RHD

# Vehicle-specific compressor coolers











	CD 20 / CD 20W	CD 20S	CD 30 / CD 30W	CD 30S	RHD 50
Ref. No.	9105330080 (black) 9105330081 (white)	9105330148 (stainless steel)	9105330085 (black) 9105330086 (white)	9105330147 (stainless steel)	9105203982
Capacity (I, approx.) including for fresh food (I)	20 -	20 -	30 -	30 -	50 -
Connections (V DC)	12/24	12/24	12/24	12/24	12/24
Temperature range (°C)	+15 to 0	+15 to 0	+12 to -2	+12 to −2	+10 to 0
Power input (watts, approx.)	40	40	40	40	45
Current consumption (Ah/h) at 12 V at +20°C at +32°C ambient temperature, both at +5°C interior temperature	0.67 1.33	0.67 1.33	0.67 1.33	0.67 1.33	0.75 1.50
Insulation PU foam all around	•	•	•	•	•
System	Fully hermetic compres		rol electronics, electronic t stomatic reverse pole prote		rotection / electronic fuse,
Material		Sturdy met drawer of injection	tal housing, on-moulded parts		Coated sheet steel, inside: stainless steel, rear wall: shock-resistant plastic
Colour	CD 20: black CD 20W: black, front white	Black, stainless steel front	CD 30: black CD 30W: black, front white	Black, stainless steel front	Pale grey cabinet; white back panel
Weight (kg, approx.)	16.1	16.1	18	18	21
Test marks	e-certified (Automotive EMC Directive)	e-certified (Automotive EMC Directive)	e-certified (Automotive EMC Directive)	e-certified (Automotive E <b>MC</b> Directive)	TÜV/GS, e-certified (Automotive EMC Directive)
Optional extras			101		
Mains adapter EPS 100, 230 V > 24 V	9102600031	9102600031	9102600031	910260003 <b>1</b>	_
Mains adapter MPS 35 110 V - 240 V > 24 V	9103555825	9103555825	9103555825	910355582 <b>5</b>	-
Stainless steel installation frame	9105303901	9105303901	9105303901	910530390 <b>1</b>	-
Mounting plate	-	_	_	(K)	9103540033
Fixing kit (Scania R)	_	_	9102800006	910280000 <b>6</b>	_
	565 422 320	565 422	730 560 490	730 560 490	705 505 445
	438 520 520 520 520	438 240 250 250	440 370 5FZ 5FZ 652	440 370 582 582 582	430

# 4.12 // WAECO CoolFreeze FC 4.24 // WAECO CoolMatic CRD 4.07 // WAECO ColdMachine CS 4.12 // WAECO CoolMatic CS

# Vehicle-specific compressor coolers









	FC 40	CRD 50	CS IV	CS MP2
Ref. No.	9105203983	9105304081	9105304105	9105203765
Capacity (I, approx.) including for fresh food (I)	37.5 -	38.5 6	- -	25 -
Connections (V DC)	12/24	12/24	12/24	12/24
Temperature range (°C)	+5 to −15	+10 to -12	-	+10 to 0
Power input (watts, approx.)	45	40	35	45
Current consumption (Ah/h) at 12 V at +20°C at +32°C ambient temperature, both at +5°C interior temperature	0.86 1.24	1.5 (at 25°C) 1.8	<del>-</del> -	1.13 1.88
Insulation	•	•	_	•
PU foam all around  System	Fully herm	etic compressors with integrated	l control electronics, electronic th	nermostat
Oyoto			se, automatic reverse pole protection	
Material	Cabinet: sheet steel; base, upper cabinet and lid: embossed plastic (polystyrene)	Cabinet: with coated metal frame Interior container door frame: plastic, fittings: stainless steel		Polystyrene cabinet and lid
Colour	Cabinet: pale grey, powder-coated; base, upper cabinet and lid: grey	Cabinet: black Door frame: silver Decor panel: matt-silver (brushed stainless steel appearance)		Outside cabinet dark grey; inside cabinet pale grey
Weight (kg, approx.)	18	20	8	12.5
Compliance	e-certified (Automotive EMC Directive)	TÜV/GS, e-certified (Automotive EMC Directive)	e-certified (Automotive EMC Directi <b>ve)</b>	e-certified (Automotive EMC Directive)
Optional extras	ة السطة			
Mains adapter EPS 100, 230 V > 24 V	9102600031	_		_
Mains adapter MPS 35 110 V – 240 V > 24 V	-	9103555825	1-0	_
Standard installation frame	_	9105303880	(R)	_
Fixing kit	9103540122	_		-
	346 J	500	195	270 

Ref. No.

Ref. No. UK

Connections

Consumption at 12 volts DC (watts)

**Energy class** 

Cooling below

Heating

Insulation

at 24 volts DC (watts)

at 230 volts AC (watts)

Temperature range

PU foam all around System

Storage volume (I, approx.)

# 4.01 // WAECO TropiCool TC

#### 4.36 // WAECO TropiCool TCX

#### 4.02 // WAECO CoolFun

# **Thermoelectric** coolers



Thermoelectric (Peltier system)
Material
Colour
Weight (kg, approx.)
Test marks
Optional extras
Universal fixing kit
Mains adapter EPS 817, 230 V AC > 12 V DC

333 450	319	340 11 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	396	396	467
210 250 250 250 200 200 200 200 200 200 20	250 303 208 CH 198	376	296 354 a.	296	547 547 296

#### 4.08 // WAECO BordBar

## **Thermoelectric** car coolers









	•	-		
	AS 25	TB 08	TB 15	TF 14
Ref. No.	9105302816	9105302016	9105302023	9105330172
Capacity (I, approx.)	20	8	15	14
Connections	12 V DC/ 230 V AC	12 V DC	12 V DC	12 V DC
Consumption at 12 volts DC (watts) at 24 volts DC (watts) at 230 volts AC (watts)	36 - 40	32 - -	40 - -	36 - -
Energy class	A++	-	-	-
Temperature range Cooling below ambient temperature (°C, approx.) Heating (°C, approx.)	max. 18 -	max. 20 +65	max. 20 +65	max. 25 -
Insulation PU foam all around	•	ISOFOAM	•	•
System Thermoelectric (Peltier system)	•	•	•	•
Material		PP	ABS	Textile cover in high-quality
				Oxford nylon, sides in hard-wearing, rubber-coated nylon
Colour		Anthracite/grey	Dark grey/ pale grey	Champagne/ black
Weight (kg, approx.)	4.3	3.2	5.2	4.6
Test marks  ■ Optional extras		TÜV/GS, e-certified (Au	tomotive EMC Directive)	
Mains adapter EPS 817, 230 V AC > 12 V DC	1 3	9102600030	9102600030	9102600030
Voltage monitor, 12 V, 5 A		9105303854	9105303854	9105303854
	420	792 8	358 1,5-22 462	255   255   20   20
	\$ 300	162 200	204	165 P

## **Electronic** accessories for coolers

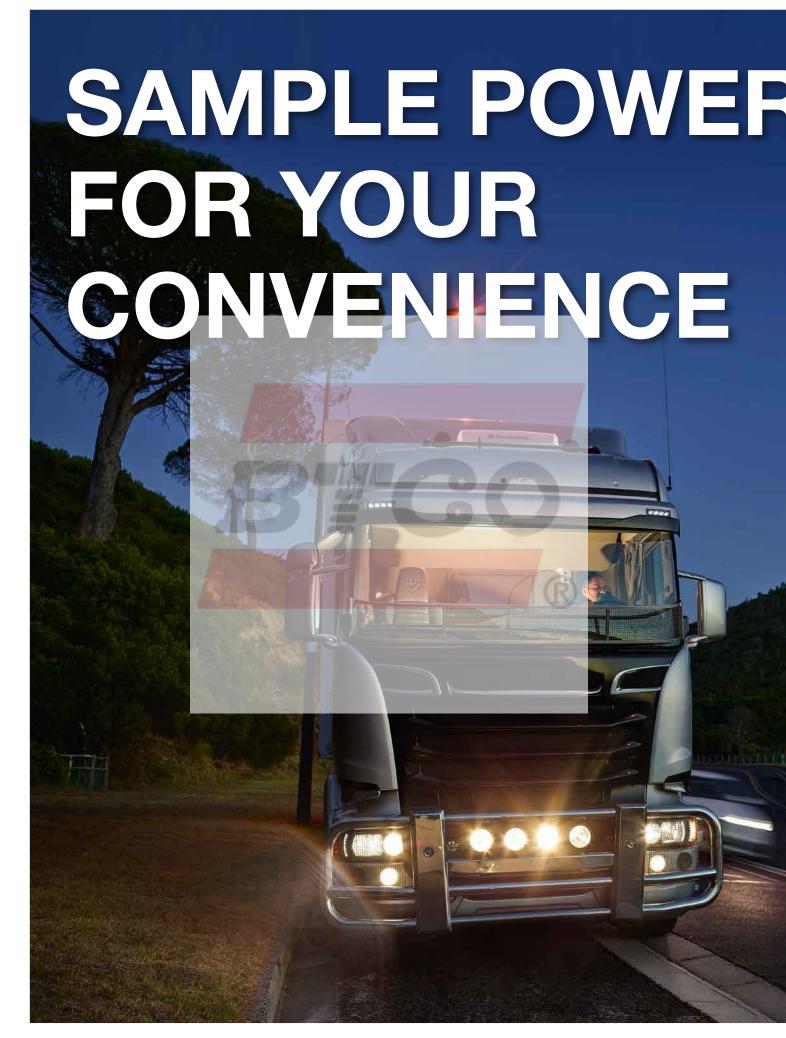
Continuous load



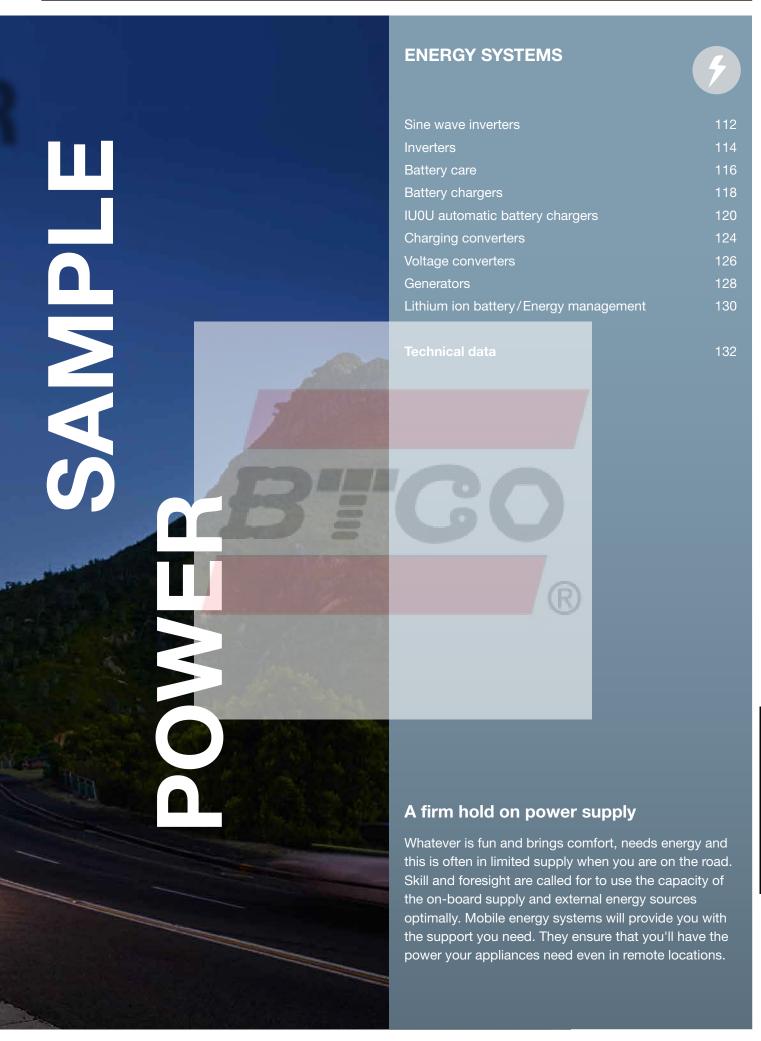
Test marks

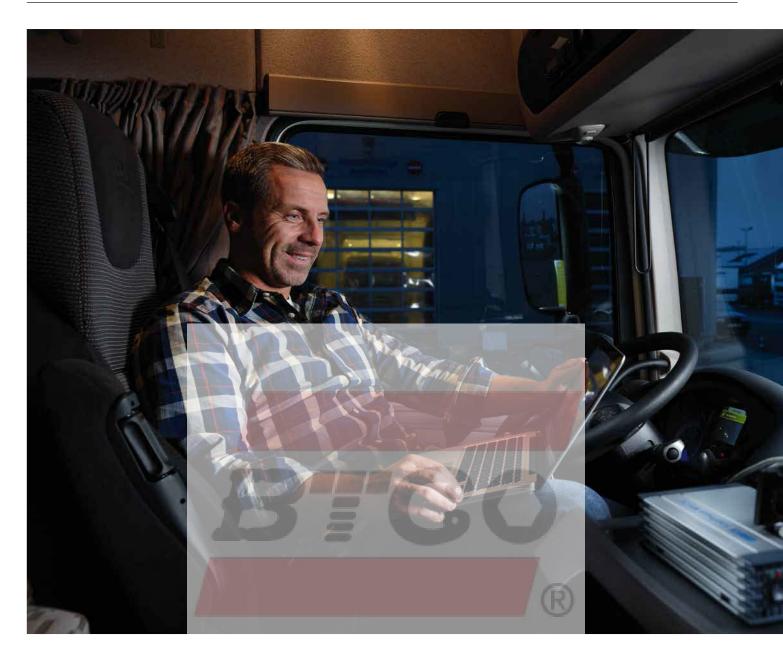
	C	CoolPower EPS 817	
	Mains adapter for connecting the	moelectric 12-volt cooling appliances	s to the 230-volt mains
Ref. No.		9102600030	
Input voltage	230 V AC / 50 Hz	<b>Dimensions</b> (W x H x D)	115 x 65 x 170 mm
Output voltage	13 V DC	Weight (kg)	0.6

6 A



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# **INTELLIGENT ENERGY MANAGEMENT** WITH PROFESSIONAL ELECTRONIC **ACCESSORIES**

# From battery chargers with inverters to mobile energy supply

Enjoy the same comforts on the move as you have at home, mobile electronics from Dometic WAECO can make this possible. Everything from inverters to voltage converters and generators – it's all there for your convenience, and now even more powerful and easier to install. A real plus of the SinePower sine wave inverters are the high peak outputs and the PerfectCharge IU0U chargers significantly reduce the charge times.



#### Inverters

#### **WAECO SinePower WAECO PerfectPower**

Versions from 100 – 3500 watts. The lightweight sine wave inverters are an optimal choice for sensitive consumers with high starting currents. Tried-and-tested inverter models which provide modified sine wave voltage complete the product range.



#### Battery chargers

#### **WAECO** PerfectCharge MCP

Battery charging has never been this easy! The new charger automatically adapts to the battery's charging condition. Battery chargers

#### **WAECO** PerfectCharge MCA

The latest charging technology, ultracompact design: WAECO PerfectCharge MCA automatic battery chargers are small, lightweight and very easy to install.



#### Voltage converters

#### **WAECO** PerfectPower DCDC

Inexpensive, ultra-compact voltage converters in switch mode design. Premium inverters with electrically isolated input and output voltage for sensitive electronic appliances.



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#### Charging converters

#### **WAECO** PerfectCharge DC

High quality charging converters for fast and gentle charging of supply batteries while driving. Also suitable as voltage stabilisers for sensitive high-tech appliances.



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#### Generators

#### **Dometic generators**

Dometic's mobile generators ensure reliable power supply wherever mains power is unavailable.





## **INVERTERS FROM XS TO XXL** MOBILE "POWER SOCKETS"

#### Whether it's a car, truck or van - it makes sense to have 230 volts on board your vehicle.

It enables you to use all the electrical gadgets it takes to feel more comfortable on the road. The problem is many of these gadgets work on 230 volt sockets. A possible power source is the on-board system - the vehicle battery or a leisure battery.

But how do you turn 12 or 24 volts DC voltage into 230 volts AC voltage? Quite simply: by using a WAECO inverter. The comprehensive range of inverters has been tailored to suit a variety of applications. It takes in to account all your needs - regardless of whether you just want an inexpensive compact charger for your mobile phone, or a truck compliant inverter to run your microwave oven or espresso machine. All units feature outstanding quality and a contemporary, user-friendly design.

#### MINIMAL POWER REQUIREMENTS FOR SOME ELECTRICAL APPLIANCES

Device	Power	Quality of the output voltage
Coffee maker (filter)	800 – 1500 watts	Modified sine wave voltage
Coffee maker (pads)	1200 – 1600 watts	Pure sine wave voltage
Espresso machine	1200 – 1600 watts	Pure sine wave voltage
Microwave	1000 – 1600 watts	Pure sine wave voltage
Toaster	1000 – 1500 watts	Modified sine wave voltage
Electric kettle	1000 – 1500 watts	Modified sine wave voltage
Reading lamp	50 – 100 watts	Modified sine wave voltage
Energy-saving bulb	10 – 20 watts	Pure sine wave voltage
Fluorescent tubes	<b>5</b> 0 – 100 watts	Pure sine wave voltage
Audio/video device	<b>1</b> 00 – 200 watts	Pure sine wave voltage
Laptop computer	<b>1</b> 00 – 200 watts	Pure sine wave voltage
Power drill/circular saw	500 – 1500 watts	Modified sine wave voltage
Vacuum cleaners	1000 – 1600 watts	Modified sine wave voltage
Electric toothbrush	50 watts	Pure sine wave voltage

#### **Example:**

- Largest appliance on board is a toaster with 1400 watts
- The technically most demanding appliance is an electric toothbrush with 50 watts output

#### Our recommendation:

A sine wave inverter with at least 1400 watts: WAECO SinePower MSI 1812(T)

#### **Alternatively:**

WAECO PerfectPower PP 2002 for the toaster and an additional sine wave inverter SinePower MSI 212 for the toothbrush

#### PURE OR MODIFIED SINE WAVE VOL

#### Pure sine wave voltage

The voltage is precisely controlled by a microprocessor. The result: a clean sine wave voltage, like that from a home power socket

• WAECO SinePower sine wave inverters (p. 112 – 113)



#### Modified sine wave voltage

The voltage produces a stepped curve simulating a pure sine wave.

The result: an output voltage of stable amplitude and frequency

• WAECO PerfectPower inverters (p. 114 – 115)

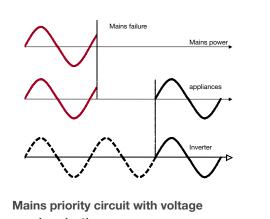


#### WHAT ARE THE BENEFITS OF A MAINS PRIORITY CIRCUIT WITH VOLTAGE SYNCHRONISATION?

All larger inverters in the WAECO PerfectPower series feature an integrated mains priority circuit. This automatically switches the inverter voltage to mains power as soon as it is available, Consequently, the inverter is switched off and the battery saved as soon as your vehicle has access to an external mains supply.

A technical highlight featured by all versions of the WAECO SinePower with 1800 watts or higher as series-standard or as an optional extra. This is why: many 230 volt consumer units depend on an uninterrupted power supply when connected.

Moreover, it is vital to ensure a smooth voltage switchover. This is exactly what the sine wave inverters provide. In these units, the inverter voltage is synchronised to match the mains voltage, and the switchover takes place in a fraction of a second.



synchronisation

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## **WAECO SINEPOWER**

## SINE WAVE INVERTERS WITH VERY HIGH PEAK OUTPUTS

#### Mains priority circuit and CAN bus interface as options

SinePower sine wave inverters turn 12 or 24 volt battery voltage into pure 230 volt AC voltage, like that from a home power socket. This ensures trouble-free mobile operation of all 230 volt appliances, even highly-sensitive appliances (e.g. computers, PAD coffee machines, electric toothbrushes etc).

A unique quality feature of the WAECO inverters is the extraordinarily high peak output rating. The devices feature a sufficient bias, allowing them to effortlessly supply the high start-up currents of any consumer units connected. Other benefits: simple installation, ultra-compact design, lightweight - the inverters are easy to accommodate even in cramped conditions.



#### WAECO SinePower MSI 212 / MSI 224

- Continuous output: 150 W
- Peak output: 300 W
- 12 or 24 volt cigarette lighter plug

MSI 212 // 12 volts // Ref. No. 9102600124 // UK 9102600139 MSI 224 // 24 volts // Ref. No. 9102600125 // UK 9102600140

3.30

#### WAECO SinePower MSI 412 / MSI 424

- Continuous output: 350 W
- Peak output: 700 W

MSI 412 // 12 volts // Ref. No. 9102600126 // UK 9102600141 MSI 424 // 24 volts // Ref. No. 9102600127 // UK 9102600142



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Optimal accessibility: socket on the top of the device

#### **MODELS WITHOUT** MAINS PRIORITY CIRCUIT

If you don't require a mains priority circuit you can choose from three particularly cost efficient SinePower models. If necessary, the priority circuit is easy to retrofit (available as an accessory).



3.30 3.30

#### WAECO SinePower MSI 912 / MSI 924

- Continuous output: 900 W
- Peak output: 1600 W

MSI 912. 12 V // Ref. No. 9102600111 // UK 9102600033 MSI 924, 24 V // Ref. No. 9102600112 // UK 9102600034

#### WAECO SinePower MSI 1312 / MSI 1324

- Continuous output: 1300 W
- Peak output: 2400 W

MSI 1312, 12 V // Ref. No. 9102600113 // UK 9102600035 MSI 1324, 24 V // Ref. No. 9102600114 // UK 9102600036

#### WAECO SinePower MSI 1812 / MSI 1824

- Continuous output: 1800 W
- Peak output: 3200 W

MSI 1812, 12 V // Ref. No. 9102600115 // UK 9102600037 MSI 1824, 24 V // Ref. No. 9102600116 // UK 9102600038

#### Priority circuit for MSI 912 / 924 / 1312 / 1324

- For all inverters up to 1800 watts
- Designed for voltage distribution in vehicles with two potential power sources

Ref. No. 9103556043

#### **MODELS WITH**

#### MAINS PRIORITY CIRCUIT

All SinePower model versions with a capacity of 1800 watts or more feature a mains priority circuit with voltage synchronisation, the 2300/3500 watt models additionally feature a bus interface.





#### WAECO SinePower MSI 1812T / MSI 1824T

- Continuous output: 1800 W
- Peak output: 3200 W

MSI 1812T, 12 V // Ref. No. 9102600117 UK 9102600039 MSI 1824T, 24 V // Ref. No. 9102600118 UK 9102600040



#### WAECO SinePower MSI 2312T / MSI 2324T

- Continuous output: 2300 W
- Peak output: 4000 W

MSI 2312T, 12 V // Ref. No. 9102600119 UK 9102600041 MSI 2324T, 24 V // Ref. No. 9102600120 UK 9102600042



#### WAECO SinePower MSI 3512T / MSI 3524T

- Continuous output: 3500 W
- Peak output: 6000 W

MSI 3512T, 12 V // Ref. No. 9102600121 UK 9102600043 MSI 3524T, 24 V // Ref. No. 9102600122 UK 9102600044

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## 150 TO 550 WATTS: INVERTERS WITH MODIFIED SINE WAVE VOLTAGE

Three smaller inverters with continuous output ratings up to 550 watts form the basis of the WAECO PerfectPower series. They turn 12 or 24 volt battery voltage into a sine wave like 230 volt alternating voltage, which is sufficient for a multitude of applications. This high-quality generation of inverters demonstrates great potential. Take installation for instance: adjustable clip-on mounts allow for adaptation to individual installation conditions. For those looking for extra convenience and prefer activating their inverter from the dashboard, there is an additional outlet for an external switch.



Front: Earthed safety socket and LEDs for function check

Mounting aid: Individually adjustable clip-on mounts

3.18

On/off switch and outlet for an external on/off switch

WAECO PerfectPower PP 152 / PP 154

- Continuous output: 150 W
- Peak output: 350 W
- 12 or 24 volt cigarette lighter plug

PP 152 // 12 volts // Ref. No. 9105303791 Ref. No. UK 9105303792 PP 154 // 24 volts // Ref. No. 9105303794 Ref. No. UK 9105303795

WAECO PerfectPower PP 402 / PP 404

- Continuous output: 350 W
- Peak output: 700 W

PP 402 // 12 volts // Ref. No. 9105303796 Ref. No. UK 9105303797 PP 404 // 24 volts // Ref. No. 9105303799

Ref. No. UK 9105303800

WAECO PerfectPower PP 602 / PP 604

- Continuous output: 550 W
- Peak output: 1100 W

PP 602 // 12 volts // Ref. No. 9105303801 Ref. No. UK 9105303802 PP 604 // 24 volts // Ref. No. 9105303804 Ref. No. UK 9105303805

## **HIGH-PERFORMANCE INVERTERS** WITH MODIFIED SINE WAVE VOLTAGE

As real power burners, any filter coffee machines, toasters or vacuum cleaners on board can only be operated using a generously dimensioned inverter they do not need pure sine wave voltage. They also function perfectly when powered by a sine like 230 volt AC voltage, which is what the two high-performance inverters from the WAECO PerfectPower series generate. Apart from premium quality, they also provide the user with innumerable convenient features. Mains priority circuit and soft-start, for example, which will even give power appliances a gentle jump start. This is in addition to cable organisers, exhaust air adapters, outputs for remote control and external switches as well as adjustable mounts.

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## MY BENEFITS

- Integrated mains priority circuit
- High peak output for especially powerful appliances
- Overload and short-circuit protection
- External on/off switch
- Output for remote control
- dividually adjustable clip-on

3.18

#### WAECO PerfectPower PP 1002 / PP 1004

- Continuous output: 1000 W
- Peak output: 2000 W

PP 1002 // 12 volts // Ref. No. 9102600002 // UK 9102600003 PP 1004 // 24 volts // Ref. No. 9102600028 // UK 9102600004

3.18

#### WAECO PerfectPower PP 2002 / PP 2004

- Continuous output: 2000 W
- Peak output: 4000 W

PP 2002 // 12 volts // Ref. No. 9102600027 // UK 9102600005 PP 2004 // 24 volts // Ref. No. 9102600029 // UK 9102600006



Nice and neat: all cables on the back



Front with input and mains input fuse

### Remote control MCR-9

• Wx Hx D: 58 x 72 x 28 mm

• Weight: 40 g

• Cable length: 7.5 m

Ref. No. 9102600026



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## **CARING FOR BATTERIES** CHARGING, CONDITIONING, CARE

A long service life and always the full capacity: The dream of an eternal vehicle battery is reality now.

The battery conditioner PerfectBattery BC 100 maintains 12 volt lead batteries by gently simulating driving. As a result, the full capacity can be maintained even after longer periods of standstill. The conditioner can also be used as a charger or back-up power supply.

The battery refresher PerfectBattery BR 12 prevents sulphate build-up, the cause for premature battery ageing and failure. It treats the battery to a regular training to multiply its service life. Even apparently defective batteries can be reactivated.



#### WAECO PerfectBattery BC 100

#### Battery conditioner

Keeps 12 volt lead batteries in prime condition over longer periods of standstill, also serves as a battery charger or takes over the power supply when the starter battery is being replaced.

- Conditions batteries with a capacity from 10 to 150 Ah
- Charges batteries with a capacity from 10 to 30 Ah
- Can also be used as back-up power supply

Ref. No. 9102500044





#### **MY BENEFITS:**

- A longer life for 12 volt lead batteries
- Maintains the full charging capacity for several years
- Reduces hazardous waste
- Ideal for seasonal vehicles (vintage cars, motorbikes,





3.28

#### WAECO PerfectBattery BR 12

Battery refresher

Prevents premature battery failure caused by sulphate build-up and reactivates apparently dead batteries.

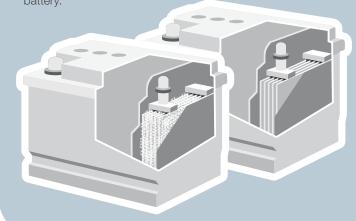
- Simply connected to the battery's minus and plus poles
- Multiplies the battery's service life by reducing sulphate build-up
- Reactivates apparently defective batteries

Ref. No. 9103556045

#### SULPHATE BUILD-UP - THE INSIDIOUS POISON TO YOUR **BATTERY**

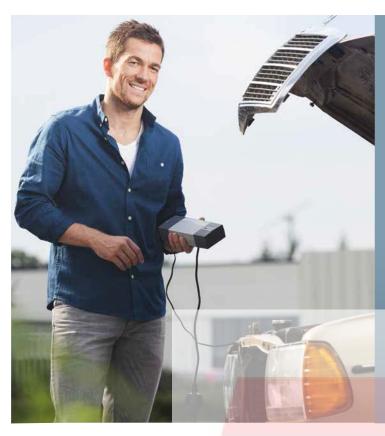
Sulphate build-up leads to premature failure of lead batteries, because it reduces the effective surface of the battery plates. Result: the capacity decreases and with it the starting ability. A battery charger won't help in this situation. Given the reduced plate surface, the battery will be unable to take up

The battery refresher tackles the problem at the roots: it removes the sulphate crystals that have built up on the plates and prevents the formation of new ones. The effective plate surfaces increases again and the charging capacity of the battery.



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#### **MY BENEFITS:**

- For all common types of batteries
- Process controlled, optimised charging characteristics, automatically adapts to the battery's charging condition
- Advanced 8-step charging characteristics
- Self-explanatory one-button operation
- High-quality connectors from the automotive industry
- Especially suitable for vehicles with start-stop technology
- Integrated cable management
- Supplied with a vast range of accessories: 12-volt cigarette lighter cable, cable with battery clamps,
- Separate, independent battery indicator and practical wall bracket available as accessories

## **MOBILE 12-VOLT BATTERY CHARGERS** SIMPLE CHARGING

Speed and accuracy are the hallmarks of the new 12-volt premium chargers in the WAECO PerfectCharge MCP series. In addition to charging, they can also be used for power supply jobs in the workshop.

Designed for convenient one-button operation, they feature a microprocessor controlled, 8-step charging curve that even gives start-stop batteries an optimal charge.

The delivery kit also includes a 12-volt cable which can be used to recharge flagging batteries from the cigarette lighter socket. A practical wall bracket holding the charger, the cables and up to four battery indicators keeps the compact gadgets ready to hand.



3.16 3.16

#### NEW! WAECO PerfectCharge MCP 1204

Battery charger 12 volts / 4 amps

- Mobile 12-volt battery charger
- Specially suitable for start-stop batteries
- One-button operation
- 8-step charging characteristics

Battery charger 12 volts / 7 amps

- · Mobile 12-volt battery charger
- · Specially suitable for start-stop batteries

**NEW!** WAECO PerfectCharge MCP 1207

- One-button operation
- 8-step charging characteristics

Ref. No. 9102500071 Not suitable for the UK!

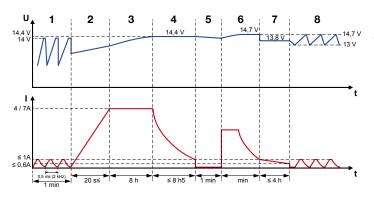
Ref. No. 9102500070 Not suitable for the UK!

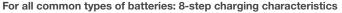
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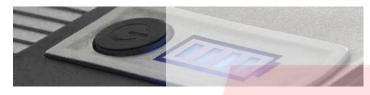
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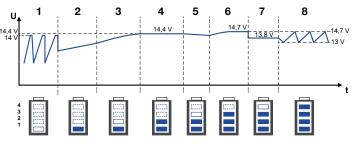
#### **ADVANCED 8-STEP CHARGING CHARACTERISTICS**





Tip: Ideal especially for calcium based start-stop batteries which are designed for tough loads and require an adapted charging process. The MCP charger range offers the optimal charging characteristics for this battery type and prevents all kinds of charging problems!





#### Meaning of the blue LEDs

1 Desulphation

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- 2 Soft-start: charging capacity is checked by the current consumption
- 3 I phase: empty battery is charged at a constant current.
- 4 U0 phase: voltage is maintained at a constant level until the battery is fully charged
- 5 Analyse: the battery's charge maintenance is checked.
- 6 Re-conditioning: voltage is increased again to generate a controlled gas formation process in the battery.
- 7 U phase: battery charger switches to float charging.
- 8 Maintenance: battery charge is monitored and recharged if required.

#### OPTIONAL BATTERY INDICATOR AND WALL BRACKET

Indispensable for a quick battery check: the compact battery indicator WAECO PerfectCharge BI 01 is also designed for one-button operation. It has a dedicated output for the WAECO battery chargers MCP 1204 and MCP 1207. Four LEDs indicate the charging condition of the connected lead acid battery in 25% steps. The indicator can be permanently fitted in the vehicle or used as a mobile tool, e.g. to check the batteries of exhibition vehicles or seasonal vehicles.

4 LEDs indicate the charging status in 25% steps



3.16



#### **NEW!** WAECO PerfectCharge BI 01

Battery indicator

- · Battery capacity display
- Indicates the charging status in 25% steps

Ref. No. 9102500078

#### **NEW!** Wall bracket

Wall bracket for PerfectCharge MCP chargers

• For MCP charger, cable and up to four battery indicators

Ref. No. 9102500079

#### 3.29

#### **WAECO PocketPower**

When your laptop or camera battery goes and dies when you are on the road, just recharging it! The very reasonably priced mini inverter SI 102 is suitable for 12-volt vehicle batteries, supplying small consumer units with a sine wave like AC voltage.

Not available in the UK!



#### WAECO PocketPower SI 102

- Modified sine wave voltage
- Continuous output: 100 watts
- Peak output: 200 watts
- · Mounting bracket, euro socket
- Weight: 282 g
- W x H x D: 67 x 43 x 125 mm

Ref. No. 9105303816



## TOP OF THE CHARGING **TECHNOLOGY CLASS** PERFECT IN EVERY DETAIL!

Once again, our electronics specialists have succeeded in developing a battery charger generation that sets standards in the market and points where the future is heading. It could not be gentler on the battery, while being equipped for every application, it is easy to use and boasts a variety of convenience functions - what more could you want?





Four dip switches allow the optimum charging characteristics for the battery type connected (gel, AGM or wet battery) to be configured. Switchover and float voltage can be set in accordance with the battery manufacturer's specifications.



#### Digital interface

Interface for connecting an external functional control or an external switch, which can be used to switch the charger into sleep mode, for example.



#### Two bus interfaces as series standard

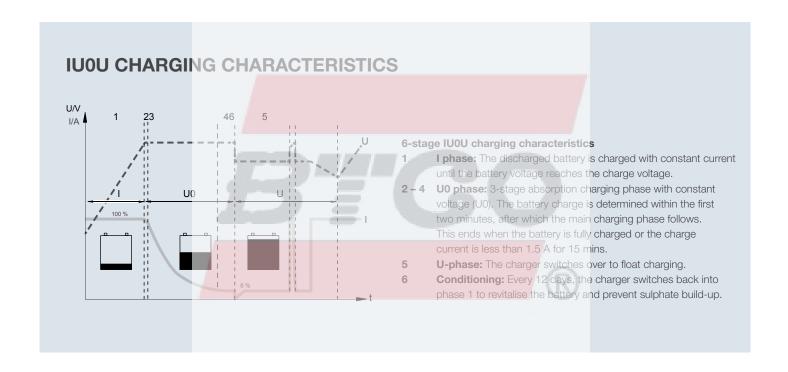
This makes WAECO PerfectCharge battery chargers optimally prepared for all current and future innovations in the automotive industry. Their bus compatibility makes connecting a battery sensor or integrating them into a management system particularly easy.

## **IU0U CHARGERS BY WAECO** GIVE YOUR BATTERIES A LONGER LIFE!

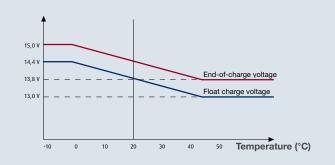
Starter batteries and supply batteries are designed for different tasks. To start the engine, starter batteries must initially supply a high current level and will then serve as an energy buffer with smaller partial cycles. Supply or on-board batteries, in contrast, are discharged at lower current levels over longer periods of time and then charged again. This means they are subjected to considerably higher loads. These special features must be considered by the charging technology to protect the batteries from damage and ensure they have a long service life. The new IUOU battery chargers from WAECO PerfectCharge function using a unique six-stage charging cycle. They provide optimum charging for all gel, AGM and wet batteries, because they charge quickly and gently at the same time.

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#### Temperature sensor/battery sensor

They are recommended when charging in highly varying or extreme ambient temperatures. This is because battery temperature determines the optimum charge voltage. This is reduced at high temperatures (battery gassing prevention), and increased accordingly at low temperatures (improved full charging).

Along with the temperature, the battery sensor determines other values which help the battery charger to optimise the charge process (battery terminal voltage, charge current, charge status). Voltage losses from the charge cables can therefore be compensated.

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## COMPACT, LIGHTWEIGHT, FAST TO INSTALL 6-STAGE IUOU AUTOMATIC CHARGERS

PerfectCharge MCA battery chargers charge particularly gently and are optimally equipped for future innovations in the automotive sector. They are just as easily integrated into the battery management system Dometic MPC 01, which optimises the charging process and reduces the charging time by up to 30%. Thanks to a series-standard bus interface, they harmonise perfectly in existing bus systems. With their lightweight, ultra-compact design and practically placed screw connections, the favourably priced chargers can be installed quickly and hassle-free. Their suitability for use all over the world makes them ideal for frequent and worldwide travellers. They feature an input voltage range of 110 – 230 volts and even charge reliably when the input voltage drops.





3.16

#### Accessories for PerfectCharge

Temperature sensor MCA-TS1 // Ref. No. 9102500036 Hella sensor MCA-HS1 for 12 volts // Ref. No. 9102500038 Remote control MCA-RC1 // Ref. No. 9102500037

#### 'Intelligent' battery sensor

They are recommended when charging in highly varying or extreme ambient temperatures. This is because battery temperature determines the optimum charge voltage. This is reduced at high temperatures (battery gassing prevention), and increased accordingly at low temperatures (improved full charging).

Besides the temperature, the battery sensor acquires other data for optimising the charging process (battery pole voltage, charge current, charge state). This helps compensate voltage drops in the charging

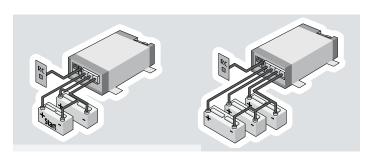
#### **WAECO PERFECTCHARGE CHARGERS -**THE BEST CHOICE FOR YOUR BATTERIES

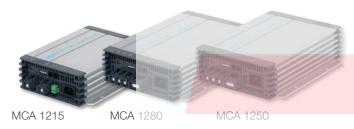
#### Why fully charging the battery regularly is important

Because there is no better way of caring for your batteries. It is a power accumulator with limited capacity which must recover 100% of the energy removed from it. Insufficient recharging will result in sulphate build-up and therefore premature battery ageing. The PerfectCharge IUOU battery chargers ensure batteries are charged fully to 100%. This, and the associated care, is something you should treat your battery to at least once a month.

#### Simultaneous charging of several batteries

When two or more batteries are used independently of one another, the load on them will be different. They are then recharged accordingly by the PerfectCharge models which feature two or three charge outputs. While charging, the weaker battery is initially brought to the same charge level as the fuller one. Both, or all three, batteries are then charged at the same voltage level until the end of the charging process.





3.16

WAECO PerfectCharge	MCA 1215	MCA 1225	MCA 1235	MCA 1250	MCA 1280
Charging	1 battery + starter battery 230 V • 12 V	2 batteries + starter battery 230 V > 12 V	2 batteries + starter battery 230 V · 12 V	3 batteries 230 V • 12 V	3 batteries 230 V · 12 V
Battery outputs	1 + 1 A output for a starter battery	2 + 1 A output for a starter battery	2 + 1 A output for a starter battery	3	3
Recommended battery capacity	40 – 170 Ah	75 – 300 Ah	100 – 400 Ah	150 – 600 Ah	200 – 800 Ah
Max. charging current	15 A	25 A	35 A	50 A	80 A
Weight	approx. 1.6 kg	approx. 1.7 kg	approx. 1.9 kg	approx. 3.1 kg	approx. 4 kg
Ref. No.	9102500027	9102500028	9102500029	91025 <b>00030</b>	9102500031
Ref. No. UK	9102500046	9102500047	9102500048	9102500049	9102500050

WAECO PerfectCharge	MCA 2415	MCA 2425	MCA 2440
Charging	2 batteries 230 V · 24 V	3 batteries 230 V · 24 V	3 batteries 230 V · 24 V
Battery outputs	2	3	3
Recommended battery capacity	40 – 170 Ah	75 – 300 Ah	100 – 400 Ah
Max. charging current	12.5 A	25 A	40 A
Weight	approx. 1.6 kg	approx. 2.9 kg	approx. 3.9 kg
Ref. No.	9102500032	9102500033	9102500034
Ref. No. UK	9102500051	9102500052	9102500053

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## **IU CHARGING CONVERTERS** BATTERY CHARGING WHILE DRIVING



Many vehicle owners expect the electric generator to completely recharge the supply batteries during the drive. When the battery is beginning to fail, however, they quickly realise it often doesn't work that way. The reason is insufficient cabling too small in cross section. The WAECO PerfectCharge IU charging converter solves this problem and ensures optimal charging during the drive.

Available in three performance categories.



#### **WAECO PerfectCharge**

The IU charging converter is simply integrated into the wiring of the starter and supply batteries. Raising the charging voltage to 14.2 volts, it ensures optimal charging during the drive.

The converter can be switched on or off by an external control signal, e.g. the D+ from the generator or a 12 volt switch. Moreover, the charging converter stabilises the voltage supply. This makes it ideal for sensitive 12 volt appliances (e.g. navigation systems, LCD monitors), which require a constant and stable voltage.

To benefit from the stabilising effect, the IU charging converter is integrated into the supply cord of the appliances. The unit compensates for over- and under voltage in a range between 8 - 16 volts, therefore preventing failure of or damage to the appliance.

## **IDEAL FOR CHARGING THE SUPPLY BATTERY**

## WHILE DRIVING



#### Our tip!

For vehicles with start-stop technology or load regulated alternators charging voltage can vary greatly. When installing a second battery as a consumer battery a DC-load converter is therefore appropriate to harmonize the charging voltage.

WAECO PerfectCharge DC 08 / DC 20 / DC 40

categories: 8 A, 20 A and 40 A

• Energy efficiency: up to 87% • Ripple & Noise: 20 mA

115 x 70 x 100 (DC 08)

• Input voltage range: 8 – 16 volts DC

• Output voltage: 14.2 volts DC ±0.1 volts

• Input voltage: 12 V DC

• Output current:

• Wx Hx D:

Charging converters and battery chargers in three performance

3.16



WAECO PerfectCharge DC 08



WAECO PerfectCharge DC 20



115 x 70 x 160 (DC20) 115 x 70 x 270 (DC 40) • Test mark: e-approved to Automotive EMC Directive DC 08 // 8 A // 12 volts » 12 volts // Ref. No. 9102500055





• Weight: 0.75 kg (DC 08), 1.2 kg (DC 20), 2.1 kg (DC 40)



#### **MY BENEFITS**

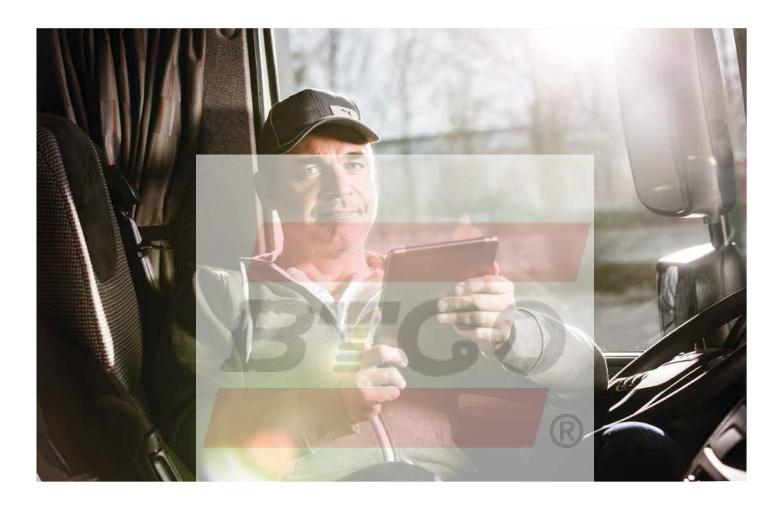
- Gives the battery a full charge while driving
- Stabilises the voltage for sensitive 12 volt devices
- High energy efficiency
- Electrically isolated
- Clean output voltage
- Additional on/off input

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## **PERFECT VOLTAGE AT ALL TIMES**

## DC/DC CONVERTERS FOR ALL APPLICATIONS



Inexpensive, ultra-compact voltage converters in switch-mode design for operation of 12 volt appliances in 24 volt circuits.

Inexpensive converters (PerfectPower DCDC 06 to DCDC 24) are often absolutely fine for running a 12 volt appliance on a 24 volt battery. Computers, monitors, measuring instruments and other sensitive appliances require a constant and stable voltage that compensates drops and peaks.

The solution: voltage converters and charging converters with electrically isolated input and output voltage (PerfectPower DCDC 10 to DCDC 40 or PerfectCharge DC 08 to DC 40).

The high-quality DC/DC converters can also be used for quick and gentle charging of supply batteries during the drive. PerfectCharge charging converters, given their enhanced output voltage of 14.2 volts, are the best choice for this purpose.







3.18

#### WAECO PerfectPower DCDC 06 / DCDC 12 / DCDC 24

Voltage converters 24 to 12 volts

- Switch mode design
- High energy efficiency (up to 90%)
- · Low heat output
- · Compact design, lightweight
- · Easy installation: Clip system

DCDC 06, 6 A, 24 V » 12 V // Ref. No. 9103555787 DCDC 12, 12 A, 24 V » 12 V // Ref No. 9103555788 DCDC 24, 24 A, 24 V » 12 V // Ref No. 9103555789

#### **MY BENEFITS**

- Inexpensive and ultra-compact
- Switch mode design for operation of 12 volt
- Easy to fit with clip-on system
- e-approved (Automotive EMC Directive)

#### High quality voltage converters with electrically isolated input and output voltage

Ideal as voltage stabilisers for sensitive 12 volt or 24 volt appliances with highest demands. Compensate for over and under-voltage in the on-board supply, generating a stable output voltage. Can also be used for charging supply batteries.

Ideal for sensitive electronic appliances

3.18

#### WAECO PerfectPower DCDC 10 / DCDC 20 / DCDC 40

Voltage converters with electrically isolated input and output voltage

- Stable, electronically controlled output voltage (± 0.1 V)
- High energy efficiency (87%)
- Several converters can be used in parallel
- Additional enable input: connection of a switch to battery + for manual activation/deactivation of the converter, or connection to D+ to switch the charger on or off automatically via the generator
- · EMC optimised for the automotive industry
- Five models available:

12 volts > 24 volts (10 amps)

12 volts > 24 volts (20 amps)

24 volts > 24 volts (10 amps)

24 volts > 12 volts (20 amps)

24 volts > 12 volts (40 amps)

DCDC 10, 10 A, 12 V » 24 V // Ref. No. 9102500057 DCDC 20, 20 A, 12 V » 24 V // Ref. No. 9102500058 DCDC 10, 10 A, 24 V » 24 V // Ref. No. 9102500061 DCDC 20, 20 A, 24 V » 12 V // Ref. No. 9102500059 DCDC 20, 20 A, 24 V » 12 V // Ref. No. 9102500060







#### MY BENEFITS

- DC/DC voltage conversion 12 - 24 V / 24 - 12 V /
- output voltage (± 0.1 V)
- charging of leisure batteries during the
- Several converters can be used in parallel
- Enable input to switch the converter on or off
- Electrically isolated
- e-approved (Automotive EMC Directive)

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## **DOMETIC GENERATORS**

## 230 VOLTS - ANYTIME, ANYWHERE

Dometic generators ensure a reliable power supply wherever mains power is unavailable. This makes them indispensible for everyone seeking maximum independence on the move.

High performance, modest fuel consumption and excellent product quality are the features you can expect to find in every Dometic generator. The range includes models from 2000 to 6200 watts, fuelled with petrol, Diesel or LPG.

The generators TEC 29, TEC 29LPG, TEC 60 and TEC 60LPG, due to their variable speed, are outstandingly quiet and fuel-saving. Fitted with permanent magnets, all the TEC series generators are also very light and compact. An additional convenience feature of the TEC series is the auto start function. When the battery voltage is low it makes sure the generator comes on automatically to recharge the battery. All Dometic generators are supplied complete with remote control.



#### LPG GENERATOR:

Dometic TEC 29LPG

2.6 kW generator for 230 volts AC, fuelled by LPG

- Output voltage: 230 volts AC ±1% (continuous)/pure sine wave voltage
- Continuous output: 2600 watts, peak output: 2900 W
- Weight: 44 kg

Ref. No. 9102900179

TEC 29LPG - for operation with LPG. Same benefits and output as

the top seller TEC 29. Minimal noise and smell emission, very high energy efficiency.





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## Energy syster

#### **REGULAR UNLEADED PETROL GENERATORS:**

TEC 29 – highly compact petrol generator. Just 44 kg and easy to store thanks to optimised dimensions. Ideal for fitting under the vehicle floor it provides 2600 watt continuous output and is also both extremely efficient and quiet. A top seller!



T2500 H – inexpensive, reliable petrol generator. Installation under the vehicle floor or in a storage compartment. 2000 watts continuous output. Supplied complete with remote control and fixing material.



3.39

#### Dometic TEC 29

2.6 kW generator for 230 volts AC, fuelled by petrol

- Output voltage: 230 volts AC ±1% (continuous)/pure sine wave voltage
- Continuous output: 2600 watts, peak output: 2900 W
- Weight: 44 kg

Ref. No. 9102900200

#### Dometic T 2500H

2.0-kW generator for 230 volts A/C, fuelled by petrol

- Output voltage: 230 volts AC ±10% (continuous)/pure sine wave voltage
- Continuous output: 2000 watts, peak output: 2200 W
- Weight: 50 kg

Ref. No. 9102900005

#### **DIESEL GENERATORS**

**TEC 30EV – fuel-saving diesel generator** Only 0.7 litres of diesel/
hour and excellent sound insulation
for low-noise operation. Stateof-the-art inverter technology
prevents over- and under supply of
connected consumer units.



TEC 40D – powerful diesel, pleasantly quiet. 3500 watts continuous output. Reliable, fuelsaving and extremely quiet for a diesel generator of its class (only 64 dBA at a distance of 7 metres) Well proven in professional use.



constant speed



3.39

#### Dometic TEC 30EV

2.5 kW generator for 230 volts AC, fuelled by diesel

- Output voltage: 230 volts AC ±1% (continuous)/pure sine wave voltage
- Continuous output: 2500 watts, peak output: 2900 W
- Weight: 70 kg

Ref. No. 9102900033

#### Dometic TEC 40D

3.5 kW generator for 230 volts AC, fuelled by diesel

- Output voltage: 230 volts AC ±1% (continuous)/pure sine wave voltage
- Continuous output: 3,500 watts, peak output: 3900 W
- Weight: 96.5 kg

Ref. No. 9102900201

#### REGULAR UNLEADED PETROL/LPG GENERATOR

#### TEC 60 / TEC 60LPG:

Ample power with petrol or LPG. At a continuous power rating of 6200 watts Petrol and 6000 watts LPG it's amazingly quiet and fuel saving. Clean sine wave voltage and high peak output thanks to well proven inverter technology!



variable speed



#### Dometic TEC 60 / TEC 60LPG

 $6.2~\mathrm{kW}$  petrol or  $6.0~\mathrm{kW}$  LPG generator, fuelled by normal unleaded petrol or LPG

- High continuous output, low consumption
- Robust design in stainless steel cabinet
- Remote control with illuminated display

TEC 60 (regular unleaded petrol) // Ref. No. 9102900229

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## DOMETIC **C**STORE POWER STORAGE MADE EASY

With the eSTORE lithium ion battery, Dometic provides an energy storage medium far superior to commonly used lead-acid or lead-gel batteries. It easily gives five times more charging cycles, is up to 60% lighter in weight and compact in size, too.

No maintenance, and no sulphate build-up either. Instead, sensationally fast charging: 1 – 3 hours on the mains hook-up or generator is enough to bring Dometic eSTORE back to full capacity.

The integrated battery management system (BMS) protects the battery from excessive charging currents, charging voltages or operating temperatures. It informs about the charging state and balances the battery cells. Dometic's lithium ion battery is ideal for use in recreational vehicles, mobile shops etc. and contributes to an unprecedented level of independence in terms of mobile energy supply.



#### eSTORE Interfaces

- eCORE communication
- 3. Command for internal main switch
- LED
- CI/LIN BUS communication
- 6. 2 x RJ11 eSTORE to eSTORE





#### High-quality lithium ion technology for perfect power management

3.48

#### Dometic eSTORE

Lithium ion battery, 100 Ah / 12 V CAN bus based system, CIB-compatible

- Rechargeable lithium ion battery
- Up to 60% lighter than gel batteries
- 5 x more charging cycles
- Optimised charging in 1 3 hours, depending on the battery charger
- Maintenance-free
- Intelligent battery monitoring with the integrated battery management system (BMS)
- Overvoltage protection
- Monitors the battery temperature
- Ideal for complex power management configurations: up to 8 batteries can be connected in parallel (= 800 Ah)

Ref. No. 9102900224

Accessories/cables please see technical data, p. 141

Light, strong, super-

compact

## DOMETIC **C**CORE

## EVERYTHING IS ALWAYS UNDER CONTROL

The eCORE central unit is the centrepiece of the Dometic energy management system. It monitors, connects and disconnects devices, ensures safety, charges batteries and keeps all consumer units in check.

Equipped with a sine wave inverter and an automatic charger, eCORE masters even highly complex energy supply situations effortlessly while retaining its full autonomy. The system "wakens" automatically from standby mode as soon as mains power is applied or the engine is started, and is immediately ready to use. If the mains power or the engine is switched off, the battery monitor automatically takes charge to save valuable on-board power.



#### Dometic eCORE - Central unit with integrated sine-wave

inverter and automatic battery charger

Lithium ion battery, 100 Ah / 12 V CAN bus based system, CIB-compatible

Power sharing function:

Supplies the connected appliances with 230 volts and simultaneously charges the battery(ies).

- Uninterrupted power supply (UPS): Supplies the connected appliances with battery current via the inverter output when the external 230-volt power source fails.
- Power support function: Support of the 230-volt mains voltage with energy from the battery.
- Generator function: Operates providing 230 volts AC and automatic battery charging. Functions in stand-alone mode or as support to the mains power.
- · Battery charger function:
  - Charges the battery(ies) from the 230-volt mains (6-step charging characteristics). Can be set for lithium ion batteries as well as gel, AGM and wet-cell batteries.
- Inverter function:
- Supplies connected appliances with pure 230-volt sine wave power.
- DC kit function:

Travel energy for battery recharging and inverter functions. Allows running connected appliances during the drive.

Ref. No. 9102900221



#### eCORE connections

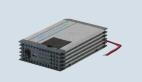
- 1 Main battery
- 2 Travel energy (DC kit)
- 3 AC compressor control (appliances without communication bus)
- 4 CAN ports for other appliances
- 5 ePOWER T input
- 6 12 V DC / 10 A battery output
- 7 12 V DC output
- 8 D+ for DC Kit
- 9 230 V AC mains output
- 10 230 V AC inverter output
- 11 230 V AC mains input
- 12 Main switch

#### 3.30 // WAECO SinePower

#### Sine wave inverters

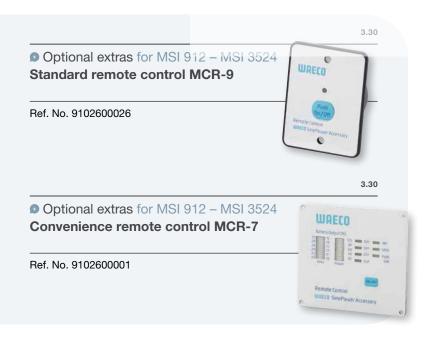








W	MSI 212 / MSI 224	MSI 412 / MSI 424	MSI 912 / MSI 924
Ref. No.	9102600124 9102600125	9102600126 9102600127	9102600011 9102600012
Ref. No. UK	9102600139 9102600140	9102600141 9102600142	9102600033 9102600034
Input voltage (V DC)	12 (11 – 15 V) 24 (22 – 30 V)	12 (11 – 15 V) 24 (22 – 30 V)	12 (10.5 – 16 V) 24 (21 – 32 V)
Output voltage (V AC)/ shape	$^{230}$ / pure sine wave $\sim$	$^{230}$ / pure sine wave $\sim$	230 / pure sine wave $\sim$
Output frequency (Hz)	50	50	50
No-load current consumption (A)	0.6 / 0.5	0.6 / 0.5	1.8 / 1.0
Standby current consumption (A)	-	-	0.5 / 0.3
Continuous output (watts)	150	350	900
Peak output (watts)	300	700	1600
Energy efficiency up to (%)	90	90	92
<b>Dimensions</b> (W x H x D, mm)	124 x 49 x 199	124 x 49 x 199	197.5 x 94.3 x 291
Weight (kg, approx.)	0.82	0.82	3
Integrated mains priority output with voltage synchronisation	-	0.0	-
Test marks		e-approved (Automotive EMC Directive)	
Protection class		equivalent to IP 21	
Optional extras			
DC connection cable	-	-	9102700001
Standard remote control MCR-9	_	- 4	9102600026
Convenience remote control MCR-7		6	9102600001
Priority circuit VS-230	-	- R	9103556043









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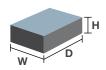
MSI 1312 / MSI 1324	MSI 1812 / MSI 1824	MSI 1812T / MSI 1824T	MSI 2312T / MSI 2324T	MSI 3512T / MSI 3524T
9102600113 9102600114	9102600115 9102600116	9102600117 9102600118	9102600119 9102600120	9102600121 9102600122
9102600035 9102600036	9102600037 9102600038	9102600039 9102600040	9102600041 9102600042	9102600043 9102600044
12 (10.5 – 16 V) 24 (21 – 32 V)	12 V (10.5 – 16 V) 24 V (21 – 32 V)	12 (10.5 – 16 V) 24 (21 – 32 V)	12 (10 – 16 V) 24 (20 – 32 V)	12 (10 – 16 V) 24 (20 – 32 V)
230 / pure sine wave $\sim$	230 / pure sine wave $\sim$	$230$ / pure sine wave $\sim$	230 / pure sine wave $\sim$	230 / pure sine wave $\sim$
50	50	50	50	50
2.1 / 1.1	2.1 / 1.1	2.1 / 1.1	3.1 / 1.5	2.7 / 1.3
0.5 / 0.3	0.5 / 0.3	0.5 / 0.3	1.1 / 0.7	1.1 / 0.7
1300	1800	1800	2300	3500
2400	3200	3200	4000	6000
92	92	92	92	92
197.5 x 94.3 x 324.6	197.5 x 94.3 x 376	197.5 x 94.3 x 406	283 x 128.4 x 436	283 x 128.4 x 496
4	5	6.5	7.5	9
-	circo.			•
	e-:	approved (Automotive EMC Directi	ve)	

equivalent to IP 21

9102700002	9102700002	9102700002	9102700004	On request
9102600026	9102600026	9102600026	9102600026	9102600026
9102600001	9102600001	9102600001	9102600001	9102600001
9103556043	-	-	- (R)	-

#### 3.18 // WAECO PerfectPower

#### **Inverters**



Ref. N	10.
--------	-----

Ref. No. UK

Output voltage/curve (V AC)

Output frequency (Hz)

No-load current consumption (A)

Continuous output (W) Peak output (W)

Cooling

Energy efficiency up to (%)

Mains priority circuit

Dimensions (W x H x D, mm)

Weight (approx. kg)

**Test marks** 

Protection class

Optional extras DC connection cable

Standard remote control MCR-9











PP 152 / PP 154	PP 402 / PP 404	PP602 / PP604	PP1002 / P1004	PP 2002 / PP 2004
9105303791 / 9105303794	9105303796 / 9105303799	9105303801 / 9105303804	9102600002 / 9102600028	9102600027 / 9102600029
9105303792 / 9105303795	9105303797 / 9105303800	9105303802 / 9105303805	9102600003 / 9102600024	9102600005 / 9102600006
		12 (11 – 15) / 24 (22 – 30)		
	2	230/modified sine wave <sup>17</sup>	и	
50	50	50	50	50
0.25	0.25	0.25	< 0.8	< 1.5
150	350	550	1000	2000
350	700	1100	2000	4000
		Fan		
90	90	90	85	85
-	-	-	•	•
129 x 71 x 177	129 x 71 x 192	129 x 71 x 237	176 x 95 x 338	176 x 95 x 443
0.84	0.99	1.4	3.5	5

e-approved (Automotive EMC Directive)

Equivalent to IP 21



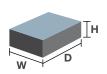






9102700006 9102600026

#### **Battery care**



#### Ref. No.

Input voltage (V AC or DC)

Input frequency (Hz)

Cut-in voltage (V)

Standby current (mA)

**Battery terminals** 

End-of-charging voltage (V DC)

Float charge voltage

**Charging control** 

Max. charging current (A)

Operating temperature (°C)

Dimensions (W x H x D, mm)

Weight (approx. kg)

**Quality features** 

**Test marks** 

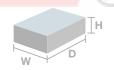
#### 3.28 // WAECO PerfectBattery





DC 100	DD 10
	BR12
9102500044	9103556045
230 (180 – 253)	12
50 – 60	-
-	> 12.6 ± 0.2
-	< 0.2
1	1
13.8	
13.0	-
3 LEDs	-
1.0	-
-20 to +50	-
70 x 100 x 60	100 x 67 x 25
0.45	0.12
Overload and short-circuit protection	
	e-approved

#### **Smart inverter**



D	of	NL	_
п	CI.	140	J.

Input voltage (V DC) Output voltage (V AC) shape Output frequency (Hz) No-load current consumption (A) Continuous output (watts) Peak output (watts) Energy efficiency up to (%) Dimensions (W x H x D, mm) Weight (kg, approx.)

#### 3.29 // WAECO PocketPower **Smart inverter**



#### SI 102 9105303816 \*

12 (11 – 15 V)
230 / modified sine wave <sup></sup>
50
< 0.4
100
200
90
67 x 43 x 125
0.282
e-approved (Automotive

EMC Directive)

\* Not suitable for the UK

Test marks

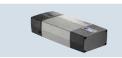
(Automotive EMC Directive)

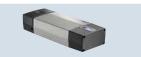
#### 3.16 // WAECO PerfectCharge MCP

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#### **Battery chargers**





	MCP 1204	MCP 1207	
Ref. No.	9102500070 *	9102500071 *	
Charger outputs	one (very flexible thanks to plug connector)		
Charging characteristics	8-step		
Input voltage (V)	230 (180 – 253)		
Charging current max.	4 A	7 A	
Recommended battery capacity	Charging: 7 – 110 Ah / Float charging: 7 – 180 Ah	Charging: 15 – 160 Ah / Float charging: 15 – 250 Ah	
Dimensions (W x H x D)	90 x 55 x 220 mm	90 x 55 x 250 mm	
Weight	0.5 kg 0.7 kg		
Oprional extras			
Battery indicator BI 01	9102500078	9102500078	

9102500079

\* Not suitable for the UK

#### Lithium ion battery

Wall bracket





#### Central unit



9102500079

Dometi	c eSTORE

Battery capacity (Ah)
Battery voltage (V, DC)

Continuous output (W)

Charging temperature (°C)

Operating temperature (discharging) (°C)

Number of cycles

Sulfation

Ref. No.

Charging time (h) Dimensions (B x H x T,mm)

Weight (kg)

**Test marks** 

Type of protection

9102900224

12 2000

100

-10 to +55(< 0°C charging at max. 5 A > 0°C charging at max. 40 A)

-30 to +55

Up to 2000 (25°C, 80% DOD depth of discharge)

1:15 (with Dometic eCore)

315 x 285 x 160

17

e-certified (Automotive EMC Directive) UN38.3, IEC62133, UN 3480

Equivalent to IP 21

#### Optional extras Dometic eSTORE and Dometic eCORE

eStore configuration kit	9102900281
eStore – eStore BUS cable kit	9102900279
eStore – eCore BUS cable	9102900280
eStore - MPC 01 BUS cable	9102200197
eStore - MCA BUS cable	9103530048
DCDC40 - eStore	9102500076
Mounting brackets (vertical)	9102900289
Mounting brackets (horizontal)	9102900290
Replacement Fuse (250A)	9102900282

**IU0U** automatic chargers

Input voltage

Output voltage

Output voltage waveform

Frequency

**Total distortion factor** 

Continuous battery output

Continuous ePOWER T output

Continuous eSYSTEM output

Peak output

Max. starting current

Transfer current

Transfer time

#### 3.48 // Dometic eCORE



#### Dometic eCORE

9102900221

10.5 to 15.0 volts DC

230 V AC ±5%

Pure sine wave  $footnote{}$ 

50 Hz ±1% (can be set)

< 1%

2000 W

1800 W

3000 W

6000 W (with Power Sharing)

33 A

230 V / 50 A

< 10 ms

#### **IU0U** automatic chargers

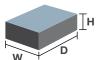
Characteristic charge curve	IU0U, 6-stage, conditioning function		
Input voltage	207 – 253 V AC		
Input frequency	45 – 55 Hz		
Charging current	10 - 100 A (can be set)		
End-of-charge voltage	14.4 V DC (can be set)		
Float charge voltage	13.6 V DC (can be set)		
Second charger output (starter battery)	10 A, IU0U, 3-stage		

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#### 3.16 // WAECO PerfectCharge MCA

#### **IU0U** automatic chargers



W				
Ref. No.				
Ref. No. UK				
Charging ports				
Input voltage (V)				
Output voltage (V)				
Frequency (Hz)				
End-of-charging voltage (V)				
Float charging voltage (V)  Recommended battery capacity (Ah)				
Energy efficiency up to (%)				
Charging current (A)				
Operating temperature (°C)				
<b>Dimensions</b> (W x H x D, mm)				
Weight (kg) 6-stage charging characteristics				
				Overload/short-circuit protection



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MCA 1215	MCA 1225	MCA 1235	MCA 1250	MCA 1280
9102500027	9102500028	9102500029	9102500030	9102500031
9102500046	9102500047	9102500048	9102500049	9102500050
1 + 1	2 + 1	2 + 1	3	3
		90 – 260		
-	-	-	-	-
		50 – 60		
		14.4/14.7		
		13.8		
40 – 170	75 – 300	100 – 400	150 – 600	200 – 800
		8 or 16		
		92		
15	25	35	50	80
		-20 to +50		
179 x 63 x 238	179 x 63 x 238	179 x 63 x 274	208.5 x 75 x 283	208.5 x 75 x 303
1.6	1.7	1.9	3.1	4
•	•	•	•	•
•	•	•	•	•
Using the remote control or dip switch on the device				

Lead-acid batteries (liquid, gel, AGM)

equivalent to IP 21

**Protection class** Optional extras

Sleep mode

**Battery types** Test marks

Temperature sensor MCA-TS1
Remote control MCA-RC1
Battery controller MPC 01
Hella Sensor MCA-HS1

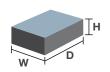
9102500036	9102500036	9102500036
9102500037	9102500037	9102500037
9102500073	9102500073	9102500073
9102500038	9102500038	9102500038

9102500036 9102500037 9102500073

9102500038

3.18 // WAECO PerfectPower

#### **Voltage converters**



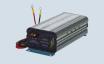
Ref. No.
Input voltage (V DC)
Input voltage range (V DC)
Output current (A)
Output voltage (V)
Energy efficiency (%)
Ripple & Noise (mA)
<b>Dimensions</b> (W x H x D, mm)
Weight (approx. kg)
Test marks











DCDC 10	DCDC 20	DCDC10	DCDC 20	DCDC 40
9102500057	9102500058	9102500061	9102500059	9102500060
12	12	24	24	24
8 to 16	8 to 16	20 to 32	20 to 32	20 to 32
10	20	10	20	40
27.6 ±0.1	27.6 ±0.1	27.6 ±0.1	13.8 ±0.1	13.8 ±0.1
87	87	87	87	87
40	40	40	20	20
115 x 70 x 155	115 x 70 x 240	115 x 70 x 140	115 x 70 x 155	115 x 70 x 240
1.2	1.9	1.0	1.2	1.9

e-approved (Automotive EMC Directive)

#### 3.16 // WAECO PerfectCharge IU charging converters









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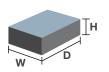




MCA 2415	MCA 2425	MCA 2440	DC 08	DC 20	DC 40
9102500032	9102500033	9102500034	9102500055	9102500045	9102500056
9102500051	9102500052	9102500053			
2	3	3	-	-	-
	90 – 260			12 (8 – 16)	
-	-	-		14.2 ±0.1	
	50 – 60		-	-	-
	28.8 / 29.4		-	-	-
	27.6		-	-	-
40 – 170	75 – 300	100 – 400	-	-	-
	8 or 16		-	-	-
	92			87	
12.5	25	40	8	20	40
	-20 to +50		-	-	-
179 x 63 x 238	<b>20</b> 8.5 x 75 x 283	208.5 x 75 x 303	115 x 70 x 100	115 x 70 x 160	115 x 70 x 270
1.6	2.9	3.9	0.75	1.2	2.1
•	• 44	•	-	-	-
•	•	•	_	_	-
Using the r	emote control or dip switch o	n the device		-	-
Lea	ad-acid batteries (liquid, gel, A	AGM)	10 A	-	-
-	- 4000	<b>K</b> -=	e-ap	proved (Automotive EMC Dire	ective)
	equivalent to IP 21		P 13 4		-
9102500036	9102500036	9102500036	-	-	-
9102500037	9102500037	9102500037	-	6	-
-	-	-	-	(R)	-
_	_	_	_		-

#### 3.18 // WAECO PerfectPower

#### **Voltage converters**



Ref. No.
Input voltage (V DC)
No-load input current (mA)
Nominal input current (A)
Output voltage (V DC)
Nominal output current (A)
Peak output current (A)
Energy efficiency (%)
Dimensions (W x H x D, mm)
Weight (approx. kg)
Test marks



DCDC 06	DCDC 12	DCDC 24	
9103555787	9103555788	9103555789	
20 to 30 V DC	20 to 30 V DC	20 to 30 V DC	
8	8	8	
5	10	18	
13.8 V DC -10%	13.8 V DC -10%	13.8 V DC -10%	
6	12	24	
10	18	30	
up to 90	up to 90	up to 90	
105 x 47 x 118	105 x 47 x 128	105 x 47 x 158	
0.45	0.5	0.7	
e-approved (Automotive EMC Directive)			

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#### 3.39 // Generators

#### **Generators**



W					
VV	TEC 29	TEC 29LPG	TEC 30EV	TEC 40D	
Ref. no.	9102900200	9102900179	9102900033	9102900201	
Output voltage	230 volts AC ±1% (continuous) / pure sine wave voltage				
Total harmonic distortion (%)	1	1	1	5	
Frequency (Hz)	50 ±1%	50 ±1%	50 ±1%	50 ±1%	
Max. starting current (A)	33	33	33	45	
Continuous output (W)	2,600	2,600	2,500	3,500	
Peak output (W)	2,900	2,900	2,900	3,900	
Engine output (kW (PS))	4.0 (5.5)	4.0 (5.5)	3.3 (4.5)	4.7 (6.4)	
Operating mode/fuel	RON 91 regular grade petrol	Gas; LPG with at least 60 % propane content	Diesel	Diesel	
Consumption	max. 1.2 l/h	max. 1.0 kg/h	max. 0.7 l	max. 1.4 l	
Sound level at 7 m distance (dBA)	54-59	54-59	60	64	
Guaranteed sound level (dBA)	86	86	84	89	
<b>Dimensions</b> (W x H x D mm)	480 x 290 x 385	480 x 290 x 385	465 x 465 x 466	765 x 457 x 467	
Width with suspension (mm)	580	580	572	765	
Housing finish	stainless steel	stainless steel	stainless steel	stainless steel	
Weight (kg)	44	44	70	96.5	
Auto start function				•	
12 volt output for battery charging			•	•	
Quality features	protection, sound insulation,	Low-oil cut-off, electrical starter, overload and short-circuit protection, sound insulation, operation via external control panel, alarm functions, variable generator speed		Low-oil cut-off, electrical starter, overload and short-circuit protection, sound insulation, operation via external control panel, alarm functions	
Test marks	E13	E13	E13	E24	
Optional extras					
Plastic petrol tank with lock cap and fuel reserve float	9102900009	-	9102900009	9102900009	
Plastic petrol tank with supports and integrated feed mouth	9102900010	-	9102900010	9102900010	
Stainless steel tank 20 litres	9102900011	-	9102900011	9102900011	
Tank hose set	9102900003	-	9102900003	9102900003	
Flexible metal hose 25 mm, 2 m *	9102900137	9102900137	9102900137	9102900137	
Flexible metal hose 25 mm, 5 m	9102900138	9102900138	9102900138	9102900138	
Battery charging regulator	-	-	-	-	
Floor chimney  Change-over switch (generator/mains)	-	-	-	-	
* Already included in the scope of delivery of the generators excluding the T 2500H	580 480 0 0 0 0 0	580 480 966	572 465 465 466	467 0 0 56 370 765	



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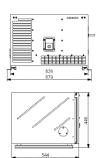


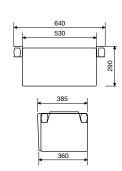
TEC 60 / TEC 60LPG	T 2500H
9102900229 (Normal 9102900230 unleaded petrol) (LPG)	9102900005
230 volts AC ±1% (continuous) / pure sine wave voltage	230 volts AC ±10% (continuous) / pure sine wave voltage
< 3%	5
50 Hz ± 1%	50 ±5%
85 A	24
6200 W	2,000
7000 W	2,200
6,6 kW / 8,9 PS	4.0 (5.5)
Unleaded petrol Liquid gas	RON 91 regular grade petrol
max. 3.7 l/h max. 3.0 kg/h	max. 1.2 l
66	60
90	86
625 x 541 x 446 mm (plus electronic box)	530 x 290 x 385
679 mm	640
stainless steel	stainless steel
102	50
•	100-8
•	with optional charging regulator
Low-oil cut-off, electrical starter, overload	Low-oil cut-off, electrical starter, overload

Low-oil cut-off, electrical starter, overload and short-circuit protection, sound insulation, operation via external control panel, alarm functions, variable generator speed

E13

9102900009	9102900009
9102900010	9102900010
9102900011	9102900011
9102900003	9102900003
9102900137	9102900137
9102900138	9102900138
-	9102900014
-	9102900023
_	9102900013









#### **KITCHEN SOLUTIONS**

**Technical data** 



Microwave oven	144
Coffee makers	146
Electric kettle	148
Wet/dry vacuum cleaner	149

GO

#### A kitchen on board ...

If you are the independent sort and pack enough food and drinks for the journey, then by having your own kitchen equipment on board, you can even prepare something hot when you stop for a break: coffee, tea, cappuccino or even a small meal, then you are ready to set off again full of energy.



## **GREAT FOR A QUICK ON-BOARD BREAK** MOBILE HOUSEHOLD DEVICES

Why waste time and money with motorway services when there is a low cost alternative available? The Dometic WAECO kitchen range gives you plenty of ways to have a quick break on board. Make coffee and tea, prepare an instant soup and then vacuum away the crumbs - all just as quick and convenient as at home.

All devices are practical and safe to use, accessories for installation in the vehicle are included.





#### Coffee maker

#### WAECO PerfectCoffee MC 052 / 054

Coffee maker for 5 cups, specially designed for mobile use. Easily accessible swivel filter. Safe fastening glass pot with transport securing device, fixing kit for wall or desk mounting. Models for 12 and for 24 volts.

P. 146



#### **Electric kettle**

#### WAECO PerfectKitchen MCK 750

For tea, soup, cappuccino and more. Capacity approx. 0.75 litres. Robust technology for safe operation on the move. Automatic switch-off when boiling temperature is reached. Fixing kit for wall or desk mounting. Models for 12 and for 24 volts.



P. 149

#### Wet/dry vacuum cleaner

#### WAECO PowerVac PV 100

Cordless operation with rechargeable, maintenance-free 12-volt battery. High vacuum power, maximum mobility. Various attachments and easy to clean textile filter. The universal vacuum cleaner for car, truck, van and home use.



P. 149

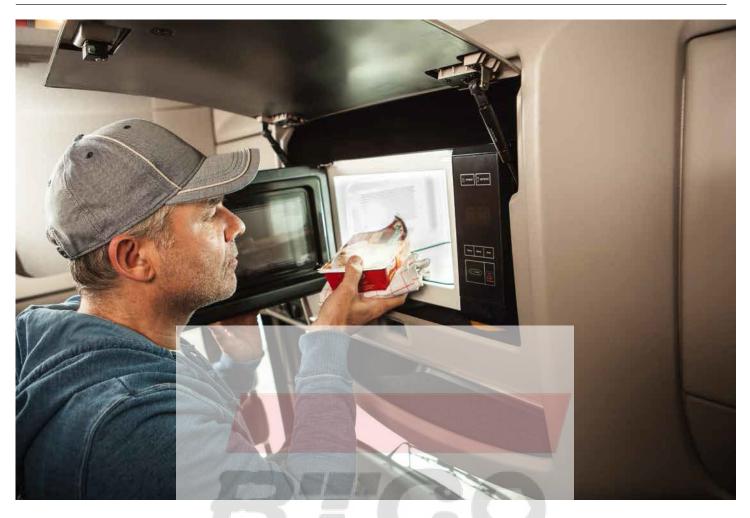
#### **Microwave**

#### Dometic Roadmate MWO 230

The Dometic Roadmate MWO 230 has been approved by leading truck manufacturers for use in their vehicles. DAF, Scania and Volvo have already developed their own fixing kits for selected types of vehicles.





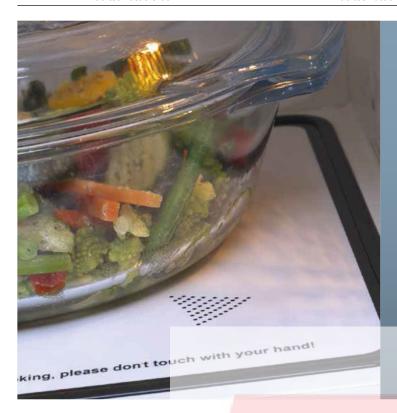


# A GENUINE "ROAD MATE" HIGH QUALITY MICROWAVE OVEN FOR TRUCKERS

Tested by leading truck manufacturers and found fully suitable for use on the road: the Dometic Roadmate MWO 230 sets new standards in terms of safety and ease of use. **Having no turntable**, it is virtually indestructible and especially easy to clean. In the vibration test it stood head and shoulders above the models of other manufacturers. It also topped the E-certification with excellent results. This is where the excellent work of Dometic's product designers pays off. The power management was exactly geared for use in trucks and to keep energy consumption as low as possible despite the high heat output, the Roadmate MWO 230 is connected to the 24-volt system via an inverter that is supplied with each unit. A user-friendly remote control for the inverter is included in the delivery kit.



The Dometic Roadmate MWO 230 has been approved by leading truck manufacturers for use in their vehicles. DAF, Scania and Volvo have already developed their own fixing kits for selected vehicle models. With these references, the new microwave oven from Dometic has excellent chances to be included in the equipment lists of the manufacturers.



### **MY BENEFITS**

- Approved road compatibility (vibration test)
- No turntable easy to clean, less breakable parts
- Inverter with pure sine wave voltage for lowest possible energy consumption
- Power management designed for trucks
- Approved by leading truck manufacturers
- Electronic control panel
- Set Cooking time by use of 3 number buttons (1 minute / 30 seconds / 10 seconds)
- 3 different power levels (400 / 500 / 600 W)
- Defrost function









3.47

### Dometic Roadmate MWO 230

### Microwave

- Approved road compatibility (vibration test)
- Without turntable easy to clean and robust
- E-certified (Automotive EMC Directive)
- Voltage: 24 volts DC to 230-volt AC inverter
- Dimensions (W x H x D): 457 x 271 x 360 mm

Ref. No. 9103533012

### Our tip!

### Plug and play installation inverter is included!

How many watts of continuous power should my 24/230-volt converter have for me to run the microwave oven with peace of mind? This is the question you face with many truck microwave

ovens. Not with the Roadmate MWO 230. The matching inverter is already included in the pack and it is technically coordinated with the microwave.



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# A GREAT, SAFE WAY TO HAVE A CUPPA MOBILE COFFEE MAKER FOR 5 CUPS

Modern design and many practical details are the hallmarks of this coffee maker which ensures continuous coffee supply during the breaks. Up to 5 cups (625 ml) are quickly brewed and kept hot on the warming plate for a long time. The swing filter is easy to access and easy to fill. **A transport securing device holds the glass pot in place.** The coffee maker itself is steady as a rock, held in place by the fixing kit. Available as 12 volt and 24 volt version, the well-engineered device is suitable for all mobile applications: car, motorhome, truck, yacht and boats.



3.13

### WAECO PerfectCoffee MC 052 / 054

Coffee maker for 5 cups, 12 or 24 volts

- Capacity 5 cups (625 ml)
- Average power consumption 12 volts: 170 watts, 24 volts 300 W
- Swing filter for easy operation, integrated transport securing device for the glass pot, warming plate with thermostat, fixing kit for wall or desk mounting
- Weight: 1.1 kg
- Dimensions (W x H x D) 240 x 270 x 155 mm
- E-certified (Automotive EMC Directive), food-safe according to the German Foodstuff and Consumer Goods Act (LMBG)

MC 052 12 V // Ref. No. 9103533013 MC 054 24 V // Ref. No. 9103533014











### PERFECT SERVICE ON BOARD

### SPACE-SAVING AND PRACTICAL

The PerfectCoffee MC 01 is a hot tip for solo travellers who fancy a cuppa only now and then. The compact 1-cup coffee maker takes up very little space and is very handy to use. Place some ground coffee into the filter, pour in some water - the same as at home. Push the plug into the cigarette lighter socket, switch the unit on, and five minutes later coffee is ready. The MC 01 is a genuine price hit, and has been a hot seller for years. It is available in a 12 volt and 24 volt version.



3.13

### WAECO PerfectCoffee MC 01

1-cup coffee maker, 12 or 24 volts

- Fresh coffee after 5 minutes of brewing time
- Fixing kit for desk mounting
- For cars, trucks, motorhomes or boats
- Specially designed for mobile use

MC 01 12 V // Ref. No. 9103533009 MC 01 24 V // Ref. No. 9103533010







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## FOR A WARM FEELING INSIDE COFFEE OR SOUP IN NO TIME AT ALL

Do you prefer your coffee the "Turkish way"? Just put two spoons of coffee into the mug, fill it with hot water, stir and that's it? Then this kettle is a handy gadget to have. It won't hurt your pocket and can also be used to make a quick cup of tea, cappuccino or soup. Available in two versions - 12 volts or 24 volts. Fixing kit included.

3.14

### WAECO PerfectKitchen MCK750

Electric kettle for 12 volts or 24 volts

- Capacity: approx. 0.75 litres
- Average power consumption: 12 volts: 200 watts, 24 volts 380 W
- Automatic switch-off when boiling temperature is reached, robust relay technology, wall or desk mounting
- Weight: 0.8 kg
- Dimensions (W x H x D) 190 x 205 x 125 mm (incl. fixing kit)
- E-certified (Automotive EMC Directive), food-safe according to the German Foodstuff and Consumer Goods Act (LMBG)

12 V // Ref. No. 9103533003 24 V // Ref. No. 9103533004





### THE BENEFITS

- Ideal for car, truck, motorhome, caravan and home use
- With rechargeable, maintenance-free 12-volt battery
- Various nozzle attachments
- Easy to clean (textile filter)

# WET/DRY VACUUM CLEANER CORDLESS WITH BATTERY POWER

**Performance power for you with the PowerVac!** With its 90 watt /400 mm water column vacuum power, it copes with all the dirt you want to get rid of in your cabin or storage compartments. **Wet or dry – it makes no difference to the PowerVac.** Fitted with special attachments, it cleans the tiniest gaps and removes every spec of dust from the seat covers.

It's substantial vacuuming power is more than a match for even the most stubborn dirt or spills and without cables getting in your way, so you can move freely even in tight cabins. Your compact little helper requires very little space and you can even put it in the outside storage compartment, after all, it is clean now.

3.31

### WAECO PowerVac PV 100

Wet/dry vacuum cleaner with 12-volt rechargeable battery

- Universal use in vehicles and at home
- Maximum mobility through cordless operation
- Battery can be recharged from 12 volts and 230 volts

PowerVac PV 100 // Ref. No. 9103500212







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#### 3.47 // Dometic Roadmate

### 3.14 // WAECO PerfectKitchen

### Microwave oven / Electric kettle / **Coffee makers**





	MWO 230	MCK750
Item no.	9103533012	9103533003 (12 V) 9103533004 (24 V)
Voltage	24 volts DC on 230-volt AC inverter	12 or 24 V DC
Capacity	20 litres	approx. 0.75 litres
Nominal input current (A)	30	-
Power consumption (W)	800	12 V: 200 24 V: 380
Colour	-	Black/silver
<b>Dimensions</b> (W x H x D, mm)	457 x 271 x 360	190 x 205 x 125 (incl. fixing kit)
Weight (kg)	12.9	0.8
Quality features	Approved road compatibility (vibration test), easy to clean, user- friendly inverter remote control, inverter with pure sine wave voltage for lowest possible power consumption, power management geared for use in trucks	Robust relay technology, switches off automatically when the boiling temperature has been reached, or when there's no water in the kettle, status indication
Test marks	E-approved (Automotive EMC Directive)	E-approved (Automotive EMC Directive), food-safe according to the German Foodstuff and Consumer Goods Act (LMBG)
Scope of delivery	Microwave oven, inverter, inverter remote control	Fixing kit for wall or desk mounting



### Wet/dry vacuum cleaner



	PV 100
Item no.	9103500212
Battery	12 V AC, 2.6 Ah
Motor	12 V DC, 28000 min <sup>-1</sup>
Power consumption (W)	approx. 90
Vacuum power	approx. 400 mm water column (±10%)
Service life	max. 18 min ±10%
Operating temperature	0 °C to +40 °C
Charging time	10 – 14 h (automatic switch-off)
Capacity	3.81
Dimensions (W x H x D, mm)	270 x 320 x 198
Weight (kg)	2.15
Quality features	Extendible crevice nozzle for narrow gaps and also between the front seats Brush attachment for doormats, rugs and upholstery
Test marks	-
Scope of delivery	Vacuum cleaner, hose, attachments for upholstery, rugs and narrow gaps, carrying strap, mains adapter, 12-volt charging cable, operating instructions

#### 3.13 // WAECO PerfectCoffee





MC 052	MC 054
9103533013 (12 V)	9103533014 (24 V)
12 volts DC	24 V DC
5 cups (625 ml)	5 cups (625 ml)
-	-
170	300
Black/silver	Black/silver
240 x 270 x 155 (incl. fixing kit)	240 x 270 x 155 (incl. fixing kit)
1.1	1.1

Swing filter for ease of use, integrated transport securing device for the glass pot, warming plate with thermostat, fixing kit for wall or desk mounting

E-approved (Automotive EMC Directive), food-safe according to the German Foodstuff and Consumer Goods Act (LMBG)

Glass pot, fixing kit for wall or desk mounting



### Coffee maker

Item no.



9103533009 (12 V)

	9103533010 (24 V)	
Voltage	12 or 24 volts DC	
Capacity	1 cup	
Power consumption (W)	12 V: 180 24 V: 250	
Colour	Silver/black	
Dimensions (W x H x D, mm)	135 x 190 x 110 (incl. fixing kit)	
Weight (kg)	0.75	
Quality features	Short brewing time, automatic switch-off, boil-dry protection	
Test marks	Food-safe according to the German Foodstuff and Consumer Goods Act (LMBG)	
Scope of delivery	Coffee maker with connection cable and plug, ceramic mug, fixing kit	







WAECO CoolAir







Dometic SAFE





WAECO MagicComfort



WAECO MagicWatch



WAECO PerfectView







Product	Description	Ref. No.	PG	Page
Air conditioners				
Truck roof air conditioners for station	nary use, 24 volts			
CoolAir RTX 1000	NEW Truck roof parking cooler	9105306210	2.09	10
CoolAir RTX 2000	NEW Truck roof parking cooler	9105306212	2.09	11
Truck split air conditioners for station	nary use, 24 volts			
CoolAir SP950C	Compressor unit for truck split parking coolers	9105305550	2.09	13
CoolAir SP950I	Interior evaporator unit for truck split air conditioner	9105305612	2.09	13
CoolAir SP950T	Roof evaporator unit for truck split air conditioner	9105305549	2.09	13
CoolAir Accessories	Installation kits / fastening frames		2.09	16/17
Vehicle accessories				
Alarm systems				
MagicSafe MS 660	Alarm system	9101600001	3.08	22
MagicSafe MSG 150	Gas detector	9103555858	3.08	22
Safes				
SAFE 310C	Safes with mechanical locking system	9106600543	3.34	23
SAFE 361C	Safes with mechanical locking system	9106600002	3.34	23
SAFE MD 281C	Safes with automatic locking system	9106600003	3.34	23
SAFE MD 361C	Safes with automatic locking system	9106600004	3.34	23
Cruise controls				
MagicSpeed CBI 150	Interface for converting digital CAN bus signals	9101400060	3.06	24
MagicSpeed MS 880	Cruise control	9101400078	3.06	25
MagicSpeed Accessory	Control element	9103555853	3.06	25
MagicSpeed Accessory	Control element (only MS 880)	9101400068	3.06	25
Radio remote controls	Solitor domain (emy ime essy)	0.0.100000		
MagicTouch MT 200	Radio remote control	vehicle-specific	3.05	26
MagicTouch MT 400	Radio remote control	9101300007	3.05	26
Seating comfort	Tiddle formets control	0101000001	0.00	
MagicComfort MCS 20	Air-conditioned seat cover	9101700043	3.23	27
MagicComfort MH 40	Heated seat cover, black	9101700023	3.23	27
MagicComfort MH 40		9101700024	3.23	27
MagicComfort MSH 60	Heated seat cover, grey/black  Retrofit insert seat heaters (for two seats)	9101700024	3.23	28
MagicComfort MSH 601	Retrofit insert seat heaters (for one seat)	9101700026	3.23	28
MagicComfort MSH 300		9101700034	3.23	29
MagicComfort MSH 301	Retrofit insert seat heater carbon (for two seats)		3.23	29
Parking aids	Retrofit insert seat heater carbon (for one seat)	9101700035	3.23	29
	NICIAI Daulina aid fau agus yagu	0101500070	2.07	33
MagicWatch MWE 7106	NEW Parking aid for cars, rear  NEW Parking aid for cars, front	9101500072	3.07	
MagicWatch MWE 7106F	,	9101500073	3.07	33
MagicWatch WPS 900F	Parking aid for cars, front	9101500019	3.07	35
MagicWatch WPS 910	Parking aid for cars, front and rear	9101500020	3.07	35
MagicWatch MWE 9004	Parking aid for cars, rear	9101500054	3.07	35
MagicWatch MWE 9008	Parking aid for cars, front and rear	9101500055	3.07	35
MagicWatch MWE 820	Parking aid for cars, rear	9101500040	3.07	36
MagicWatch MWE 860	Parking aid for cars, rear	9101500041	3.07	36
MagicWatch MWE 890	Parking aid for cars, front	9101500042	3.07	37
MagicWatch MW 650	Parking aid for trucks, 4 sub-mounted sensors, rear	9103555875	3.07	38
MagicWatch MWE 650	Parking aid for trucks, 4 built-in sensors, rear	9103555886	3.07	38
MagicWatch MWE 4004	NEW Blind spot system for trucks	9101500052	3.07	39
Safety solutions				
Cameras for reversing video/navigati	-			
PerfectView CAM 55	NEW High-end camera with extended input voltage range		3.19	48 / 57
PerfectView CAM55W	<b>NEW</b> High-end camera with extended input voltage range		3.19	48
PerfectView CAM 55NAV	<b>NEW</b> High-end camera with extended input voltage range		3.19	48 /57
PerfectView CAM55W NAV	NEW High-end camera with extended input voltage range	9102000099	3.19	48
PerfectView CAM 604	Colour zoom camera	9102000071	3.19	48
PerfectView CAM 604NAV	Colour zoom camera	9102000057	3.19	48
PerfectView CAM44	Twin colour camera with shutter	9102000061	3.19	49
PerfectView CAM 44NAV	Twin colour camera with shutter	9102000062	3.19	49
PerfectView CAM 80CM	Colour shutter camera	9102000066	3.19	49
PerfectView CAM 80NAV	Colour shutter camera	9102000023	3.19	49
PerfectView CAM 18	Colour camera	9102000096	3.19	49
PerfectView CAM 18NAV	Colour camera	9102000103	3.19	49
PerfectView CAM 30C	Colour ball camera	9102000045	3.19	49

WAECO PerfectView











WAECO PerfectView MC







WAECO CoolFreeze

Product	Description	Ref. No.	PG	Page
Cameras for reversing video/navig	pation systems			
PerfectView CAM 40	Colour ball camera	9102000047	3.19	49
PerfectView CAM 29BK	Colour cylinder camera	9102000117	3.19	49/5
PerfectView CAM 29BK NAV	Colour cylinder camera	9102000115	3.19	49/55
PerfectView CAM 29BKS	NEW Colour cylinder camera	9102000118	3.19	49/54
PerfectView CAM 29BKS NAV	NEW Colour cylinder camera	9102000116	3.19	49/54
Monitors	·			
PerfectView M 55L	5" colour LCD monitor	9102100056	3.19	50
PerfectView M 55LX	5" colour LCD monitor	9102100059	3.19	51
PerfectView M 75L	7" colour LCD monitor	9102100057	3.19	50
PerfectView M 75LX	7" colour LCD monitor	9102100058	3.19	51
Complete reversing video systems		0102100000	0.10	
PerfectView RVS 555	NEW RVS with M 55L + CAM 55	9101900003	3.19	53
PerfectView RVS 755			3.19	53
	NEW RVS with M 75L + CAM 55	9101900078		
PerfectView RVS 580	RVS with M 55L + CAM 80CM	9101900040	3.19	53
PerfectView RVS 780	RVS with M 75L + CAM 80CM	9101900084	3.19	53
PerfectView RVS 594	RVS with M 55L + CAM 44	9101900002	3.19	53
PerfectView RVS 794	RVS with M 75L + CAM 44	9101900061	3.19	53
PerfectView RVS 565	RVS with M 55L + CAM 29BK	9101900036	3.19	53
PerfectView RVS 535	RVS with M 55L + CAM 29BKS	9101900001	3.19	53
Complete reversing video systems	s with LX-series monitor			
PerfectView RVS 555X	NEW RVS with M 55LX + CAM 55	9101900086	3.19	53
PerfectView RVS 755X	NEW RVS with M 75LX + CAM 55	9101900062	3.19	52/5
PerfectView RVS 580X	RVS with M 55LX + CAM 80CM	9101900085	3.19	53
PerfectView RVS 780X	RVS with M 75LX + CAM 80CM	9101900083	3.19	53
PerfectView RVS 764X	RVS with M 75LX + CAM 604	9101900087	3.19	53
Moniceiver with reversing camera				
PerfectView MC 402	2-DIN moniceiver	9102100024	3.22	60
PerfectView MC 418	WAECO PerfectView MC 402 + CAM 18NAV	9103531018	3.22	60
PerfectView MC 455	WAECO PerfectView MC 402 + CAM 55NAV	9103531019	3.22	60
PerfectView MC 480	WAECO PerfectView MC 402 + CAM 80NAV	9101900070	3.22	60
PerfectView MC 464	WAECO PerfectView MC 402 + CAM 604NAV	9103531017	3.22	60
PerfectView MC 444	WAECO PerfectView MC 402 + CAM 44NAV	9101900072	3.22	60
PerfectView MC 460	WAECO PerfectView MC 402 + CAM 29BK NAV	9103531021	3.22	60
PerfectView MC 429	NEW WAECO PerfectView MC 402 + CAM 29BKS NAV	9103531047	3.22	60
Interior cameras		7.53	0.22	
PerfectView CAM 11	Mini dome camera	9102000052	3.19	65
PerfectView CAM 12	LED dome camera	9102000053	3.19	65
	LED dome camera	9102000033	5.19	- 03
Heavy-duty components	Oales when a state a surround	040000074	0.40	
PerfectView CAM 604	Colour heavy-duty camera	9102000071	3.19	66
PerfectView CAM 30C	Colour ball camera	9102000045	3.19	66
PerfectView CAM 40	Colour ball camera	9102000047	3.19	66
PerfectView CAM 60ADR	Heavy-duty colour camera	9102000065	3.19	66
PerfectView M 70IP	7" colour LCD monitor	9102100046	3.19	67
PerfectView M 55LX	5" colour LCD monitor	9102100059	3.19	67
PerfectView M 75LX	7" colour LCD monitor	9102100058	3.19	67
PerfectView M 9LQ	NEW Heavy-duty monitor with quad splitter	9102100055	3.19	67
Accessories				
PerfectView Switch VTO200	Switchbox	9102200156	3.19	58
PerfectView VT 100WiFi	NEW WiFi transmitter	9102200217	3.19	62/6
PerfectView VS 400	Video splitter	9102200044	3.19	68
PerfectView SWITCH 300	Switchbox	9102200105	3.19	68
PerfectView REC 400	Video recorder	9102200138	3.19	69
PerfectView VT 100DIG	Digital radio link	9102200116	3.19	70
PerfectView accessories	System cables, extension cables and adapters			71-7
Mobile cooling				
CoolFreeze CFX 28	NEW Compressor cooler	9105305970 // UK 9105306327	4.30	88
CoolFreeze CFX 35	Compressor cooler	9105304047 // UK 9105305645	4.30	88
CoolFreeze CFX 40	Compressor cooler	9105304048 // UK 9105305646	4.30	88
CoolFreeze CFX 50	Compressor cooler  Compressor cooler	9105304049 // UK 9105305647	4.30	88
	·			
CoolFreeze CFX 65	Compressor cooler	9105304050 // UK 9105305648	4.30	88
CoolFreeze CFX 65DZ	Compressor cooler	9105304051 // UK 9105305649	4.30	89



WAECO CoolFreeze



WAECO CoolMatic





WAECO TropiCool



WAECO BordBar

WAECO SinePower



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Product	Docariation	Ref. No.	PG	Pogo
Mobile cooling	Description	nei. No.	ru	Page
	NEW Company cools	0105006101	4.00	89
CoolFreeze CFX 95DZ2	NEW Compressor cooler	9105306181	4.30	
WAECO wireless display	Wireless display	9105304065	4.30	89
CoolFreeze CDF 18	Compressor cooler	9105330241	4.10	90
CoolFreeze CF 11	NEW Compressor cooler	9105330183	4.35	91
CoolFreeze CF 16	NEW Compressor cooler	9105330184	4.35	91
CoolFreeze CF 26	NEW Compressor cooler	9105330185	4.35	91
CoolFreeze CDF 36	New Design Compressor cooler	9105330186	4.10	91
CoolFreeze CDF 46	New Design Compressor cooler	9105330187	4.10	91
Vehicle-specific compressor coolers				
CoolMatic CD 20	Compressor drawer fridge, universal	9105330080	4.24	92
CoolMatic CD 20W	Compressor drawer fridge, universal	9105330081	4.24	92
CoolMatic CD 20S	NEW Compressor drawer fridge, universal	9105330148	4.24	92
CoolMatic CD 30	Compressor drawer fridge, universal	9105330085	4.24	92
CoolMatic CD 30W	Compressor drawer fridge, universal	9105330086	4.24	92
CoolMatic CD 30S	NEW Compressor drawer fridge, universal	9105330147	4.24	92
CoolFreeze FC 40	Compressor cooler	9105203983	4.12	92
CoolMatic CRD 50	Compressor cooler drawer	9105304081	4.24	92
ColdMachine CS IV	Vehicle-specific compressor cooling unit	9105304105	4.07	93
CoolMatic CS MP2	Vehicle-specific compressor drawer	9105203765	4.12	93
CoolMatic RHD 50	Vehicle-specific compressor refrigerator, permanent fitting	9105203982	4.05	93
Thermoelectric coolers	oposino comproccor romgorator, permanent litting			
TropiCool TC 07	Thermoelectric cooler	9105302036 // UK 9105303473	4.01	95
			4.36	
TropiCool TCX 14	NEW Thermoelectric cooler	9105330180 // UK 9105330317		95
TropiCool TCX 21	NEW Thermoelectric cooler	9105330181 // UK 9105330318	4.36	95
TropiCool TCX 35	NEW Thermoelectric cooler	9105330182 // UK 9105330319	4.36	95
Thermoelectric car coolers				
BordBar TB 08	Thermoelectric car cooler	9105302016	4.08	96
BordBar TB 15	Thermoelectric car cooler	9105302023	4.08	96
BordBar AS 25	Thermoelectric car cooler	9105302816	4.08	96
BordBar TF 14	New Design Thermoelectric car cooler	9105330172	4.08	97
Cool-Ice WCI-22	NEW Icebox	9108400060	4.14	97
Cool-Ice WCI-42	NEW Icebox	9108400062	4.14	97
CoolFun SC 26	NEW Thermoelectric cooler	9103501289	4.02	99
CoolFun SCT 26	NEW Thermoelectric cooler	9103501290	4.02	99
CoolFun SC 30	NEW Thermoelectric cooler	9103501291	4.02	99
CoolFun SC 38	NEW Thermoelectric cooler	9103501293	4.02	99
Energy systems				
Sine wave inverters				
SinePower MSI 212	Sine wave inverter 150 watts, 12 volts	9102600124 // UK 9102600139	3.30	112
SinePower MSI 224	Sine wave inverter 150 watts, 24 volts	9102600125 // UK 9102600140	3.30	112
SinePower MSI 412	Sine wave inverter 350 watts, 12 volts	9102600126 // UK 9102600141	3.30	112
SinePower MSI 424	Sine wave inverter 350 watts, 24 volts	9102600127 // UK 9102600142	3.30	112
SinePower MSI 912	Sine wave inverter 900 watts, 12 volts	9102600111 // UK 9102600033	3.30	113
SinePower MSI 924	Sine wave inverter 900 watts, 24 volts	9102600112 // UK 9102600034	3.30	113
SinePower MSI 1312	Sine wave inverter 1300 watts, 24 volts	9102600113 // UK 9102600035	3.30	113
SinePower MSI 1324	Sine wave inverter 1300 watts, 12 voits	9102600114 // UK 9102600036	3.30	113
SinePower MSI 1812	Sine wave inverter 1800 watts, 12 volts	9102600115 // UK 9102600037	3.30	113
SinePower MSI1824	Sine wave inverter 1800 watts, 24 volts	9102600116 // UK 9102600038	3.30	113
SinePower MSI1812T	Sine wave inverter 1800 watts, 12 volts	9102600117 // UK 9102600039	3.30	113
SinePower MSI 1824T	Sine wave inverter 1800 watts, 24 volts	9102600118 // UK 9102600040	3.30	113
SinePower MSI 2312T	Sine wave inverter 2300 watts, 12 volts	9102600119 // UK 9102600041	3.30	113
SinePower MSI 2324T	Sine wave inverter 2300 watts, 24 volts	9102600120 // UK 9102600042	3.30	113
SinePower MSI3512T	Sine wave inverter 3500 watts, 12 volts	9102600121 // UK 9102600043	3.30	113
SinePower MSI3524T	Sine wave inverter 3500 watts, 24 volts	9102600122 // UK 9102600044	3.30	113
Inverters				
PerfectPower PP 152	Inverter 150 watts, 12 volts	9105303791 // UK 9105303792	3.18	114
PerfectPower PP 154	Inverter 150 watts, 24 volts	9105303794 // UK 9105303795	3.18	114
PerfectPower PP 402	Inverter 350 watts, 12 volts	9105303796 // UK 9105303797	3.18	114
PerfectPower PP 404	Inverter 350 watts, 24 volts	9105303799 // UK 9105303800	3.18	114
PerfectPower PP 602	Inverter 550 watts, 12 volts	9105303801 // UK 9105303802	3.18	114
PerfectPower PP 604	Inverter 550 watts, 24 volts	9105303804 // UK 9105303805	3.18	114



WAECO PerfectPower



WAECO PerfectCharge



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Dometic Generator



WAECO PerfectCoffee



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Product	Description	Ref. No.	PG	Page
Inverters	<u> </u>			J
PerfectPower PP 1002	Inverter 1000 watts, 12 volts	9102600002 // UK 9102600003	3.18	115
PerfectPower PP 1004	Inverter 1000 watts, 24 volts	9102600028 // UK 9102600004	3.18	115
PerfectPower PP 2002	Inverter 2000 watts, 12 volts	9102600027 // UK 9102600005	3.18	115
PerfectPower PP 2004	Inverter 2000 watts, 24 volts	9102600029 // UK 9102600006	3.18	115
Remote control MCR-9	Remote control	9102600026	3.30	115
Battery maintenance and service				
PerfectBattery BC 100	Battery charger and conditioner, 12 V	9102500044	3.28	116
PerfectBattery BR 12	Battery conditioner, 12 V	9103556045	3.28	117
Smart inverter				
PocketPower SI 102	Smart inverter	9105303816	3.29	119
Battery chargers				
PerfectCharge MCP 1204	NEW Battery charger 12 volts / 4 amps	9102500070	3.16	118
PerfectCharge MCP 1207	NEW Battery charger 12 volts / 7 amps	9102500071	3.16	118
PerfectCharge BI 01	NEW Battery indicator	9102500078	3.16	119
Wall bracket	NEW Wall bracket for PerfectCharge MCP chargers	9102500079	3.16	119
Battery chargers			0.10	
PerfectCharge MCA 1215	Battery charger 12 volts / 15 A	9102500027 // UK 9102500046	3.16	123
PerfectCharge MCA 1225	Battery charger 12 volts / 25 A	9102500028 // UK 9102500047	3.16	123
PerfectCharge MCA 1235	Battery charger 12 volts / 25 A	9102500028 // UK 9102500047	3.16	123
			3.16	123
PerfectCharge MCA 1250	Battery charger 12 volts / 50 A	9102500030 // UK 9102500049		
PerfectCharge MCA 1280	Battery charger 12 volts / 80 A	9102500031 // UK 9102500050	3.16	123
PerfectCharge MCA 2415	Battery charger 24 volts / 12.5 A	9102500032 // UK 9102500051	3.16	123
PerfectCharge MCA 2425	Battery charger 24 volts / 25 A	9102500033 // UK 9102500052	3.16	123
PerfectCharge MCA 2440	Battery charger 24 volts / 40 A	9102500034 // UK 9102500053	3.16	123
Charging/Voltage converters				
PerfectCharge DC 08	Charging converter 12 volts > 12 volts, 8 A	9102500055	3.16	125
PerfectCharge DC 20	Charging converter 12 volts • 12 volts, 20 A	9102500045	3.16	125
PerfectCharge DC 40	Charging converter 12 volts > 12 volts, 40 A	9102500056	3.16	125
PerfectPower DCDC 06	Voltage converter 24 volts > 12 volts, 6 A	9103555787	3.18	127
PerfectPower DCDC 12	Voltage converter 24 volts > 12 volts, 12 A	9103555788	3.18	127
PerfectPower DCDC 24	Voltage converter 24 volts > 12 volts, 24 A	9103555789	3.18	127
PerfectPower DCDC 10	Voltage converter 12 volts > 24 volts, 10 A	9102500057	3.18	127
PerfectPower DCDC 20	Voltage converter 12 volts > 24 volts, 20 A	9102500058	3.18	127
PerfectPower DCDC 10	Voltage converter 24 volts > 24 volts, 10 A	9102500061	3.18	127
PerfectPower DCDC 20	Voltage converter 24 volts > 12 volts, 20 A	9102500059	3.18	127
PerfectPower DCDC 40	Voltage converter 24 volts > 12 volts, 40 A	9102500060	3.18	127
Generators				
TEC 29LPG	LPG generator 2.6 kW / 230 V	9102900179	3.39	128
TEC 29	Petrol generator 2,6 kW / 230 V	9102900200	3.39	129
T2500 H	Petrol generator 2 kW / 230 V	9102900005	3.39	129
TEC 30EV	Diesel generator 2.5 kW / 230 V	9102900033	3.39	129
TEC 40D	Diesel generator 3.5 kW / 230 V	9102900201	3.39	129
TEC 60	Petrol generator 6.2 kW / 230 V	9102900229	3.39	129
TEC 60LPG	LPG generator 6.2 kW / 230 V	9102900230	3.39	129
eSTORE / eCORE				
eSTORE	Lithium ion battery, 100 Ah / 12 V	9102900224	3.48	130
eCORE	Energy management	9102900221	3.48	131
Kitchen solutions				
Roadmate MWO 230	Microwave oven 24 V · 230 V	9103533012	3.47	145
PerfectCoffee MC 052	5-cup coffee maker, 12 V	9103533013	3.13	146
PerfectCoffee MC 054	5-cup coffee maker, 24 V	9103533014	3.13	146
PerfectCoffee MC 01	1-cup coffee maker, 12 V	9103533009	3.13	147
PerfectCoffee MC 01	1-cup coffee maker, 24 V	9103533010	3.13	147
PerfectKitchen MCK 750	Electric kettle, 12 V	9103533003	3.14	148
PerfectKitchen MCK 750	Electric kettle, 24 V	9103533004	3.14	148
PowerVac PV 100	Wet/dry vacuum cleaner with 12-volt rechargeable battery	9103500212	3.31	149

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