COMPLETE CLIMATE CONTROL SOLUTIONS FROM EBERSPAECHER

SEPTEMBER 2023

A WORLD OF COMFORT

Eberspächer

QUICK-REFERENCE GUIDE

Eberspaecher heaters have become one of the most popular money saving products available in the heavy-duty truck market today.
Typical savings using an Airtronic S3 can be as much as $6,000 per unit per year based on current fuel prices. Below you will find the most popular selling kit numbers for our air and coolant heater models.
For a detailed listing of our complete product line including heater kits, accessories and controllers for heavy truck, light truck, school bus, industrial and oil field markets please see the following pages.

All the heater products mentioned on the Quick-Reference pages are EPA Verified compliant for worry-free operation anywhere in the North America.

AIRTRONIC S3

DIESEL AIR HEATER / TRUCK BUNK HEATER

The Airtronic S3 puts out 7,500 BTU of clean comfortable heat and is ideal for bunk heating in all makes of heavy-duty trucks. It has a higher heat output than competitive models and is equipped with a standard fan-mode for times when air circulation is preferred instead of heating.

The most popular Airtronic S3 kit is listed below. It comes with everything needed for installation including: Heater, easy start pro controller, fuel delivery system, mounting hardware kit and all ducting.

Airtronic S3 – Install Kit with EasyStart Pro **20.2829.53.0201**

Use of an engine pre-heater reduces cold start wear on internal components, reduces stress on the starting/cranking system, and can help extend DOC/DPF regen and replacement cycles by reducing cold-start white smoke.

HYDRONIC S3 ECONOMY (5kW)

PRE-HEATER SYSTEM

Eberspaecher, the leading system developer and supplier of vehicle heaters, is expanding its product portfolio with the new Hydronic S3 Economy (5kW) pre-heater. The water heater impresses thanks to its compact dimensions and flexible installation options for simple retrofitting in a large number of vehicle models. As a ground-breaking all-in-one solution with comprehensive peripheral devices, it offers installation partners many practical advantages. With the new EasyScan diagnostic and service tool, workshop staff can analyze the operating condition of the pre-heater easily and quickly.

- Compact, efficient water heater
- Innovative peripheral devices and new diagnostic device
- Simplified installation

Hydronic S3 Economy (5kW) Definition:

Hydronic: Water & Electronic, Product line, water heater
S3: Size and generation, Size (small) Generation 3
Economy: Marketing appendix, entry model
Compact and robust water heater for simple installation

With the third generation of its Hydronic series, Eberspaecher is offering an easy-to-operate preheater with stepless heating power control. The coolant heater works efficiently with all popular types of fuel. Due to its robust construction – with an encapsulated fan motor and the separation of cold and hot components – it is designed for longevity.
A high IP protection class also secures the unit from the ingress of water during high-pressure or steam jet cleaning. The new water spigots are fully rotatable by 360 degrees and are fully replaceable, they ensure convenient and rapid fitting in a range of installation positions. Optimized brackets enable the pre-heater to be mounted anywhere in the smallest possible space and to be attached rapidly and permanently. (See page 16)

HEATER INSTALLATION TIPS
For a time saving video showing a typical Class 8 truck installation for each of these products please visit the Eberspaecher website at
https://partner.eberspaecher.com/en

See your local dealer for special pricing on quantity purchases of money-saving Eberspaecher heaters.

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The basic principle of pre-heaters is to heat the passenger compartment of all kinds of vehicles without having to depend on the heat given off by a running engine. That's a well-known fact. But at some point or other you must have asked yourself what the actual difference is between air and water heaters.

Air-based pre-heater – Eberspächer Airtronic:

Air-based pre-heaters are mostly installed inside the cab and directly heat the air inside it, which is sucked in via the unit's own fan. Their effects are noticeable almostinstantly, as the heat in the form of hot gas, which is produced by a burner, does not have to heat up a water circuit first. Modern devices are very quiet, low on emissions and chiefly used to maintain the temperature in the cab of a truck or van at a pleasant level even while it is at a standstill (e.g. overnight).

Water-based pre-heater – Eberspächer Hydronic:

Water-based pre-heaters have a compact design and can be fitted almost anywhere in the engine compartment. They are therefore the pre-heater of choice for cars with interiors too cramped for additional installations. The heat generated by a burner is transferred to the vehicle's coolant. An (additional) electric circulation pump distributes the hot coolant, even when the engine is switched off. Then, the interior fan is activated automatically – everything works as it does in normal heater operation. Water-based heaters therefore not only warm up the interior but, depending on the application, also the engine or the water used in boats or motor homes. Engines heated in this way can be started more easily in cold weather while also protecting the car battery from the effects of the cold, and producing fewer harmful emissions on starting, as the hotter exhaust temperature enables the catalytic converter to reach its operating temperature more quickly. The cold-starting phase, which produces mechanical stress and higher emissions, is dramatically reduced, as the oil reaches operating temperature fast when the engine is started. This saves fuel and money while lowering CO2 emissions at the same time.

Both systems generally run on the vehicle's fuel, straight out of the fuel tank. Depending on the model, you can use a timer, remote control, smartphone, smartwatch, Alexa or a browser to control them.

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Hydronic S3 (5 kW):

Cab and engine heater

- Passenger cars (from 2.0 l displacement)
- Emergency vehicles
- Vans, large taxis, minivans
- Commercial vehicles, including tandem configurations with air heaters
- Construction and agricultural machines
- Motor homes

Hydronic M8 / M10 / M12 (8–12 kW):

- Commercial vehicles from approx. 150 kW engine power
- Cargo area heating
- Military vehicles
- Large agricultural and construction machines
- Motor homes

Hydronic L16 / L24 / L30 / L35 (16–35 kW):

- Coaches and city buses
- Large freight compartments for goods that need to be kept warm
- Container setups
- Diesel locomotives

QUICK REFERENCE GUIDE

Airtronic S3 (2.2 kW):

Heating comfort for a variety of applications.

- Vans, small motor homes, small buses
- Truck cabs with sleeping cabins
- Construction and agricultural machines without engine-dependent heating
- Forklifts and other plant machinery
- Electric vehicles

Airtronic M3 (4 kW):

The high-performance, compact air heater for mid-range requirements.

- Large trucks – cabs with sleeping cabins
- Vans, small buses
- Large agricultural and construction machines
- Motor homes
- Minivans, and vehicles used for conferences and consultancy

Airtronic L3 (6 kW):

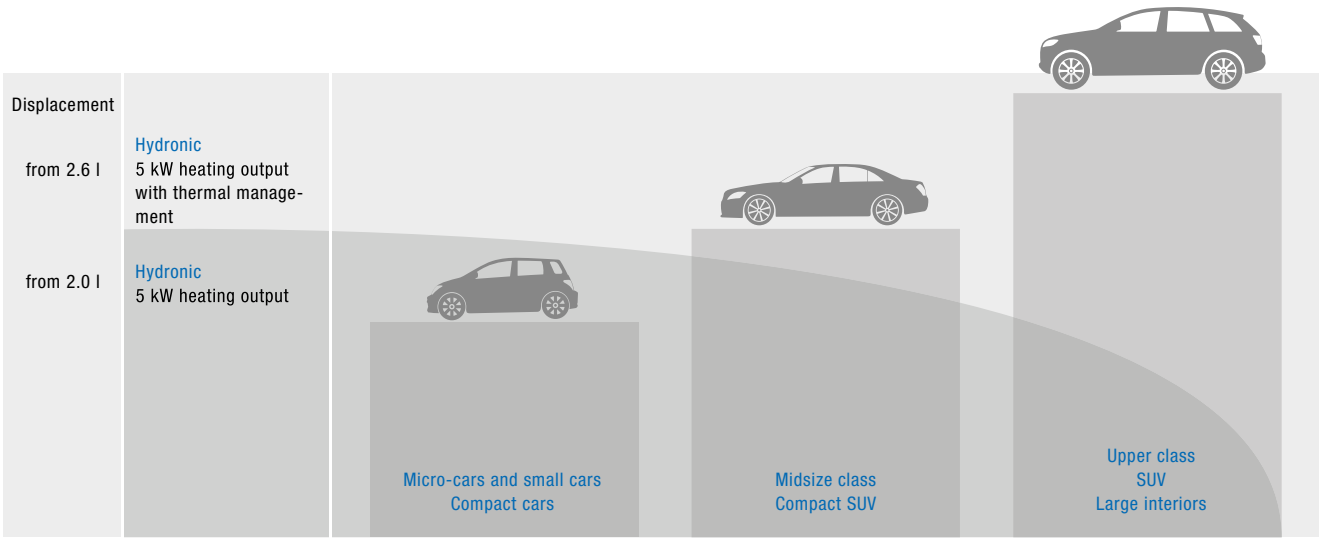
- Vans, workshop vehicles, personnel carriers, small buses (fast heating despite door opening frequently)
- Ambulances and emergency medics' vehicles (special heating and temperature requirements)
- Freight compartment and freight goods heating plus frost protection and dew point prevention

Airtronic XL3 (8 kW):

Continuously variable, pre-selectable heating performance regulation.

- Large freight compartments, containers
- Personnel carriers
- Coaches and city buses

QUICK-REFERENCE GUIDE



Advantages:

- Hydronic S3 Economy & Commercial (5 to 6 kW): New bracket design plus straight and 90° angled water fittings (rotatable through 360°) which can be used in any combination for faster installation.New installation recommendations and kits are available.
- Hydronic M2 (8 to 12 kW): provide increased power for larger engines and cabins, e.g. large trucks, small buses, cargo areas.
- Hydronic L (16 to 35 kW) is ideally suited for buses, trains, boats and cargo areas.

Advantages:

- **Biodiesel:** Hydronic S3 Economy (up to 30 %), Hydronic M8 (100 %), Hydronic M10 / M12 (up to 20 %).
- **E10:** all (professionally installed) water heaters.

Expert tips for installing the pressure-resistant metering pump: You need to know the fuel pressure. The return line must end just above the floor of the tank and must not be fitted with a check valve. Diesel vehicles can then be connected straight to the return line. Please also always take note of the technical description of the particular equipment.

QUICK REFERENCE GUIDE

INTRODUCTION PAGE

On the following pages you will find the entire offering of Eberspaecher heaters, heater kits, control options and accessories.
Below are some tips on how to best choose the products you are looking for.

PAGE LAYOUT

The Product Catalog is a complete listing of the products we sell.

In the heater section, you can trace the heater you are considering straight across to the dots in the columns on the right side of the page.
These columns have a header row showing the items offered - with the dots indicating which of them actually come in the kit being selected.
In the accessory section, you trace the accessory across to the dots on the far right to see what heaters that component is used with.

HEATER CHOICES

Our heaters come in both 12 and 24 Volt offerings and in Gasoline (B prefix) and Diesel (D prefix) models.
When selecting a heater model, be sure to begin with the right voltage and fuel type for your application. The “Basic” heaters shown are just that, a bare heater, and are usually used as replacements. If a heater price seems too low, compared to other models, be sure it’s not a basic kit.

- RECOMMENDED
  There are a variety of kits and components in the catalogue that may look similar. When more than one item is listed, look for the RECOMMENDED label. This indicates that item is one of the more commonly sold products of those that are listed. However, we want to make sure you get the right equipment for the job so if you are in doubt please don’t hesitate to call your local regional sales manager or our tech service department (800-387-4800) help@eberspaecher.com for assistance.

- EMMISSIONS
  Eberspaecher offers more EPA Verified / CARB Compliant heater choices than any other manufacturer. Look for the EPA label when selecting a heater for specific applications.

- AIRTRONIC HEATER KITS
  Unless specified otherwise these kits are usually sold as complete with installation components. The variables are usually limited to multiple controller and fuel pickup choices. These are all noted in the kit description and in the columns on the right side of the page.

- HYDRONIC HEATER KITS
  Unless otherwise noted these units are typically sold ala-carte – with the heater kit, timer/controller and even installation kits purchased separately to provide maximum installation flexibility. Always check the description and the kit component listing in the columns on the right side of the page.

- CONTROLLERS
  Eberspaecher offers a variety of controllers for almost every heater model and application combination. The most popular air heater controller is the Digi-Max Controller and the EasyStart Timer, while the Programmable (school bus) timers are the most popular for coolant heaters.
  School bus and/or industrial applications using coolant heaters may also choose to include the Multi-Function Switch.

QUICK-REFERENCE GUIDE

FUEL PICKUP / FMP OPTIONS:
Eberspaecher makes a number of fuel pickup and fuel pump mounting options to help streamline installations.
Below you will find a summary of some of those choices.

- UNIVERSAL PICKUP – Unless designated otherwise, Eberspaecher heater kits that show to have a fuel pickup tube come with our "Universal Pickup." This offers the flexibility of a typical drill-the-tank installation or the ability for installation in an existing NPT port on the fuel tank (if available).
- NO PICKUP – Kits marked "No Pickup" do not have a fuel pickup tube. A variety of pickup tubes, including those for specialty use or to be used with NPT compression fittings, are located in the fuel section. Choosing the right fuel pickup can save time and provide a custom installation.
- VENT PICKUP – Kits marked "Vent Pickup" come with a fuel pickup tube made for installation using the trucks fuel system vent port.
- EXTERNAL / INTERNAL FMP – The Eberspaecher FMP's, or fuel metering pumps, can pull fuel 6' and push it approximately 20', thus the FMP needs to be located within 6' of the primary fuel source.
  Coolant heater kits with an External FMP typically are used when the heater is located more than 6' from the fuel source.

BOXED:
Kits marked "Boxed" means the heater comes installed in a rugged metal enclosure for protection and long-life. The box is usually frame rail mounted but can also be used in a variety of industrial or heavy equipment applications. Eberspaecher's large coolant heater models use a heavy-duty box and carries a direct replacement footprint for many legacy heaters in the field.

SPECIALTY KITS:
Eberspaecher manufactures several specialty kits to provide the best heater life and maximum levels of reliability and safety for end-users.

- HIGH ALTITUDE – Eberspaecher provides a number of options to get the best performance from units operating at higher altitudes where the air is thin and heaters tend to run rich. These include: A full heater install kit - OR - a fuel metering pump adjusted for full-time high altitude operation or a plug-and/play module for leaning out fuel delivery.
  The latter two can be used to modify a standard heater kit for HA operation. All are geared toward heaters in applications spending longer amounts of time operating above 4,900 ft.

Note:
The latest generations, Ax2, Ax3 and HS3 heaters do not need altitude kits.

SPARE PARTS:
For all spare parts information, please reference heater 's "Spare Parts Manual".
https://partner.eberspaecher.com/en

Not all parts which are listed in the Airtronic S3, M3, L3, XL3, Hydronic S3 CS, Hydronic M-II and Hydronic L-II parts manual are included in the respective heater kit part numbers provided in this product catalogue. Any additional parts not included in the heater kits provided in this product catalogue will have to be ordered separately (For example: Exhaust Muffler).

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Altitude kit*:

Applicable to older heater generations such as the Hydronic, Hydronic 2 and Airtronic 1, and is required above around 1,500 meters above sea level. When the heater starts, the pressure sensor measures the atmospheric pressure cyclically and sends the measured values to the heater control unit. The control unit evaluates the measured values and, if required, adjusts the fuel feed in the metering pump to the current atmospheric pressure. It begins reducing fuel feed at around 1,400 m, which immediately starts to reduce heating performance by around 9% for every 1,000 m in altitude.

An altitude kit is no longer required for the new heater generations Hydronic S3 Commercial (CS), Airtronic 2 and Airtronic 3 models. A manual altitude function using CAN control units is possible for the Hydronic S3 Economy (CS). Heater operation up to altitudes of 3,000 m. The Hydronic S3 Economy (CL) does not support an altitude function.

The Hydronic M10/M12 models also feature automatic altitude adjustment. The heater can be operated up to altitudes of 3,500 m.

Check the compatibility of the heater, pressure sensor and control unit before installation. (Please look for “H-Kit“ on the heater identification label)

Technical data for altitude kit (22.1000.33.2200):
Max. permissible altitude: approx. 3,500 m
Measuring range: 600 hPa to 1,150 hPa
Nominal voltage: 12 / 24 V
Operating voltage: 8 to 32 V
Dimensions: 76 x 76 x 29 mm
Operating temperature: –40 °C to +85 °C

Identification labels:

1. In this case, on the right-hand side of the heater identification label you will see “H-Kit”. If the label carries this mark, the heater is suitable for the high altitude kit

2. The heater’s packaging (box) carries a sticker on which you will find the drawing number of the heater: The last two characters of this number (e.g. “0N”) specify the heater status. Based on this information, the Technical Hotline can tell you whether the heater is compatible with the altitude kit. If the label is not legible, please contact the Technical Hotline.

Fig.: Identification label

Fig.: Sticker on heater box

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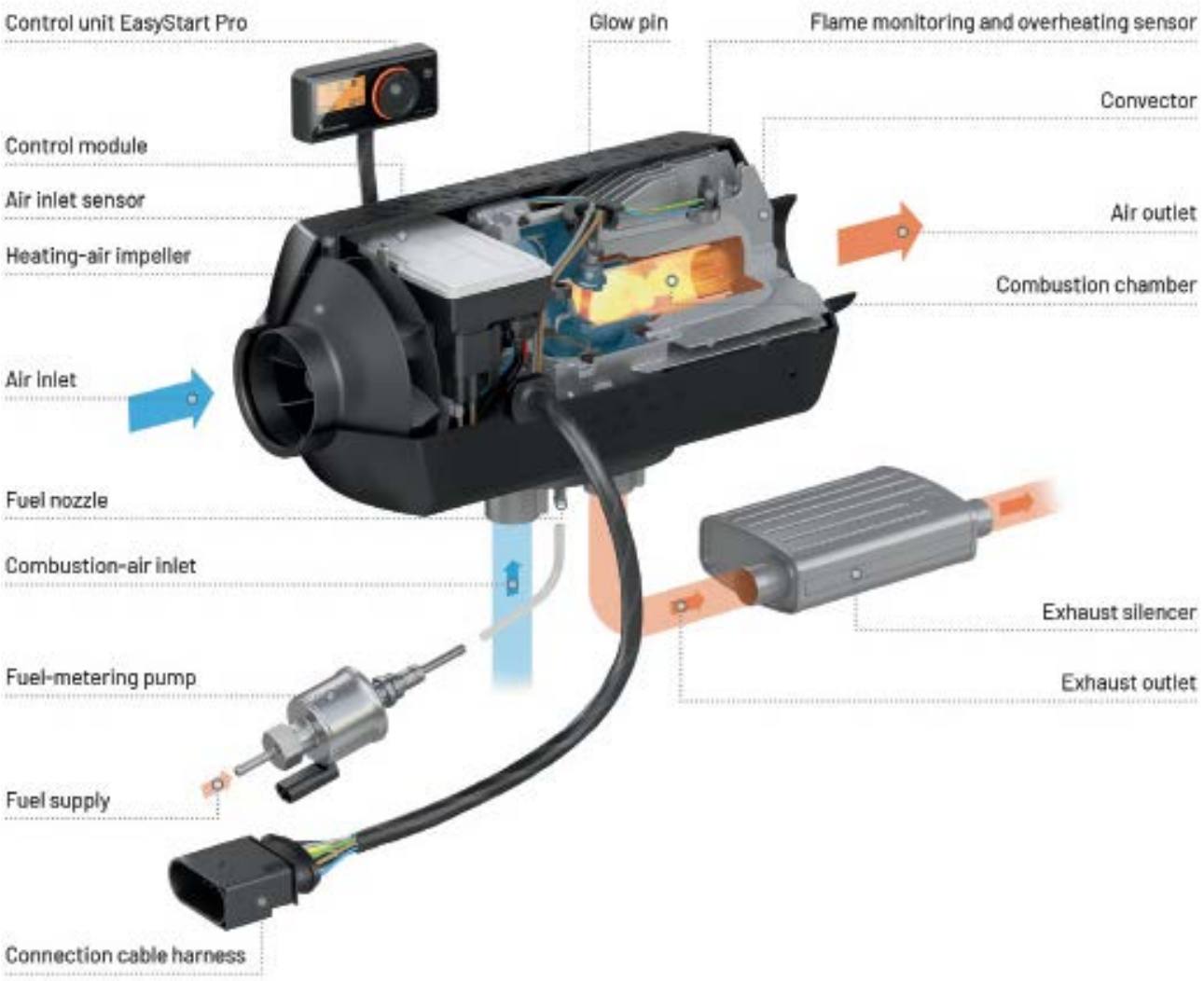
AIRTRONIC: TECHNOLOGY



AIRTRONIC FUNCTIONS:

- Combustion air is conveyed to the combustion chamber by the fan motor and impeller.
- Fuel is drawn from the vehicle's tank.
- Fuel is delivered to the combustion chamber by the metering pump.
- The glow element (filament glow plug from 5 kW) vaporizes this fuel as it enters the combustion chamber and creates a combustible fuel-air mix with the combustion air.
- The resulting flame formation switches off the glow element (or filament glow plug), transfers the heat to the heating air via the convector, and diverts exhaust gas via the exhaust silencer.
- The fan motor and heating-air impeller convey cool air to the heater, where it is warmed by the convector and then blown into the vehicle interior.

PRODUCT INFORMATION

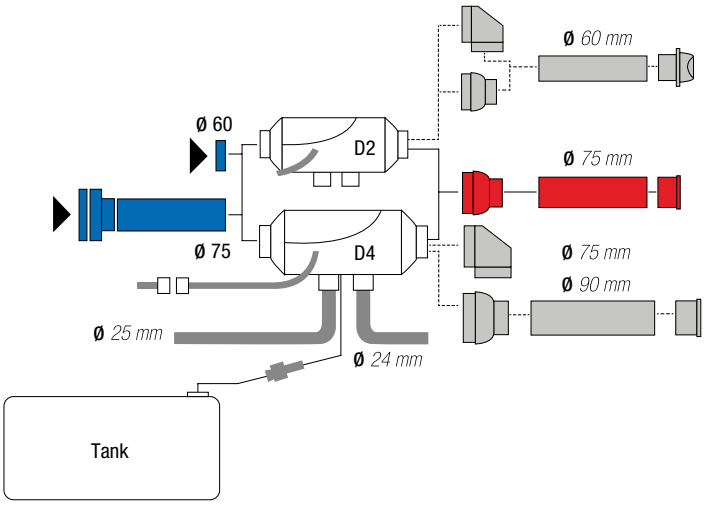
The heating output information provided refers to heating the interior of a cold vehicle to around 20 °C in cold outside temperatures. If the heater only needs to maintain the existing temperature of the interior, less heating power is required. The heating outputs are only guide values. The exact heating requirement also depends on other environmental conditions (e.g. wind, materials, cabin walls, heating-air ducting, etc.).

GUIDE VALUES FOR REQUIRED HEATING OUTPUT		Outside temperature		
Example	Volume of interior	< -15 °C	-15 °C to 0 °C	> 0 °C
Truck cabin	< 8 m³	4 kW	3 kW (2 kW)*	2 kW
Small bus	8 – 12 m³	5 kW (4 kW)*	4 kW (3 kW)*	2 kW
Motor home / van	12 – 20 m³	8 kW	6 kW (5 kW)*	4 kW

* Values (referring to heat-insulated cabins / vehicles)

Selecting the device and the respective advantages:

- Airtronic S3 Commercial: the smallest air heater on the market, advantageous in cramped installation spaces. Air ducting with 60 mm or 75 mm air hoses possible. Performance 2,200 Watt (Gasoline 2,000 Watt).
- Airtronic M3 Commercial: output 4,000 W, air ducting with 75 mm or 90 mm air hoses possible, for vans and suitably sized trucks; offers the advantage of high power within a reasonable installation space, wide range of applications from 1,050 W (gasoline 1,300 W) to 4,000 W.
- Airtronic M3 Recreational: for applications requiring a higher air throughput, e.g. for long, complex heating-air ducting in campers/motor homes, boats or ambulances. Performance 4,000 Watt



PRODUCT INFORMATION

EBERSPÄCHER AIRTRONIC

Heater		Airtronic S3 Commercial		
Product Package		Heater, metering pump		
Techn. designation		Airtronic S3 D2L - 12V	Airtronic S3 D2L - 24V	Airtronic S3 B2L - 12V
Order no. for heater		25.2953.05.0000	25.2954.05.0000	20.2029.05.0000
Fuel		Diesel fuel - commercially available(DIN EN 590)		Gasoline - commercially available(DIN EN 590)
Voltage	V	12	24	12
Heating medium		Air		
Control/heat settings	l/h	Off/stepless: min.-max.		
Heating Perfomance	W	-/ 850 / 2,200		-/ 1,000 / 2,000
Fuel consumption	l/h	-/ 0.1 / 0.27		-/ 0.14 / 0.26
Elec. power consumption, operation	W	4 / 6 / 27	7 / 9 / 28	4 / 11 / 26
Elec. power consumption, start	W	≤ 80	≤ 90	≤ 80
Air throughput w/o backpressure	kg/h	20/50/105		20/65/100
Lower voltage limit	V	Approx. 10.5	Approx. 21	Approx. 10.5
Upper voltage limit	V	Approx. 16	Approx. 32	Approx. 16
Interference suppression		Interference suppression class 5 (DIN EN 55025)		
Dimensions L x W x H	mm	310 x 115 x 122		
Weight empty	Kg	Approx. 2.5		
Ventilation mode		Available		

EBERSPÄCHER AIRTRONIC

Heater		Airtronic M3 Commercial		
Product Package		Heater, metering pump		
Techn. designation		Airtronic D4L - 12V	Airtronic D4L - 24V	Airtronic B4L - 12V
Order no. for heater		25.2955.05.0000	25.2956.05.0000	20.2030.05.0000
Fuel		Diesel fuel - commercially available(DIN EN 590)		Gasoline - commercially available(DIN EN 590)
Voltage	V	12	24	12
Heating medium		Air		
Control/heat settings	l/h	Off/stepless: min.-max.		
Heating Perfomance	W	-/ 1,050 / 4,000		-/ 1,300 / 4,000
Fuel consumption	l/h	-/ 0.12 / 0.49		-/ 0.17 / 0.55
Elec. power consumption, operation	W	4 / 6 / 37	7 / 9 / 39	4 / 8 / 38
Elec. power consumption, start	W	≤ 105	≤ 100	≤ 105
Air throughput w/o backpressure	kg/h	35 / 40 / 185		24 / 85 / 180
Lower voltage limit	V	Approx. 10.5	Approx. 21	Approx. 10.5
Upper voltage limit	V	Approx. 16	Approx. 32	Approx. 16
Interference suppression		Interference suppression class 5 (DIN EN 55025)		
Dimensions L x W x H	mm	376 x 140 x 150		
Weight empty	Kg	4.5		
Ventilation mode		Available		

PRODUCT INFORMATION

EBERSPÄCHER AIRTRONIC

Heater		Airtronic M3 Recreational		
Product Package		Heater, metering pump		
Techn. designation		Airtronic D4R - 12V	Airtronic D4R - 24V	Airtronic B4R - 12V
Order no. for heater		25.2957.05.0000	25.2958.05.0000	20.2031.05.0000
Fuel		Diesel fuel - commercially available(DIN EN 590)		Gasoline - commercially available(DIN EN 590)
Voltage	V	12	24	12
Heating medium		Air		
Control/heat settings	l/h	Off/stepless: min.-max.		
Heating Perfomance	W	-/ 1,050 / 4,000		-/ 1,300 / 4,000
Fuel consumption	l/h	-/ 0.12 / 0.49		-/ 0.17 / 0.55
Elec. power consumption, operation	W	5 / 7 / 53	8 / 10 / 55	5 / 10 / 54
Elec. power consumption, start	W	≤ 105	≤ 90	≤ 110
Air throughput w/o backpressure	kg/h	37 / 45 / 190		37 / 85 / 190
Lower voltage limit	V	Approx. 10.5	Approx. 21	Approx. 10.5
Upper voltage limit	V	Approx. 16	Approx. 32	Approx. 16
Interference suppression		Interference suppression class 5 (DIN EN 55025)		
Dimensions L x W x H	mm	376 x 140 x 150		
Weight empty	Kg	Approx. 2.5		
Ventilation mode		Available		

EBERSPÄCHER AIRTRONIC

Heater		Airtronic L3		Airtornic XL3
Product Package		Heater, metering pump		
Techn. designation		Airtronic L3 D6L - 12V	Airtronic L3 D6L - 24V	Airtronic XL3 D8L - 24V
Order no. for heater		25.2959.05.0000	25.2960.05.0000	25.3020.05.0000
Fuel		Diesel fuel - commercially available(DIN EN 590)		
Voltage	V	12	24	
Heating medium		Air		
Control/heat settings	l/h	Off/stepless: min.-max.		
Heating Perfomance	W	-/ 1,500 / 6,000		-/ 2,000 / 7,600
Fuel consumption	l/h	-/ 0.16 / 0.74		-/ 0.23 / 1.01
Elec. power consumption, operation	W	7 / 90	11 / 95	8 / 130
Elec. power consumption, start	W	≤ 90	≤ 85	≤ 90
Air throughput w/o backpressure	kg/h	60 / 80 / 285		60 / 120 / 300
Lower voltage limit	V	Approx. 10.5	Approx. 21.4	
Upper voltage limit	V	Approx. 16	Approx. 32	
Interference suppression		Interference suppression class 5 (DIN EN 55025)		
Dimensions L x W x H	mm	438 x 160 x 170		493 x 160 x 170
Weight empty	Kg	Approx. 7		Approx 8.5
Ventilation mode		Available		

AIRTRONIC S3/M3
DIESEL AIR HEATER - 7,500 BTU / 13,600 BTU

		Heater	Harness	Fuel System	Ducting	Mounting Bracket	Control Options / Timers	Fuel Pickup Pipe	Hardware Kit	Exhaust Pipe	Intake Pipe	Manuals
AIRTRONIC S3/M3												
S3 D2L 12V Commercial with fuel pump - No installation parts	25.2953.05.0000	■										■
S3 D2L 24V Commercial with fuel pump - No installation parts	25.2954.05.0000	■										■
M3 D4L 12V Commercial with fuel pump - No installation parts	25.2955.05.0000	■										■
M3 D4L 24V Commercial with fuel pump - No installation parts	25.2956.05.0000	■										■
M3 D4R 12V Recreational with fuel pump - No installation parts	25.2957.05.0000	■										■
M3 D4R 24V Recreational with fuel pump - No installation parts	25.2958.05.0000											
HEATER WITH INSTALLATION KIT												
Install Kit - Airtronic S3 D2L 12V	20.2829.53.0200	■	■	■	■	■			■	■	■	■
Install Kit - Air S3 D2L 12V w/ EPRO U/P *RECOMMENDED*	20.2829.53.0201	■	■	■	■	■	■	■	■	■	■	■
Install Kit - Airtronic S3 D2L 24V	20.2829.54.0200	■	■	■	■	■			■	■	■	■
Install Kit - Airtronic M3 D4L 12V	20.2829.55.0400	■	■	■	■	■			■	■	■	■
Install Kit - Air M3 D4L 12V w/ EPRO U/P	20.2829.55.0402	■	■	■	■	■	■	■	■	■	■	■
Install Kit - Airtronic M3 D4L 24V	20.2829.56.0400	■	■	■	■	■			■	■	■	■
Install Kit - Airtronic M3 D4R 12V	20.2829.57.0400	■	■	■		■			■	■	■	■
Install Kit - Airtronic M3 D4R 24V	20.2829.58.0400	■	■	■		■			■	■	■	■

AIRTRONIC S3/M3
GASOLINE AIR HEATER - 7,500 BTU /13,600 BTU

		Heater	Harness	Fuel System	Ducting	Mounting Bracket	Control Options / Timers	Fuel Pickup Pipe	Hardware Kit	Exhaust Pipe	Intake Pipe	Manuals
AIRTRONIC S3/M3												
S3 B2L 12V Commercial with fuel pump	20.2029.05.0000	■										■
M3 B4L 12V Commercial with fuel pump	20.2030.05.0000	■										■
M3 B4R 12V Recreational with fuel pump	20.2031.05.0000	■										■
HEATER WITH INSTALLATION KIT												
Install Kit - Airtronic S3 B2L 12V	20.2820.29.0200	■	■	■	■	■			■	■	■	■
Install Kit - Airtronic M3 B4L 12V	20.2820.30.0400	■	■	■	■	■			■	■	■	■
Install Kit - Air M3 B4L 12V w/ EPRO U/P	20.2820.30.0402	■	■	■	■	■	■	■	■	■	■	■
Install Kit - Airtronic M3 B4R 12V	20.2820.31.0400	■	■	■		■			■	■	■	■
RETURN AIR KIT												
60mm D2 Airtronic	20.2800.50.0202											
75mm B/D4 Airtronic	20.2800.50.0400											

■ Item in the Kit

HARDWARE KIT INCLUDES:

Fuel Clamps
Nuts
Cable Ties
Grommets
Exhaust Clamps
Mounting Screws
Ducting Clamps
Washers
Routing Clamps
End Caps
Exhaust Brackets

FUEL SYSTEM INCLUDES:

Clamps
5 mm Fuel Line
Plastic Fuel Line
3.5 mm Fuel Line

Refer to the Accessories Section for ducting components and additional accessories.
Refer to heater manual for individual installation parts.

AIRTRONIC L3/XL3
DIESEL AIR HEATER - 20,500 BTU / 26,000 BTU

		Heater	Harness	Fuel System	Ducting	Mounting Bracket	Control Options / Timers	Fuel Pickup Pipe	Hardware Kit	Exhaust Pipe	Intake Pipe	Manuals
AIRTRONIC L3/XL3												
L3 D6L 12V Commercial with fuel pump - No installation parts	25.2959.05.0000	■										■
L3 D6L 24V Commercial with fuel pump - No installation parts	25.2960.05.0000	■										■
XL3 D8L 24V Commercial with fuel pump - No installation parts	25.3020.05.0000	■										■
INSTALL KITS												
Install Kit - AL3 D6L 12/24V/ EPRO-NO HTR	20.2829.60.0600		■	■	■	■	■		■	■	■	■
Install Kit - AXL3 D8L 24V - NO HEATER	20.2830.20.0800		■	■	■	■			■	■	■	■

■ Item in the kit

HARDWARE KIT INCLUDES:

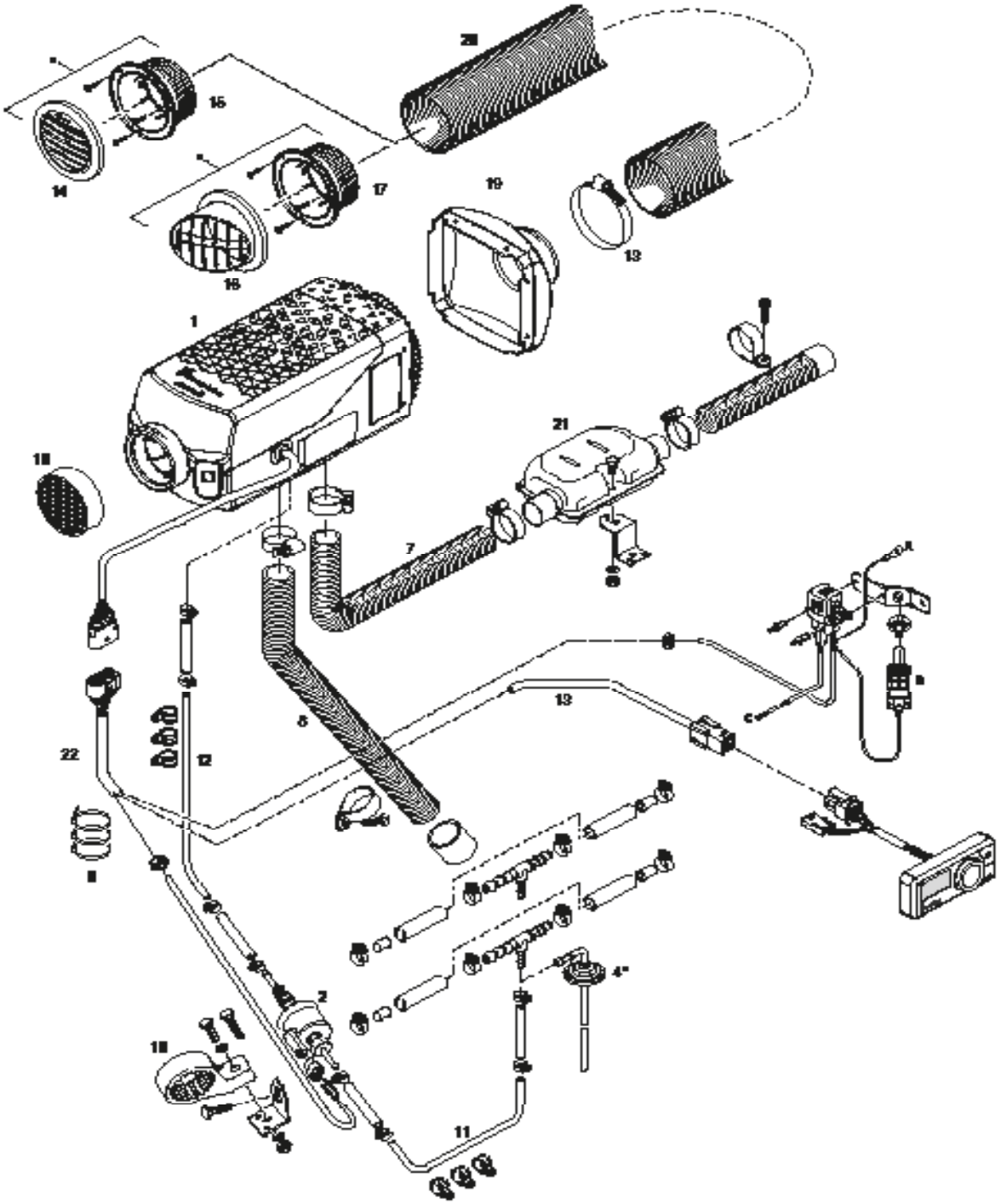
Fuel Clamps
Nuts
Cable Ties
Exhaust Clamps
Mounting Screws
Ducting Clamps
Washers
Routing Clamps
End Caps
Exhaust Brackets

FUEL SYSTEM INCLUDES:

Clamps
5 mm Fuel Line
Plastic Fuel Line
3.5 mm Fuel Line

Refer to the Accessories Section for ducting components and additional accessories.
Refer to heater manual for individual installation parts.

PRODUCT PACKAGE FOR AIRTRONIC S3, M3 AND L3



PRODUCT PACKAGE FOR AIRTRONIC S3, M3 AND L3

Heater – scope of supply includes:

1	Heater
2	Metering pump (ill. not for Airtronic XL3)

Installation kit for Airtronic S3/M3/L3

S3 - (20.2829.53.0200):

5	Lead harness, plus / minus (included in Item 22)
6	Lead harness, operation (included in Item 22)
7	Flexible exhaust pipe, length 900 mm
8	Combustion air hose, 1 m long
9	Cable tape (2 x 10 pieces)
10	Bracket, metering pump
12	Pipe, 4 x 1.0 – 7.5 m long
21	Exhaust silencer
22	Cable harness, heater
25	Flexible exhaust pipe with end piece

To be ordered separately:

4	Fuel remover
13	Hose clip (1x)
14	Air outlet 30°, Ø 75 mm / Ø 90 mm
15	Connection socket, Ø 75 mm / Ø 90 mm
16	Air outlet, high 30°, Ø 60 / 75 / 90 mm
17	Connection socket, Ø 60 mm
18	Grille
19	Hood
20	Flexible pipe
23	Control unit EasyStart Pro

* The image on page 18 differs from the Airtronic XL3 installation components in some cases, including the exhaust system, combustion-air intake, and metering pump with adapter cable.

Note: Not all parts included in the scope of supply of North America

Airtronic S3 B2L installation kit (20.2820.29.0200):

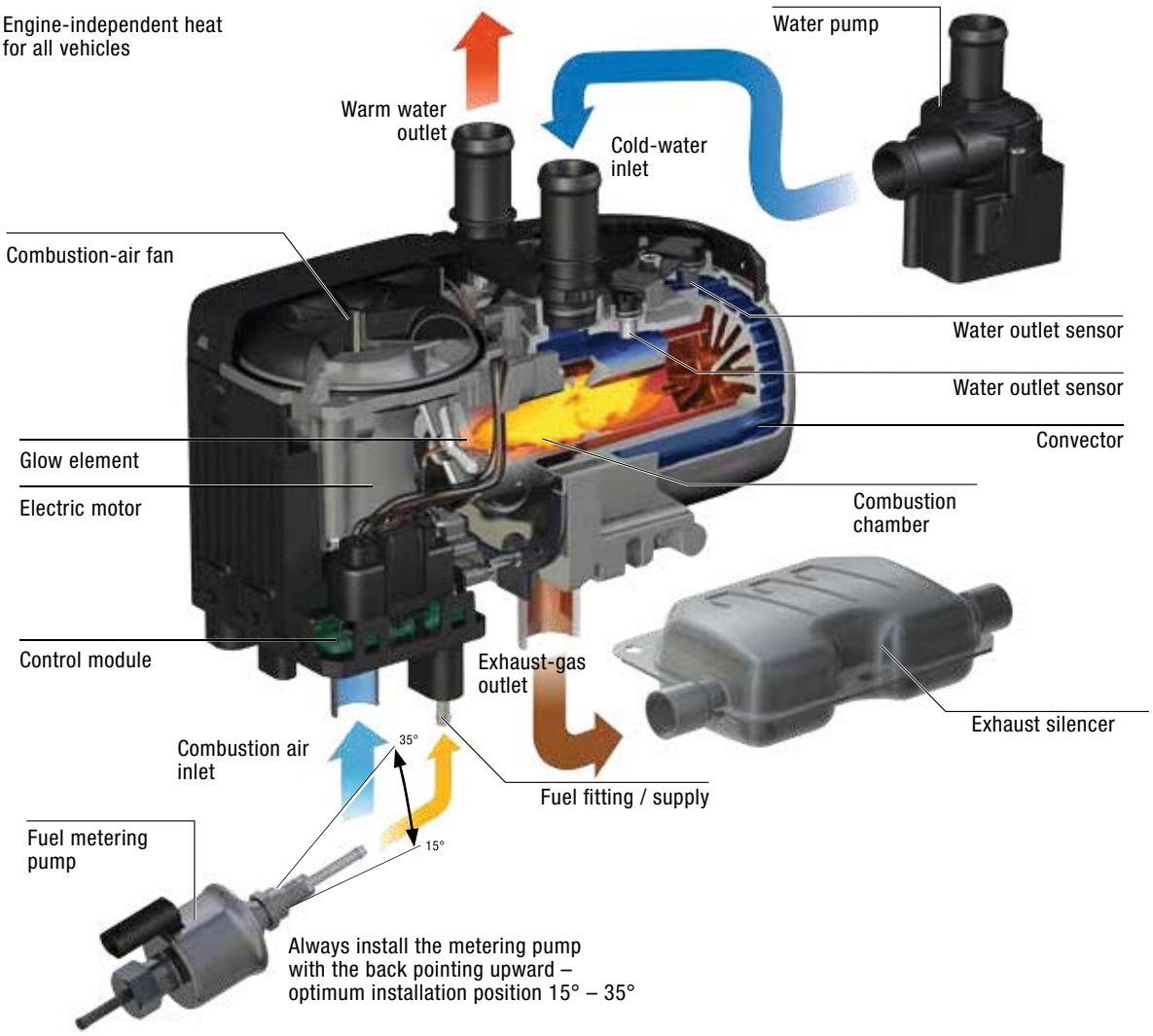
5	Lead harness, plus / minus (included in Item 22)
6	Lead harness, operation (included in Item 22)
7	Flexible exhaust pipe, length 900 mm
8	Combustion air hose, 1 m long
9	Cable tape (2 x 10 pieces)
10	Bracket, metering pump
11	Pipe, 4 x 1 – 2 m long
12	Pipe, 4 x 1.25 – 4 m long
21	Exhaust silencer
22	Cable harness, heater
25	Flexible exhaust pipe with end piece

Airtronic XL3 D8L installation kit (20.2830.20.0800)*:

5	Lead harness, plus / minus (included in Item 22)
6	Lead harness, operation (included in Item 22)
7	Flexible exhaust pipe, length 900 mm
8	Combustion air hose, 1 m long
9	Cable tape (2 x 10 pieces)
10	Bracket, metering pump
11	Pipe, intake side: 4 x 1; di = 4; 2 m long Pipe, pressure side: 4 x 1; di = 2; 2 m long
21	Exhaust silencer
22	Cable harness, heater
25	Flexible exhaust pipe with end piece

PRODUCT INFORMATION

HYDRONIC S3 ECONOMY: TECHNOLOGY

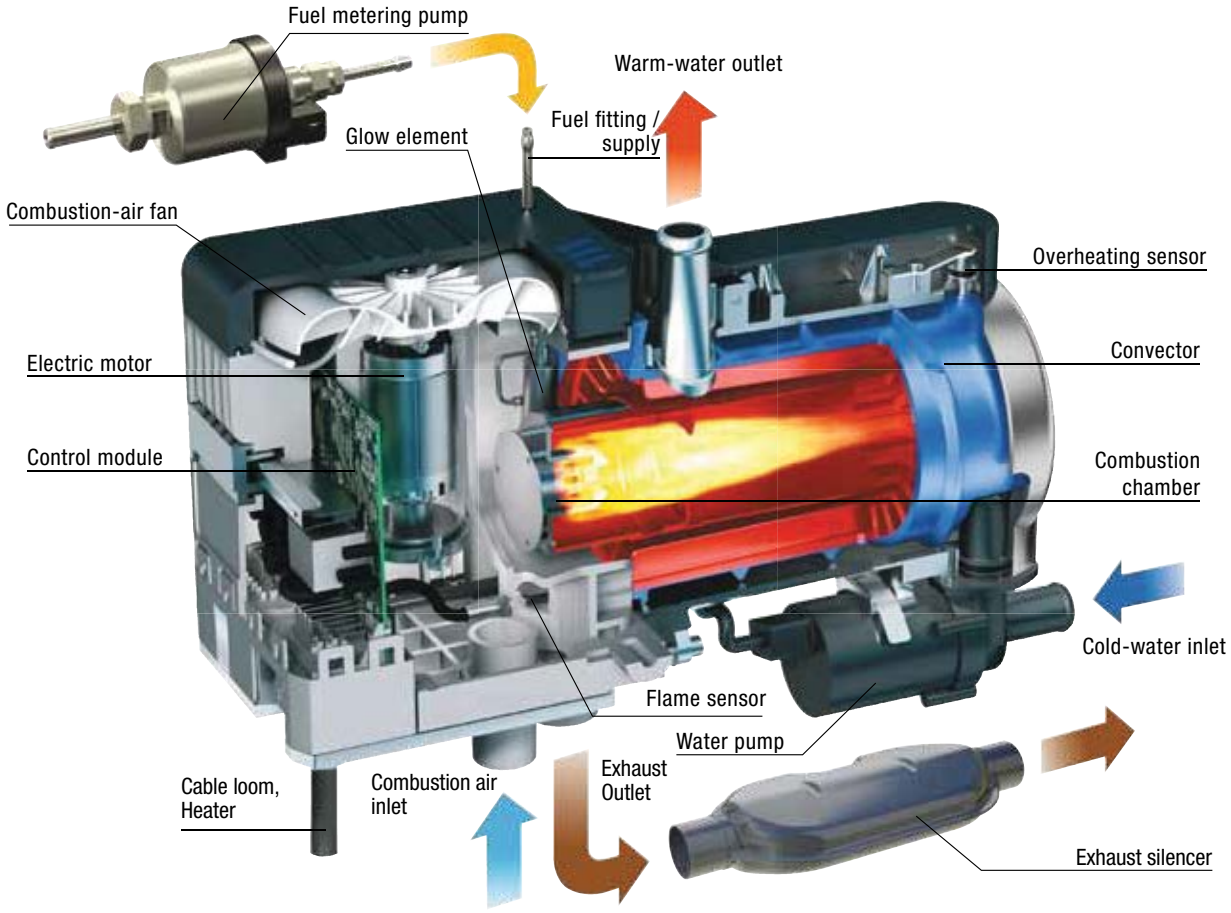


HYDRONIC S3 ECONOMY* FUNCTIONS:

- Combustion air is conveyed to the combustion chamber by the fan motor and impeller.
- Fuel is drawn from the vehicle's tank.
- Fuel is delivered to the combustion chamber by the metering pump (reciprocating pump).
- The glow element vaporizes this fuel as it enters the combustion chamber and creates a combustible fuel-air mix with the combustion air.
- The resulting flame formation switches off the glow element, transfers the heat to the cooling water via the convector, and diverts exhaust gas via the exhaust silencer.
- The cooling water circulation pump conveys cool water to the heater, where it is warmed by the convector and then routed to the vehicle's convector and combustion engine.

PRODUCT INFORMATION

HYDRONIC M-II: TECHNOLOGY

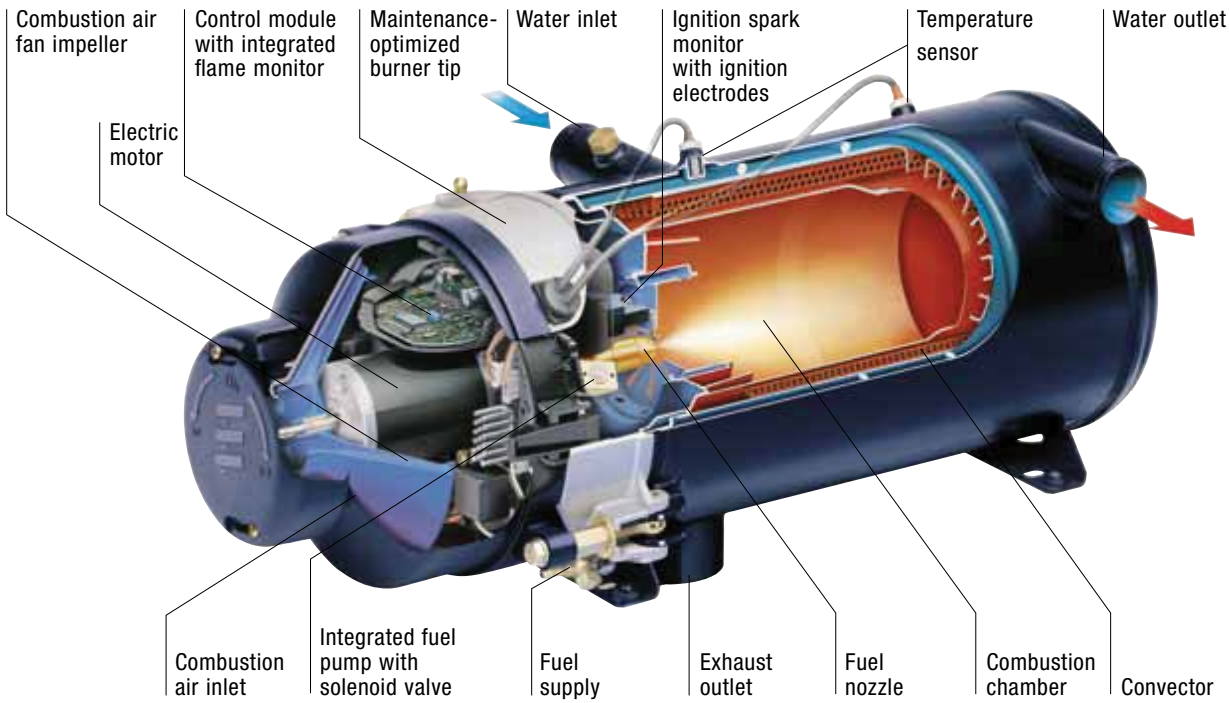


HYDRONIC M FUNCTIONS:

- Combustion air is conveyed to the combustion chamber by the fan motor and impeller.
- Fuel is drawn from the vehicle's tank.
- Fuel is delivered to the combustion chamber by the metering pump (reciprocating pump).
- The glow element vaporises this fuel as it enters the combustion chamber and creates a combustible fuel-air mix with the combustion air.
- The resulting flame formation switches off the glow element, transfers the heat to the cooling water via the convector, and diverts exhaust gas via the exhaust silencer.
- The cooling water circulation pump conveys cool water to the heater, where it is warmed by the convector and then routed to the vehicle's own convector and combustion engine.

PRODUCT INFORMATION

HYDRONIC L: TECHNOLOGY



HYDRONIC L FUNCTIONS:

- Combustion air is conveyed to the combustion chamber by the fan motor and impeller.
- A gear pump delivers fuel from the vehicle's tank and builds up pressure against the closed solenoid valve.
- The solenoid valve opens and the fuel is atomized by the fuel nozzle in the combustion chamber / flame tube.
- The ignition spark monitor ignites the fuel-air mix.
- The resulting flame detection by an optical flame sensor switches off the ignition spark monitor, transfers the heat to the cooling water via the convector, and diverts exhaust gas via the exhaust silencer.
- The cooling water circulation pump conveys cool water to the heater, where it is warmed by the convector and then routed to the vehicle's own convector and combustion engine.

PRODUCT INFORMATION

EBERSPÄCHER HYDRONIC					
Heater		Hydronic S3 Economy	Hydronic S3 Economy	Hydronic S3 Economy	Hydronic S3 Economy
Product package		Heater	Heater	Heater	Heater
Techn. designation		Hydronic HS3 CS Economy B5E	Hydronic HS3 CL Economy B5E	Hydronic HS3 CS Economy D5E	Hydronic HS3 CL Economy D5E
Order no. for **heater**		20.2051.05.0000	20.2048.05.0000	25.2993.05.0000	25.2971.05.0000
Order no. for **heater with PRMP***		–	–	25.2994.05.0000	25.2990.05.0000
Fuel		Gasoline	Gasoline	Diesel	Diesel
Voltage	V	12	12	12	12
Heating medium		Mixture of water and anti-freeze (Proportion of antifreeze at least 10 % up to 50 % maximum)			
Control / heat settings		Infinitely variable	Infinitely variable	Infinitely variable	Infinitely variable
Heat output	W	1,800 to 5,000	1,800 to 5,000	1,300 to 5,000	1,300 to 5,000
Fuel consumption	l / h	0.23 / 0.67	0.23 / 0.67	0.15 / 0.59	0.15 / 0.59
Power consumption, heater	W	7 / 32	7 / 32	5 / 32	5 / 32
Power consumption, water pump	W	17	17	17	17
Elec. power consumption, start	W	135	135	135	135
Minimum water throughput	l / h	300	300	300	300
Lower voltage limit	V	10.5	10.5	10.5	10.5
Upper voltage limit	V	16	16	16	16
Protection rating		Heater: IP5K6K, IP5K9K, Control module: IP6K6K, IP6K9K		Heater: IP5K6K, IP5K9K, Control module: IP6K6K, IP6K9K	
Dimensions L x W x H	mm	215 x 91 x 124	215 x 91 x 124	215 x 91 x 124	215 x 91 x 124
Weight empty	kg	2.0	2.0	2.0	2.0

EBERSPÄCHER HYDRONIC		
Heater		HS3 CS D6L Commercial
Product package		Heater
Order no. for heater		25.2972.05.0000
Fuel		Diesel – standard commercially available (EN 590) Blending with max. 30 % FAME according to EN 14214 is permitted.
Voltage	V	24
Heating medium		Mixture of water and anti-freeze (Proportion of antifreeze at least 10 % up to 50 % maximum)
Control / heat settings		Infinitely variable
Heat output	W	1,300 to 5,600
Fuel consumption	l / h	0.15 / 0.65
Power consumption, heater	W	5 / 37
Power consumption, water pump	W	11
Elec. power consumption, start	W	135
Minimum water throughput	l / h	300
Lower voltage limit	V	20.4
Upper voltage limit	V	32
Interference suppression		5 (DIN EN 55025)
Dimensions L x W x H	mm	215 x 91 x 124
Weight empty	kg	2.0

*PRMP: Pressure resistant metering pump

PRODUCT INFORMATION

EBERSPÄCHER HYDRONIC					
Heater		Hydronic M8 Biodiesel	Hydronic M8 Biodiesel	Hydronic M10	Hydronic M10
Product package		Heater	Heater	Heater	Heater
Techn. designation		Hydronic M-II (D8W)	Hydronic M-II (D8W)	Hydronic M-II (D10W)	Hydronic M-II (D10W)
Order no. for **heater**		25.2470.05.0000	25.2471.05.0000	25.2434.05.0000	25.2435.05.0000
Fuel		Diesel and FAME (biodiesel)	Diesel and FAME (biodiesel)	Diesel	Diesel
Voltage	V	12	24	12	24
Heating medium		Mixture of water and anti-freeze (Proportion of antifreeze at least 10 % up to 50 % maximum)			
Control / heat settings		low / medium / high / power	low / medium / high / power	low / medium / high / power	low / medium / high / power
Heat output	W	1,500 / 3,500 / 5,000 / 8,000	1,500 / 3,500 / 5,000 / 8,000	1,500 / 3,500 / 8,000 / 9,500	1,500 / 3,500 / 8,000 / 9,500
Fuel consumption	l / h	0.18 / 0.4 / 0.65 / 0.9	0.18 / 0.4 / 0.65 / 0.9	0.18 / 0.4 / 0.9 / 1.2	0.18 / 0.4 / 0.9 / 1.2
Power consumption, heater	W	6 / 10 / 17 / 26	6 / 10 / 17 / 26	6 / 10 / 31 / 57	6 / 10 / 31 / 57
Power consumption, water pump	W	29	29	29	29
Elec. power consumption, start	W	200	200	120	120
Minimum water throughput	l / h	500	500	500	500
Lower voltage limit	V	10	20	10	20
Upper voltage limit	V	15	30	15	30
Interference suppression		5 (DIN EN 55025)	5 (DIN EN 55025)	5 (DIN EN 55025)	5 (DIN EN 55025)
Dimensions L x W x H	mm	331 x 138 x 221	331 x 138 x 221	331 x 138 x 221	331 x 138 x 221
Weight empty	kg	6.2	6.2	6.2	6.2

EBERSPÄCHER HYDRONIC			
Heater		Hydronic M12	Hydronic M12
Product package		Heater	Heater
Techn. designation		Hydronic M-II (D12W)	Hydronic M-II (D12W)
Order no. for **heater**		25.2472.05.0000	25.2473.05.0000
Fuel		Diesel	Diesel
Voltage	V	12	24
Heating medium		Mixture of water and anti-freeze (Proportion of antifreeze at least 10 % up to 50 % maximum)	
Control / heat settings		low / medium 1 / medium 2 / medium 3 / high / power	low / medium 1 / medium 2 / medium 3 / high / power
Heat output	W	1,200 / 1,500 / 3,500 / 5,000 / 9,500 / 12,000	1,200 / 1,500 / 3,500 / 5,000 / 9,500 / 12,000
Fuel consumption l / h		0.15 / 0.18 / 0.4 / 0.65 / 1.2 / 1.5	0.15 / 0.18 / 0.4 / 0.65 / 1.2 / 1.5
Power consumption, heater	W	5 / 6 / 10 / 17 / 57 / 103	5 / 6 / 10 / 17 / 57 / 103
Power consumption, water pump	W	29	29
Elec. power consumption, start	W	120	120
Minimum water throughput l / h		500	500
Lower voltage limit	V	10	20
Upper voltage limit V		15	30
Interference suppression		5 (DIN EN 55025)	5 (DIN EN 55025)
Dimensions L x W x H	mm	331 x 138 x 221	331 x 138 x 221
Weight empty	kg	6.2	6.2

PRODUCT INFORMATION

EBERSPÄCHER HYDRONIC					
Heater		Hydronic L16	Hydronic L24	Hydronic L30	Hydronic L35
Product package		Heater	Heater	Heater	Heater
Techn. designation		Hydronic L-II (HL2-16)	Hydronic L-II (HL2-24)	Hydronic L-II (HL2-30)	Hydronic L-II (HL2-35)
Order no. for **heater**		25.2486.02.0000	25.2487.02.0000	25.2599.02.0000	25.2600.02.0000
Order no. for **compact heater**		–	–	25.2599.05.0000	25.2600.05.0000
Fuel		Diesel and fuel oil	Diesel and fuel oil	Diesel and fuel oil	Diesel and fuel oil
Voltage	V	24	24	24	24
Heating medium		Mixture of water and anti-freeze (Proportion of antifreeze at least 10 % up to 50 % maximum)			
Heat output	W	16,000	24,000	30,000	35,000
Fuel consumption	l / h	2	2.9	3.65	4.2
Power consumption, heater	W	60	80	105	120
Power consumption, water pump	W	104 – 210*	104 – 210*	104 – 210*	104 – 210*
Minimum water throughput	l / h	1,400	2,000	2,600	3,000
Lower voltage limit	V	20	20	20	20
Upper voltage limit	V	30	30	30	30
Dimensions L x W x H	mm	600 x 230 x 222	600 x 230 x 222	600 x 230 x 222	600 x 230 x 222
Weight empty**	kg	18	18	18	18

* depending on the water pump model

EBERSPÄCHER WATER PUMPS FOR HYDRONIC L			
Water pumps		Flowtronic 5000	Flowtronic 6000 SC
Order no. for water pump		25.2488.26.0000	25.2488.25.0000
Coolant		Water-glycol mix with	Water-glycol mix with
		up to max 50 % glycol	up to max 50 % glycol
Delivery rate	l / h	5,200 at 0.2 bar	6,000 at 0.4 bar
Operating pressure	bar	max. 2	max. 2
Nominal voltage	V	24	24
Elec. power consumption	W	104	210
Protection class		IP5K4	IP25 (potted electronics)
Dry running		No	Yes – motor switches itself off after 45 minutes
Shaft-impeller connector		Mechanical seal	Magnetic coupling
Weight empty*	kg	2.04	2.5

HYDRONIC HS3 CS
COOLANT HEATER - 17,100 BTU / 19,100 BTU

		Heater	Harness	Fuel System	Coolant Hose	Mounting Bracket	Control Options / Timers	Fuel Pickup Pipe	Hardware Kit	Exhaust Pipe	Intake Pipe	Boxed	Manuals
HYDRONIC HS3 D5E/D6L CS - DIESEL													
D5E 12V Economy with FMP and water pump - No installation parts	25.2993.05.0000	■											■
D6L 24V Commercial with FMP and water pump - No installation parts	25.2972.05.0000	■											■
HEATER WITH INSTALLATION KIT													
Install Kit HS3 CS D5E 12 V	25.2829.34.0500	■	■	■	■	■			■	■	■		■
Install Kit HS3 CS D5E Boxed 12 V Right	25.2829.34.0501	■	■	■		■	■		■	■	■	■	■
Install Kit HS3 CS D6L 24 V	25.2827.45.0600	■	■	■	■	■			■	■	■		■
Install Kit HS3 CS D6L Boxed 24 V Right	25.2827.45.0601	■	■	■		■	■		■	■	■	■	■
HYDRONIC HS3 B5E CS - GASOLINE													
B5E 12V Economy with FMP and water pump - No installation parts	20.2051.05.0000	■											■
HEATER WITH INSTALLATION KIT													
Install Kit HS3 CS B5E 12 V	25.2820.51.0500	■	■	■	■	■			■	■	■		■

■ Item in the kit

HYDRONIC HS3 B/D5E/D6L CS

HARDWARE KIT INCLUDES:

Fuel Clamps
Nuts
Cable Ties
Grommets
Exhaust Clamps
Mounting Screws
Ducting Clamps
Washers
Routing Clamps
End Caps
Exhaust Brackets

FUEL SYSTEM INCLUDES:

Clamps
5 mm Fuel Line
Plastic Fuel Line
3.5 mm Fuel Line

Refer to the Accessories Section for ducting components and additional accessories.

PICK-UP TRUCK KITS
HYDRONIC HS3 - 17,100 BTU

GAS KITS	Make	Model	Engine	M/Y		Heater	Harness	Fuel System	Mounting Bracket	Control Device	Fuel Pickup Pipe	Hardware Kit	Exhaust Pipe	Intake Pipe	Blower Control Option	Manuals
Heater HS3 B5E 12V CL					20.2048.05.0000	■										■
Installation kit	Dodge	RAM	5.7L V8	2017 and up	24.8000.35.0019		■	■	■		■	■	■	■	■	
Installation kit	GMC	Sierra/Silverado	5.3L V8	2015 and up	24.8000.35.0020		■	■	■		■	■	■	■	■	
HS3 B5E 12V CS					20.2051.05.0000	■										■
Installation kit	Dodge	RAM	5.7L V8	2018 and up	24.8000.35.0063		■	■	■		■	■	■	■	■	
Installation kit	Dodge	RAM	6.4L V8	2020 and up	24.8000.35.0093		■	■	■		■	■	■	■	■	
Installation kit with cold start kit	GMC	Sierra/Silverado	6.2L V8	2020 and up	24.8000.39.0055											
DIESEL KITS																
Heater HS3 D5E 12V CL					25.2971.05.0000	■										■
Heater HS3 D5E 12V CL w. PRMP*					25.2990.05.0000	■										■
Installation kit	Ford	F250/F350	6.7L V8	2016 and up	24.8000.35.0034		■	■	■		■	■	■	■		
Installation Dodge	Dodge	RAM	6.7L V6	2017 and up	24.8000.35.0035		■	■	■		■	■	■	■	■	
Installation kit with cold start kit	GMC	Sierra/Silverado	6.6L V8	2017 and up	24.8000.35.0038		■	■	■		■	■	■	■	■	
Heater HS3 D5E 12V CS					25.2993.05.0000	■										■
Heater HS3 D5E 12V CS w. PRMP*					25.2994.05.0000	■										■
Installation kit	Dodge	RAM	6.7L V8	2019 and up	24.8000.35.0090		■	■	■		■	■	■	■		
Installation kit with cold start kit	GMC	Sierra/Silverado	6.6L V8	2020 and up	24.8000.39.0056		■	■	■		■	■	■	■	■	
RELATED PARTS																
EasyStart Timer (For HS3 CL heaters)					22.1000.34.1500					■						
Control Kit Wi-Fi Remote (For HS3 CS and CL heaters)					20.2800.70.2300					■						
EasyStart PRO Controller (For HS3 CS heaters)					22.1000.35.2200					■						

*PRMP: Pressure resistant metering pump

■ Item in the kit

HARDWARE KIT INCLUDES:

- Fuel Clamps
- Nuts
- Cable Ties
- Grommets
- Exhaust Clamps
- Mounting Screws
- Ducting Clamps
- Washers
- Routing Clamps
- End Caps
- Exhaust Brackets

FUEL SYSTEM INCLUDES:

- Clamps
- 5 mm Fuel Line
- Plastic Fuel Line
- 3.5 mm Fuel Line

Refer to the Accessories Section for ducting components and additional accessories.

HYDRONIC M-II
SERIES: 27,300, 32,450, 42,000 BTU

		Heater	Harness	Fuel System	Coolant Hose	Mounting Bracket	Control Options / Timers	Fuel Pickup Pipe	Hardware Kit	Exhaust Pipe	Intake Pipe	Boxed	Manuals
HYDRONIC 10 / M													
HYDRONIC M8 biodiesel 12 volt	25.2470.05.0000	■											■
HYDRONIC M8 biodiesel 24 volt	25.2471.05.0000	■											■
HYDRONIC M10 12 volt	25.2434.05.0000	■											■
HYDRONIC M10 24 volt	25.2435.05.0000	■											■
HYDRONIC M12 12 volt	25.2472.05.0000	■											■
HYDRONIC M12 24 volt	25.2473.05.0000	■											■
HYDRONIC M12 24 volt w/Hella	25.2725.05.0000	■											■
HYDRONIC M12 12 volt Boxed Kit	25.2824.72.1210	■	■	■		■		■	■	■	■	■	■
HYDRONIC M12 24 volt Boxed Kit	25.2824.73.1210	■	■	■		■		■	■	■	■	■	■
HYDRONIC M12 12 volt Boxed Kit w/high Capacity Pump	25.2824.72.0012	■	■	■		■		■	■	■	■	■	■
HYDRONIC M12 24 volt Boxed Kit w/high Capacity Pump	25.2824.73.0024	■	■	■		■		■	■	■	■	■	■
UNIVERSAL INSTALLATION KITS													
Eberspaecher Universal Install 12V with diagnostic connection	25.2800.90.1012		■	■		■			■	■	■		
Eberspaecher Universal Install 24V with diagnostic connection	25.2800.90.1024		■	■		■			■	■	■		
Air Int Muffler w/end Cap	25.1786.80.0200										■		

■ Item in the kit

HYDRONIC M-II — BUILD YOUR OWN KIT
SERIES: 42,000 BTU - CARB APPROVED

HYDRONIC M II STEP 1 - SELECT BASIC KITS:		Heater	Harness	Fuel System	Coolant Hose	Mounting Bracket	Control Options / Timers	Fuel Pickup Pipe	Hardware Kit	Exhaust Pipe	Intake Pipe	Boxed	Manuals
HYDRONIC M12 12 volt, Basic assambly	25.2824.72.1203	■	■	■		■			■	■	■	■	■
HYDRONIC M12 24 volt, Basic assambly	25.2824.73.1201	■	■	■		■			■	■	■	■	■

STEP 2 - SELECT ONE OF THE FOLLOWING CONTROL OPTIONS	
EasyStart Timer	22.1000.34.1500
Multi Max F-1000 Controller	20.2800.70.1600
Programmable Timer With LVD	25.2800.70.1010
Programmable Timer With LVD Dual Input	25.2800.70.2020
Pro. Timer w/LVD Dual Output Switch	25.2800.70.3030

STEP 3 - SELECT FUEL PICKUP PIPE OPTIONS	
Fuel Pick Up Pipe 4mm with 1/2 NPT	20.2900.20.2050
Fuel Pipe with Vent 4mm ID - 19.5 IN	20.2900.20.4006

■ Item in the kit

E-GUARDIAN
DIESEL / WATER

		Heater	Harness	Fuel System	Coolant Hose	Mounting Bracket	Control Options / Timers	Fuel Pickup Pipe	Hardware Kit	Exhaust Pipe	Intake Pipe	Boxed	Manuals
E-Guardian HYDRONIC M-II KITS													
Boxed D12 E-GUARDIAN II ASMBLY 12V	25.2824.72.1202	■	■	■		■	■	■	■	■	■	■	■
Boxed D12 MII - Series Asmbly - 12V	25.2824.72.1210	■	■	■		■	■	■	■	■	■	■	■
Boxed D12 MII - Series Asmbly - 24V	25.2824.73.1210	■	■	■		■	■	■	■	■	■	■	■
Spare Parts:													
E-Guardian Coolant Pump 12 V	25.2596.25.0100												
E-Guardian 12 Replacement Heater	25.2596.05.0000	■											■

■ Item in the kit

HARDWARE KIT INCLUDES:

Fuel Clamps
Nuts
Cable Ties
Grommets
Exhaust Clamps
Mounting Screws
Ducting Clamps
Washers
Routing Clamps
End Caps
Exhaust Brackets

FUEL SYSTEM INCLUDES:

Clamps
5 mm Fuel Line
Plastic Fuel Line
3.5 mm Fuel Line

Refer to the Accessories Section for ducting components and additional accessories.

HYDRONIC L-II
SERIES: 55,000, 82,000, 102,000, 120,000 BTU

HYDRONIC L 16	
Basic Heater 24V	25.2486.02.0000
HYDRONIC L 24	
Basic Heater 24 volt	25.2487.02.0000
HYDRONIC L 30	
Basic Heater 24 volt	25.2599.02.0000
HYDRONIC L 30 Compact	
Water pump Flowtronic 5000 and fuel filter pre-assembled	25.2599.05.0000
HYDRONIC L 35	
Basic Heater 24 volt	25.2600.02.0000
HYDRONIC L 35 Compact	
Water pump Flowtronic 5000 and fuel filter pre-assembled	25.2600.05.0000

ACCESORIES

FUEL	Nipple and Nut Connectors for compact version (1 required)	20.2900.20.2071
	Fuel Line 5.0mm black rubber	360.75.350
	Clamps 11mm	10.2068.01.1098
	Fuel Pick-up with Return	20.2900.20.2059
	L-II Filter Base and Bracket	25.2599.05.0100
EXHAUST	Flexible Stainless Steel Exhaust Tube 70mm	5530015
	Muffler Clamp 3”	5530004
	Exhaust Elbow (70mm exhaust) D30 / D35	22.1000.40.0300
PUMPS	Coolant Pump 24volt (5,000 L/hr)	25.2488.26.0000
	Flowtronic Coolant Pump 24 volt (6,000 L/hr)	25.2488.25.0000
CONTROLS	Multi Max F-1000 Controller	20.2800.70.1600
	Programmable Timer With LVD	25.2800.70.1010
	Programmable Timer With LVD Dual Input	25.2800.70.2020
	Pro. Timer w/LVD Dual Output Switch	25.2800.70.3030

When using Artic Fox Systems, be sure and specify heaters with high capacity pumps.

HYDRONIC L-II OFF HIGHWAY KITS

HYDRONIC L-II OFF HIGHWAY		Heater	Harness	Fuel System	Coolant Hose	Mounting Bracket	Control Options / Timers	Fuel Pickup Pipe	Hardware Kit	Exhaust Pipe	Intake Pipe	Boxed	Manuals
HYDRONIC 30 L-II Boxed Off-Highway Assembly 12V w/6000 L pump	25.2800.10.3612	■	■			*			■	■		■	■
HYDRONIC 30 L-II Boxed Off-Highway Assembly 24V w/6000 L pump	25.2800.10.3600	■	■			*			■	■		■	■
HYDRONIC 35 L-II Boxed Off-Highway Assembly 24V w/6000 L pump	25.2800.10.5624	■	■			*			■	■		■	■

■ Item in the kit * Mounting holes on base. No mounting hardware included

Fuel	
Hose Fuel 5 x 3mm black rubber	360.75.350
Single Pick-up Pipe 4.0 mm with Return (61 cm or 24")	20.2900.20.2059
Clamp 11mm, 4 qty.	10.2068.01.1098

Controls	
Multi Max F-1000 Controller	20.2800.70.1600
Programmable Timer With LVD	25.2800.70.1010
Programmable Timer With LVD Dual Input	25.2800.70.2020
Pro. Timer w/LVD Dual Output Switch	25.2800.70.3030

- Packaged for Off-Highway and oilfield applications
- 12 and 24 volt options
- Eliminate cold starts
- Minimize diesel exhaust emissions
- Rugged, compact
- Versatile fluid pre-heating
- Standard with pre-heated nozzle

ACCESSORIES PARTS GUIDE

TIMERS AND CONTROLLERS

							
AVAILABLE FUNCTIONS	**DIGI-MAX CONTROLLER**	**EASYSTART TIMER**	**EASYSTART PRO CONTROLLER**	**WI-FI REMOTE CONTROL**	**MULTI-MAX F-1000**	**PROGRAMABLE TIMER**	**MULTI-FUNCTION**
Order number	20.2800.70.1500	22.1000.34.1500	20.2800.70.2200	20.2800.70.2300	20.2800.70.1600	5670433 12V 5670434 24V	25.2800.70.1010
Heater On/OFF with status indicator	■	■	■	■	■	■	■
Run Time limiter with selectable presets	■	■	■	■	■	■	■
Built in diagnostic with fault code display (numerical, verbal or both)	■	■	■	■	■ Blinking Diagnostic		
Clearing codes and unlocking capability	■	■	■	■	■		
Illuminated turn and push control dial			■				
Programmable Timer		■	■	■	■	■	
Multiple Starts-Day/Week		■	■		■	■	
Use of residual heat			■				
Synchronization and independency of two parallel controllers (heater switched on one controller may be switched off from the other one, both controllers display same information			■				
Switching heater into the High Altitude Mode (for supported heaters)			■				
Grouping heaters			■				
Standard Fan Mode		■	■				
Programmable LVD	■	■	■		■		■
Low voltage shutdown	■	■	■		■		■
Onboard temperature sensor	■		■				
Setpoint switchable between F and C	■	■	■				

* Refer to controllers manuals for the list of diagnostic-compatible heaters

TIMERS AND CONTROLLERS

							
AVAILABLE FUNCTIONS	**DIGI-MAX CONTROLLER**	**EASYSTART TIMER**	**EASYSTART PRO CONTROLLER**	**WI-FI REMOTE CONTROL**	**MULTI-MAX F-1000**	**PROGRAMABLE TIMER**	**MULTI-FUNCTION**
Order number	20.2800.70.1500	22.1000.34.1500	20.2800.70.2200	20.2800.70.2300	20.2800.70.1600	5670433 12V 5670434 24V	25.2800.70.1010
Hours meter or reader	■			■	■		■
"Maintenance required" warning	■		■		■		
External control wire or port for use with external devices		■	■		■		
Low temperature display	■						
Computer programming via SD card	■						
Computer setup via Easy Scan			■				
Multilingual interface		■	■				
"Check heater" warning	■		■		■		
Ambient Air Temp Sensor	■		■			■ Cabin temp sensor	
Diagnostic Code Retrieval	■ 1st	■	■	■	■ 1st		
Standard Fan Mode	■	■	■		■		
10-Hour Automatic Shutoff	■			■	■		
Manual Start Mode	■	■	■	■	■	■	■
Program Memory		■	■		■	■	
Accepts External Inputs		■	■		■		■
AIR HEATERS	■	■	■	■	■		
COOLANT HEATERS		■	■	■	■	■	■

■ 1st only for 1st generation of AIRTRONIC AND HYDRONIC heaters

TIMERS AND CONTROLLERS

Control units



Model	**Mini-controller** Control unit	**EasyStart Select** Control unit	**EasyStart Pro** Timer
Order number	22.1000.32.0700	22.1000.34.1300	22.1000.35.2200
Interface	S+	LIN	CAN
Basic functions	• Heating/ventilation on/off		Heating/ventilation on/off • Long-press function for immediate heating • A second/additional heater can be operated
Timer programming	—	—	• Three programming locations within seven days • Selection of individual days of the week or one of three time periods (Mo.–Fr./ Sa.+Su./Mo.–Su.)
Operating time settings	Continuous operation	60 min. preset	10–720 min. or endless
Pre-ventilation*	Yes	Yes	Yes
Display Interior temperature	—	—	Yes
Range	—	—	—
Diagnosis capable	—	Display of error number	Simple diagnostics in text form via User menu Diagnostics via fault number in Workshop menu

TIMERS AND CONTROLLERS

Control units

Model	**Mini-controller** Control unit	**EasyStart Select** Control unit	**EasyStart Pro** Timer
Residual heat function possible	—	—	Yes, depending on the heater type*
Timer programing: autom. calculation of the operating time	—	—	Yes
Manual high-altitude operation of Hydronic S3 Economy (CS) possible	—	—	Yes
Lower air flow temperature can be set	—	—	Yes

* only with Hydronic 3 (CS)

OPTIONAL ADD-ONS

Selection of control and display sensors

The EasyStart Pro has an integrated temperature sensor, which is used to determine the interior temperature. An exterior temperature sensor additionally can be connected and implemented in the system upon installation. The temperature sensor, which is built into the heater, can also be used by air heaters to determine the interior temperature. The sensors to be used for temperature control (control sensor) and for temperature display (display sensor) can be set via the EasyStart Pro during commissioning.

Specifics regarding fresh-air mode:

- The control sensor must not be the internal heater sensor.

There are three options:

- Use of the integrated temperature sensor of the EasyStart Pro
- Connection of an external temperature sensor to the EasyStart Pro
- Connection of an external temperature sensor to the air heater

Specification of the temperature and control sensors for Airtronic heaters

In the EasyStart Pro

In the heater

External, connected to control unit

External, connected to heater*

* Possible only via EasyScan configuration

OPTIONAL ADD-ONS

Control units

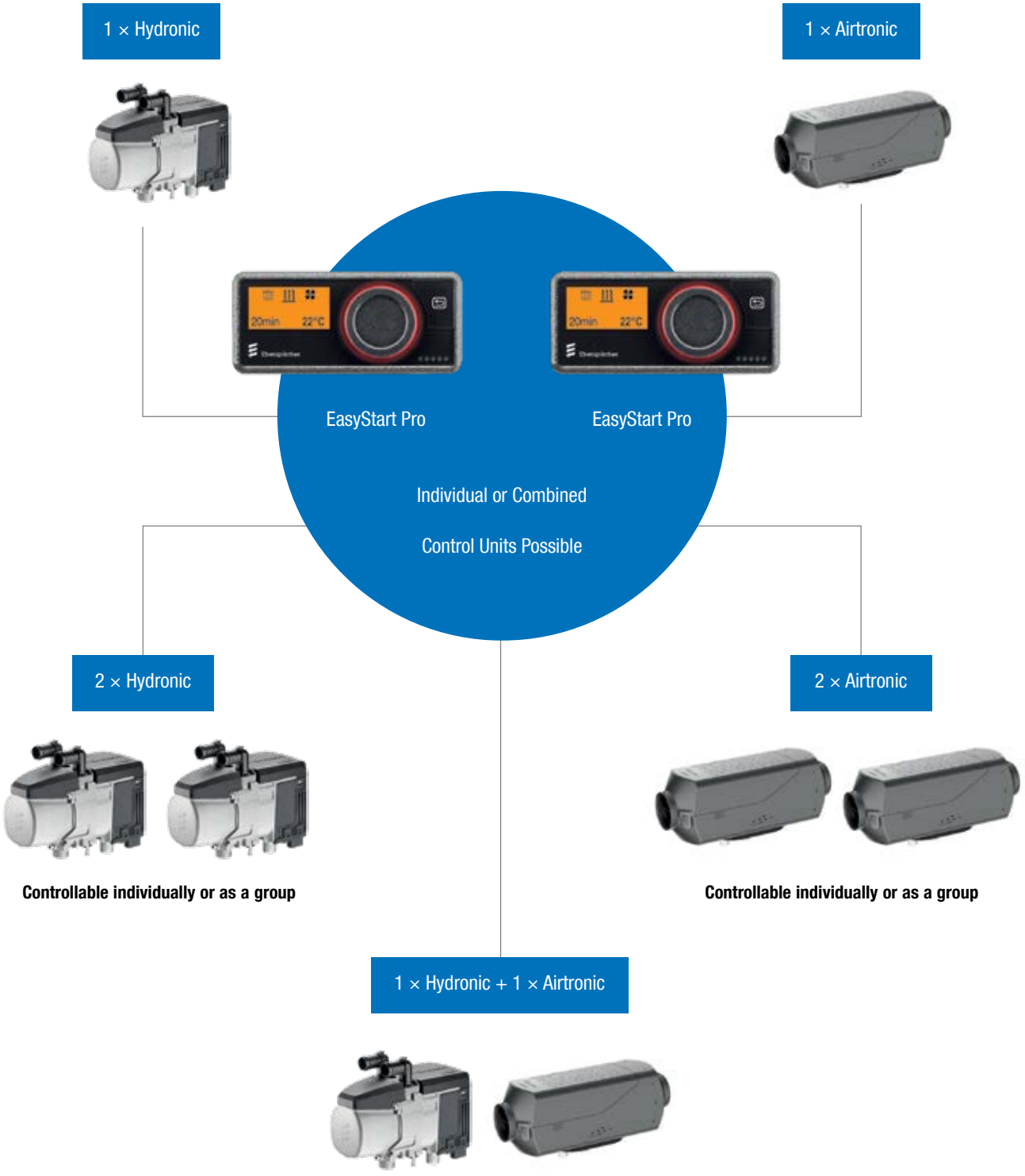
Model		Airtronic mini-controller	EasyStart Select	EasyStart Timer	EasyStart Pro
Order number		22.1000.32.0700	22.1000.34.1300	22.1000.34.1500	22.1000.35.2200
Interface		S+	LIN	LIN, S+	CAN
Control unit compatibility with heaters					
	Hydronic S3 12V CS Economy	–	–	S+ *	CAN
	Hydronic S3 24V	–	–	S+ *	CAN
	Hydronic S3 12V	–	LIN	LIN	–
	Hydronic M II 12/24 V	–	LIN	LIN	–
	Hydronic L16, L24, L30, L35	–	–	S+ *	–
	Airtronic S3/M3/L3 12 V	S+ **	LIN	LIN	CAN
	Airtronic M3 12V Recreational	S+ **	LIN	LIN	CAN
	Airtronic S3/M3/L3/XL3 24V Commercial	S+ **	–	S+ * No setpoint input possible	CAN

* With restricted function: diagnostics cannot be run via the control unit

** With restricted function: no external temperature sensor possible

OPTIONAL ADD-ONS

Combination options for heaters and control units via CAN



CONTROL UNITS - EASYSTART PRO

1. Advantages (functions):

- Intuitive navigation via a control knob
- Integrated temperature sensor
- Operation of up to two heaters separately or two identical (Airtronic or Hydronic) heaters in a group
- Simple plain text diagnostics for users
- Detailed diagnostics function for the workshop
- Integrated residual heat function for Hydronic (CS) heaters: efficient heating using the engine's residual heat
- Altitude mode can be activated manually above 1,500 m (Hydronic S3 Economy (CS))
- Easy-to-read system status display (home screen)
- Timer function: up to three programming locations available
- Display and LED color ring for clearly indicating the status in all operating conditions
- Various installation variants possible (surface mounting with concealed or visible cable routing, flush mounting)
- Mounting-optimized ribbon cable
- Endless heater operating time can be set (Airtronic 2 + Airtronic 3 and Hydronic S3 (CS))
- Menu operation available in English and German, as well as 25 other languages via EasyScan

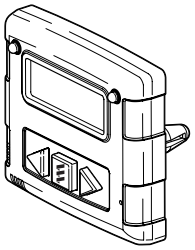
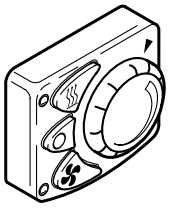
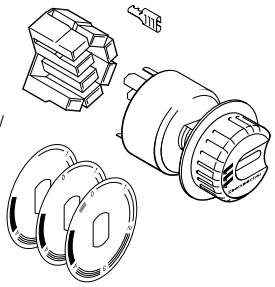
2. Additional features:

- Setup assistant simplifies installation
- Maintenance interval setting possible
- Immediate heating via the long-press function
- Integration of an additional CAN control unit possible: EasyStart Web (from Q2/2020) or additional EasyStart Pro
- Permanent display illumination possible
- ADR compliant
- Easy diagnostics via EasyScan; no disassembly required

Technical data:

Order number		22.1000.35.2200
Dimensions L x W x H	mm	81.8 x 37.0 x 13.5 (without control knob) 81.8 x 37.0 x 18.6 (with control knob)
IP type of protection		IP5K2
Average standby current draw	mA	< 0.4
Operating temperature	°C	–40 to +85

CONTROL OPTIONS AND TIMERS

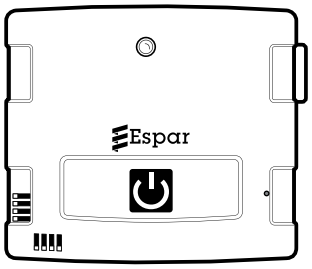
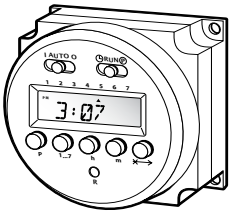
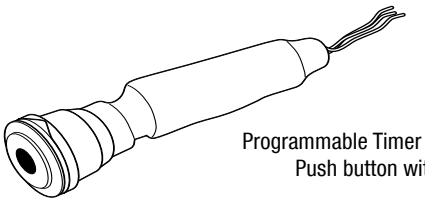
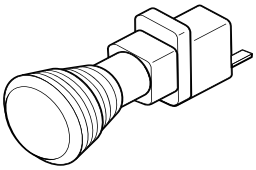
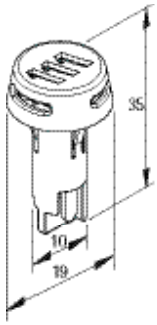
			Airtronic S (2.2 kW)	Airtronic M (4 kW)	Airtronic L (5.5 kW)	Airtronic XL3	Hydronic S (5-6 kW)	HydronicL(16-35 kW)/L2	Hydronic M-II (8-12 kW)	Part number
Digi-Max Controller with Diagnostic 12V & 24V			~	~	■	■				20.2800.70.1500
Mini Controller 12 and 24 volt Mini Controller Knob	 ①		~	~	■	■				22.1000.32.0700 ①
Control unit - single part 7-pin bushing connector housing		24 volt	■	■	■	■				206.31.282
Rheostat Switch		*12 volt	~	~	■	■				25.1895.71.0000
		*24 volt	~	~	■	■				25.1896.71.0000
		**24 volt	~	~	~	■				25.1768.71.0000
Wi-Fi Remote Control			~	~	■	■				20.2800.70.2300

* with bushing connector housing and bushing connector
** without bushing connector housing and bushing connectors/ only for air heater 8 L

~ = No ventilation, no diagnostic information

■ unrestricted use ~ restricted use no diagnostic

CONTROL OPTIONS AND TIMERS

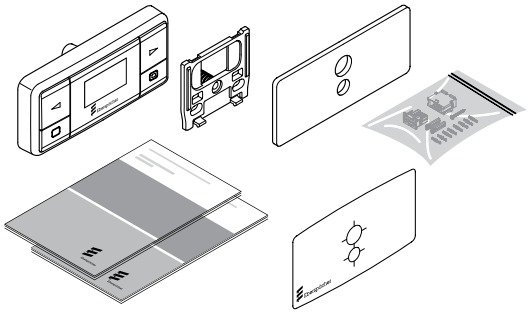
		Airtronic S (2.2 kW)	Airtronic M (4 kW)	Airtronic L (5.5 kW)	Airtronic XL3	Hydronic S (5-6 kW)	HydronicL(16-35 kW)/L2	Hydronic M-II (8-12 kW)	Part number
Multi-Max									
	F1000 with PC Programmability & Diagnostic 12 & 24 V					~	■	■	20.2800.70.1600
Programmable Timer (No Diagnostic)									
	12 V					~	■	■	5670433
	24 V					~	■	■	5670434
Programmable Timer with LVD									
	Dual Input					~	■	■	25.2800.70.1010
	Programmable Timer with LVD, Dual Outputs-Detached					~	■	■	25.2800.70.2020
	Push button with 24” leads for 25.2800.70.3030					~	■	■	25.2800.70.3030
						~	■	■	25.2800.70.3035
Push / Pull Switch									
	Push / Pull Switch 12 volt					~	■	■	5670007
External and internal temperature control sensor, flush wall-mounte[illegible] 2m Cable harness									
* Can also be combined with control unit	 	■	■	■	■				22.1000.35.2100

■ unrestricted use ~ restricted use no diagnostic

CONTROL OPTIONS AND TIMERS

EasyStart Timer

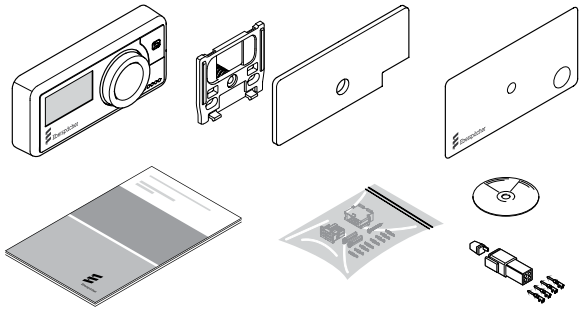
For Hydronic 1,
Hydronic 2,
Hydronic S3 CL,
Hydronic M2 and
Airtronic 1
Airtronic 2 and
Airtronic 3



~ = For Hydronic S3 Economy (CS): possible only with S+; no diagnostic option

	Airtronic S (2.2 kW)	Airtronic M (4 kW)	Airtronic L (5.5 kW)	Airtronic XL3	Hydronic S (5-6 kW)	HydronicL(16-35 kW)/L2	Hydronic M-II (8-12 kW)	Part number
EasyStart Timer	~	~	~	~	~	~	~	22.1000.34.1500

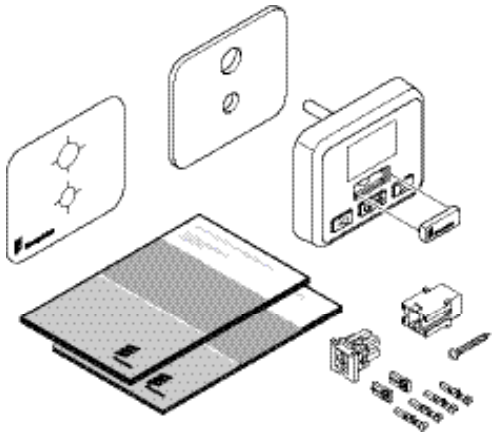
Control Kit - EasyStart Pro with Adaptor



	Airtronic S (2.2 kW)	Airtronic M (4 kW)	Airtronic L (5.5 kW)	Airtronic XL3	Hydronic S (5-6 kW)	HydronicL(16-35 kW)/L2	Hydronic M-II (8-12 kW)	Part number
Control Kit - EasyStart Pro with Adaptor	■	■	■	■	■			20.2800.70.2200
12 V / 24 V	■	■	■	■	■			22.1000.35.2200

EasyStart Select

For Hydronic 1,
Hydronic 2,
Hydronic S3 CL,
Hydronic M2 and
Airtronic 1
Airtronic 2 and
Airtronic 3

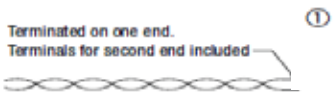


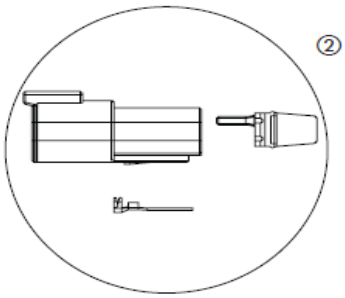
~ = consider heater compatibility

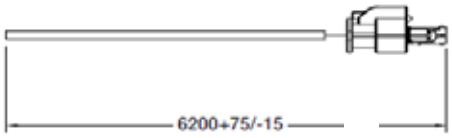
	Airtronic S (2.2 kW)	Airtronic M (4 kW)	Airtronic L (5.5 kW)	Airtronic XL3	Hydronic S (5-6 kW)	HydronicL(16-35 kW)/L2	Hydronic M-II (8-12 kW)	Part number
12 V / 24 V	~	~	~		~	■		22.1000.34.1300

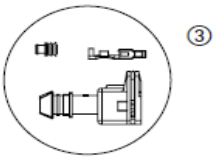
■* Use EasyScan to configure input as external temperature sensor ■ unrestricted use ~ restricted use, no diagnostic

CAN BUS CONNECTORS AND TEMPERATURE SENSORS

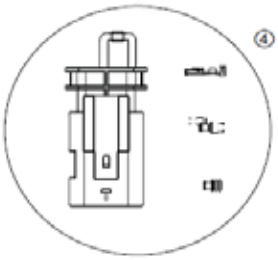






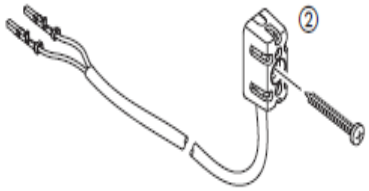


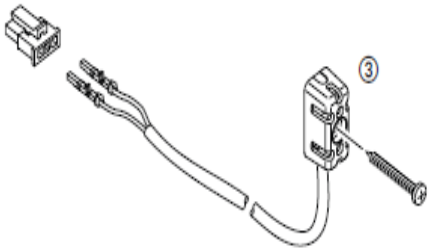
BAG PART



	Airtronic S (2.2 kW)	Airtronic M (4 kW)	Airtronic L (5.5 kW)	Airtronic XL3	Hydronic S (5-6 kW)	HydronicL(16-35 kW)/L2	Hydronic M-II (8-12 kW)	Part number
Combo harness use to join two Canbus heaters	■	■			■			20.2900.70.0015 ①
Deutsch connector, 4 way	■	■			■			20.2900.70.0019 ②
AX2 / HS3 FMP Harness	■	■			■			20.2900.70.0020 ③
Diagnostic Cap	■	■			■			20.2900.70.0022 ④

Temperature Sensor





	Airtronic S (2.2 kW)	Airtronic M (4 kW)	Airtronic L (5.5 kW)	Airtronic XL3	Hydronic S (5-6 kW)	HydronicL(16-35 kW)/L2	Hydronic M-II (8-12 kW)	Part number
Remote Temperature Sensor (To be used as air heater's external temperature sensor ONLY)	*	*	■	■				25.1774.89.0300 ①
Controller Temperature Sensor (To be used with EasyStart Timer)			■			■	■	22.1000.34.2200 ②
Temperature Sensor (To be used with EasyStart Pro	■	■			■			22.1000.34.5400 ③

* Use EasyScan to configure input as external temperature sensor ■ unrestricted use ~ restricted use, no diagnostic

EASYSCAN DIAGNOSTIC AND SERVICE TOOL

EasyScan – the new diagnostic and service tool for Eberspächer pre-heater systems:

EasyScan is the diagnostic and service tool for the future – it is the workshop's future-proof solution for challenges in the long term. The new tool is a replacement for our current EDiTH diagnostic system, and is therefore also backward compatible. Usually air and water heaters from as early as 2007 and 2009, respectively, can be diagnosed.

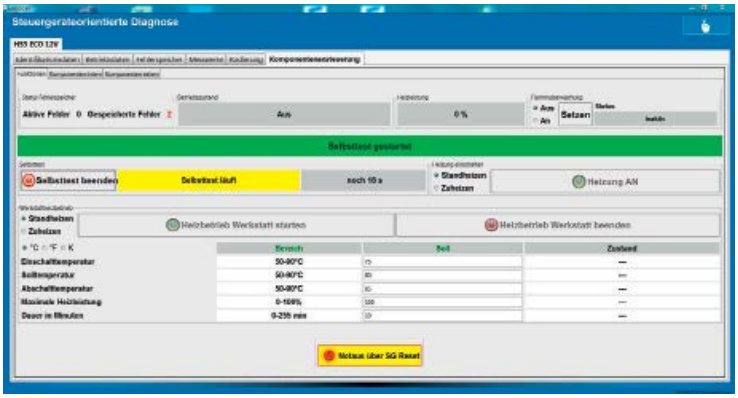


Fig.: Component or workshop test

1. Advantages (functions):

- Comprehensive evaluation of current operating statuses
- Error analysis on devices and components
- Error code display for heaters with CAN communication, including additional system parameters
- Heating application function check
- Commissioning support for heating systems with CAN communication
- Integrated results log at the end of commissioning and for diagnostic processes
- Existing heater adapters are still applicable
- Direct link to the Eberspächer Partner Portal at any time
- Datasets can be installed, e.g. for the flap and fan module EasyFan, as well as EasyStart Web firmware updates

2. Additional features:

- PC software is downloaded via the Partner Portal
- Software can also be installed and updated locally from a data carrier, as an alternative
- Ongoing updates provided on the Partner Portal
- Product package: VCI, USB cable and Y-adapter cable (connection for current heaters as well as future applications)

EASYSCAN DIAGNOSTIC AND SERVICE TOOL

Technical data:

Part number		22.1550.89.0000
Compatibility		Air and water heaters Hydronic 1 (12 V), Hydronic 2, Hydronic 2 Commercial (12 V and 24 V), Hydronic S3 Economy (12 V), Hydronic M II (12 V and 24 V), Airtronic 1 (12 V and 24 V), Airtronic 2 (12 V and 24 V) and all Airtronic 3 heaters (12 V and 24 V)
Temperature range	°C	–40 to +70
Dimensions L x W x H	mm	82 x 72 x 24
IP type of protection		IP 20

PC system requirements:

- standard PC or laptop with Windows 7 or later
- Hardware: Processor speed min 1 GHz
- RAM: min. 1 GB (3 GB recommended)
- USB port
- Operating system: Windows 7 (32- + 64-bit, SP1) or later

Languages	DE/EN FR/IT/CZ/PL/CN/JP/KO/RU

Fig.: Graphic representation of startup process

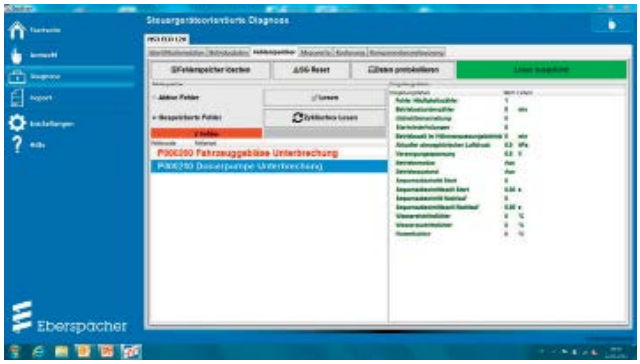


Fig.: Graphic representation of startup process

SERVICE: OTHER DIAGNOSTIC DEVICES

Eberspächer diagnostics options:

- EasyScan: requires PC, ISO adapter and software – see heater fault finding or EasyScan instructions on the Partner Portal
- With EasyStart control units: see heater and control unit fault finding on the Partner Portal
- With existing diagnostic devices 20.2900.70.5060 and with the new diagnostic device 22.1545.89.0000: See heater fault finding or diagnostic device instructions on the Partner Portal

Testing heaters using	EasyScan	CONTROL unit/diagnostic device
Full test without PC		x
Full test with PC	x	

EasyScan:

- Reads out general heater data, e.g. running times for function tests in the vehicle and on the test bench, parameter displays
- Activates individual parts to test components, line filling
- Hydronic S3, Airtronic 2 and Airtronic 3 heaters can be diagnosed in detail only with EasyScan, EasyStart Pro and EasyStart Web.

Diagnostic device 22.1545.89.0000 is used for Hydronic 1, Hydronic 2 and Airtronic 1:

- If EasyScan and PC are not available
- If EasyStart Select, Timer, Remote, Remote+ or Web is not installed

Diagnostic devices:

- For correct commissioning or rapid diagnostics in vehicles, without a diagnostics-enabled control unit
- If there is no PC
- Minimal installation

TESTING EQUIPMENT

Testing equipment for heaters:

Designation	Item no.
EasyScan	22.1550.89.0000
Diagnostic device (new timer)	22.1545.89.0000

Current adapter cables:

Designation	Item no.
Hydronic I 3/4/5 kW	22.1000.31.6300
Hydronic 2 Economy / Comfort	22.1000.33.7800
Hydronic M-II	22.1000.33.4400
Airtronic 1 (D2/D3/D3 Plus/D4/D4 Plus)	22.1000.31.8600

Adapter cables for older heaters*:

Designation	Item no.
Compact air heater	22.1000.30.6900
Air heater C (D1L C DAF)	22 .1000.30.2000
D9W, Hydronic 10	22.1000.31.8300
Hydronic 10 (25 2161/25 2162)	22.1000.32.5200
Hydronic 16/24/30/35	22.1000.31.6600

* Diagnostic function using EasyScan depends on the diagnostic device or diagnostic protocol of the heater.

A/C KIT WITH IPCU FOR CONTROLLING THE VEHICLES'S FAN

The IPCU is part of the A/C kit:

A/C kits should be installed first!

OPTIONS:

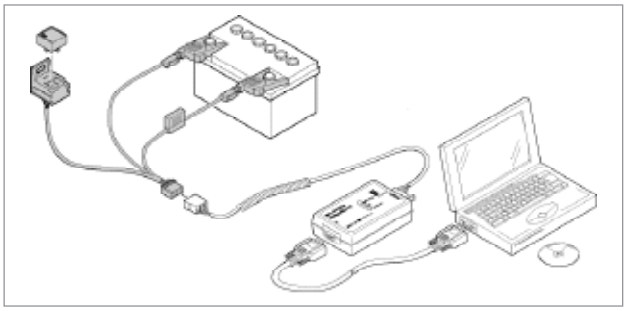
- See installation recommendations/Service Portal as to whether A/C kit is available
- If there is no A/C kit, see Service Portal: IPCU programming list (Download area)
- Call the Technical Hotline

Warning:

- Performing measurements requires specialist knowledge in automotive electronics
- Performing measurements requires the vehicle manufacturer's circuit diagrams
- We can accept no liability for measuring errors that result in permanent damage to the vehicle's air-conditioning system and/or measuring devices and diagnostics equipment

Programming option with EDiTH Basic:

Adapter cable for IPCU configuration
Order no.: 22 1000 32 74 00



Introduction to performing measurements with the relevant instruments:

Universal multimeter with frequency meter and duty cycle or an oscilloscope (workshop equipment).

PERFORMING MEASUREMENTS:

- Preselect voltage meter measuring range minimum U3; measure according to circuit diagram
- Switch on ignition
- Change fan speed using A/C control unit
- If the voltage is changeable between 0 – 5 V or 0 – 10 V: voltage divider, choose a low fan speed, note voltage value

No clear change:

- Switch fan to 0, measure direct current in voltage range
  - Voltage to battery: Low active or
  - Voltage 0 V: High active, note
    Important: do not exceed maximum voltage!
- Switch to frequency measurement, read and note frequency
- Select low fan speed, switch to duty cycle and note duty cycle in %
- Choose a fan speed that puts the duty cycle at ~50%, switch the measuring device to minimum U13, read voltage, multiply by 2 and note

THE BENEFITS OF WORKSHOPS

Robust design, high-performance, sophisticated technology: Eberspächer fuel operated heaters have made a name for themselves around the world. For every application, our innovative heating technology ensures an extremely comfortable degree of warmth as soon as the driver or passengers enter a vehicle. Use our products for the benefit of your customers – and therefore to your advantage. We have summarized the most important reasons why both you and your customers should choose Eberspächer.

Higher sales and workshop utilization:

Selling pre-heaters is a high-margin alternative to conventional workshop business. Make the best possible use of this opportunity to increase your workshop's utilization.

Potential:

More than 90% of customers who have bought a pre-heater would opt for this extra again with their next vehicle.

Partnership:

As an Eberspächer Partner; you are comprehensively trained so that you have all the necessary know-how on Eberspächer pre-heaters. You also have access to our Web portal where you can obtain important information such as installation recommendations, prices and catalogs. At the start of the season, you receive our comprehensive advertising package.

Here's how you can support sales internally:

- Your customer will buy only something he knows and loves. That means your demonstration vehicles should have a pre-heater too!
- Motivation is everything: ensure that your sales staff are fired up and fully versed on the subject of pre-heaters.
- To make sure they close the deal, give your employees impressive sample calculations for available leasing and finance offers.
- Go for maximum impact: drive the advertising message on your homepage, in your newsletter or with direct mail too.

So when you're planning, here are the key areas to consider:

- Provide your sales team and your parts and service managers with campaign information in good time!
- Set out which vehicle models the promotional package can be offered for.
- Make sure you provide a careful calculation of the package prices.
- Order our advertising materials and use them for optimum effect at your premises.!
- Make sure you have the necessary parts in stock!
- Check that your pre-heater workshop knowledge is up-to-date and if you need a refresher, use the training provided by your distributor and Eberspächer.
- Together with your team, work through a guideline for your sales discussions. Next – some compelling arguments!

THE BENEFITS FOR END CUSTOMERS

Customer benefits for passenger car owners:

- Not only do you no longer have to waste time scraping the ice off the windows in the morning – a pre-heater also ensures you have a pleasantly warm car to get into after playing sports, having a wellness treatment, spending an evening at the movies or enjoying a concert. A pre-heater is also a true status symbol and should be found in every high-end car.
- The Eberspächer pre-heater ensures that your windows are thawed in time for you to leave, and do not fog up. A clear view of the road and no need to wear a thick winter jacket at the steering wheel – for real safety!
- A cold start puts as much of a burden on the engine as many miles of highway driving. A modern pre-heater prevents this, because it heats not only the interior but also your engine's cooling circuit. The extremely wear-inducing cold-start phase is avoided, which helps to maintain the vehicle's value.
- An engine warmed by a pre-heater consumes considerably less fuel when starting and for the first few minutes of a trip, because the cold-starting or warm-up phase described earlier does not occur.
- Pollutant emissions during a warm start are lower than during a cold start. This not only eases people's conscience, but also specifically protects the environment.
- Winters at our latitudes last much longer than we realize. Ice in April is not unusual! And the first minus sign often appears on the thermometer in October. On hot summer days, select pre-ventilation and you can keep your car supplied with fresh outside air when parking as well.

Customer benefits for motor home owners:

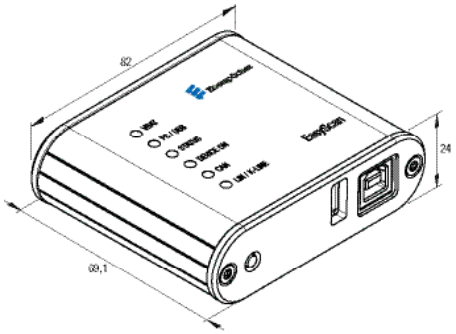
- The heater is supplied with fuel from your vehicle's fuel tank – you don't have to worry about propane containers and connections when traveling abroad.
- Eberspächer heaters feature low fuel and electricity consumption.
- The heater is conveniently operated via pre-programming, remote control or smartphone.
- Eberspächer fuel operated heaters are now even quieter.
- Compared to competitor products, Eberspächer products permit space-saving installation underfloor or in the engine compartment in addition to interior installation.
- This kind of heating is permitted worldwide while driving, without any additional components.
- The heater's design is particularly easy to service and maintain.

TESTERS / ADAPTERS / SPECIAL TOOLS

Customer benefits for special-purpose vehicle owners:

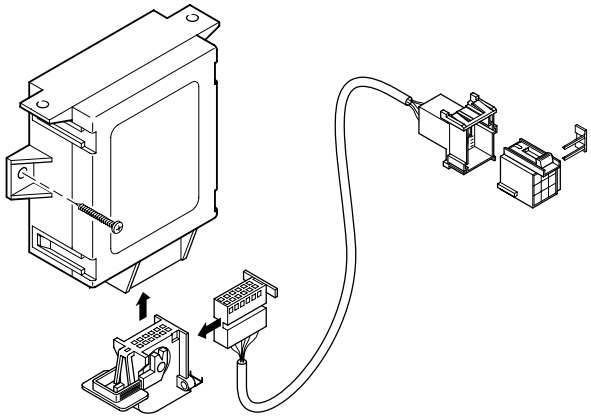
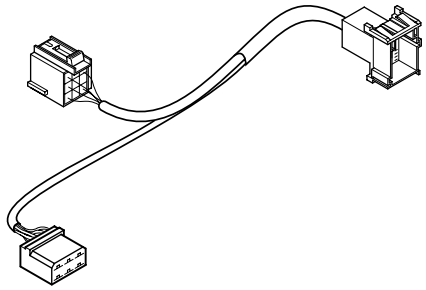
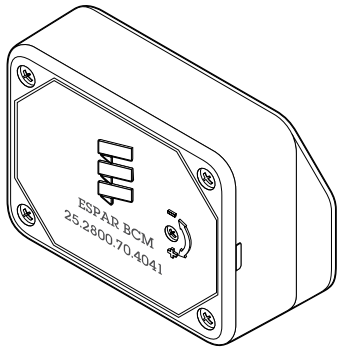
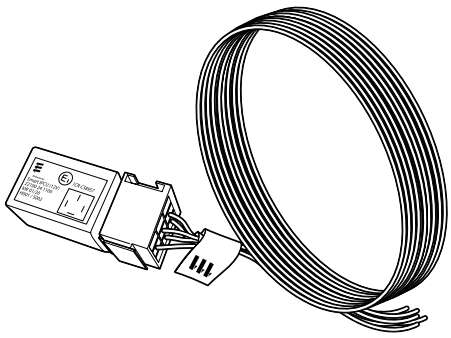
- Low operating costs due to excellent efficiency
- Reliable starting even in low temperatures
- Comfortable temperatures in mobile workplaces and optimum temperature control for storage compartments
- Eberspächer fuel operated heaters are now even quieter.
- The heater is installed inside the vehicle – it is also possible to mount it below the floor or in the engine compartment to save space.
- The heater's design is particularly easy to service and maintain.

TESTERS / ADAPTERS / SPECIAL TOOLS

	Airtronic S (2.2 kW)	Airtronic M (4 kW)	Airtronic L (5.5 kW)	Airtronic XL3	Hydronic S (5-6 kW)	HydronicL(16-35 kW)/L2	Hydronic M-II (8-12 kW)	Part number
EasyScan 	■	■	■		■		■	22.1550.89.0000
Tester Adapter North America for EDITH and EasyScan 								
Diagnostic Adaptor (Airtronic, Hydronic I, Hydronic II)			■		~			20.2900.70.5057
Diagnostic Adaptor Hydronic M-II							■	25.2800.70.1004
Diagnostic Adaptor Hydronic M-II E-Guardian							E	25.2800.70.0024
Adapter cable For Diagnostic device, EDiTH Basic and EasyScan 								
Airtronic / Airtronic M	■	■	■					22.1000.31.8600
Hydronic					■			20.2900.70.5028
Hydronic 2 / Hydronic 2 C / Hydronic M2 (versions from June 2012)					■			22.1000.33.7800
Hydronic L / Hydronic L2						■		22.1000.31.6600
Adapter cable for older models of heater For EDiTH Basic only 								
Hydronic M								22.1000.32.5200
Hydronic M2 (versions pre-dating June 2012)							■	22.1000.33.4400
B / D1 LC compact, B / D3 LC compact, B / D3 LP compact								22.1000.30.6900
B / D1 LC, B / D3 LC, B / D3 LP, B / D5 LC								22.1000.30.2000
D9 W, Hydronic 10								22.1000.31.8300

* Use EasyScan to configure input as external temperature sensor ■ unrestricted use ~ restricted use, no diagnostic

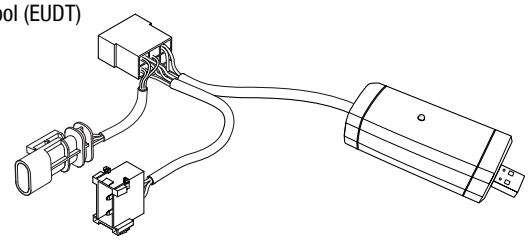
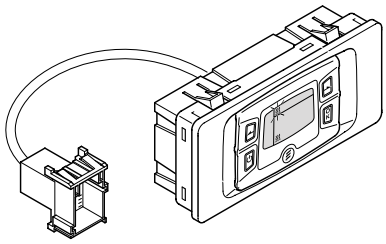
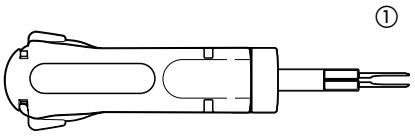
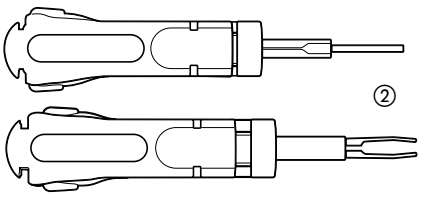
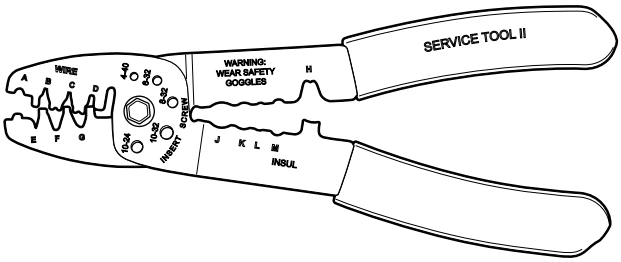
TESTERS / ADAPTERS / SPECIAL TOOLS

	Airtronic S (2.2 kW)	Airtronic M (4 kW)	Airtronic L (5.5 kW)	Airtronic XL3	Hydronic S (5-6 kW)	HydronicL(16-35 kW)/L2	Hydronic M-II (8-12 kW)	Part number
Altitude kit * Air pressure sensor for heating mode at altitudes up to 3,500 m above sea level  * For use with the Airtronic / Airtronic M and Hydronic / Hydronic 2 labeled "H-Kit" on the factory plate on the side *Ax2 and HS3 heaters do not require this kit.*			■					22.1000.33.2200
Adapter cable For air pressure sensor diagnostics 			■					22.1000.33.3100
Blower control module 12/24 V - Heavy Duty (BCM) For coolant heaters 					■		■	25.2800.70.4041
Upgrade kit IPCU Smart 12 V (AD) For coolant heaters 					■		■	24.8800.00.0077

■ unrestricted use ~ restricted use

TESTERS / ADAPTERS / SPECIAL TOOLS

All adapters used with Diagnostic Unit and Edith

		Airtronic S (2.2 kW)	Airtronic M (4 kW)	Airtronic L (5.5 kW)	Airtronic XL3	Hydronic S (5-6 kW)	HydronicL(16-35 kW)/L2	Hydronic M-II (8-12 kW)	Part number
Eberspaecher Universal Diagnostic Tool (EUDT) 		*	*			~		#	20.2800.70.1200
Diagnostic Fault Code Retriever 		*	*			~			20.2900.70.5060
Terminal Removal Tool  ①  ②	1.6 mm					~			206.00.205 ①
	2.8 mm								206.00.215 ②
Wire Crimper 									5670003

* For Airtronic 1 Only unrestricted use E E-Guardian # For frequent diagnostics, use EasyScan ~ For Hydronic II not HS3

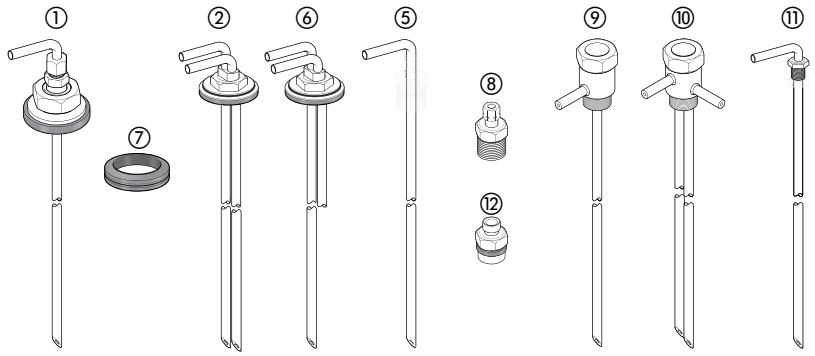
FUEL SYSTEM

General information:

- Protect fuel lines, filters and metering pumps from impermissible heat levels; do not install near silencers or exhaust pipes.
- Take the rear axle suspension travel into account when installing fuel lines, fuel filters and metering pumps near the rear axle.
- When cutting fuel hoses and pipes, be sure to use a sharp knife.
- Cut surfaces must have no dents or burrs.
- Please also refer to the safety information on this section in the heater documentation.

FUEL SYSTEM

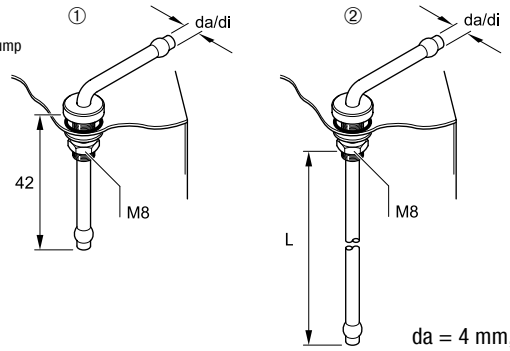
PLEASE NOTE: ■ *Refer to Fuel System Guide on page 80p, to help plan your fuel system.*



		Airtronic S (2.2 kW)	Airtronic M (4 kW)	Airtronic L (5.5 kW)	Airtronic XL3	Hydronic S (5-6 kW)	HydronicL(16-35 kW)/L2	Hydronic M-II (8-12 kW)	Part number
Single Pick-up Pipe 2.0 mm Universal RECOMMENDED	(Drill or 1/4" NPT fitting) (66 cm or 26")	■	■	■		■			20.2900.20.2010 ①
Single Pick-up Pipe 2.0 mm	(66 cm or 26")	■	■	■		■			20.2900.20.2042 ⑤
Double Pick-up Pipe 2.0 mm	(56 cm or 22")	■	■	■		■			20.2900.20.2057 ②
Fuel Pick-up pipe 2 mm W/FTNG	(59.5 cm or 23.5") - Vent fitting 1/2" NPT	■	■	■		■			20.2900.20.2004 ⑨
Dual Vent Fuel Pick-up pipe 2.0 mm	(61 cm or 26") - Vent fitting 1/2" 14 NPT	■	■	■		■			20.2900.20.2007 ⑩
Single Pick-Up Pipe 4.0 mm universal RECOMMENDED	(Drill or 1/4" NPT fitting) (66 cm or 26")	■			■			■	20.2900.20.2050 ①
Fuel Pick-up pipe 4 mm W/FTNG 19.5"	- Vent fitting 1/2" NPT	■			■			■	20.2900.20.4006 ⑨
Single Pick-up Pipe 4.0 mm with Return	(61 cm or 24")						■		20.2900.20.2059 ⑥
Compression Fitting 1/4" NPT		■	■	■	■	■	■	■	20.2900.20.2044 ⑧
Compression Fitting 3/8" NPT		■	■	■	■	■	■	■	5520002 ⑧
Compression Fitting 1/2" NPT		■	■	■	■	■	■	■	5520006 ⑧
Compression FTNG 3/4" NPT		■	■	■	■	■	■	■	20.2900.20.2082 ⑧
Compression FTNG 9/16" w/O-ring		■	■	■	■	■	■	■	5520007 ⑫
Rubber Seal Ring for Fuel Pick-up Pipe		■	■	■	■	■	■	■	20.2900.20.2026 ⑦
Automotive Fuel Pick-up Assembly	(48 cm or 18.8")	■	■	■		■			22.1000.20.1100 ⑪

Tank connection

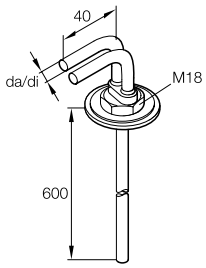
For cars with an inner tank pump



da = 4 mm, di = 2 mm		■	■	■		■			22.1000.20.1500 ①
da = 4 mm, di = 2 mm, L = 295 mm		■	■	■		■			22.1000.20.1600 ②

Tank connection with return

For commercial vehicles



da = 6 mm, di = 4 mm							■		25.1226.89.4000

■ unrestricted use ~ restricted use

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1
2
3
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5

FUEL SYSTEM

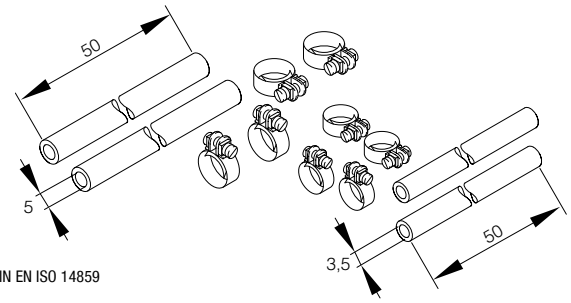
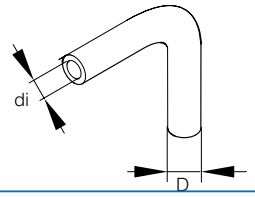
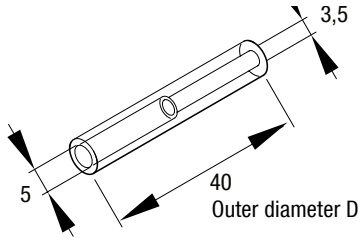
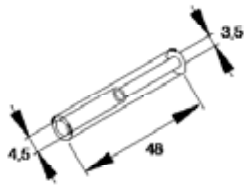
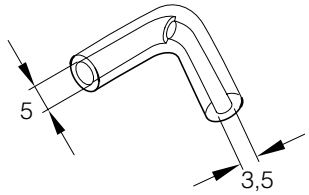
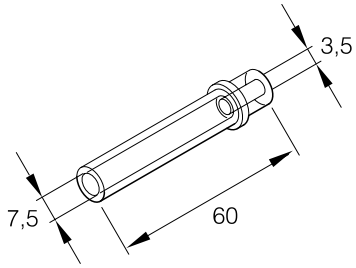
PLEASE NOTE: ■ *Refer to Fuel System Guide on page 78, to help plan your fuel system.*

		Airtronic S (2.2 kW)	Airtronic M (4 kW)	Airtronic L (5.5 kW)	Airtronic XL3	Hydronic S (5-6 kW)	HydronicL(16-35 kW)/L2	Hydronic M-II (8-12 kW)	Part number
Tank connection For commercial vehicles	da = 6 mm, di = 2 mm	■	■	■		■			25.1226.89.5000
EasyFix tank connection For wall thicknesses from 2.8 to 3.5 mm	da = 4 mm, di = 2 mm	■	■	■		■			22.1000.20.4500
Fuel hose (linear m) Rubber *PME-compatible	di = 3.5mm, D = 9.50 mm	■	■	■		■			360.75.300
	*di = 3.5 mm, D= 9.50 mm	■	■	■		■			360.75.400
	di = 5.0 mm, D = 11.0 mm	■	■	■	■	■	■		360.75.350
	* di = 5.0 mm, D = 11.0 mm	■	■	■	■	■	■		360.75.401
Tank Connection Kit For passenger cars with an inner tank pump	l1 = pipe D; L = 6 m/ l2 = pipe D 4x1; L=6 m / da =4 mm, di = 2 mm	■	■	■		■			22. 1000.20.1300
Fuel pipe (linear m) Plastic	natural-colored, di = 1.5 mm x10.0m , D = 4 mm	■	■	■		■			20.2900.20.0067
	natural-colored, di = 1.5 mm x50.0m , D = 4 mm	■	■	■		■			20.2900.20.0068
	natural-colored, di = 1.5 mm x100.0m , D = 4 mm	■	■	■		■			20.2900.20.0069
	natural-colored, di = 1.5 mm x400.0m , D = 4 mm	■	■	■		■			20.2900.20.0070
	natural-colored, 2 mm x 0.8m , D = 4 mm	■	■	■		■			20.2900.20.0057
	natural-colored, 2 mm x 1.0m , D = 4 mm	■	■	■		■			20.2900.20.0030
	natural-colored, 2 mm x 1.7m , D = 4 mm	■	■	■		■			20.2900.20.0058
	natural-colored, 2 mm x 2.0m , D = 4 mm	■	■	■		■			20.2900.20.0050
	natural-colored, 2 mm x 3.0m , D = 4 mm	■	■	■		■			20.2900.20.0014
	natural-colored, 2 mm x 3.3m , D = 4 mm	■	■	■		■			20.2900.20.0023
	natural-colored, 2 mm x 4.3m , D = 4 mm	■	■	■		■			20.2900.20.0024
	natural-colored, 2 mm x 5.0m , D = 4 mm	■	■	■		■			20.2900.20.0013
	natural-colored, 2 mm x 6.0m , D = 4 mm	■	■	■		■			20.2900.20.0015
	natural-colored, 2 mm x 6.5m , D = 4 mm	■	■	■		■			20.2900.20.0046
	natural-colored, 2 mm x 8.0m , D = 4 mm	■	■	■		■			20.2900.20.0053
	natural-colored, 2 mm x 10.0m , D = 4 mm	■	■	■		■			20.2900.20.0060
	natural-colored, 2 mm x 50.0m , D = 4 mm	■	■	■		■			20.2900.20.0061
	natural-colored, 2 mm x 100.0m , D = 4 mm	■	■	■		■			20.2900.20.0062
	blue, di = 2 mm , D = 4 mm	■	■	■		■			890.31.054
	black, di = 2 mm , D = 6 mm	■	■	■		■		■	890.31.125
	blue, di = 4 mm , D = 6 mm				■		■		890.31.101

■ unrestricted use ~ restricted use

FUEL SYSTEM

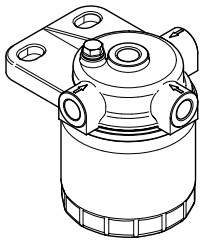
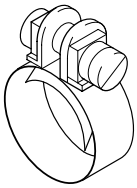
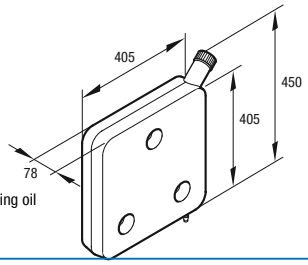
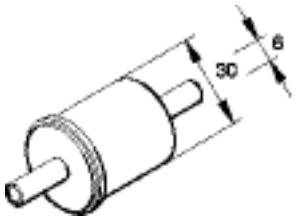
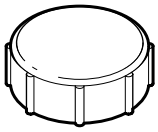
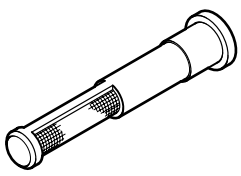
PLEASE NOTE: ■ *Refer to Fuel System Guide on page 78, to help plan your fuel system.*

		Airtronic S (2.2 kW)	Airtronic M (4 kW)	Airtronic L (5.5 kW)	Airtronic XL3	Hydronic S (5-6 kW)	HydronicL(16-35 kW)/L2	Hydronic M-II (8-12 kW)	Part number
Fuel supply kit For installing fuel line in boat engine compartments 	Fire-resistant hose according to DIN EN ISO 14859	■	■	■	■	■		■	22.1000.20.1000
Fuel hose 105° elbow PME-compatible 	di = 3.5 mm, D = 9.5 mm	■	■	■		■		■	25.1888.80.0101
Fuel Line Adapter 	Outer diameter D = 10, 3.5mm to 5mm	■	■	■			■		25.1888.80.0102
Adapter for Hydronic S3 and all Airtronic 3 models 	ıter diameter D = 10 mm	■	■	■	■	■			25.2635.05.0007
Adapter 105° elbow PME-compatible 	Outer diameter D = 10	■	■	■		■			25.2110.05.0301
Adapter for fuel pipes 	Outer diameter D = 12	■	■	■		■			22.1000.20.3000

■ unrestricted use ~ restricted use

FUEL SYSTEM

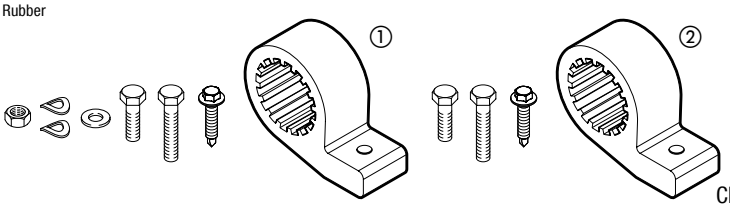
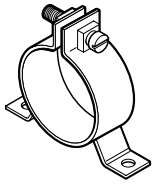
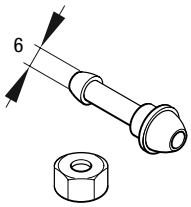
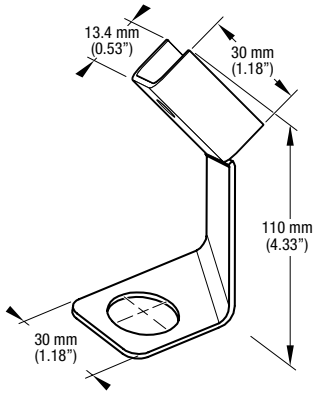
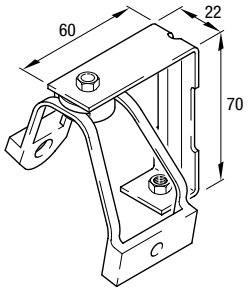
PLEASE NOTE: ■ *Refer to Fuel System Guide on page 78, to help plan your fuel system.*

		Airtronic S (2.2 kW)	Airtronic M (4 kW)	Airtronic L (5.5 kW)	Airtronic XL3	Hydronic S (5-6 kW)	HydronicL(16-35 kW)/L2	Hydronic M-II (8-12 kW)	Part number
Fuel Filter									
	Fuel Filter						■		25.2599.05.0100
Clamp									
	9 mm x 10 pc (used with 360 75 300)	■	■	■	■	■	■	■	20.2900.20.0063
	9 mm x 50 pc (used with 360 75 300)	■	■	■	■	■	■	■	20.2900.20.0064
	10 mm (used with 360 75 350)	■	■	■	■	■	■	■	10.2068.01.0098
	11 mm x 10 pc (used with 360 75 350)	■	■	■	■	■	■	■	20.2900.20.0065
	11 mm x 50 pc (used with 360 75 350)	■	■	■	■	■	■	■	20.2900.20.0066
	12 mm	■	■	■	■	■	■	■	10.2068.01.2098
	14 mm	■	■	■	■	■	■	■	10.2068.01.4098
Plastic Fuel Tank									
~suitable only for diesel/bio-diesel (FAME)/heating oil	Fuel Tank (10L or 2.6 gal - Blue)	~	~	~	~	~	~	~	22.1000.20.2800
Fuel filter with paper insert Plastic/installation in front of fuel circulation pump		~	~	~	~	~	~	~	25.1156.20.0009
Plastic Cap									
suitable for 22.1000.20.2800		■	■	■	■	■		■	22.1000.20.2200
Fuel strainer for fuel tank									
suitable for 22.1000.20.2800		~	~	~	~	~	~	~	22.1000.20.2803
O-ring for fuel valve, 6mm									
suitable for 22.1000.20.2800		~	~	~	~	~		~	22.1000.20.2804

■ unrestricted use ~ restricted use

FUEL SYSTEM

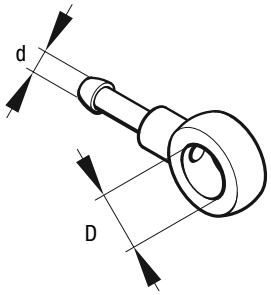
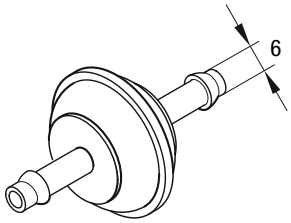
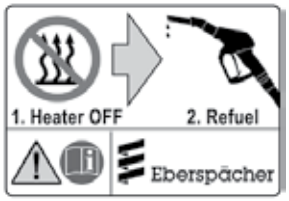
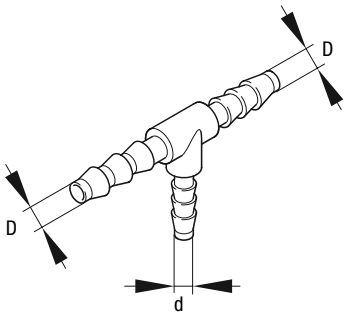
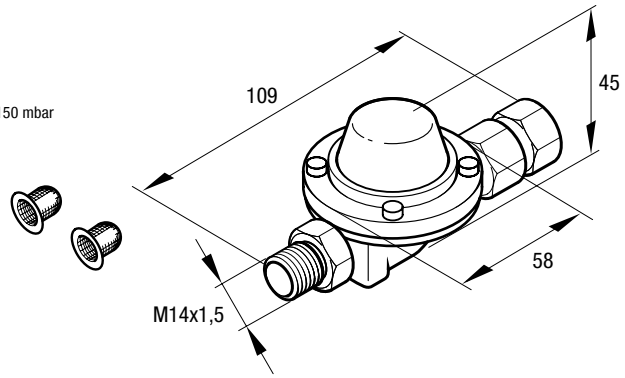
PLEASE NOTE: ■ Refer to Fuel System Guide on page 78, to help plan your fuel system.

	Airtronic S (2.2 kW)	Airtronic M (4 kW)	Airtronic L (5.5 kW)	Airtronic XL3	Hydronic S (5-6 kW)	HydronicL(16-35 kW)/L2	Hydronic M-II (8-12 kW)	Part number
Mounting bracket for metering pump and Flowtronic Water Pump 800 S (see page 76) Rubber 								
Clamp 34 mm for FMP	■	■	■		■			152.00.200
Fuel, ø 34 mm	■	■	■		■		■	22.1000.50.0300 ①
(For HS3 D6L coolant pump) Water, ø 41 mm				■	~		■	22.1000.50.0700 ②
Fuel Metering Pump Holder 							■	25.1156.20.0011
Fuel Connector Nipple and Nut 						■		20.2900.20.2071
FMP Bracket RECOMMENDED 								20.2900.40.0104
Mounting bracket for metering pump For use with boats and camping vehicles Recommended for mobile homes 						■		20.1634.80.0600

■ unrestricted use ~ restricted use

FUEL SYSTEM

PLEASE NOTE: ■ *Refer to Fuel System Guide on page 78, to help plan your fuel system.*

		Airtronic S (2.2 kW)	Airtronic M (4 kW)	Airtronic L (5.5 kW)	Airtronic XL3	Hydronic S (5-6 kW)	HydronicL(16-35 kW)/L2	Hydronic M-II (8-12 kW)	Part number
Banjo fitting 	d = 5mm, D = 8mm				■		■	■	25.1352.88.0005
Plastic Fuel Filter with metal strainer For metering pumps with cup strainer Fuel filter suitable for use with fuel circulation pump only 		■	■	■	■	■		■	25.1226.89.0037
Information Sticker 		■	■	■	■	■	■	■	25.2652.05.0001
Fuel T-piece **Plastic** 	d = 4mm, D = 8mm	~	~	~	~	~		~	262.31.155
	d = 6mm, D = 6mm	~	~	~	~	~	~	~	262.31.150
Pressure Reducer with cup strainer and hose fitting Input pressure 0.2 – 4 bar Control pressure min. 50 mbar, max. 150 mbar 		■	■	■		■			22.1000.20.0800

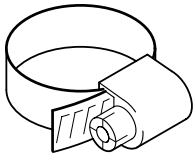
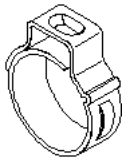
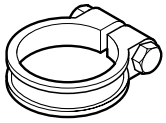
■ unrestricted use ~ restricted use

MOUNTING PARTS

General information:

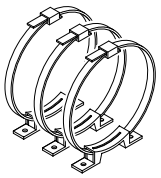
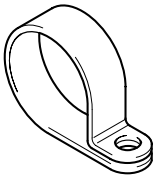
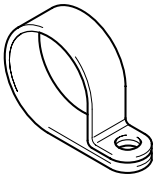
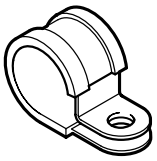
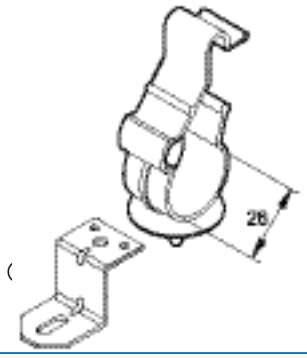
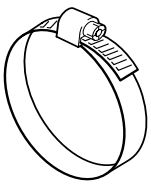
- The fastening parts supplied take account of all standard installation conditions.
- In installations in passenger cars and buses, the heater or its mount can usually be rigidly attached directly to the corresponding part of the body.
- By contrast, rubber-metal buffers need to be installed as vibration dampers in trucks and particularly in construction machinery. However, these must not be placed under tension or shear stress.
- This type of rubber-metal component also reduces structure-borne noise transmission. It is therefore used for installing both the heater and the metering pump on houseboats, for example.
- Please also refer to the safety information on this section in the heater documentation.

MOUNTING PARTS

			Airtronic S (2.2 kW)	Airtronic M (4 kW)	Airtronic L (5.5 kW)	Airtronic XL3	Hydronic S (5-6 kW)	HydronicL(16-35 kW)/L2	Hydronic M-II (8-12 kW)	Part number
Hose Clip ~= check connection diameter		ø 16 - ø 25 mm ø 32 - ø 50 mm ø 33 - ø 57 mm ø 50 - ø 70 mm								10.2067.01.6025 10.2067.03.2050 5550001 5550004
Hose clip with lug = check connection diameter		ø 9 - ø 10.5 mm ø 21 - ø 24.0 mm								152.61.104 152.61.115
Hose Clip ~=check connection diameter		ø 9 mm ø 10 mm ø 11 mm ø 12 mm ø 14 mm								10.2068.00.9098 10.2068.01.0098 10.2068.01.1098 10.2068.01.2098 10.2068.01.4098
Pipe clip for exhuast pipe		ø 26 - ø 28 mm ø 32 - ø 34 mm								22.1000.51.4400 22.1000.51.4500
Pipe clip for exhuast pipe		ø 42 - ø 45 mm								152.09.004
Holder for metering pump and Flowtronic 800 S water pump (see page 67) Rubber		ø 34 mm ø 41 mm	■	■	■	■		■		22.1000.50.0300 22.1000.50.0700

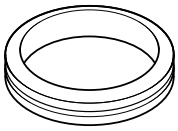
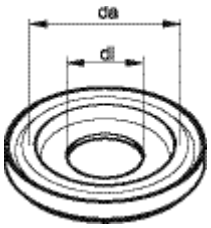
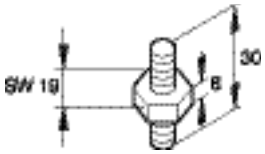
■ unrestricted use ~ restricted use

MOUNTING PARTS

		Airtronic S (2.2 kW)	Airtronic M (4 kW)	Airtronic L (5.5 kW)	Airtronic XL3	Hydronic S (5-6 kW)	HydronicL(16-35 kW)/L2	Hydronic M-II (8-12 kW)	Part number
Air hose fastening kit Plastic(3 pcs.)									
	ø 60 - ø 100 mm								22.1000.50.0200
Clip Galvanized									
	ø 28 mm								152.09.010
	ø 28 mm x 10 pc								20.2900.90.0001
	ø 28 mm x 50 pc								20.2900.90.0005
Do not use for flexible exhaust pipes!	ø 41 mm								152.10.039
	ø 50 mm								152.09.011
Clip Stainless steel									
	ø 25 mm (for 22 mm Exhaust/ Air Intake)								152.10.048
	ø 34 mm (for 30mm Exhaust)								152.09.008
Pipe clip with rubber inlay									
	ø 10 mm								152.00.139
Fastening Clip for water hoses, ø 15 mm - ø 20 mm ① Holder page 73									156.31.011
Stainless Steel Hose Clamp									
	46-70 mm (60 mm or 2.4” Ducting)	■							5550004
	59-83 mm (75 mm or 3” Ducting)	■	■	■					5550002
	84-108 mm (100 mm or 4” Ducting)	~	~	■	■				5550003

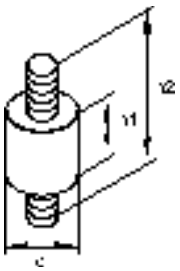
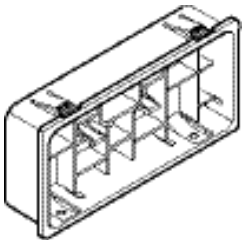
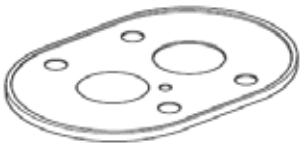
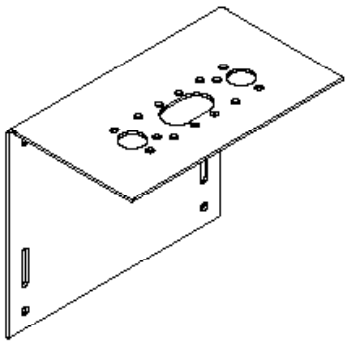
■ unrestricted use ~ restricted use

MOUNTING PARTS

			Airtronic S (2.2 kW)	Airtronic M (4 kW)	Airtronic L (5.5 kW)	Airtronic XL3	Hydronic S (5-6 kW)	HydronicL(16-35 kW)/L2	Hydronic M-II (8-12 kW)	Part number
Rubber grommet		di = 4 - 10 mm , da = 16.5 mm								20.1280.09.0103
Gasket for exhasut pipe		di = 41 mm								20.8542.11.0002
Grommet for exhuast pipe		di = 23-30 mm, da = 41 mm di = 38 - 45 mm, da = 60 mm								25.1216.88.0301 20.1282.20.0002
Rubber - metal buffer		Thread 2 x M6 x 11 mm								20.1185.00.0001

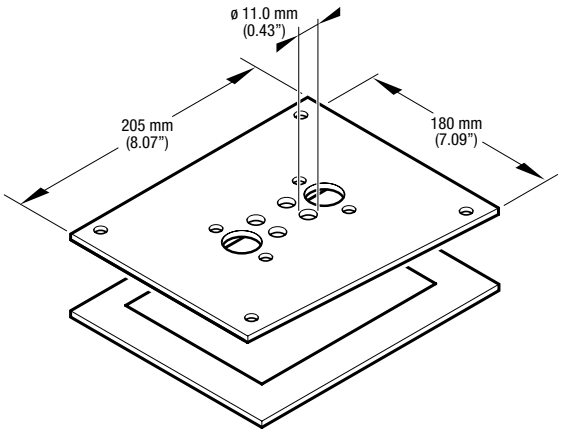
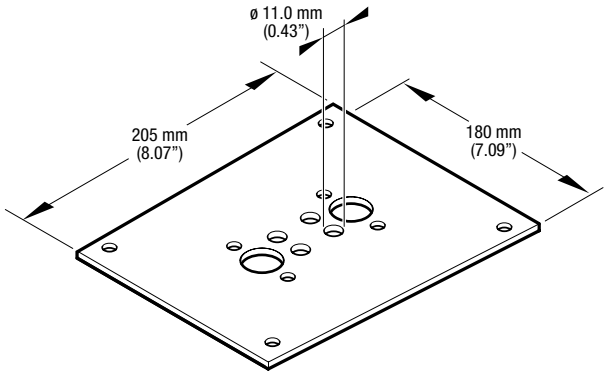
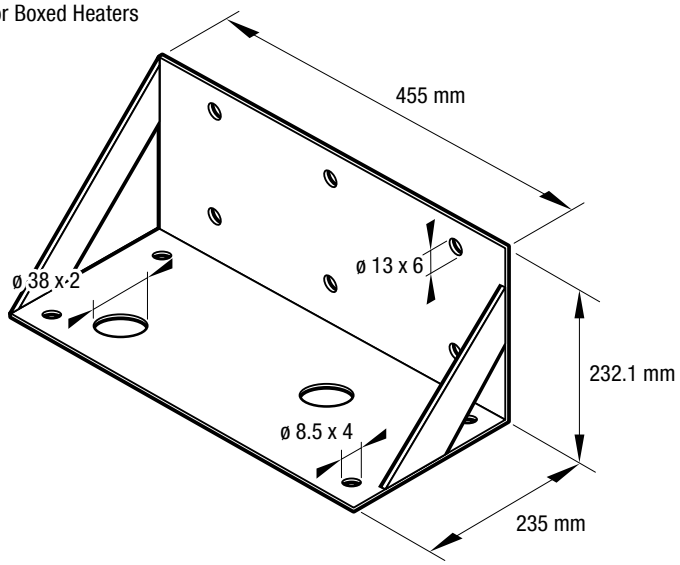
unrestricted use ~ restricted use

MOUNTING PARTS

		Airtronic S (2.2 kW)	Airtronic M (4 kW)	Airtronic L (5.5 kW)	Airtronic XL3	Hydronic S (5-6 kW)	HydronicL(16-35 kW)/L2	Hydronic M-II (8-12 kW)	Part number
Rubber - metal buffer									
Thread 2 x M8 x 13, d = 30 mm, h1 = 15 mm, h2 = 41 mm 1 inch H, Round Body, 5/16 x 18 NC									330.09.002 5540014
Installation frame for EasyStart Timer and Pro (TP7)									22.1000.51.4100
Spacer plater Rubber									
Flange seal									25.2069.01.0002
NEW Device holder suitable for Airtronic L ~= only for Airtornic L3				~	■				22.1000.51.5400

■ unrestricted use ~ restricted use

MOUNTING PARTS

	Airtronic S (2.2 kW)	Airtronic M (4 kW)	Airtronic L (5.5 kW)	Airtronic XL3	Hydronic S (5-6 kW)	HydronicL(16-35 kW)/L2	Hydronic M-II (8-12 kW)	Part number
Mounting Plate with Seal 	■	■						5540001
Mounting Plate 	■	■						20.2900.40.0025
Side Frame Mounting Tray for Boxed Heaters 							E	20.2900.40.0075

■ unrestricted use ~ restricted use E E-Guardian

MOUNTING PARTS

	Airtronic S (2.2 kW)	Airtronic M (4 kW)	Airtronic L (5.5 kW)	Airtronic XL3	Hydronic S (5-6 kW)	HydronicL(16-35 kW)/L2	Hydronic M-II (8-12 kW)	Part number
Angle Bracket for Airtronic D5								
①			■					20.2900.40.0023
②			■					20.2800.40.0500
Mounting Bracket 90°								
	■	■						5540016
Metal Angle Bracket for Fuel Metering Pump								
①	■	■	■	■	■	■	■	20.1348.03.0002
②	■	■	■	■	■	■	■	20.1348.03.0004
③	■	■	■	■	■	■	■	20.1533.88.0007

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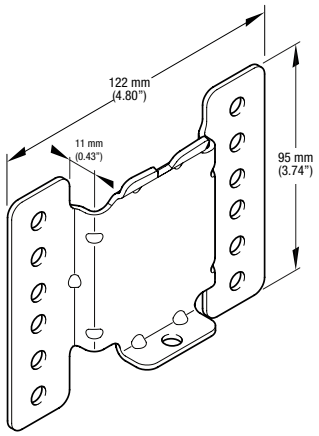
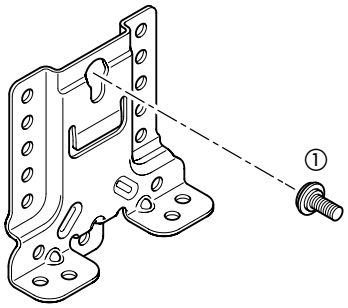
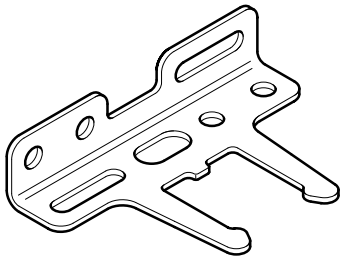
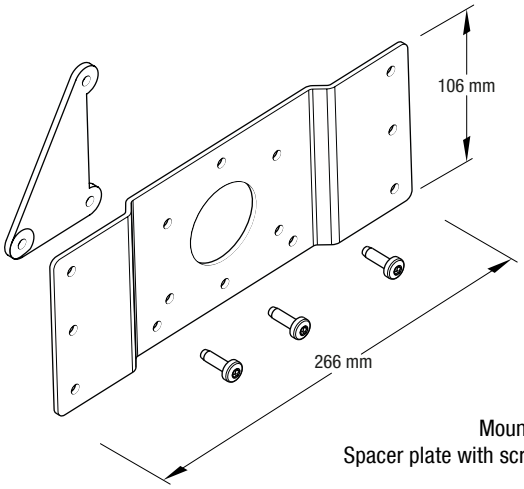
MOUNTING PARTS

		Airtronic S (2.2 kW)	Airtronic M (4 kW)	Airtronic L (5.5 kW)	Airtronic XL3	Hydronic S (5-6 kW)	HydronicL(16-35 kW)/L2	Hydronic M-II (8-12 kW)	Part number
Mounting bracket for Hydronic S3 D5E						■			22.1000.51.4200
Mounting bracket for Hydronic II D5E ① special screw also required for Economy/comfort 25.2526.80.0101						■			22.1000.51.3700
Water Pump Bracked ① Special screw also required: for Economy / Comfort 25 2526 80 01 01						■			22.1000.51.3900
Mounting bracket for Hydronic S3 Commercial (24 V)						~			22.1000.51.5000
Mounting bracket Spacer plate with screws M6×20						~			22.9000.51.5100

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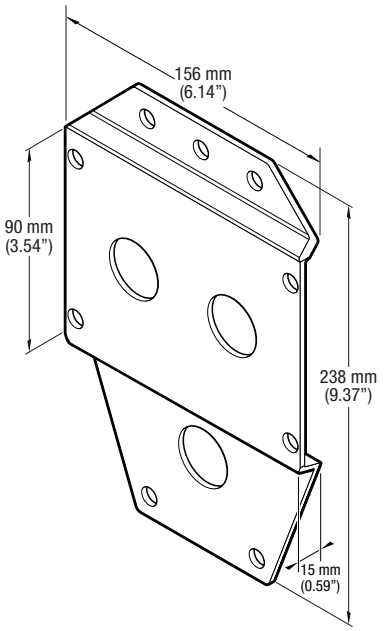
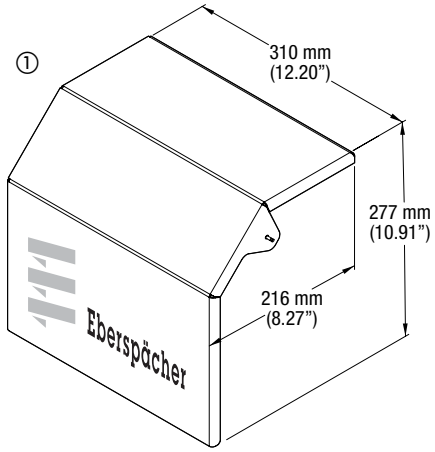
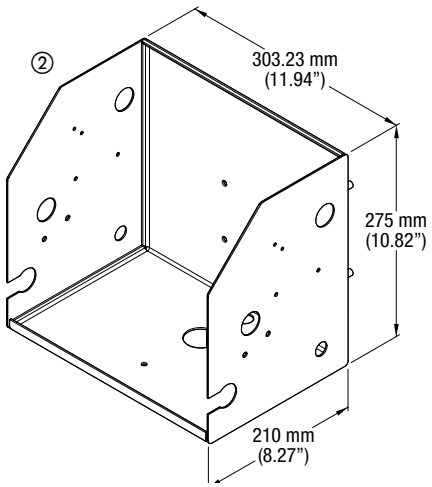
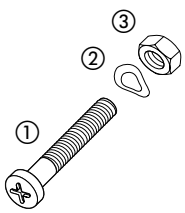
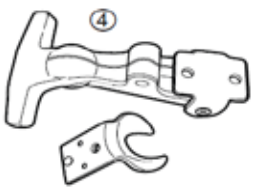
MOUNTING PARTS

	Airtronic S (2.2 kW)	Airtronic M (4 kW)	Airtronic L (5.5 kW)	Airtronic XL3	Hydronic S (5-6 kW)	HydronicL(16-35 kW)/L2	Hydronic M-II (8-12 kW)	Part number	
Mounting Bracket 							■	25.1816.80.0001	
HS3 Box  									
HS3 Box Lid					■			25.2800.40.0529	①
HS3 Enclosure Base					■			25.2800.40.0528	②
HS3 Box Screw, Nut & Washer  									
Screw. phil. head m3x10					■			5590024	①
M3 wave washer din137					■			5590117	②
Nut 3mm					■			5590069	③
Southco latches								5520059	④

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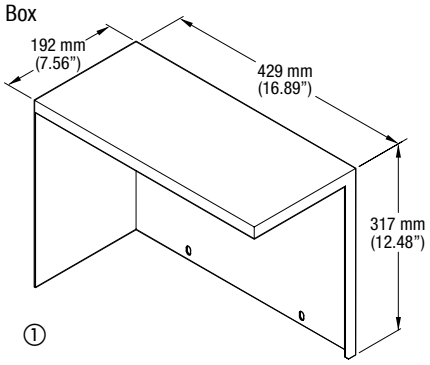
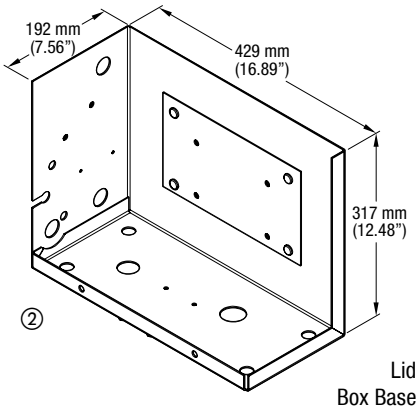
MOUNTING PARTS

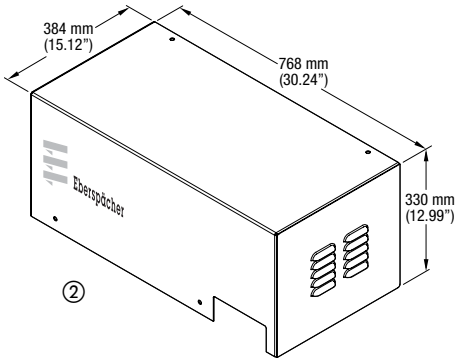
M-II Box

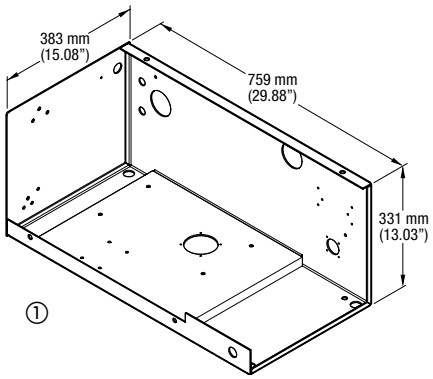




	Airtronic S (2.2 kW)	Airtronic M (4 kW)	Airtronic L (5.5 kW)	Airtronic XL3	Hydronic S (5-6 kW)	HydronicL(16-35 kW)/L2	Hydronic M-II (8-12 kW)	Part number
Lid							E	25.2800.40.1003 ①
Box Base							E	25.2800.40.1002 ②

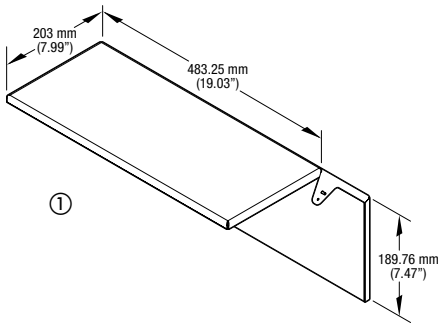
L2 Enclosure Lid

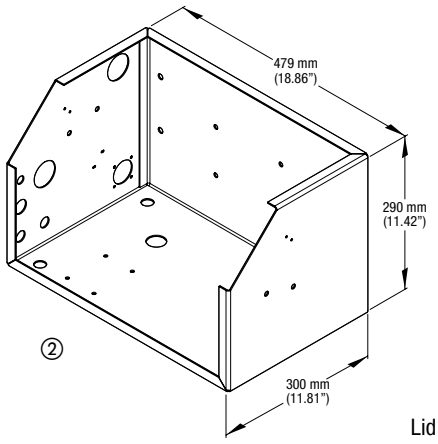




	Airtronic S (2.2 kW)	Airtronic M (4 kW)	Airtronic L (5.5 kW)	Airtronic XL3	Hydronic S (5-6 kW)	HydronicL(16-35 kW)/L2	Hydronic M-II (8-12 kW)	Part number
Lid						■		25.2800.40.1022 ②
Box Base						■		25.2800.40.1021 ①

M-II Box





	Airtronic S (2.2 kW)	Airtronic M (4 kW)	Airtronic L (5.5 kW)	Airtronic XL3	Hydronic S (5-6 kW)	HydronicL(16-35 kW)/L2	Hydronic M-II (8-12 kW)	Part number
Lid							■	25.2800.40.1026 ①
Box Base							■	25.2800.40.1025 ②

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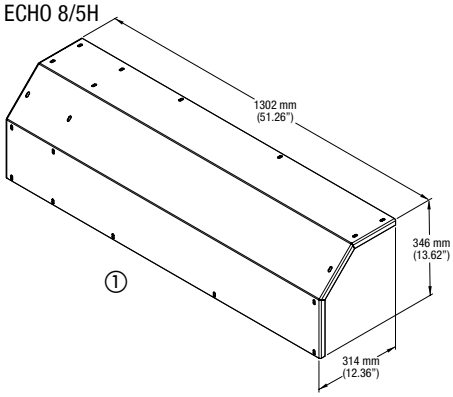
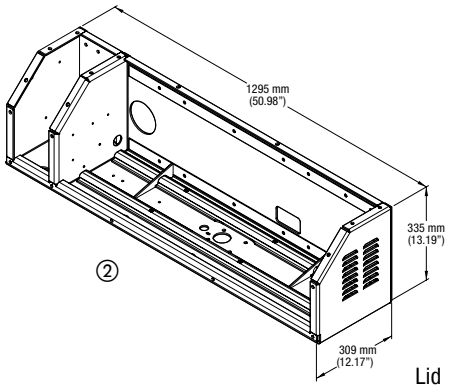
MOUNTING PARTS

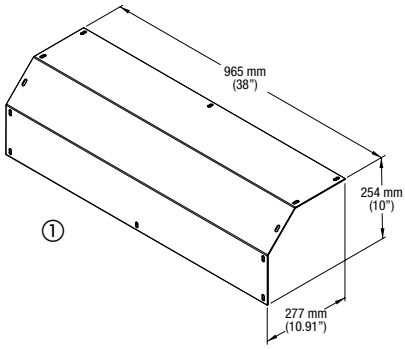
ECHO 8/5H

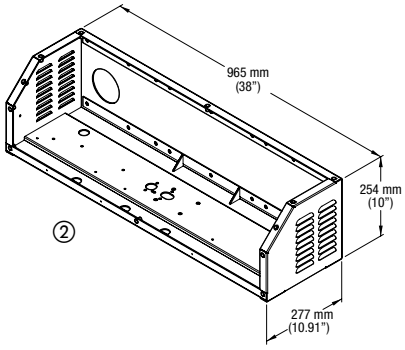




	Airtronic S (2.2 kW)	Airtronic M (4 kW)	Airtronic L (5.5 kW)	Airtronic XL3	Hydronic S (5-6 kW)	HydronicL(16-35 kW)/L2	Hydronic M-II (8-12 kW)	Part number
Lid			■	■				20.2900.40.8002 ①
Box Base			■	■				20.2900.40.8006 ②

ECHO 5





	Airtronic S (2.2 kW)	Airtronic M (4 kW)	Airtronic L (5.5 kW)	Airtronic XL3	Hydronic S (5-6 kW)	HydronicL(16-35 kW)/L2	Hydronic M-II (8-12 kW)	Part number
Lid		■	■					20.2900.40.0506 ①
Box Base		■	■					20.2900.40.0502 ②

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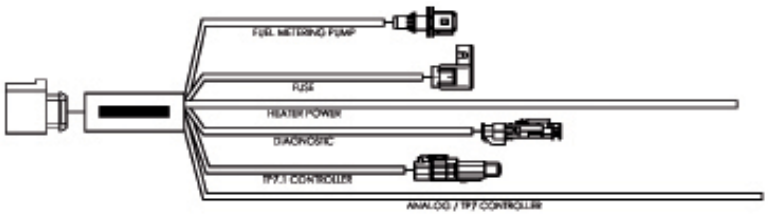
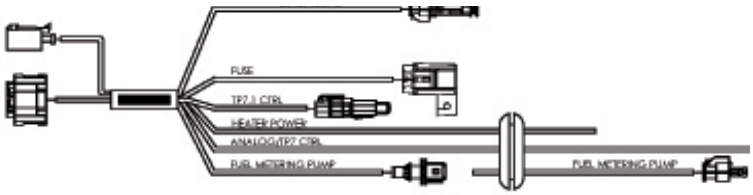
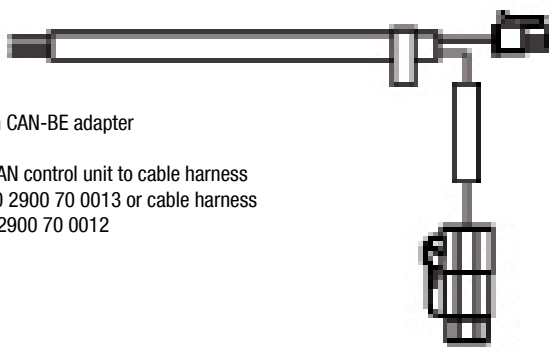
ELECTRICAL PARTS

General information:

- Using a timer you can manually or automatically switch on the heater at a preset time (pre-heating mode).
- Always make sure that a heater can run on, even if the vehicle's whole electrical system can be shut down with a battery main switch (special electrical circuit or clear instruction).
- The rule of thumb for the electrical power supply is: charging time = heating time.
- In certain circumstances, heaters in motor homes or commercial vehicles are operated for longer sustained periods.
  In these cases, the on-board energy resources need to be monitored.
- For more detailed information, see technical description and installation instructions.
- Please also refer to the safety information on this section in the heater documentation.

ELECTRICAL PARTS

Modular cable bundles for the combination of several heaters and/or when there is a large distance between the heater and the control element (e.g., in recreational vehicles, boats, or buses)

	Airtronic S (2.2 kW)	Airtronic M (4 kW)	Airtronic L (5.5 kW)	Airtronic XL3	Hydronic S (5-6 kW)	HydronicL(16-35 kW)/L2	Hydronic M-II (8-12 kW)	Part number
NEW Modular cable harness AX2_AX3 12V_24V Details: Alternative cable harness for Airtronic 2 and Airtronic 3 heaters, especially suitable for individually installed units, e.g., when there is a large distance between a heater and control unit or heaters are combined. To connect a CAN control unit, 20 2900 70 0014 is required. For connection to another heater cable harness from the modular series, 20 2900 70 0015 is required. 	■	■	■	■				20.2900.70.0012
NEW Modular cable harness HS3 CS 12V_24V Details: Alternative cable harness for Hydronic S3 (CS) heaters, especially suitable for individually installed units, e.g., when there is a large distance between a heater and control unit or heaters are combined. For 12 V heaters, 20 2900 70 0016 is also required. For 24 V heaters, 20 2900 70 0018 is also required. To connect a CAN control unit, 20 2900 70 0014 is required. 					■			20.2900.70.0013
NEW  Modular line section CAN-BE adapter Info: To connect a CAN control unit to cable harness HS3 CS 12V_24V 20 2900 70 0013 or cable harness AX2/3 12V_24V 20 2900 70 0012 Length 7,300 mm	■	■	■	■	■			20.2900.70.0014

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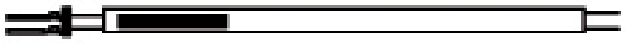
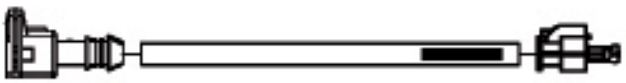
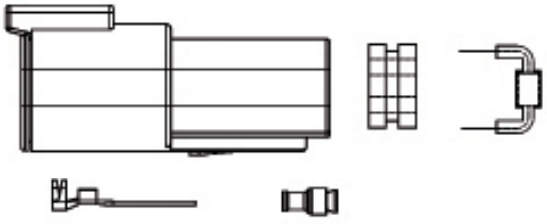
ELECTRICAL PARTS

	Airtronic S (2.2 kW)	Airtronic M (4 kW)	Airtronic L (5.5 kW)	Airtronic XL3	Hydronic S (5-6 kW)	HydronicL(16-35 kW)/L2	Hydronic M-II (8-12 kW)	Part number
NEW Modular line section 2 HG adapter Details: For connecting two heaters to modular cable harnesses. Length 9,100 mm 	■	■	■	■				20.2900.70.0015
NEW  Line section 12V WP Details: Required if using modular cable harness HS3 CS 12V_24V 20 2900 70 0013 for a 12 V heater. Length 1,525 mm					■			20.2900.70.0016
NEW  Line section 24V WP Details: Required if using modular cable harness HS3 CS 12V_24V 20 2900 70 0013 for a 24 V heater. Length 1,525 mm					■			20.2900.70.0018
NEW  CAN bus terminating plug For use with modular cable harness HS3CS12V_24V 20 2900 70 0013 and modular cable harness AX2_ AX3 12V_24V 20 2900 70 0012	■	■	■	■	■			20.2900.70.0017

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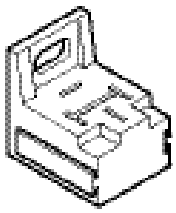
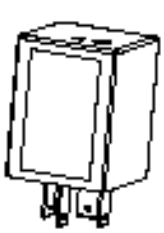
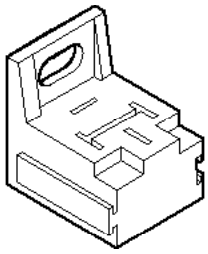
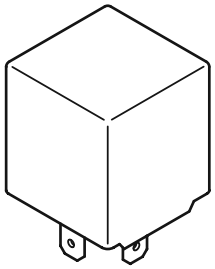
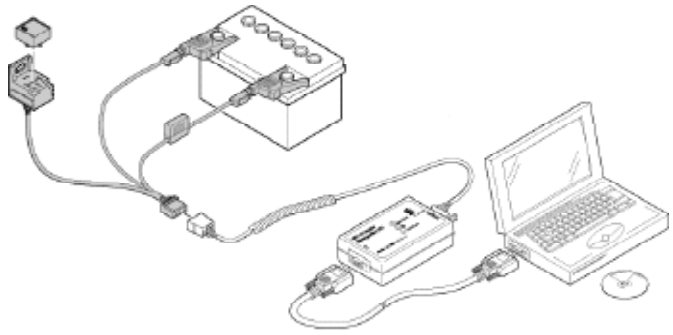
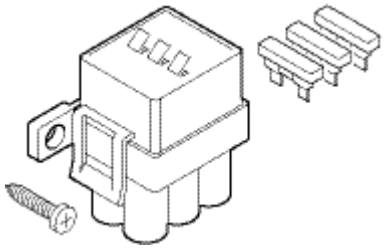
ELECTRICAL PARTS

		Airtronic S (2.2 kW)	Airtronic M (4 kW)	Airtronic L (5.5 kW)	Airtronic XL3	Hydronic S (5-6 kW)	HydronicL(16-35 kW)/L2	Hydronic M-II (8-12 kW)	Part number
Voltage divider for fan control – single part Connector block (Base Relay 5 Pin)									203.00.085
Smart IPCU retrofit kit	  					~			24.8800.00.0077
Relay									
Changeover contact Max. current consumption 40 A - 12v 24v Inc Diode									203.00.097 203.00.066

~ = for Hydronic S3 Economy 12V (CL and CS)

unrestricted use ~ restricted use

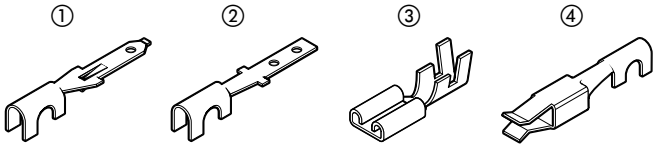
ELECTRICAL PARTS

	Airtronic S (2.2 kW)	Airtronic M (4 kW)	Airtronic L (5.5 kW)	Airtronic XL3	Hydronic S (5-6 kW)	HydronicL(16-35 kW)/L2	Hydronic M-II (8-12 kW)	Part number
IPCU adapter cable for EDiTH Basic 					~	~		22.1000.32.7400
Triple fuse holder with pin With 5 A, 15 A, 25 A fuses plus fastening parts 								22.1000.31.0600

unrestricted use ~ restricted use

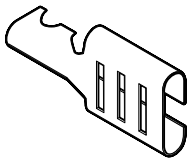
ELECTRICAL PARTS

Terminals



	Airtronic S (2.2 kW)	Airtronic M (4 kW)	Airtronic L (5.5 kW)	Airtronic XL3	Hydronic S (5-6 kW)	HydronicL(16-35 kW)/L2	Hydronic M-II (8-12 kW)	Part number	
10ga - 12ga Female, Tabs	■	■	■	■	■	■		5670174	③
14ga - 18ga Female, Tabs	■	■	■	■	■	■		5670394	③
Mini Terminal, AWG 16-20	■	■						206.00.180	④
10ga - 12ga Male	■	■	■	■	■	■		5670176	①
14ga - 18ga Male	■	■	■	■	■	■		5670175	①
Mini Terminal, AWG 16-20	■	■						206.36.018	②
Mini Terminal, AWG 14-18	■	■						206.00.182	④
Terminal 12033997L	■	■	■	■	■	■		5670199	③

Terminal FE Faston - 18/22 AWG

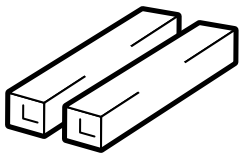


	■	■	■	■	■	■		5670395	

Ring Terminal

(3/8") AWG 10-12	■	■	■	■	■	■	■	5670178	

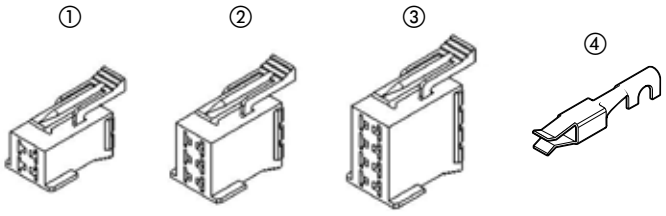
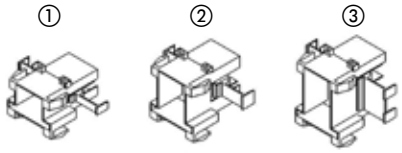
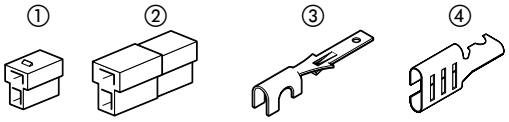
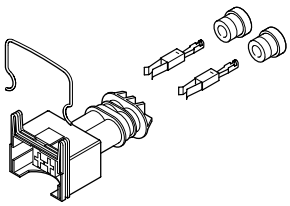
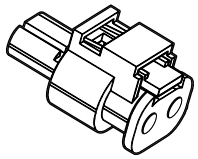
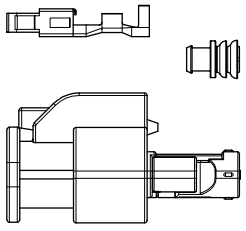
Plug and Socket Connector



	■	■	■	■	■	■		206.00.040	

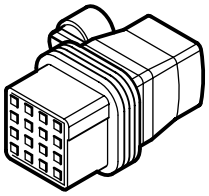
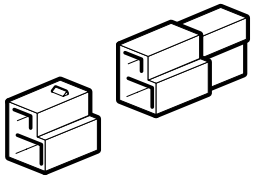
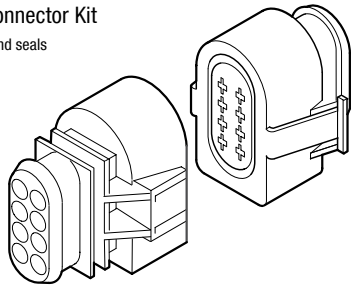
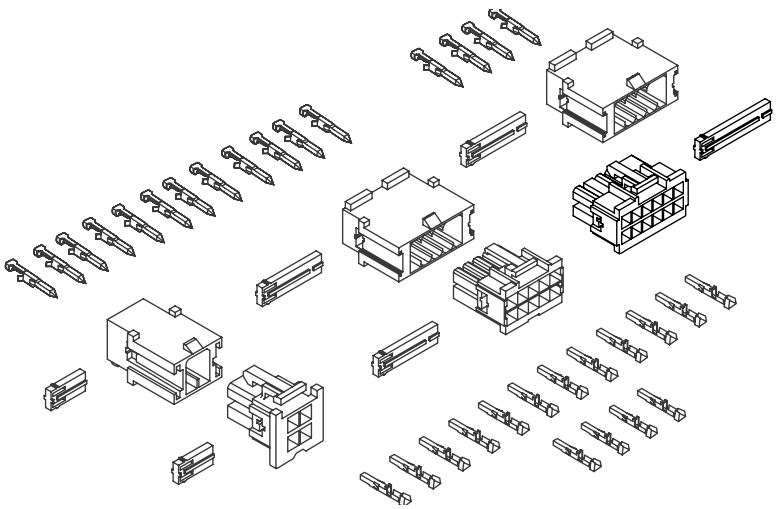
■ unrestricted use ~ restricted use

TERMINALS AND CONNECTORS

	Airtronic S (2.2 kW)	Airtronic M (4 kW)	Airtronic L (5.5 kW)	Airtronic XL3	Hydronic S (5-6 kW)	HydronicL(16-35 kW)/L2	Hydronic M-II (8-12 kW)	Part number	
Socket Housing, Male									
									
4 Pin	■	■	■	■	■	■	■	206.31.296	①
6 Pin	■	■	■	■	■	■	■	206.31.297	②
8 Pin	■	■	■	■	■	■	■	206.31.298	③
Terminal, Female AWG 16-20	■	■	■	■	■	■	■	206.00.180	④
Socket Housing, Female									
									
4 Pin	■	■	■	■	■	■	■	206.31.100	①
6 Pin	■	■	■	■	■	■	■	206.31.106	②
8 Pin	■	■	■	■	■	■	■	206.31.101	③
Terminal, Male AWG 16-20	■	■	■	■	■	■	■	206.36.018	④
Socket Housing									
									
Male 2 Pin "T"	■	■	■	■	■	■		206.00.099	①
Female 2 Pin "T"	■	■	■	■	■	■		206.31.004	②
Flat Term & Tab AWG 10-12 for 20631004	~	~	~	~	~	~		5670176	③
Terminal w/Tab 18-14 for 20600099	~	~	~	~	~	~		5670394	④
Fuel Metering Pump Housing Kit for metering pump, with contacts and seals									
									
INCLUDES: terminals and seals.			■	■			■	22.1000.31.8700	
2 Pin with Spring (FMP Connection)						■		206.31.290	
Mini Terminal, Female AWG 16-20						■		206.00.180	
Housing 2W REC MCON 1.2 Ax2/HS3 FMP									
									
	■	■			■			206.31.294	
FMP Connector Kit **for Hydronic S3 and Airtronic**									
									
INCLUDES: terminals and seals.	■	■			■			25.2800.90.0054	

■ unrestricted use ~ restricted use

TERMINALS AND CONNECTORS

	Airtronic S (2.2 kW)	Airtronic M (4 kW)	Airtronic L (5.5 kW)	Airtronic XL3	Hydronic S (5-6 kW)	HydronicL(16-35 kW)/L2	Hydronic M-II (8-12 kW)	Part number
Hydronic M Square Connector								
								
Socket Housing M Stribel Ctrl							■	206.31.319
Connector with pins							■	22.1000.31.9300
Socket Housing,								
								
2 Pin with Spring (FMP Connection)	■	■			■	■		206.31.290
Mini Terminal, Female AWG 16-20	■	■			■	■		206.00.180
Socket Housing M Stribel Control						■		206.31.319
Plug for 206 31 319 Stribel						■		206.75.042
Hydronic 4/5 Main harness connector Kit								
For the Hydronic D5S/SC, with contacts and seals								
								
					*			22.1000.30.1021
EasyStart Timer - Single part electrical connection								
								
			■			■	■	22.1000.34.2600

* restricted use ■ unrestricted use ~ restricted use

POWER CONVERTERS 12V TO 24V

Power Converter 12 - 24 480 W

5673601

EXHAUST

General information:

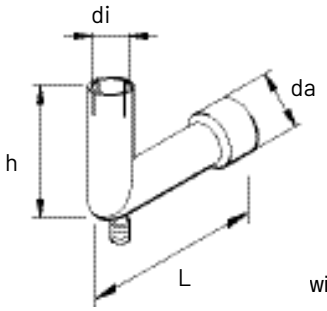
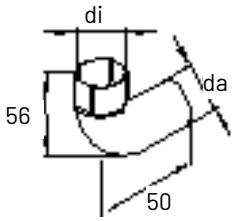
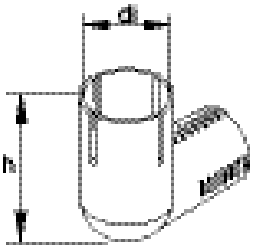
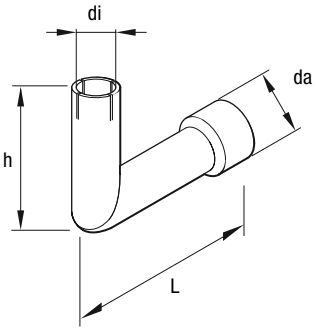
The exhaust and combustion air system must be installed in such a way that it ensures the following:

- The connection to the heater plug is sealed.
- The mouth of the pipe is never facing a head wind.
- As far as possible, the mouth of the pipe is protected from spray water ingress and spray must be able to run straight out again without penetrating the heater.
- There is no possibility of heater or vehicle engine exhaust gases being sucked in.
- Please also refer to the safety information on this section in the heater documentation.

Installing the exhaust line:

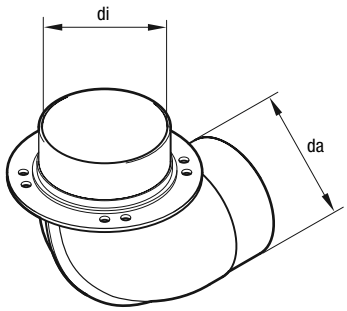
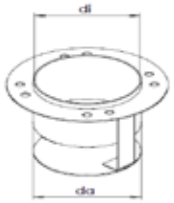
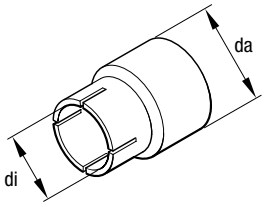
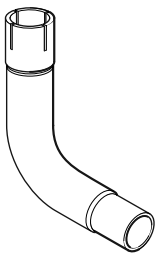
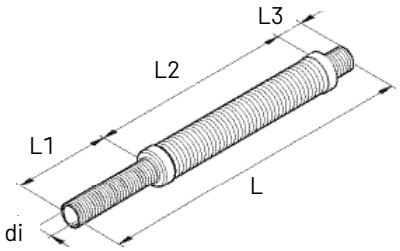
- Exhaust pipes should always be installed at downward angle towards the mouth of the pipe.
- If this is not possible, a water drainage hole must be drilled at the lowest point.
- If this point is not in the open air (e.g. in a ship's engine room), this opening must have a sealed connection to an overflow vessel.
- Under no circumstances must any cross-sections in the exhaust line be narrower than those on the heater exhaust connection.
- For permissible lengths, diameters and curvatures in the combustion-air and exhaust lines, see the technical information and installation instructions.

EXHAUST

		Airtronic S (2.2 kW)	Airtronic M (4 kW)	Airtronic L (5.5 kW)	Airtronic XL3	Hydronic S (5-6 kW)	HydronicL(16-35 kW)/L2	Hydronic M-II (8-12 kW)	Part number
Exhaust pipe elbow 	with condensate hole, di = 24 mm, da = 24 mm	■	■	■		■			24.0076.07.0100
	without condensate hole, di = 24 mm, da = 24 mm	■	■	■		■			24.0172.01.0100
Exhaust pipe elbow 	di = 24 mm, da = 24 mm	■	■	■		■			25.2481.80.0202
Elbow for combustion air Plastic 	di = 20 mm, h = 45 mm						■		22.1000.40.0002
	di = 25 mm, h = 50 mm	■	■	■	■				22.1000.40.0001
Elbow 	di = 24, da = 30 mm, h = 50 mm, L = 80 mm	■	■	■		■			25.1226.89.5500

■ unrestricted use ~ restricted use

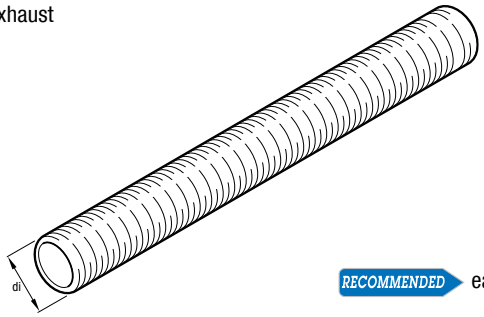
EXHAUST

		Airtronic S (2.2 kW)	Airtronic M (4 kW)	Airtronic L (5.5 kW)	Airtronic XL3	Hydronic S (5-6 kW)	HydronicL(16-35 kW)/L2	Hydronic M-II (8-12 kW)	Part number
Exhaust connection	 								
	Exhaust connection di = 70 mm, da = 72 mm						■		22.1000.40.0400
	Exhaust Elbow di = 70 mm, da = 72 mm						■		22.1000.40.0300
Straight Exhaust Fitting									
	di = 24, da = 30 mm	■	■	■		■			25.1520.80.0101
Exhaust 90° adapter									
	di = 30 mm							■	25.2800.30.1000
Silencer for combustion air Flexible									
	di = 25 mm, L1 = 135 mm, L2 = 405 mm, L3 = 25 mm, L = 565 mm	■	■	■	■		■		20.1689.80.0500

■ unrestricted use ~ restricted use

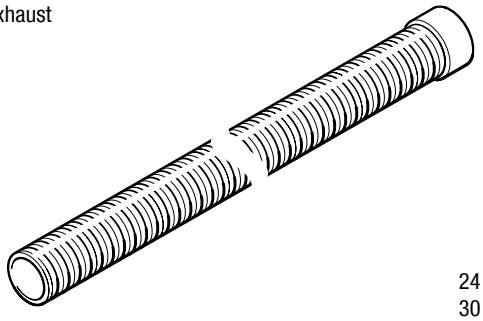
EXHAUST

Flexible Stainless Steel Exhaust



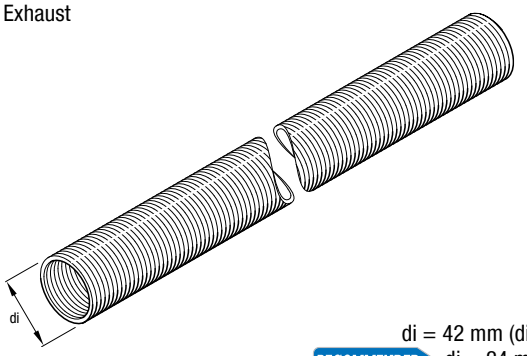
	Airtronic S (2.2 kW)	Airtronic M (4 kW)	Airtronic L (5.5 kW)	Airtronic XL3	Hydronic S (5-6 kW)	HydronicL(16-35 kW)/L2	Hydronic M-II (8-12 kW)	Part number
RECOMMENDED each - di = 24mm (1.3 mtr)	■	■	■		■			360.61.557

Flexible Stainless Steel Exhaust



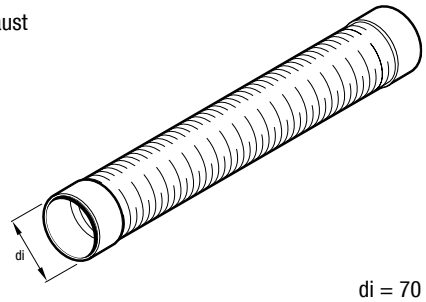
	Airtronic S (2.2 kW)	Airtronic M (4 kW)	Airtronic L (5.5 kW)	Airtronic XL3	Hydronic S (5-6 kW)	HydronicL(16-35 kW)/L2	Hydronic M-II (8-12 kW)	Part number
24 mm x 1.0 M with end cap	■	■	■		■			25.1774.80.0200
30 mm x 1.3 M with end cap							■	25.1816.80.0800

Flexible Stainless Steel Exhaust



	Airtronic S (2.2 kW)	Airtronic M (4 kW)	Airtronic L (5.5 kW)	Airtronic XL3	Hydronic S (5-6 kW)	HydronicL(16-35 kW)/L2	Hydronic M-II (8-12 kW)	Part number
di = 42 mm (direct connect) - per mtr				■				5530013
RECOMMENDED di = 24 mm (one layer) - per mtr	■	■	■		■			360.61.550
di = 24 mm (two layer) - per mtr	■	■	■		■			360.61.299
di = 30 mm (one layer) - per mtr							■	360.61.580
di = 30 mm (two layers) - per mtr							■	360.61.300

Flexible Stainless Steel Exhaust

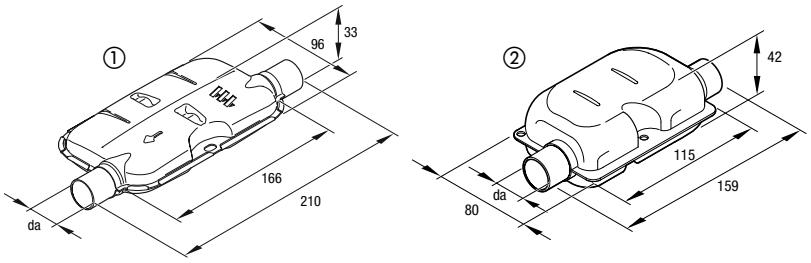


	Airtronic S (2.2 kW)	Airtronic M (4 kW)	Airtronic L (5.5 kW)	Airtronic XL3	Hydronic S (5-6 kW)	HydronicL(16-35 kW)/L2	Hydronic M-II (8-12 kW)	Part number
di = 70 mm (direct connect) - per mtr						■		5530015

■ unrestricted use ~ restricted use

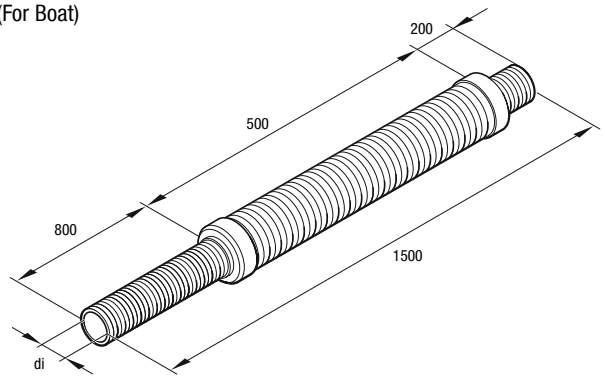
EXHAUST

Exhaust Muffler



	Airtronic S (2.2 kW)	Airtronic M (4 kW)	Airtronic L (5.5 kW)	Airtronic XL3	Hydronic S (5-6 kW)	HydronicL(16-35 kW)/L2	Hydronic M-II (8-12 kW)	Part number
for 24mm (Slimmer-New)	■	■	■		■			22.1000.40.0900 ①
for 24mm (Wider-Old)	■	■	■		■			25.1864.81.0100 ②

Exhaust Muffler (For Boat)

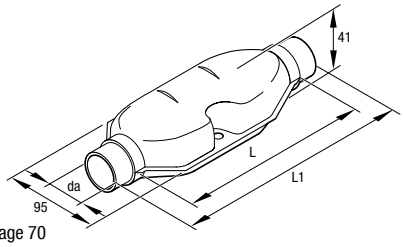


	Airtronic S (2.2 kW)	Airtronic M (4 kW)	Airtronic L (5.5 kW)	Airtronic XL3	Hydronic S (5-6 kW)	HydronicL(16-35 kW)/L2	Hydronic M-II (8-12 kW)	Part number
di = 30 mm	~	~	~		~		■	25.1226.89.5800

Exhaust Muffler

The exhaust silencer must not be installed in boat interiors.

Holder for exhaust silencer, see page 70

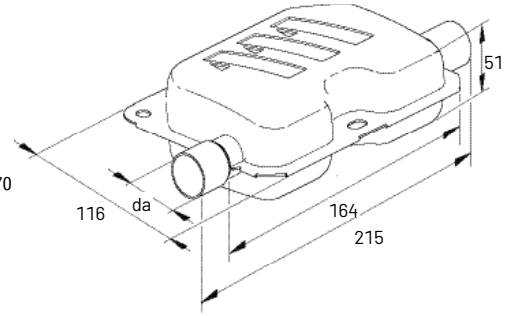


	Airtronic S (2.2 kW)	Airtronic M (4 kW)	Airtronic L (5.5 kW)	Airtronic XL3	Hydronic S (5-6 kW)	HydronicL(16-35 kW)/L2	Hydronic M-II (8-12 kW)	Part number
da = 30 mm, L = 180 mm, L1 = 224 mm			■		■			25.1806.80.0100

Exhaust Silencer

The exhaust silencer must not be installed in boat interiors.

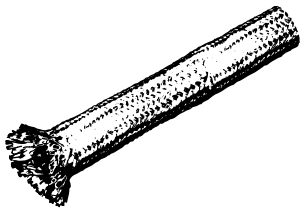
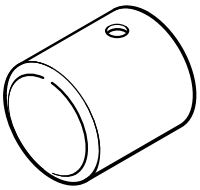
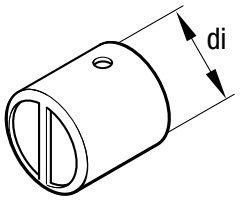
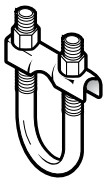
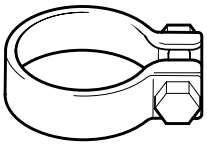
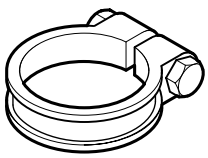
Holder for exhaust silencer, see page 70



	Airtronic S (2.2 kW)	Airtronic M (4 kW)	Airtronic L (5.5 kW)	Airtronic XL3	Hydronic S (5-6 kW)	HydronicL(16-35 kW)/L2	Hydronic M-II (8-12 kW)	Part number
da = 24 mm	■	■	■		■			22.1000.40.2100

■ unrestricted use ~ restricted use

EXHAUST

		Airtronic S (2.2 kW)	Airtronic M (4 kW)	Airtronic L (5.5 kW)	Airtronic XL3	Hydronic S (5-6 kW)	HydronicL(16-35 kW)/L2	Hydronic M-II (8-12 kW)	Part number
Exhaust Insulation Sock									
									
1” for 22 mm-24 mm,	ID Exhaust - per mtr	■	■			■			5530001
2” for 24 mm-42 mm,	ID Exhaust - per mtr	■	■	■	■	■			5530002
3” for 70 mm,	ID Exhaust - per mtr						■		5530003
Exhaust End Cap									
① 									
② 									
ø 24 mm		■	■	■		■			25.1482.80.0001 ①
di = 24 mm		■	■	■		■			20.2900.30.2400 ①
di = 30 mm								■	25.1785.80.0200 ①
di = 42 mm					■				22.1000.40.0200 ②
Exhaust Clamp for									
									
ø 70 mm								■	5530004
Clamp for Exhaust Pipe									
ø 31 mm - ø 34 mm									
									
ø 26 mm		■	■	■		■		■	22.1000.51.4500
									152.61.102
Clamp for Exhaust Pipe									
									
ø 42 mm - ø 45 mm					■				152.09.004

■ unrestricted use ~ restricted use

DUCTING

General information:

- Heating-air throughput is at its highest in a heater if the air flow is unimpeded. Heating-air-conducting parts reduce the heating-air throughput.
- In order to give you the opportunity to check that the installation you have planned does not reduce the heating-air throughput to an impermissible level, we have calculated a heater guide number for each heater and a line guide number for the heating-air-conducting parts.
- The total of the line guide numbers of the heating-air-conducting parts connected to the heater must not be greater than the heater guide number, as otherwise the air outlet temperature would be impermissibly high and the overheating sensor would respond.
- If the total of the line guide numbers is greater than the heater guide number, the total can be reduced by selecting a larger diameter for the air ducts.

Rule of thumb:

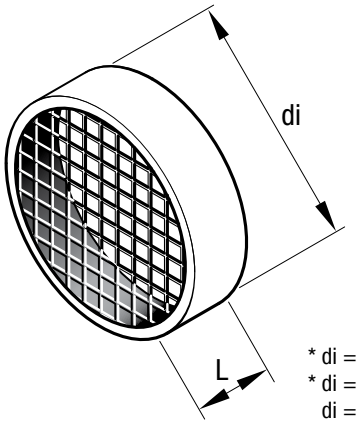
Double the cross-section or two identical parts installed in parallel = 1/4 of the guide number.
Example:
Hose Ø 60,
Cross-section area A = 19.6 cm^2, guide number 1.0
Hose Ø 75,
Cross-section area A = 44.2 cm^2, guide number 0.25

With smooth welded pipes, the line guide number is only half of the flexible hose with the same diameter (i.e. double pipe length).

DUCTING

PLEASE NOTE: ■ *Air ducting is critical to the performance of your heater - for infromation on how to layout a system and measure restriction values see the Rating Guide on page 115*

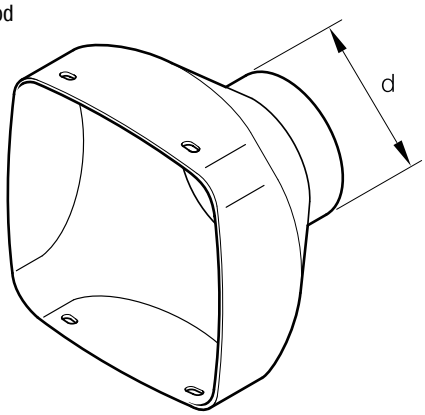
1 Protective Grill (Heater)



~ = Check connection diameter

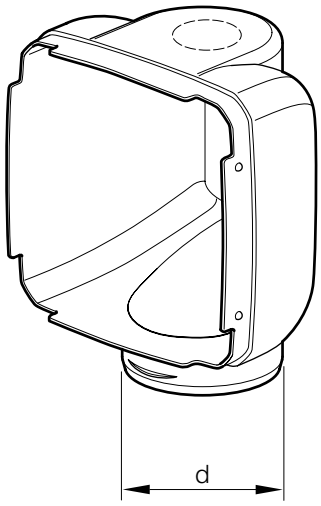
	Airtronic S (2.2 kW)	Airtronic M (4 kW)	Airtronic L (5.5 kW)	Airtronic XL3	Hydronic S (5-6 kW)	HydronicL(16-35 kW)/L2	Hydronic M-II (8-12 kW)	Part number
* di = 60 mm, L = 20 mm (di=2.4", L= 0.77")	■							25.1688.80.0600
* di = 75 mm, L = 22 mm (di=3", L= 0.87")	■	■						25.1552.05.0100
di = 90 mm, L = 24 mm (di=3.5", L= 0.95")		■	■					25.1729.80.0001
di = 100 mm, L = 22 mm (di=3.9", L= 0.87")				■				25.1226.89.4400

2 Straight Air Outlet Hood



	Airtronic S (2.2 kW)	Airtronic M (4 kW)	Airtronic L (5.5 kW)	Airtronic XL3	Hydronic S (5-6 kW)	HydronicL(16-35 kW)/L2	Hydronic M-II (8-12 kW)	Part number
d = 60 mm (2.4")	■							22.1000.01.0016
d = 75 mm (3")	■							22.1000.01.0017
d = 75 mm (3")		■						22.1000.01.0018
d = 90 mm (3.5")		■						22.1000.01.0019
(For Airtronic D5) d = 90 mm (3.5")			■					25.1729.01.0900
d = 90 mm (3.5")			■					22.1000.01.0086
(For D8LC) d = 100 mm (3.9")				■				22.1000.01.0087

3 Ball-shaped scoop



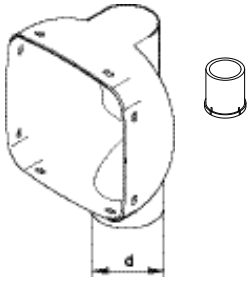
	Airtronic S (2.2 kW)	Airtronic M (4 kW)	Airtronic L (5.5 kW)	Airtronic XL3	Hydronic S (5-6 kW)	HydronicL(16-35 kW)/L2	Hydronic M-II (8-12 kW)	Part number
d = 60 mm (2.4") Outlet	■							22.1000.01.0020
d = 75 mm (3") Outlet		■						22.1000.01.0022
d = 90 mm (3.5") Outlet		■						22.1000.01.0023
d = 75 mm (3")	■							22.1000.01.0028

■ unrestricted use ~ restricted use

DUCTING

PLEASE NOTE: ■ *Air ducting is critical to the performance of your heater - for infromation on how to layout a system and measure restriction values see the Rating Guide on page 115*

4
Ball-shaped scoop for Airtronic D5



6
Ball-shaped scoop for Airtronic L3

	Airtronic S (2.2 kW)	Airtronic M (4 kW)	Airtronic L (5.5 kW)	Airtronic XL3	Hydronic S (5-6 kW)	HydronicL(16-35 kW)/L2	Hydronic M-II (8-12 kW)	Part number
d = 90 mm or 3.5”			■					25.1729.89.1000
d = 90 mm			■					22.1000.01.0088

■ unrestricted use ~ restricted use

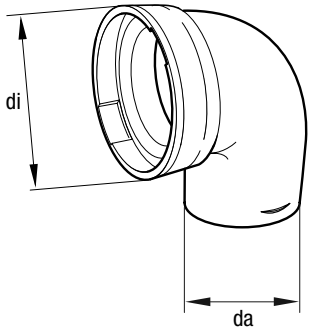
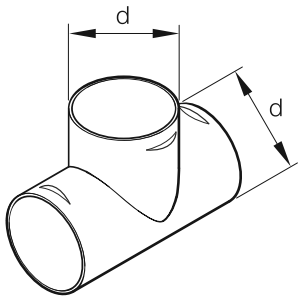
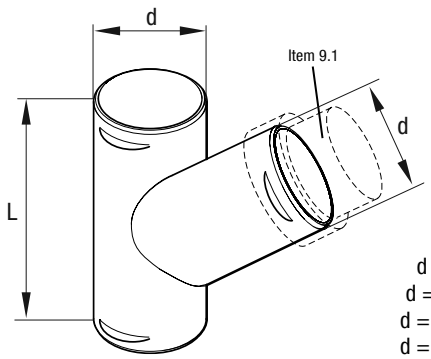
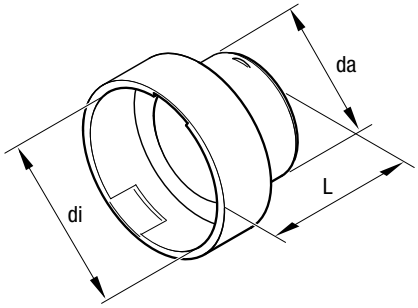
DUCTING

	Airtronic S (2.2 kW)	Airtronic M (4 kW)	Airtronic L (5.5 kW)	Airtronic XL3	Hydronic S (5-6 kW)	HydronicL(16-35 kW)/L2	Hydronic M-II (8-12 kW)	Part number
7 Grill (Inlet & Outlet)								
① ø5 ø5 D d L ø5								
② D								
d = 90 mm or 3.5”	■	■						20.1465.89.0500 ①
d = 140 mm or 5.25”		■	■	■				25.1729.89.0005 ②
D = 93 mm (3.6”), L = 75 mm (3”) d = 60 mm (2.4”)	■							22.1000.01.0001 ②
Nickel Plated Open Screen (d = 140 mm or 5.25”)		■	■	■				25.1226.89.0500 ①
8 Ducting Flange (Connecting Socket)								
50 D L d								
* D = 93 mm								
~ = Check connection diameter								
for Duct Size 50 mm (2”)	■							20.1575.80.0801
for Duct Size 60 mm (2.4”)	■	~						20.1577.89.0601
for Duct Size 90 mm (3.5”)		■	■	~				20.1297.00.0001
for Duct Size 100 mm (4”)			~	■				25.1226.89.0040
9 Flexible Air Hose (aluminum, paper, plastic)								
① di								
① For air hose fastening, see page 66								
~ = Check connection diameter								
di = 50mm (2”)	~	~						10.2114.29.0000
di = 60mm (2.4”)	■	~						10.2114.31.0000
di = 75mm (3”)	■	■	~					10.2114.34.0000
di = 90mm (3.5”)		■	■	~				10.2114.37.0000
di = 100mm (4”)		~	~	■				10.2114.38.0000
9.1 Flexible Hose								
di								
di = 75 mm (3”)	■	■	~					5550007
di = 100 mm (4”)		~	~	■				5550008
10 Flexible Hose (Plastic hose with metal spiral, suitable for outsid								
①								
① For air hose fastening, see page 66								
~ = Check connection diameter								
0 mm (1-meter pieces)	■	~						360.00.165

■ unrestricted use ~ restricted use

DUCTING

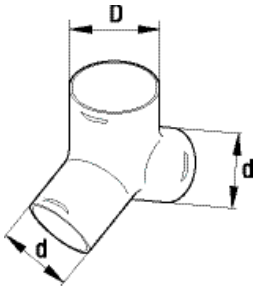
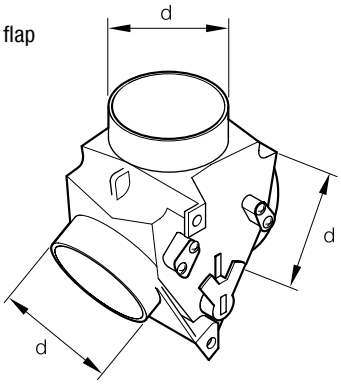
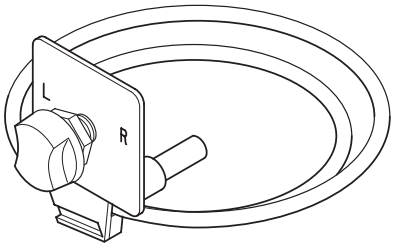
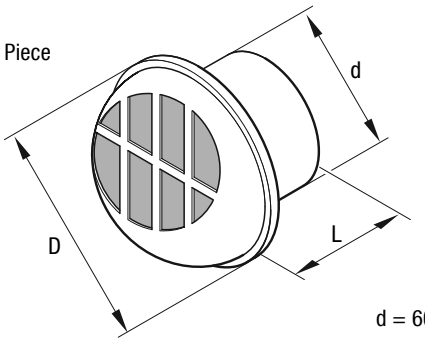
PLEASE NOTE: ■ *Air ducting is critical to the performance of your heater - for infromation on how to layout a system and measure restriction values see the Rating Guide on page 115*

		Airtronic S (2.2 kW)	Airtronic M (4 kW)	Airtronic L (5.5 kW)	Airtronic XL3	Hydronic S (5-6 kW)	HydronicL(16-35 kW)/L2	Hydronic M-II (8-12 kW)	Part number
11 90° Bend, Plastic Elbow									
	di = 60 mm (2.4"), da = 60 mm (2.4")	■							25.1688.89.0001
	di = 75 mm (3"), da = 75 mm (3")	■	■						25.1482.89.0005
12 Plastic "T" Piece									
	d = 60 mm (2.4")	■							25.1688.89.0002
	d = 75 mm (3")	■	■						22.1000.01.0027
	d = 90 mm (3.5")		■						22.1000.01.0026
13 45° Plastic "Y" Connector									
	d = 75 mm (3"), L = 175 mm	■	■	~	~				25.1226.89.0044
	d = 100 mm (4"), L = 230 mm		~	~	■				25.1226.89.0045
	d = 60 mm (2.4"), L = 145 mm	■							25.1774.89.0005
	d = 90 mm (3.5"), L = 180 mm	~	■	~	~				22.1000.01.0021
13.1 Plastic Reducer for "Y" or Ducting Union									
	di = 90 mm (3.5"), da = 75 mm (3"), L = 45 mm	~	■	■	~				22.1000.01.0012
	di = 75 mm (3"), da = 50 mm (2"), L = 50 mm	■	■	~					25.1226.89.0046
	di = 100 mm (4"), da = 75 mm (3"), L = 50 mm	~	~	~	■				25.1226.89.0047
	di = 100 mm (4"), da = 50 mm (2"), L = 62 mm		~	~	■				25.1226.89.0048
	di = 75 mm (3"), da = 60 mm (2.4"), L = 45 mm	■	■	~					25.1226.89.0050

■ unrestricted use ~ restricted use

DUCTING

PLEASE NOTE: ■ *Air ducting is critical to the performance of your heater - for infromation on how to layout a system and measure restriction values see the Rating Guide on page 115*

		Airtronic S (2.2 kW)	Airtronic M (4 kW)	Airtronic L (5.5 kW)	Airtronic XL3	Hydronic S (5-6 kW)	HydronicL(16-35 kW)/L2	Hydronic M-II (8-12 kW)	Part number
13.2 Symmetrical "Y" Piece									
Plastic, D = 60 mm,	d =50 mm	■							25.1688.89.0003
Plastic, D = 75 mm,	d =60 mm	■	■						22.1000.01.0082
Plastic, D = 90 mm,	d =60 mm	■	■	~					22.1000.01.0083
Plastic, D = 90 mm,	d =75 mm		■						22.1000.01.0084
14 Butterfly Valve with regulating flap ① Adapter see item 9.1	 								
d = 60 mm		■							330.00.174
d = 90 mm		~	■	■					330.00.175
14.1 Operating Cable for item 10 2 m long									
Requires air regulating valve		■	■	■					22.1000.01.0300
15 Outlet Grill with Connecting Piece (Rotatable)									
d = 60 mm, D = 97 mm, L = 50 mm		■	~						20.2800.50.0200

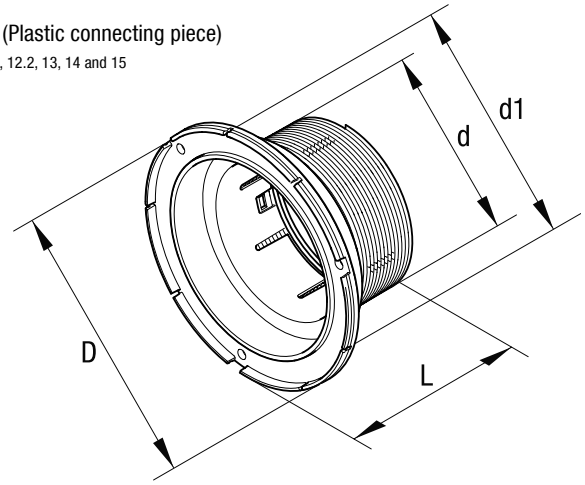
■ unrestricted use ~ restricted use

DUCTING

PLEASE NOTE: ■ *Air ducting is critical to the performance of your heater - for infromation on how to layout a system and measure restriction values see the Rating Guide on page 115*

16
Ducting Flange (Plastic connecting piece)

For vents, Items: 12.1, 12.2, 13, 14 and 15



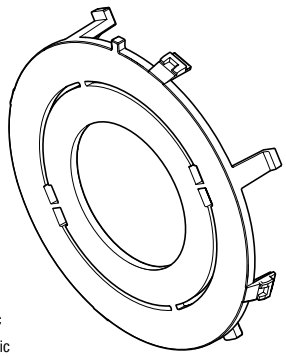
d1 = core drill bit diameter

~ = Check connection diameter

	Airtronic S (2.2 kW)	Airtronic M (4 kW)	Airtronic L (5.5 kW)	Airtronic XL3	Hydronic S (5-6 kW)	HydronicL(16-35 kW)/L2	Hydronic M-II (8-12 kW)	Part number
d = 50 mm, d1 = 67 mm, D = 89 mm, L = 39 mm, black	■							22.1000.01.0034
d = 60 mm, d1 = 67 mm, D = 89 mm, L = 40 mm, black	■	■						22.1000.01.0035
d = 75 mm, d1 = 92 mm, D = 115 mm, L = 42 mm, black	■	■	■	~				22.1000.01.0036
d = 90 mm, d1 = 92 mm, D = 115 mm, L = 40 mm, black		■	■	■				22.1000.01.0037

16.1
Air Control Element

(2 position)



~ = Check connection diameter

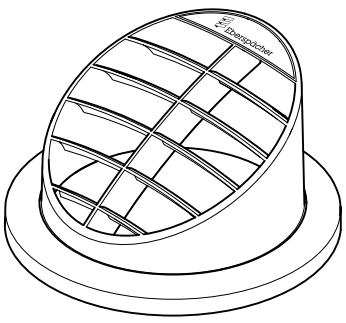
** for fitting, order no. 22.1000.01.0036 - Plastic

*** for fitting, order no. 22.1000.01.0037 - Plastic

	Airtronic S (2.2 kW)	Airtronic M (4 kW)	Airtronic L (5.5 kW)	Airtronic XL3	Hydronic S (5-6 kW)	HydronicL(16-35 kW)/L2	Hydronic M-II (8-12 kW)	Part number
ø 75 mm	■	■	■					22.1000.01.0080
ø 90 mm		■	■	~				22.1000.01.0081

16.2
Upright vent, 30°

(Rotable)



	Airtronic S (2.2 kW)	Airtronic M (4 kW)	Airtronic L (5.5 kW)	Airtronic XL3	Hydronic S (5-6 kW)	HydronicL(16-35 kW)/L2	Hydronic M-II (8-12 kW)	Part number
suitable for ø 50 / 60 mm fitting, black	■	~						22.1000.01.0056

■ unrestricted use ~ restricted use

DUCTING

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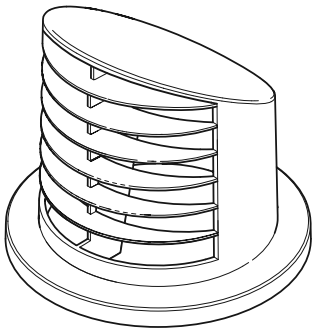
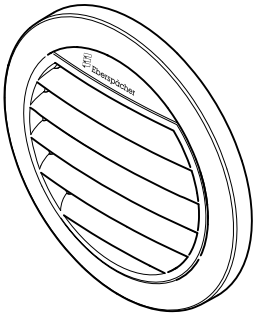
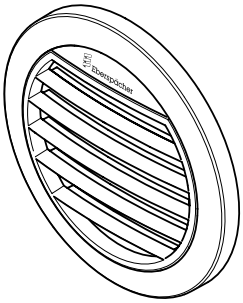
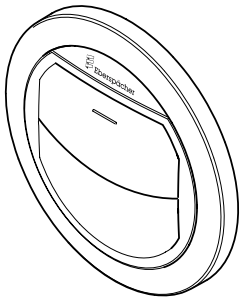
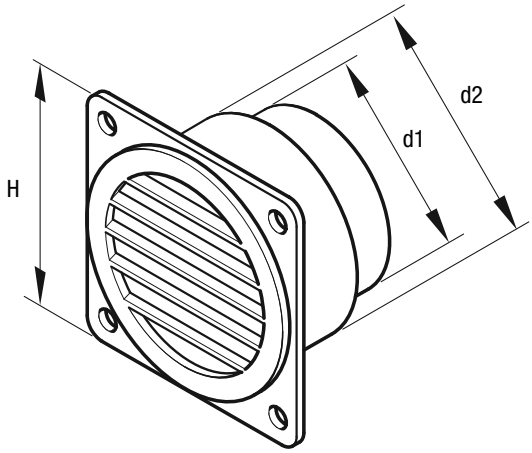
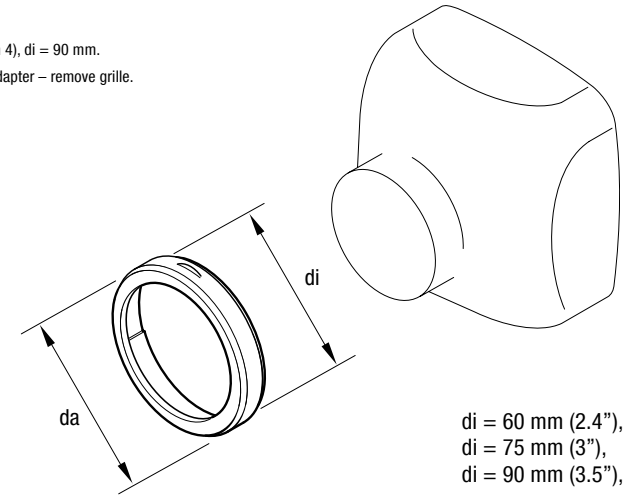
	Airtronic S (2.2 kW)	Airtronic M (4 kW)	Airtronic L (5.5 kW)	Airtronic XL3	Hydronic S (5-6 kW)	HydronicL(16-35 kW)/L2	Hydronic M-II (8-12 kW)	Part number
17 **90° Upright Vent** (Rotatable)								
								
Suitable for ø 50/60 mm fitting, black	■	~						22.1000.01.0064
Suitable for ø 75/90 mm fitting, black	■	■	~					22.1000.01.0068
18 **30° Outlet Screen (Flat)** Rotatable, see Item 4 for fitting								
								
Suitable for ø 50/60 mm fitting, black)	■							22.1000.01.0044
Suitable for ø 75/90 mm fitting, black)	■	■	~					22.1000.01.0052
18.1 **0° Outlet Screen (Flat)** (For 75/90mm flange)								
								
Suitable for 75/90 mm fitting, black)	■	■	■					22.1000.01.0048

■ unrestricted use ~ restricted use

DUCTING

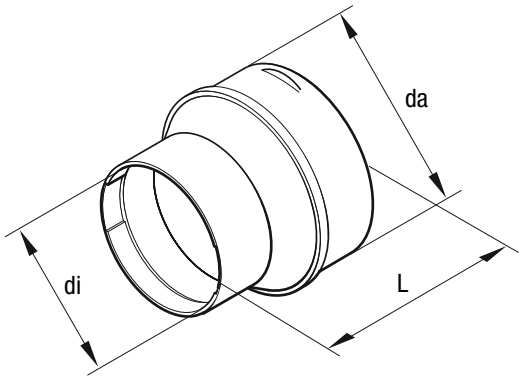
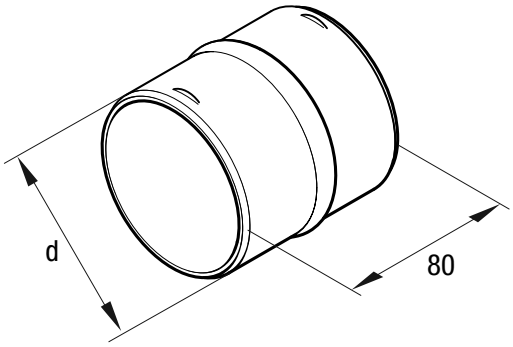
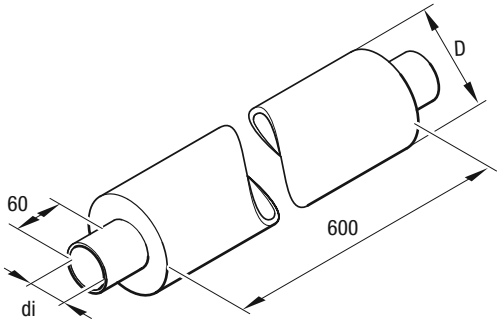
PLEASE NOTE: ■ *Air ducting is critical to the performance of your heater - for infromation on how to layout a system and measure restriction values see the Rating Guide on page 115*

	Airtronic S (2.2 kW)	Airtronic M (4 kW)	Airtronic L (5.5 kW)	Airtronic XL3	Hydronic S (5-6 kW)	HydronicL(16-35 kW)/L2	Hydronic M-II (8-12 kW)	Part number
19 Outlet Screen Closable Rotatable, see Ducting Flange (Plastic) for fitting								
								
Suitable for ø 50/60 mm fitting, black	■	■						22.1000.01.0072
Suitable for ø 75/90 mm fitting, black	■	■	■	~				22.1000.01.0076
20 Outlet Vent with Flange (Rotatable)								
								
d1 = 90 mm (3.5"), d2 = 100 mm (4"), H = 110 mm		■	■	~				20.1609.80.0900
d1 = 75 mm (3"), d2 = 100 mm (4"), H = 110 mm	■	■						22.1050.89.2100
21 Adapter Ring								
Protective grille (Item 4), di = 90 mm. Can be used as an adapter – remove grille.								
								
di = 60 mm (2.4"), da = 75 mm (3")	■							22.1000.01.0008
di = 75 mm (3"), da = 90 mm (3.5")	■	■						25.1822.89.0001
di = 90 mm (3.5"), da = 100 mm (4")		■	■					20.1607.80.0001

■ unrestricted use ~ restricted use

DUCTING

PLEASE NOTE: ■ *Air ducting is critical to the performance of your heater - for infromation on how to layout a system and measure restriction values see the Rating Guide on page 115*

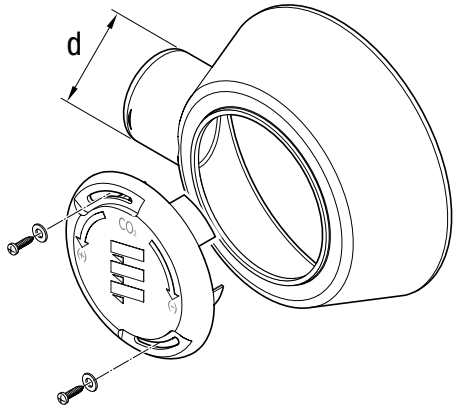
		Airtronic S (2.2 kW)	Airtronic M (4 kW)	Airtronic L (5.5 kW)	Airtronic XL3	Hydronic S (5-6 kW)	HydronicL(16-35 kW)/L2	Hydronic M-II (8-12 kW)	Part number
22 Plastic Reducer									
									
~ = Check connection diameter	di = 60 mm (2.4"), da = 75 mm (3"), L = 40.5 mm	■	~						25.1688.89.0010
23 Ducting Union, straight									
									
	d = 60 mm (2.4")	■							22.1000.01.0005
	d = 75 mm (3")	■	~	~	~				22.1000.01.0006
	d = 90 mm (3.5")	~	■	■	~				22.1000.01.0024
	d = 100 mm (4")		~	~	■				22.1000.01.0007
24 Air Silencer (Inlet & Outlet Duct) Hot air, aluminum									
									
~ = Check connection diameter	di = 75 mm, D = 120 mm	■	■						25.1226.89.1500
	di = 100 mm, D = 150 mm		~	~	■				25.1226.89.5600

■ unrestricted use ~ restricted use

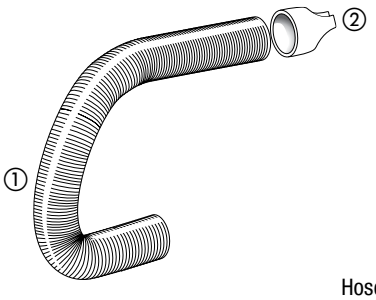
DUCTING

PLEASE NOTE: ■ *Air ducting is critical to the performance of your heater - for infromation on how to layout a system and measure restriction values see the Rating Guide on page 115*

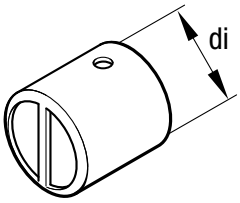
Air Intake Hood



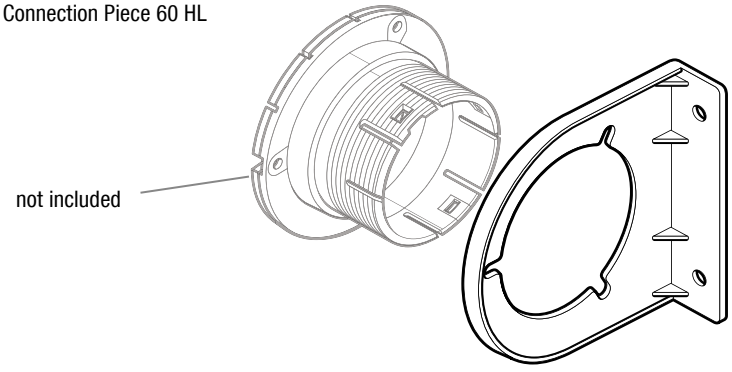
Combustion Air Intake Flex Hose



Plastic Air Intake End Cap with Crossbar



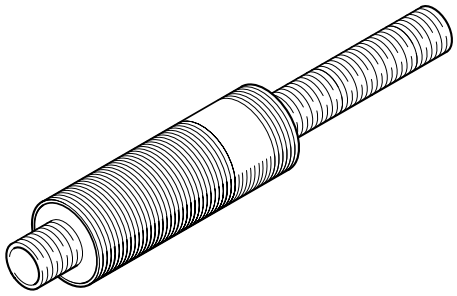
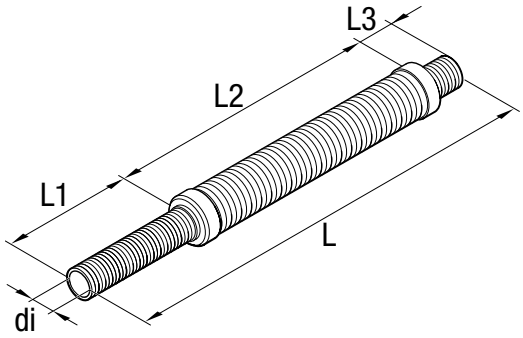
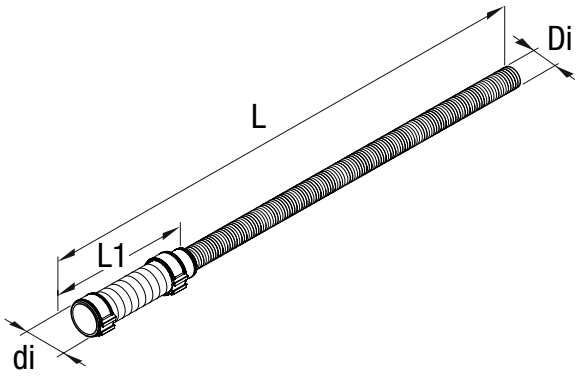
Holder Connection Piece 60 HL



	Airtronic S (2.2 kW)	Airtronic M (4 kW)	Airtronic L (5.5 kW)	Airtronic XL3	Hydronic S (5-6 kW)	HydronicL(16-35 kW)/L2	Hydronic M-II (8-12 kW)	Part number
d = 60, mm (2.4")						■		22.1000.40.0600
per mtr, ID = 25 mm	■	■	■				■	10.2114.21.0000 ①
per mtr, ID = 30 mm				■				10.2114.25.0000
End Cap				■				25.1480.89.0400 ②
Hose Comb. Air - 25mm (1m)	■	■	■					360.00.006
Hose - 20mm APK Comb Air (1m)					■			360.00.099
di = 20 mm					■			25.1688.80.1201
di = 25 mm	■	■	■					25.1729.89.0002
Suitable for ø 50/60 mm fitting, black)	■	■						22.1000.01.1400

■ unrestricted use ~ restricted use

INTAKE (COMBUSTION AIR)

	Airtronic S (2.2 kW)	Airtronic M (4 kW)	Airtronic L (5.5 kW)	Airtronic XL3	Hydronic S (5-6 kW)	HydronicL(16-35 kW)/L2	Hydronic M-II (8-12 kW)	Part number
Intake Silencer 		■						20.1609.80.0400
Air Int Muffler w/End Cap  di = 25 mm, L1 = 90 mm, L2 = 300 mm, L3 = 40 mm, L = 430 mm							■	25.1786.80.0200
Combustion Airt Intake 410mm  Di = 20 mm, di = 38 mm, L1 = 160 mm, L = 760 mm	~	~			~			22.1000.40.0010

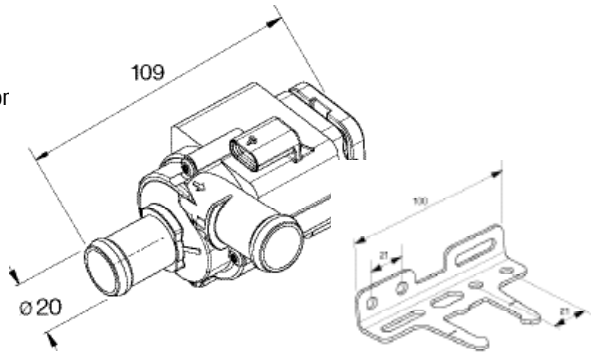
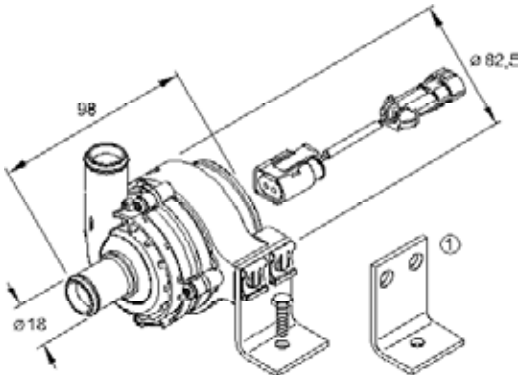
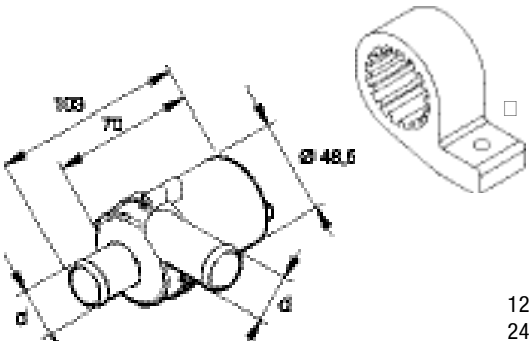
■ unrestricted use ~ restricted use

WATER-CONDUCTING PARTS

General information:

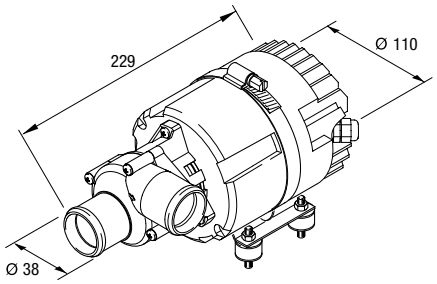
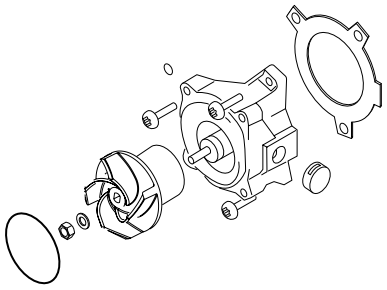
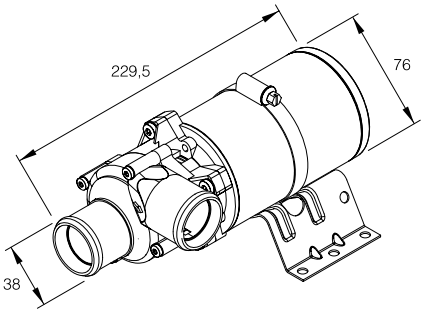
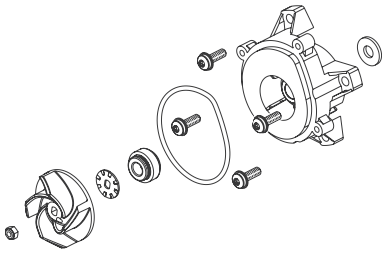
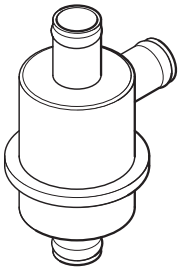
- Install water pump no higher than the heater and preferably lower.
- All water-conducting heater parts must always be below the engine's coolant level.
- When installing a water heater, always use water hoses approved for use with vehicles, otherwise there is a danger of the hose bursting or layers of the hose separating, clogging the water circuit.
- Always secure water hoses with hose clips at connections.
- Always route water hoses so that they are not affected by moving parts and cannot be chafed. Pay particular attention to the heavy vibration caused by switching the engine on and off.
- Always use a large radius when routing water hoses to prevent kinking, and do not leave hoses hanging loose.
- Protect water hoses from intense heat or even contact with hot engine parts, e.g. the exhaust pipe.
- Always air-bleed the entire water circuit of a vehicle after any assembly operation.
- Please also refer to the safety information on this section in the heater documentation.

COOLANT PUMPS

		Airtronic S (2.2 kW)	Airtronic M (4 kW)	Airtronic L (5.5 kW)	Airtronic XL3	Hydronic S (5-6 kW)	HydronicL(16-35 kW)/L2	Hydronic M-II (8-12 kW)	Part number
Water pump 12V for Hydronic S3 Econor									
①									
Mounting bracket for water pump	12 V					~			25.2652.25.0000
~ = Compatible only with Hydronic S3 Economy	Mounting bracket for water pump					~			22.1000.51.3900
Water pump									
with mounting bracket installed, adapter cable, M6x12 hexagon screws									
Water flow rate 850 l / h at 0.1 ba	12 V					■			25.2217.27.0000
	Holder for water pump					~			25.2217.27.0100
Flowtronic 800 S water pump									
Water flow rate 820 l / h at 0.1 bar									
~ = excluding Hydronic S3 Economy	12 V, d = 20 mm					~			25.2275.25.0000
	24 V, d = 18 mm					~			25.2218.25.0000
	Holder for water pump					~			22.1000.50.0700

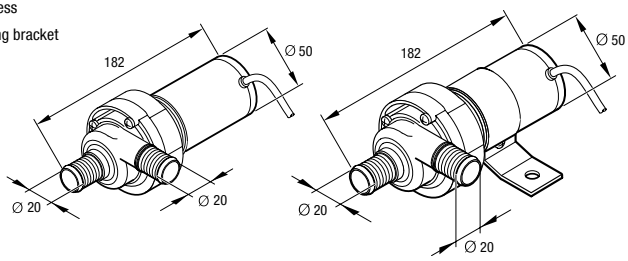
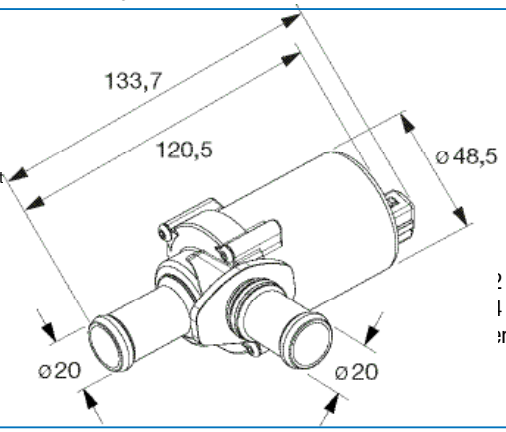
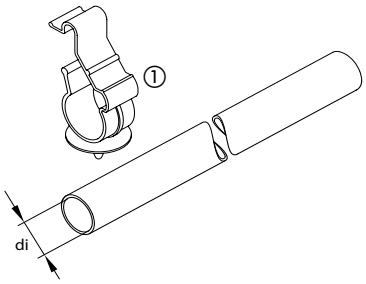
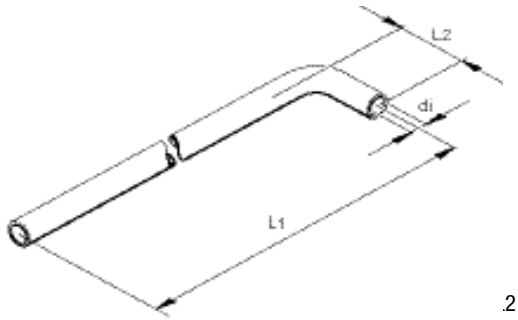
■ unrestricted use ~ restricted use

COOLANT PUMPS

			Airtronic S (2.2 kW)	Airtronic M (4 kW)	Airtronic L (5.5 kW)	Airtronic XL3	Hydronic S (5-6 kW)	HydronicL(16-35 kW)/L2	Hydronic M-II (8-12 kW)	Part number
Flowtronic 6000 SC water pump With magnetic coupling and mounting bracket Water flow rate 6,000 l / h at 0.4 bar		24 V						■		25.2488.25.0000
Flowtronic 6000 SC spares kit								■		25.2488.99.2510
Flowtronic 5000 water pump With mounting bracket, water flow rate 5,200 l / h at 0.2 bar		24 V						■		25 2488 26 00 00
Flowtronic 5000 spares kit For water pump 25.2488.26.0000								■		25.2488.99.2610
Brass Water Thermostat		D = 18mm, d = 18mm (70°C-75°C) 158°F-167°F					■		■	330.00.123

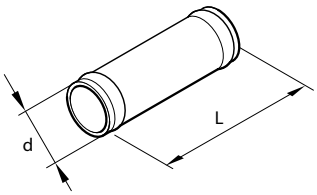
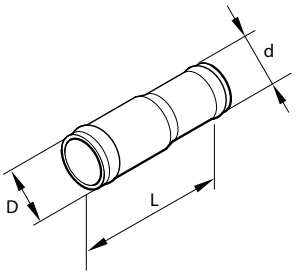
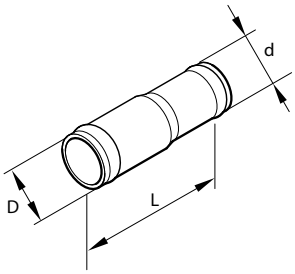
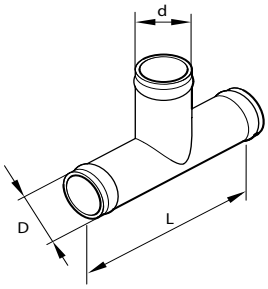
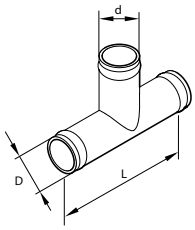
■ unrestricted use ~ restricted use

COOLANT PUMPS

	Airtronic S (2.2 kW)	Airtronic M (4 kW)	Airtronic L (5.5 kW)	Airtronic XL3	Hydronic S (5-6 kW)	HydronicL(16-35 kW)/L2	Hydronic M-II (8-12 kW)	Part number
Flowtronic 1200 S water pump With magnetic coupling, 200 mm long cable harness 12 V without mounting bracket, 24 V with mounting bracket Water flow rate 700 l / h at 0.3 bar 								
12 V without mounting bracket, cable harness without connector housing							~	25.1815.25.0100
12 V E-Guardian Coolant Pump							■	25.2596.25.0100
24 V with mounting bracket installed, cable harness with flat connector housing							~	25.1816.25.0100
Flowtronic 1400 water pump  * With Hydronic S3 Economy(12V): EasyScan programming required (specificat ans an uncontrolled pump)								
? v without holder					~	~		25.2434.99.2701
l v without holder					~	~		25.2435.99.2701
ır for water pump					~	~		22.1000.50.0700
Water hose **wall thickness 4.5 mm**  ① For spacer ring, see page 121 ~= check connection diameter								
di = 18 mm, L = 2 m					■	~		360.75.407
Water hose **wall thickness 4.5 mm**  ~= check connection diameter								
.2 = 50 mm					■	~		20.1645.80.0001

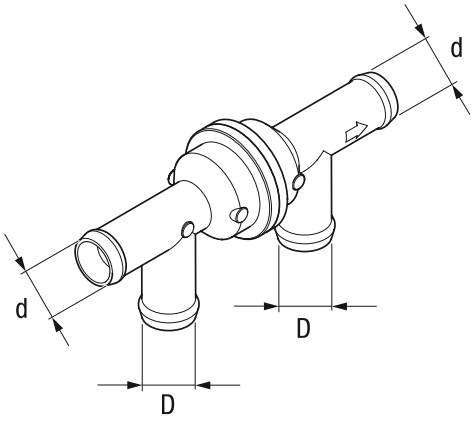
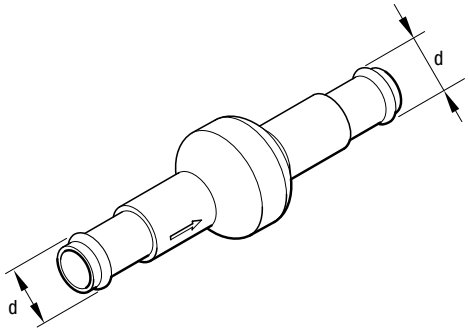
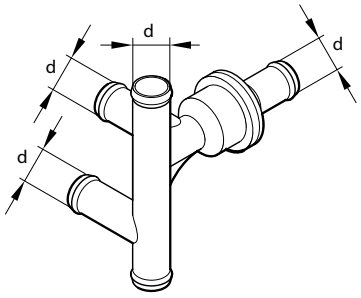
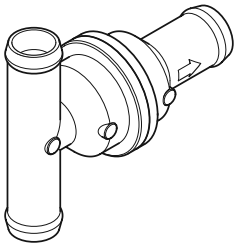
■ unrestricted use ~ restricted use

PLUMBING

			Airtronic S (2.2 kW)	Airtronic M (4 kW)	Airtronic L (5.5 kW)	Airtronic XL3	Hydronic S (5-6 kW)	HydronicL(16-35 kW)/L2	Hydronic M-II (8-12 kW)	Part number
Connection Pipe		Plastic, d = 18 mm, L = 60 mm					~	■		22.1000.10.2500
		Brass, d = 18 mm, L = 55 mm					■	~		20.1528.88.0003
		Plastic, d = 20 mm, L = 60 mm					~	■		22.1000.10.0103
		Brass, d = 22 mm, L = 55 mm					~	~		20.1645.89.0007
Brass Reducer		D = 20 mm, d = 18 mm L = 60 mm					■	■		20.1645.89.0006
Plastic Reducer		D = 20 mm, d = 18 mm, L = 60 mm					■		■	22.1000.10.0104
T-piece Brass ~ = Check connection diameter		D = 18 mm, d= 15 mm, L = 65 mm					■	~		25.1214.89.1600
		D = 20 mm, d= 20 mm, L = 75 mm					■	~		20.1673.80.1100
T-piece Plastic ~ = Check connection diameter		D = 18 mm, d= 15 mm, L = 65 mm					~	~		22.1000.10.2100
		D = 20 mm, d= 20 mm, L = 75 mm					~	~		22.1000.10.2300
		D = 20 mm, d= 20 mm, L = 75 mm						■		22.1000.10.2200

■ unrestricted use ~ Restricted use

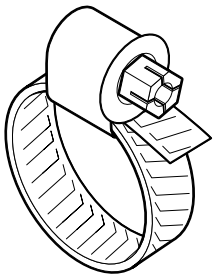
PLUMBING

		Airtronic S (2.2 kW)	Airtronic M (4 kW)	Airtronic L (5.5 kW)	Airtronic XL3	Hydronic S (5-6 kW)	HydronicL(16-35 kW)/L2	Hydronic M-II (8-12 kW)	Part number
One Way Check Valve									
	D = 20 mm, d = 20 mm					~		■	22.1000.10.1000
	Non-Return Valve, D = 20 mm, d = 18 mm					■		~	22.1000.10.1100
One Way Check Valve									
	d = 20 mm					~		■	22.1000.10.0800
Combi valve with thermostat function with six connections ~ = Check connection diameter									
	d = 20 mm						■		25.2014.80.7200
Water Check Valve									
	D = 20 mm, d = 20 mm					~		■	22.1000.10.0700

■ unrestricted use ~ restricted use

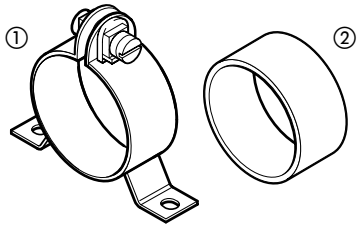
PLUMBING

Clamp



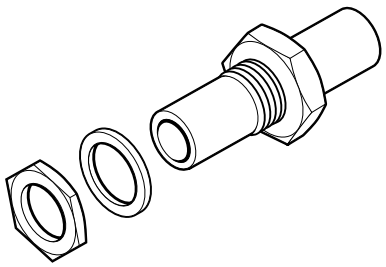
	Airtronic S (2.2 kW)	Airtronic M (4 kW)	Airtronic L (5.5 kW)	Airtronic XL3	Hydronic S (5-6 kW)	HydronicL(16-35 kW)/L2	Hydronic M-II (8-12 kW)	Part number
ID = 16-25 mm					■			10.2067.01.6025
ID = 20-32 mm	■	■	■		■	■	■	10.2066.02.0032

Pump Clamp and Rubber Ring



	Airtronic S (2.2 kW)	Airtronic M (4 kW)	Airtronic L (5.5 kW)	Airtronic XL3	Hydronic S (5-6 kW)	HydronicL(16-35 kW)/L2	Hydronic M-II (8-12 kW)	Part number
Pump Clamp 48 mm 22				■	■			22.1000.50.1000 ①
Rubber Ring for Large FMP				■				20.1449.00.1001 ②

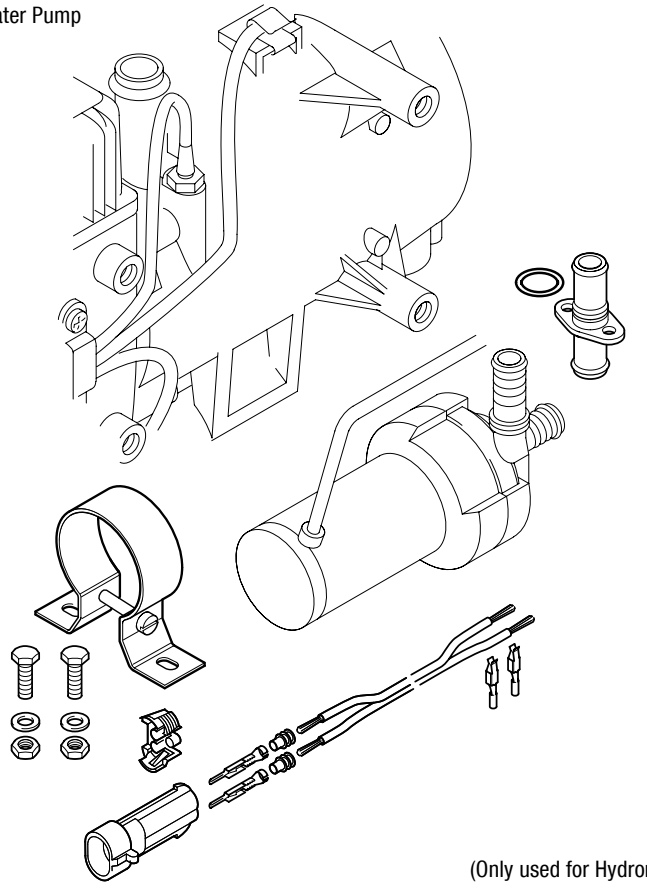
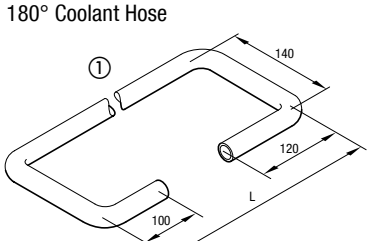
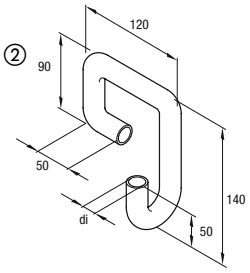
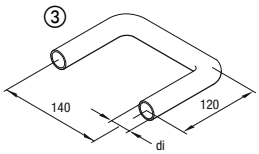
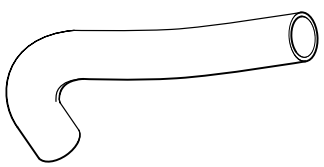
Bulk Head Fitting



	Airtronic S (2.2 kW)	Airtronic M (4 kW)	Airtronic L (5.5 kW)	Airtronic XL3	Hydronic S (5-6 kW)	HydronicL(16-35 kW)/L2	Hydronic M-II (8-12 kW)	Part number
3/4" - 2 pieces required					■		■	20.2900.60.1010
1/2 - 3/4 Straight Barb Connection								5520068

■ unrestricted use ~ Restricted use

PLUMBING

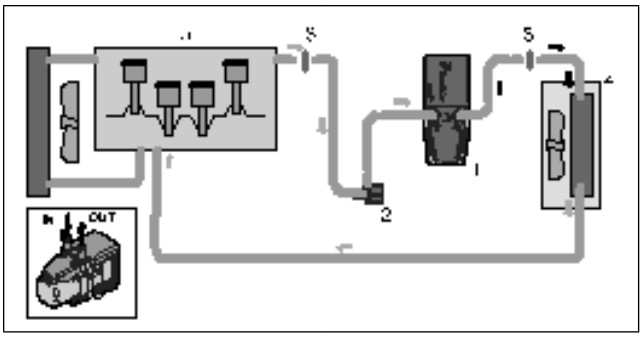
	Airtronic S (2.2 kW)	Airtronic M (4 kW)	Airtronic L (5.5 kW)	Airtronic XL3	Hydronic S (5-6 kW)	HydronicL(16-35 kW)/L2	Hydronic M-II (8-12 kW)	Part number
Conversion Kit for Water Pump  (Only used for Hydronic 10/M)								22.1000.10.0100
180° Coolant Hose    ~ = preferably for connecting Hydronic 2 / Hydronic 2 C with the water pump								
di = 18 mm x 218 mm, L = 2m					■		~	20.1690.81.0001 ①
di = 20 mm					■		■	25.1917.80.0001 ①
di = 20 mm					~		■	25.2526.80.0102 ②
di = 20 mm					~		■	24.0117.80.0001 ③
90º Hose Bend  20 mm x 0.29 m							■	20.2900.60.1023

■ unrestricted use ~ restricted use

OPTIONAL WATER CIRCUITS ON A HYDRONIC S3 ECONOMY, EXAMPLE

"Inline integration" of cooling circuit:
Cut through the water feed hose from the vehicle engine to the vehicle convector. Connect the heater and water pump to the water feed hose using connection fittings and water hoses. Run and connect a water hose from the water pump pressure fitting to the heater water inlet fitting.

Heating characteristic
When the heater is switched on, heat is initially conveyed only to the vehicle's engine via the vehicle convector. Once the coolant temperature reaches approx. 30 °C, the vehicle fan starts up and heat is supplied to the passenger compartment as well.

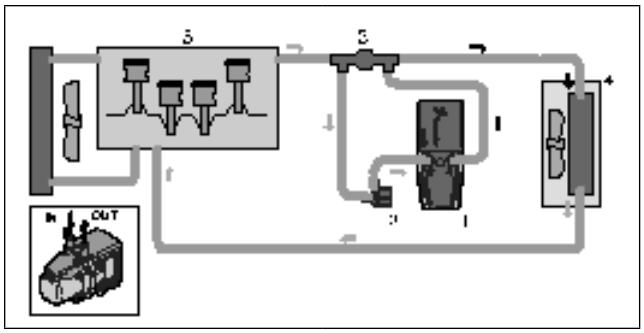


1 Heater
2 Water pump
3 Connecting piece
4 Convector
5 Vehicle engine

Cooling circuit with check valve:
Cut through the water feed hose from vehicle engine to the vehicle convector, and insert the check valve. Connect the heater and the water pump to the check valve using water hoses. Run and connect a water hose from the
water pump pressure fitting to the heater water inlet fitting.

Heating characteristic
When the heater is switched on, heat is initially conveyed only to the vehicle's engine via the vehicle convector. Once the coolant temperature reaches approx. 30 °C, the
vehicle fan starts up and heat is supplied to the passenger compartment as well.

Advantage compared to in-line integration in the water circuit
No loss of performance on the vehicle heater when the heater is switched off.



1 Heater
2 Water pump
3 Check valve
4 Convector
5 Vehicle engine

Note:

- The check valve must be ordered separately – see page 74 + 75. for the order number.

OPTIONAL WATER CIRCUITS ON A HYDRONIC S3 ECONOMY, EXAMPLE

Cooling circuit with combi valve:

Using the combi valve with five connections
If the water feed and return lines between the vehicle's engine and convector are installed separately in the engine compartment, the combi valve with five connections must be used along with a T-piece.

Using the combi valve with six connections
If the water feed and return lines between the vehicle's engine and convector are installed in parallel in the engine compartment, the combi valve with six connections can be used (without a T-piece).

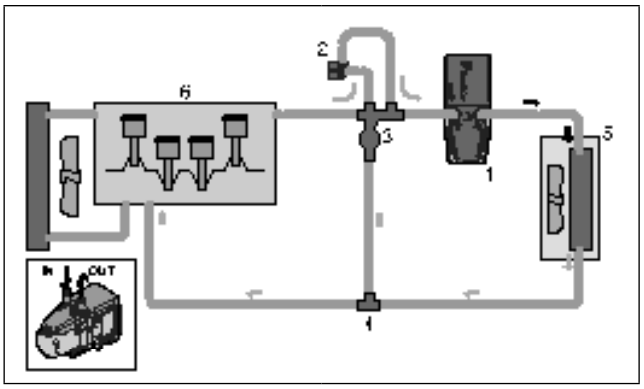
Heating characteristic in pre-heating mode – small cooling circuit:
Initially the heat from the heater, at a coolant temperature of approximately 67 °C, is conveyed only to the vehicle convector, rapidly heating the vehicle interior.

Once the coolant temperature reaches around 67 °C, some of the heat from the heater is also conveyed to the engine. This allows the engine to be pre-heated while preventing the "small cooling circuit" for interior heating from cooling too fast.

Heating characteristic in additional heating mode – large cooling circuit
When the vehicle's engine is operating, heat is distributed evenly between the convector and engine, making the warm-up phase even shorter and heating the vehicle interior.

Installing a combi valve with five connections:

Cut through the water feed hose from the vehicle engine to the vehicle convector, and install the combi valve. Cut through the water return hose from the vehicle convector to the vehicle engine, and insert the T-piece. Connect the heater and water pump to the combi valve and T-piece using water hoses as shown in the drawing.

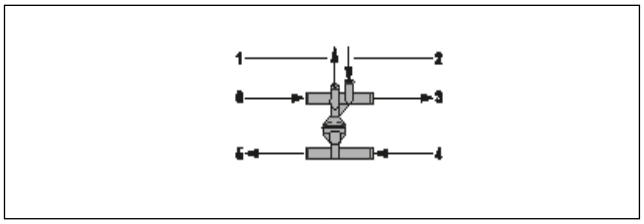


1 Heater
2 Water pump
3 Combi valve (five connections)
4 T-piece
5 Vehicle convector
6 Vehicle engine

OPTIONAL WATER CIRCUITS ON A HYDRONIC S3 ECONOMY, EXAMPLE

Installing a combi valve with six connections:

Cut through the water feed and return hoses between the vehicle engine and vehicle convector, and install the combi valve. Connect the heater and water pump to the combi valve using water hoses as shown in the drawing.

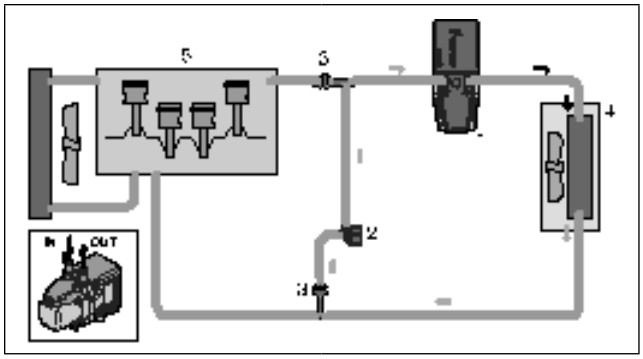


1 To water pump
2 From water pump
3 To heater
4 From vehicle convector
5 To vehicle engine
6 From vehicle engine

Cooling circuit with two check valves:

To pre-heat the vehicle interior only (vehicle engine disengaged)
Cut through the water feed and return hoses between the vehicle engine and vehicle convector and insert one check valve in each hose. It is essential to observe the flow direction of the check valves.
Install the heater in the water feed hose between the check valve and the vehicle convector.
Connect the water pump to the check valve using water hoses.

Heating characteristic
When the heater is switched on, the heat is conveyed only to the vehicle's convector. Once the coolant temperature reaches approx. 30 °C, the vehicle fan starts up and the heat is supplied exclusively to the passenger compartment.



1 Heater
2 Water pump
3 T-piece with check valve
4 Vehicle convector
5 Vehicle engine

HYDRONIC S3 OPTIONAL ADD-ONS-FUEL SUPPLY

Diesel:

- Hydronic S3 Economy with admission-pressure-resistant metering pump
- Advantage: easy to connect to the vehicle's fuel system, speeding up installation
- Prerequisite: fuel pressure < 2 bar with diesel, no check valve on the tank connection, return line ends just above the tank floor

Please note! The following version of the Hydronic S3 Economy includes the admission-pressure-resistant metering pump:

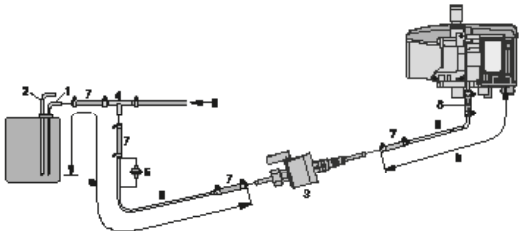
D5E 12 V: 25.2994.05.0000

Gasoline:

- Gasoline applications with an admission pressure of > 0.2 bar still require the pressure reducer

Please note! For fuel lines pressurized at 2.0 bar to max. 4.0 bar, use the pressure reducer (order no. 22.1000.20.0800) or a separate tank connection.

Fuel is extracted via a T-piece in the fuel return line from the vehicle engine to the tank fitting



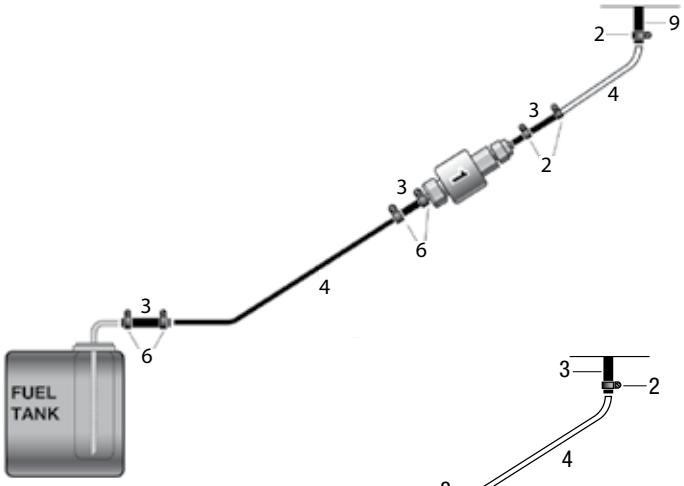
1. Fuel return line from the vehicle's tank fitting
2. Fuel supply line from vehicle's tank fitting
3. Metering pump (admission pressure resistant up to 2.0 bar) identified with a green label
4. T-piece
5. Fuel filter – required only for contaminated fuel
6. Fuel pipe, 4 x 1 (di = Ø 2 mm, blue)
7. Fuel hose 3.5 x 3 (di Ø 3.5 mm), approx. 50 mm long
8. Adapter (Ø 4.5 / 3.5 mm)
9. From vehicle engine to tank fitting

Permissible line lengths on suction side: a = max. 2 m
Pressure side: b = max. 6 m

FUEL SYSTEM GUIDE

This guide is to help in selecting which size fuel line, rubber hose and clamps are required for a specific heating system.
Refer to the Fuel System section of this manual for specific part numbers.
Cross-reference this information with the corresponding heater manual for maximum height and length specifications.

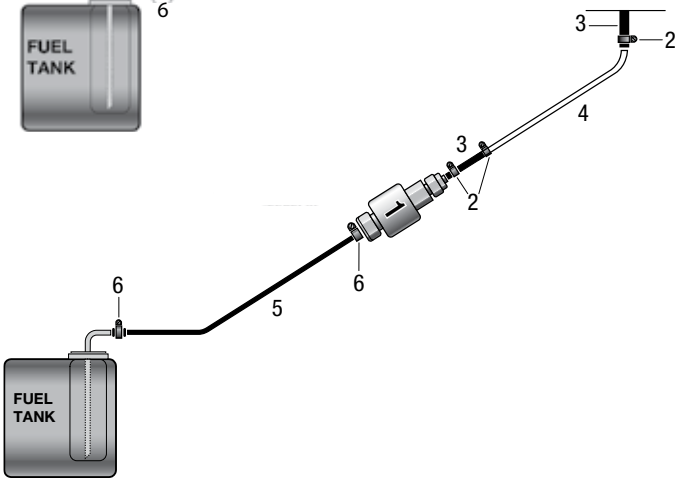
AIRTRONIC S3/M3/L3/XL3



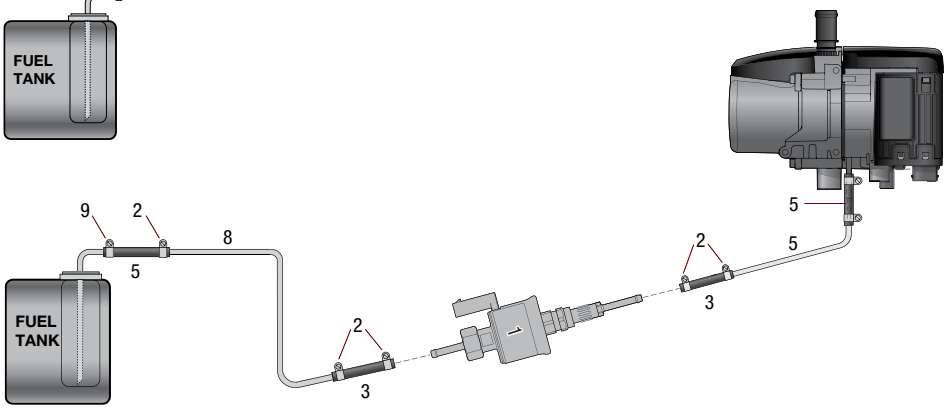
LEGEND

1. Fuel Metering Pump
2. Clamp 9mm
3. Rubber Connector 3.5mm
4. White Plastic Fuel Line 2.0mm
5. Rubber Connector / Fuel Line 5.0mm
6. Clamp 11mm
7. Black Plastic Fuel Line 2.0mm
8. White Plastic Fuel Line 1.5mm
9. Adapter: d=4.5 / 3.5mm
10. Clamp 10mm

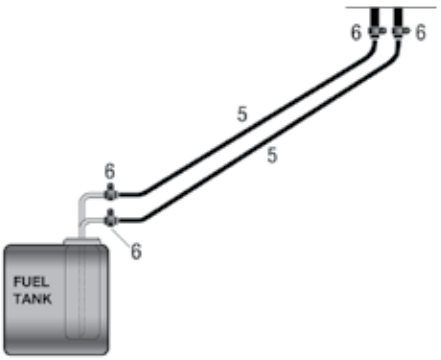
XL3
HYDRONIC 10



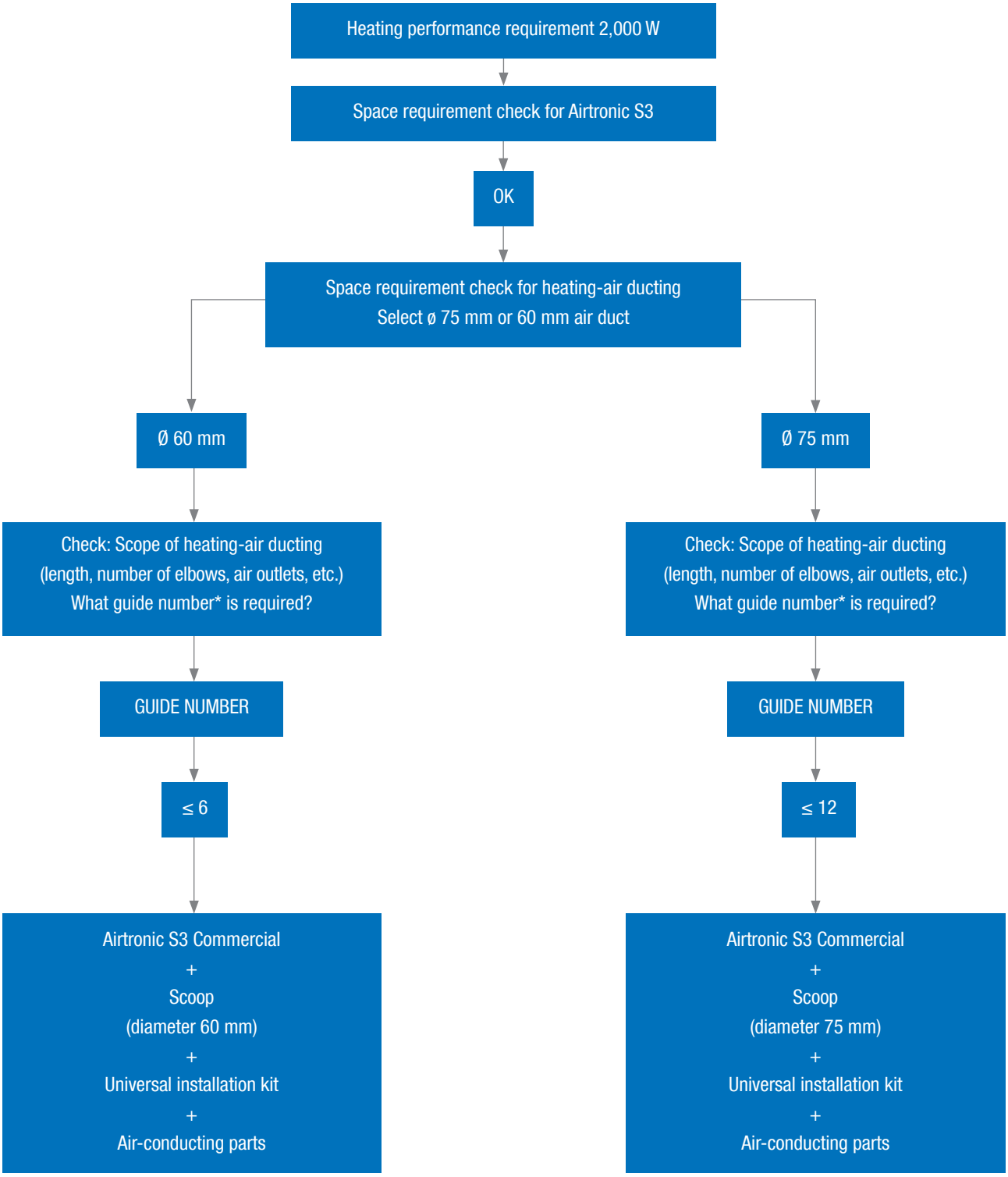
HYDRONIC 5
HS3 CS



HYDRONIC 16
HYDRONIC 24
HYDRONIC 30
HYDRONIC 35

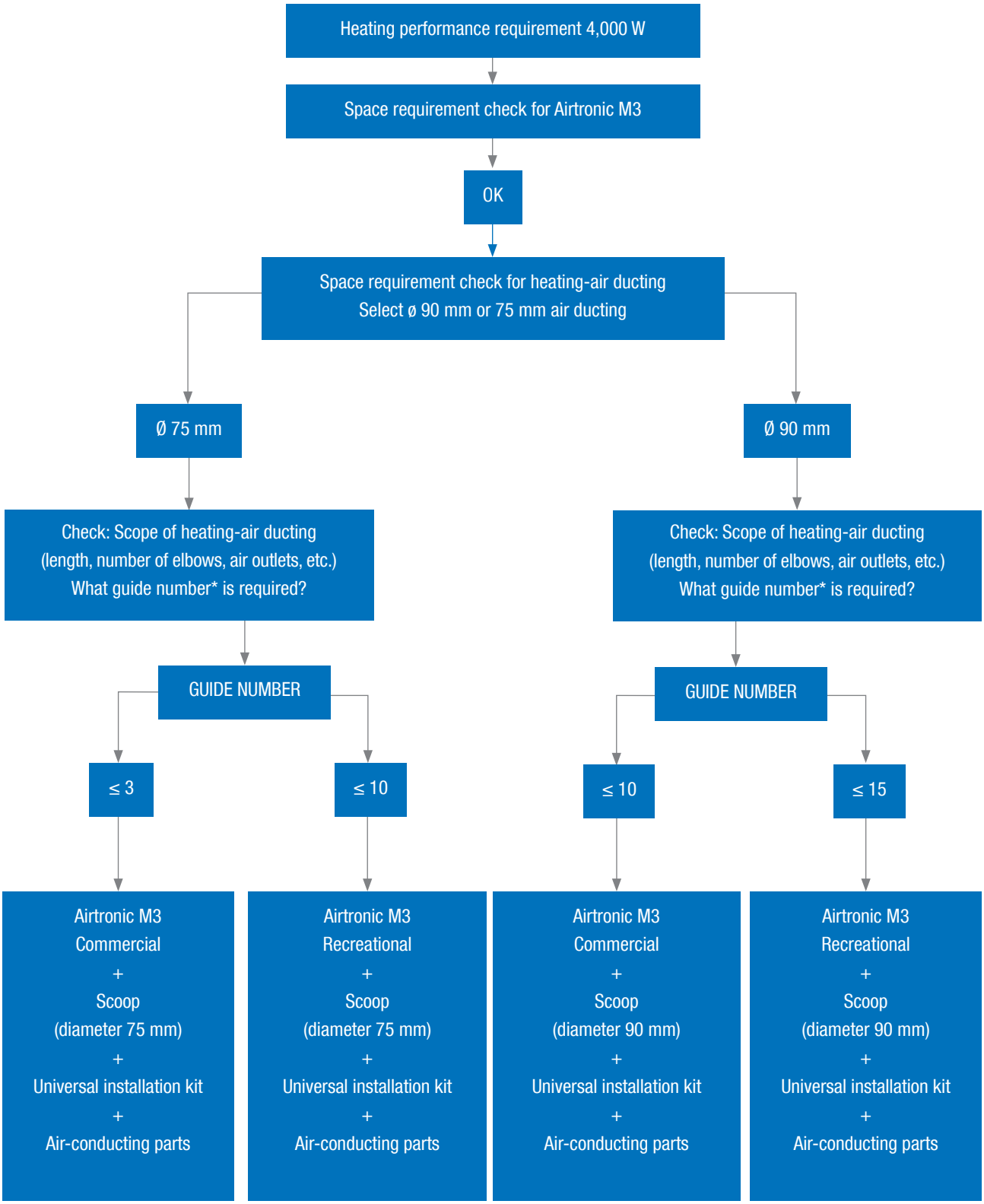


SELECTING THE AIR HEATER



* *Guide number: each component of the heating-air ducting (air hose, curved sections, vents, etc.) has a line guide number. The sum of these line guide numbers must not be greater than the guide number for the heater, otherwise the heater could malfunction – e.g. overheating The higher the guide number for the heater, the more heating-air ducting components may be connected. Please refer to Eberspächer's Accessories catalog for a detailed explanation of guide numbers.*

DUCTING RATING GUIDE



DUCTING RATING GUIDE

General notes on heating-air ducting:

Heating-air-conducting parts can also be mounted onto the heater. Each part has a line guide number that indicates the reduction in the heating-air throughput. In order to give you the opportunity to check that the installation you have planned does not reduce the heating-air throughput to an impermissible level, we have calculated a heater guide number for each heater and a line guide number for the heating-air-conducting parts; see information in the guide number tables:
0 = no temperature increase,
– = no line guide number.

The total of the line guide numbers of the heating-air-conducting parts connected to the heater must not be greater than the heater guide number, as otherwise the air outlet temperature would be impermissibly high, the heat distribution would be uneven and the overheating sensor would respond. If the total of the line guide numbers is greater than the heater guide number, the total can be reduced by selecting a larger diameter for the air ducts or switching from a one-duct to a two-duct system.

1-duct means:
One heating-air duct leads to or from the heater. The line guide numbers under “1-duct” apply.

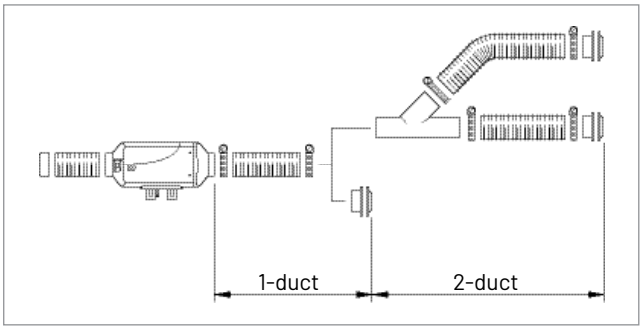
2-duct means:
Behind the heater, the heating-air line divides into two ducts. Up until this branch, the line guide numbers specified under “1-duct” apply, from the branch onwards the line guide numbers under “2-duct” apply.
When using two air ducts or multiple air outlets, at least one of the ducts must be permanently open.

The branch that can be closed must not be taken into account when calculating the total of the line guide numbers.

Rule of thumb:

Double the cross-section or two identical parts installed in parallel = 1/4 of the guide number.
Example:
Hose Ø 60,
Cross-section area A = 19.6 cm^2, guide number 1.0
Hose Ø 75,
Cross-section area A = 44.2 cm^2, guide number 0.25

With smooth welded pipes, the line guide number is only half of the flexible hose with the same diameter (i.e. double pipe length).



With innovative air flow regulating elements:

In order to counteract the non-uniform distribution of warm air in multi-duct systems with several air outlets, we have developed innovative air flow regulating elements that are simply clipped into the hose connection fitting of the air outlet. These regulating elements, which are registered for patent protection, reduce the flow cross section as needed and thereby decrease the emerging air flow. Available for fitting diameters 60, 75 and 90 mm.

DUCTING RATING GUIDE

The new range of air outlets:

Particularly colorfast and durable even at high temperatures, the covers of our completely re-designed range of air outlets are impressive, featuring a streamlined and high-quality design that allows for a variety of flow directions. They are available in white and black, allowing seamless integration into any interior.

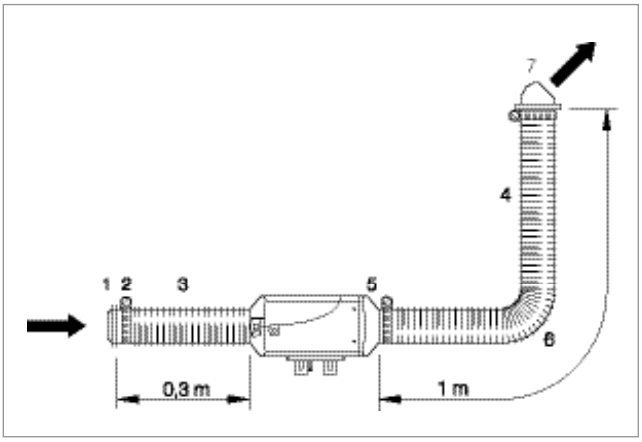
- Clear, simple system thanks to the modular design.
- Plug-in connections between the cover and fitting or fitting and air hose for easy assembly.
- Fittings available in 50, 60, 75 and 90 mm.

Example calculation for heating-air ducting:

Airtronic: Heater guide number = 6

NO.	DESIGNATION	LINE GUIDE NUMBER
1	Protective grille	0
2	Connectors Ø 60	0
3	Flex. pipe Ø 60, 0.3 m long	0.3
4	Flex. pipe Ø 60, 1.0 m long	1.0
5	Straight scoop Ø 60	0
6	1 x 90° elbow, flex. pipe	0.6
7	Rotating air outlet	1.4
Total of the line guide numbers		3.3

Total of line guide numbers, 3.3, does not exceed the heater guide number 6, so the installation is permissible.



Overview of air guide numbers Airtronic 3/Airtronic 2

Air heater	Scoop	Air guide number
Airtronic S3 Commercial B2L/D2L Airtronic S2 D2L	Diameter 60	6
	Diameter 75	12
	Ball 60	1.2
	Ball 75	6
Airtronic M3 Commercial D4L/B4L Airtronic M2 Commercial D4L/B4L	Diameter 75	3
	Diameter 90	10
	Ball 75	1
	Ball 90	5
Airtronic M3 Recreational D4R/B4R Airtronic M2 Recreational D4R/B4R	Diameter 75	10
	Diameter 90	15
	Ball 75	8
	Ball 90	10
Airtronic L3 Commercial D6L	Diameter 90	10
Airtronic L3 Commercial D6L	Diameter 90 with adapter solution for 100	11
Airtronic XL3 Commercial D8L	Diameter 90 with adapter solution for 100	10

DUCTING RATING GUIDE

GENERAL TIPS ON HEATING AIR DUCTING AND COMPONENT RATINGS

A heater has the biggest heating air throughput when it can operate with the air blowing freely. Heating air ducting components reduce the throughput. To enable you to check whether or not the installation you plan reduces the air throughput to an inadmissable degree, we have calculated a heater rating for each heater and a component rating for each heating air ducting component:

0 = no temperature increase
- = no component rating

The sum of component ratings for the heating air ducting components must not exceed the heater rating, otherwise the outlet temperature will become too high and trigger the safety cutout switch. If the sum of the component ratings exceeds the heater rating, it can be reduced by selecting a larger diameter for the air ducting parts.

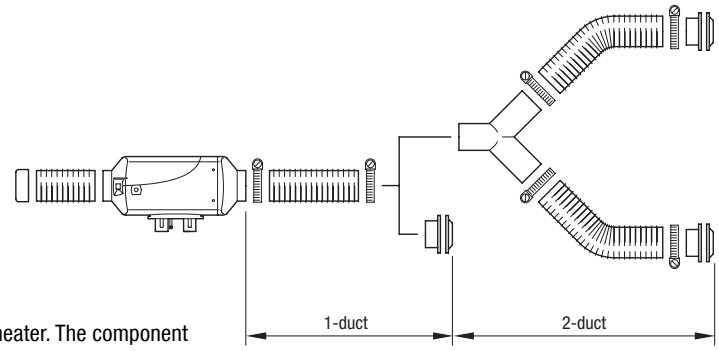
RULE OF THUMB:
Double the cross-section or two identical components running parallel = 1/4 of the rating.
Example:

50 diameter hose
A = 19.6 cm2, R rating 1.0

75 diameter hose
A = 44.2 cm2, R rating 0.25

The component rating of smooth welded pipes is only half that of flexible pipe of equal diameter (e.g. double the pipe length).

MAIN-LINE DRAWING FOR 1-DUCT AND 2-DUCT HEATING AIR SYSTEM

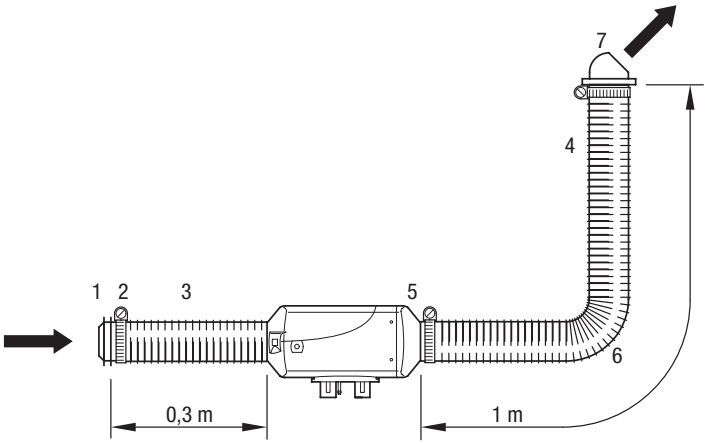


2-duct means:
The heating air line branches into two ducts after the heater. Up to the branch the component ratings under “1-duct” are valid, after the branch they fall under “2-duct”. If an adjustable outlet is used in the 2-duct heating system, one duct must be unclosable.
Note: When determining the sum of the component ratings, do not take the closable duct into consideration.

1-DUCT MEANS:
A heating duct leads to or from heater. The component ratings under “1-duct” are valid.

EXAMPLE OF HEATING AIR DUCTING FOR AIRTRONIC D2
Heater Rating = 6

ITEM	DESIGNATION	COMPONENT RATING
1	Protective grille	0.5
2	Connection piece 60mm dia.	0
3	Flex. pipe, 60mm dia. 0.3m long	0.3
4	Flex. pipe, 60mm dia, 1.0m long	1.0
5	Reduction hood 60mm straight	0
6	1 x 90° bends of flex. pipe	0.2
7	Swivel outlet	3.2
	Total Component Rating	**5.2**



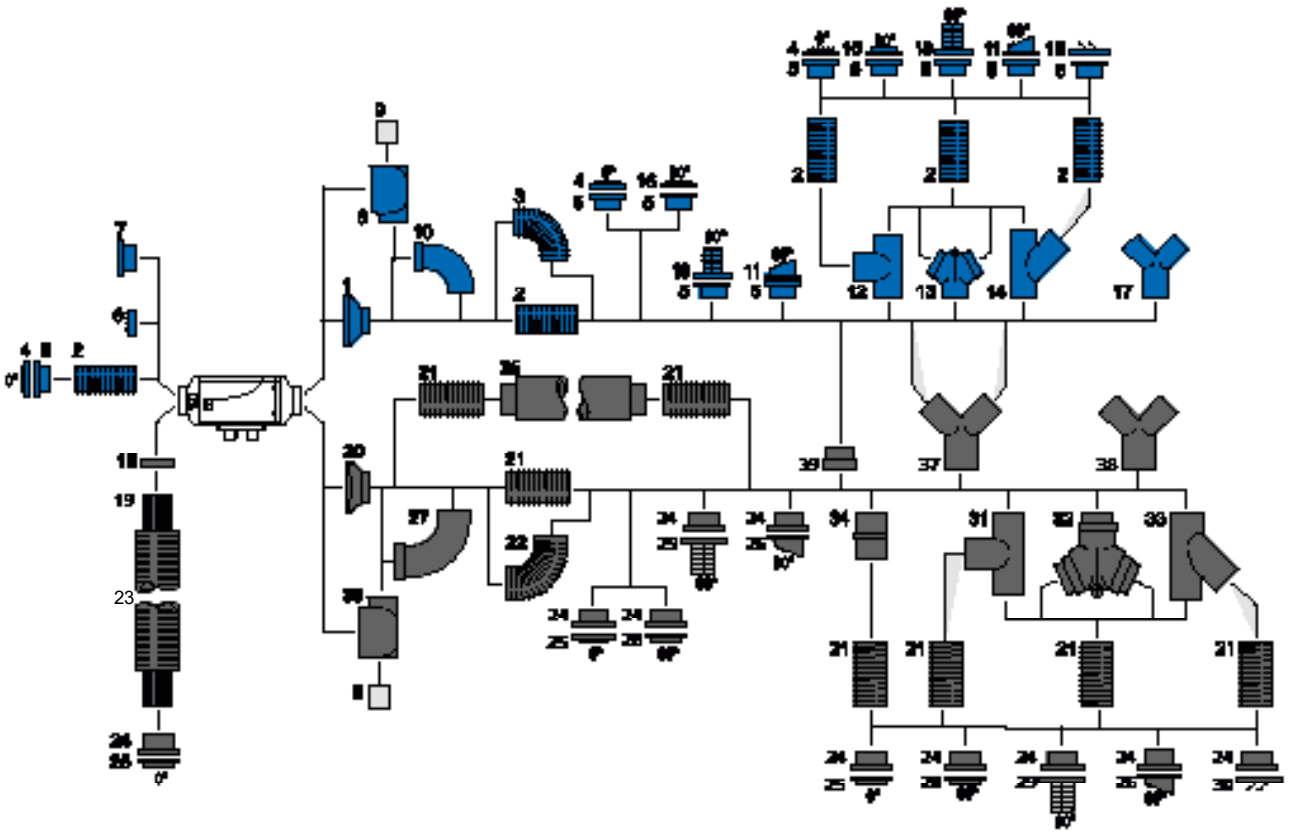
Rating sum = 5.2 and does not exceed the heater rating of 6. The installation is permissable.

GUIDE NUMBERS

Airtronic S3 Commercial

Heater guide number 6 – with air scoop Ø 60
Heater guide number 12 – with air scoop Ø 75

The drawing shows the application options for the main air-conducting parts. There are no installation examples.



= Ø 50 mm
= Ø 60 mm
= Ø 75 mm

GUIDE NUMBERS

No.	Designation (dimensions in mm)	Line guide number 1-duct	Line guide number 2-duct	see ser. no., section 8 „Air-conducting parts“
	Heating-air ducting with scoop Ø 60 (heater guide number 6)			
1	Scoop, Ø 60	0	0	21
2	Flex. pipe Ø 60 per m	1.0	0.25	1
3	90° elbow, flexible pipe	0.6	–	–
4	Flat air outlet 0° with fitting Ø 60	0.5	0.1	13
5	Fitting Ø 60	0	0	16
6	Heater grille, Ø 60	0	–	17
7	Air filter, Ø 60	1.6	–	5
8	Ball-shaped scoopØ 60	4.8	–	32
9	Connection fitting Ø 50 for ball-shaped scoopØ 60 Ø 75	4.5	–	31
10	Pipe elbow 90° Ø 60	4	–	33
11	Upright air outlet 30° with fitting Ø 60	3.2	0.8	10
12	T-junction	1.4	0.25	35
13	Butterfly valve Ø 60/60/60 with “right/left” flap position	–	0.6	40
14	Y-junction	–	1	43
15	Closable air outlet Ø 50/60	–	–	12
16	Flat air outlet 30° Ø 50/60	0.7	0.2	11
17	Symmetrical metal Y-junction Ø 60/50/50	–	0.3	42
18	Upright air outlet 90° Ø 50/60	3.2	n/a	14
	Heating-air ducting with scoop Ø 75 (heater guide number 12)			
19	Adapter			
20	Scoop Ø 75	0	0	21
21	Flex. pipe Ø 75 per m	1	0.25	1
22	90° elbow of flex. pipe Ø 75	0.2	–	1
23	Intake silencer Ø 75	0.7	–	4
24	Fitting Ø 75	0	0	20
25	Flat air outlet 0° Ø 75/90 with fitting Ø 75	0.6	0.1	13
26	Upright air outlet 30° Ø 75/90 with fitting Ø 75	0.5	0.15	10
27	Pipe elbow 90° Ø 75	4.5	–	33
28	Flat air outlet 30° with fitting Ø 75	0.5	0.15	11
29	Upright air outlet 90° with fitting Ø 75	0.8	0.15	14
30	Closable air outlet Ø 75/90 with fitting Ø 75	0.6	0.2	11
31	T-junction Ø 75/75/75	–	0.8	35
32	Butterfly valve Ø 75/75/75 Flap position “left/right” Flap position “center”	–	1.2	40
33	Y-junction Ø 75/75/75	–	0.6	43
34	Hose connector fitting Ø 75	0.5	0.1	44
35	Silencer Ø 75	0.6	–	3
36	Ball-shaped scoopØ 75	6	–	32
37	Symmetrical plastic Y-junction Ø 75/60/60	–	0.8	42
38	Symmetrical metal Y-junctionØ 75/50/50	–	0.9	42.1
39	Adapter Ø 75 – 60	3.2	–	45

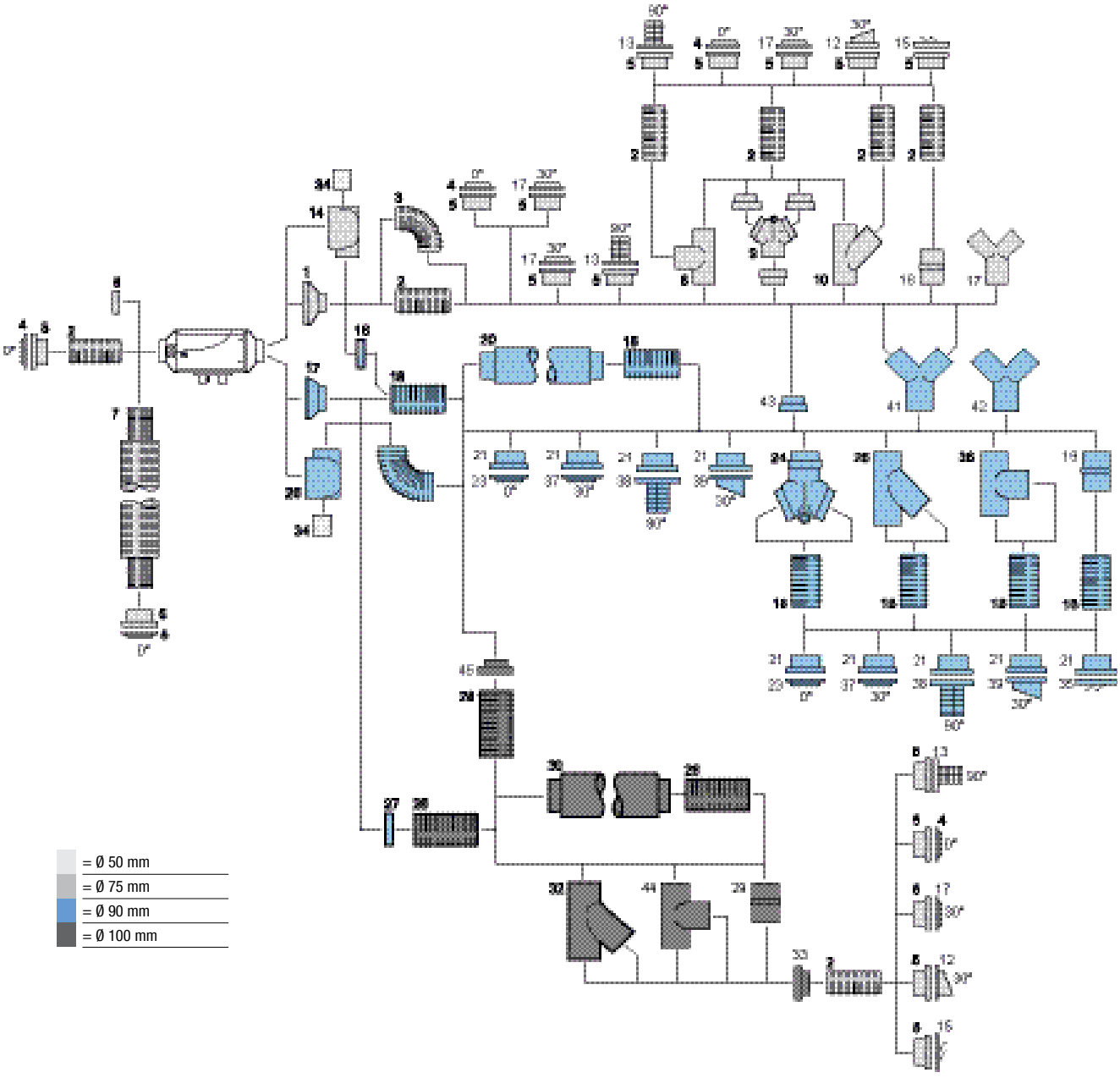
GUIDE NUMBERS

Airtronic M3 Commercial

Heater guide number 3* – with air scoop Ø 75
Heater guide number 10* – with air scoop Ø 90

The drawing shows the application options for the main air-conducting parts. There are no installation examples.

* Heater guide numbers for the Airtronic M3 Recreational are different



GUIDE NUMBERS

No.	Designation (dimensions in mm)	Line guide number 1-duct		Line guide number 2-duct		see ser. no., section 8 „Air-conducting parts“
		Ø 75	Ø 90	Ø 75	Ø 90	
	Heating-air ducting with scoop Ø 75 (heater guide number 3)					
1a	Scoop Ø 75	0	–	–	–	21
2	Flex. pipe Ø 75 per m	1	–	0.25	–	1
3	90° elbow of flex. pipe Ø 75	0.2	–	–	–	1
4	Flat air outlet 0° with fitting Ø75	0.4	–	0.1	–	13
5	Fitting Ø 75	0.0	–	0.0	–	16
6	Grille Ø 75	2.0	–	–	–	17
7	Intake silencer Ø 75	0.8	–	–	–	4
8	T-junction Ø 75	–	–	0.5	–	35
9	Butterfly valve Ø 90/90/90 with adapters 75/90	–	–	1.8	–	40
10	Plastic Y-junction Ø 75/75/75	–	–	0.6	–	43
11	Flat air outlet 30° with fitting Ø75	0.4	–	0.1	–	11
12	Upright air outlet 30° with fitting Ø75	0.6	–	0.2	–	10
13	Upright air outlet 90° with fitting Ø75	1.1	–	0.3	–	14
14	Ball-shaped scoopØ 75	2.0	–	–	–	32
15	Closable air outlet with fitting Ø75	–	–	–	–	12
16	Ring Ø 75/90	0.5	–	–	–	34
17	Symmetrical plastic Y-junction Ø 75/60/60	–	–	0.9	–	42
18	Hose connector	0.5	–	0.1	–	44
	Heating-air ducting with scoop Ø 90 (heater guide number 10)					
1b	Scoop Ø 90	–	0	–	–	21
18	Flex. pipe Ø 90 per m	–	1	–	0.25	1
19	Hose connector fitting Ø 90	–	0.5	–	0.1	44
20	Silencer Ø 90	–	0.7	–	–	3
21	Fitting Ø 90	–	0	–	0	16
23	Flat air outlet 0° with fitting Ø 90	–	1.1	–	0.3	13
24	Butterfly valve Ø 90/90/90	–	1.2	–	–	40
25	Y-junction Ø 90/90/90	–	–	–	0.3	43
26	Ball-shaped scoopØ 90*	–	5.0	–	–	32
27	Ring Ø 90/100	–	0	–	–	34
28	Flexible pipe Ø 100 per m	–	0.4	–	–	1
29	Hose connector fitting Ø 100	–	0.1	–	–	44
31	Rotating air outlet Ø 100	–	2.1	–	0.5	11.1
32	Y-junction Ø 100/100/100	–	–	–	0.5	43
33	Adapter Ø 75 – 100	–	–	–	0.8	45
34a	Connection fitting 50 for Ø 75	–	–	–	1.0	31
34b	Connection fitting 50 for Ø 90	–	–	–	2.5	31
35	Closable air outlet with fitting Ø 90	–	–	–	–	12
36	T-junction Ø 90	–	–	–	0.6	35
37	Flat air outlet 30° with fitting Ø 90	–	2.0	–	0.4	11
38	Upright air outlet 90° with fitting Ø 90	–	2.7	–	0.3	14
39	Upright air outlet 30° with fitting Ø 90	–	2.4	–	0.6	10
40	90° elbow of flex. pipe Ø 90	0.1	–	–	–	1
41	Symmetrical plastic Y-junction Ø 90/75/75	–	–	–	0.9	42
42	Symmetrical plastic Y-junction Ø 90/60/60	–	–	–	2.1	42
43	Adapter Ø 75 – 90	–	3.3	–	–	45
44	T-junction Ø 100	–	–	–	0.4	35
45	Adapter Ø 90 – 100	–	0.4	–	–	45

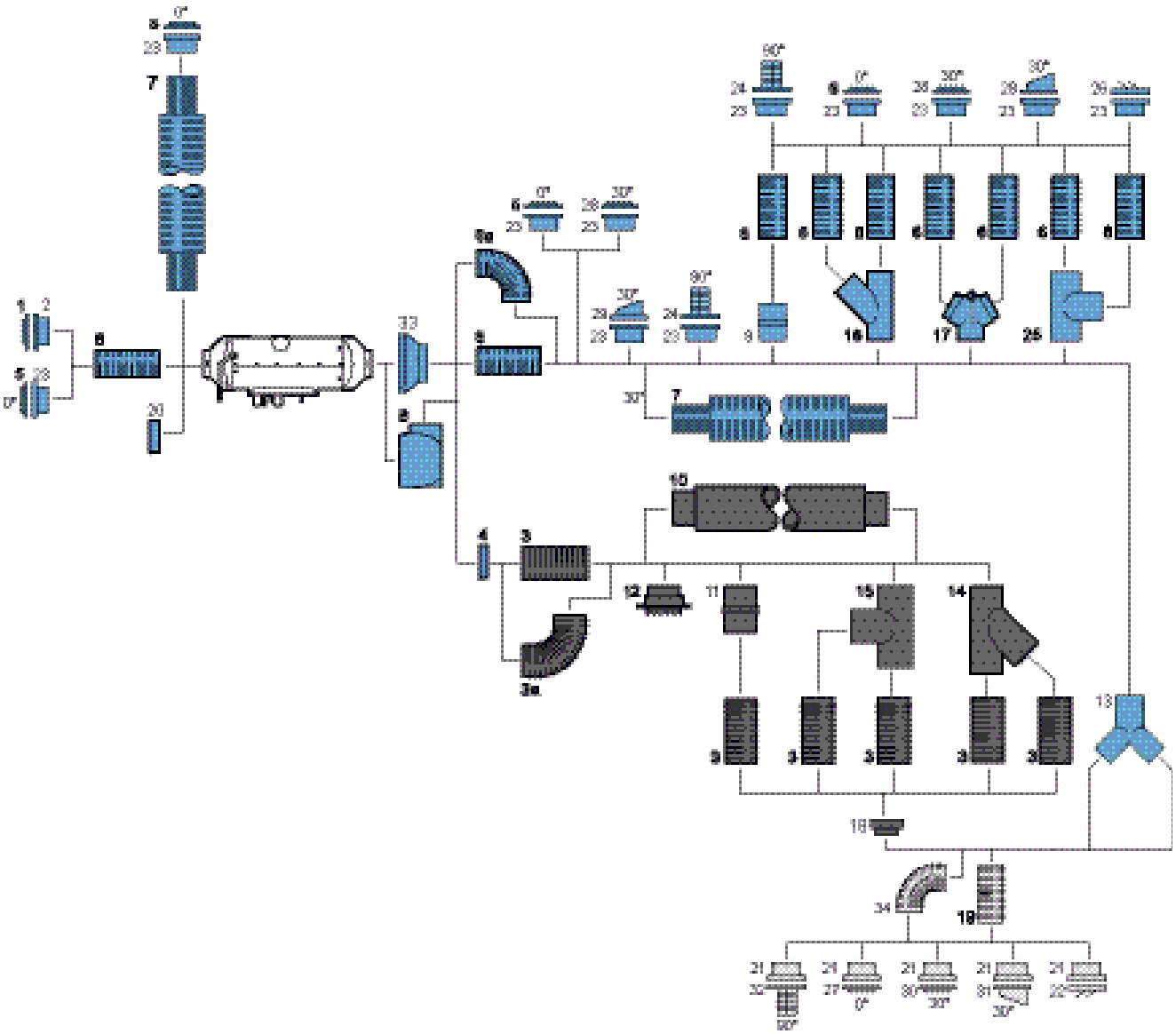
* Cannot be used with the Airtronic D4Plus, D4R and B4R

GUIDE NUMBERS

Airtronic L3

Heater guide number 10

The drawing shows the application options for the main air-conducting parts. There are no installation examples.



GUIDE NUMBERS

No.	Designation (dimensions in mm)	Line guide number 1-duct	Line guide number 2-duct	see ser. no., section 8 „Air-conducting parts"
	Heating-air ducting with scoop Ø 90 (heater guide number 10)			
1	Air outlet Ø 90, metal grille	0.6	0.2	13.1
2	Hose fitting Ø 90	0	0	18
3	Flexible pipe Ø 100 per m	0.6	0.2	1
3a	90° elbow of flex. pipe Ø 100	0.6	–	1
4	Adapter Ø 90/100	0	–	45
5	Flat air outlet 0° with fitting Ø 90	1	0.2	13
6	Flexible pipe Ø 90 per m	1	0.25	1
6a	90° elbow of flex. pipe Ø 90	0.2	–	1
7	Intake silencer Ø 90	0.8	–	3
8	Ball-shaped scoopØ 90	8	–	22
9	Hose connector fitting Ø 90	0.5	0.1	46
10	Silencer Ø 100	0.5	–	3
11	Hose connector fitting Ø 100	0.4	0.1	44
13	Symmetrical plastic Y-junction Ø 90/75/75	–	0.9	42
14	Y-junction Ø 100/100/100	–	0.5	43
15	T-junction Ø 100/100/100	–	0.5	35
16	Y-junction Ø 90/90/90	–	0.6	43
17	Butterfly valve Ø 90/90/90	–	1.1	40
18	Adapter Ø 75 – 100	3.2	–	45
19	Flexible pipe Ø 75 per m	4	1	1
20	Plastic heater grille, ø 90	2	–	17
21	Fitting Ø 75	0	0	16
22	Closable air outlet with fitting Ø 75	–	–	12
23	Fitting Ø 90	0	0	16
24	Upright air outlet 90° with fitting Ø 90	3	0.8	14
25	T-junction Ø 90/90/90	–	0.6	35
26	Closable air outlet with fitting Ø 90	–	–	12
27	Flat air outlet 0° with fitting Ø 75	2.5	0.7	13
28	Flat air outlet 30° with fitting Ø 90	1.7	0.4	11
29	Upright air outlet 30° with fitting Ø 90	2.3	0.6	10
30	Flat air outlet 30° with fitting Ø 75	2.7	0.8	11
31	Upright air outlet 30° with fitting Ø 75	2.1	0.5	10
32	Upright air outlet 90° with fitting Ø 75	4.7	1.2	14
33	Scoop Ø 90	0	0	–
34	90° elbow of flex. pipe Ø 75	1	0.25	1

* Item 4 – when using as adapter Ø 90 / 100, cut out the grille

ELECTRIC HEATERS

HIGH VOLTAGE PTC COOLANT HEATER FOR ELECTRIC VEHICLES CHHV 50 G 3 T / 70 G3 T

Note:

- The high voltage heater is strictly OEM product, available only to vehicle and body manufacturers.
- Not available for aftermarket installations/replacements. Because of it's nature, the heater comes without certification and has to be certified together with the vehicle .

3rd GENEREATION HIGH VOLTAGE COOLANT HEATER

- HV electrical coolant heater for automotive use
- Specified for a voltage range which is typical for electrical/hybrid/fuel cell vehicles
- Application as:
  - Vechicle interior heating
  - Battery conditioning
  - Other coolant circuit applications
- PTC Technology

SPECIFICATIONS

TITRONIC CHHV		50G3T	70G3T
Operating voltage range	HVV	250-500	
Control voltage range	LVV	8-16	8-16
Heating Perfomance*	W	5,000	7,000
Heating Perfomance control	%	0-100	
Burst pressure	bar		
Weight	Kg	2.0	2.5
Interface		LIN2.1	
IP type of protection		IP6K9K, IP67	
Dimenstions		184x141x105	220x141x123
ISO 26262		Compliant	
Operating temperature range	C	-40 bis 120	

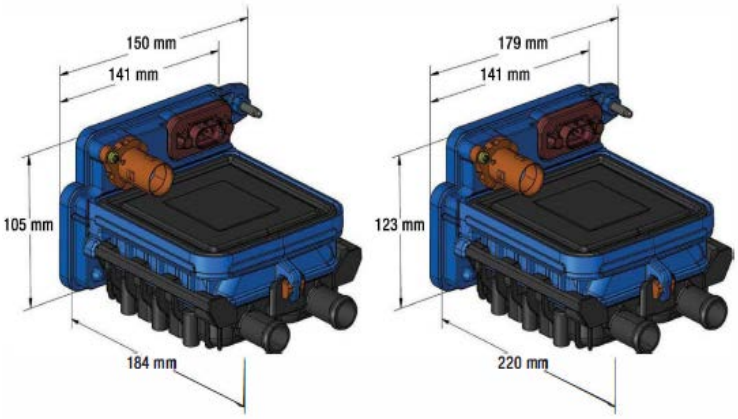
*Un = 360 V, T co = 60 C, Oco" 10 l/min, Coolant = 50:50

HIGH-VOLTAGE ELECTRICAL HEATER TITRONIC CHHV 50 G 3 T / 70 G 3 T

The third generation of high-voltage PTC water heaters for electric vehicles

- Reliable and powerful PTC technology offering a high heating performance of 5 kW or 7 kW
- Six heat settings
- Already installed in millions of hybrid/electric vehicles worldwide
- PTC elements allow intrinsically safe operation of the heater
- Small installation space required

Titronic CHHV 50 G3 T	21.2203.05.0000
Titronic CHHV 70 G3 T	21.2203.05.0000



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