

CLIMATE CONTROL SOLUTIONS FROM EBERSPÄECHER



SEPTEMBER 2024, Rev 1



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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, has updated its product portfolio with the new generation of Hydronic S3 Economy (5kW) pre-heater.

Definition:

Hydronic: Water & Electronic, Product line, water heater

S3: Size and generation, Size (small) Generation 3

Economy: Marketing appendix, entry model

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.

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 EasyScan diagnostic tool, shop personnel can analyze the operating condition of the pre-heater easily and quickly.

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 pricing on purchases of the 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 almost instantly, 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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QUICK-REFERENCE GUIDE

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 L3 (16 / 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

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 blue squares indicating which of them actually come in the kit being selected. In the accessory section, you trace the accessory across to the blue squares 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 label. **PREFERRED**

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 contact your local regional sales manager or our tech service department at (800-387-4800) or email CA-TO-TechServices@eberspaecher.com for assistance.

EMISSIONS

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 preferred controller is the EasyStart PRO controller for both the air and coolant heaters. Other controller types like the EasyStart timer, the programmable (school bus) timers, mini controller and the multi-function switch are also available for use based on the application and customer requirements.



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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.

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

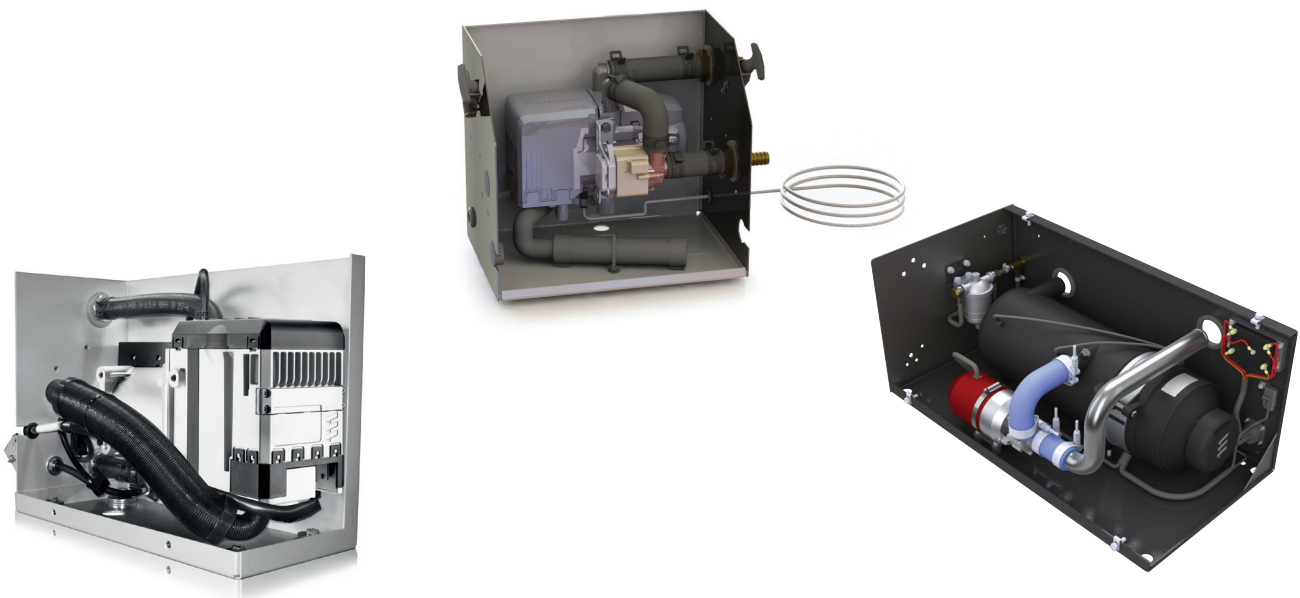
The latest generations, Airtronic 3, Airtronic 2, Hydronic S3 CS (24 Volts only) and Hydronic L3 heaters DO NOT NEED altitude kits.

Eberspaecher provides other options from older units operating at higher altitudes where the air is thin and heaters tend to run rich.

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 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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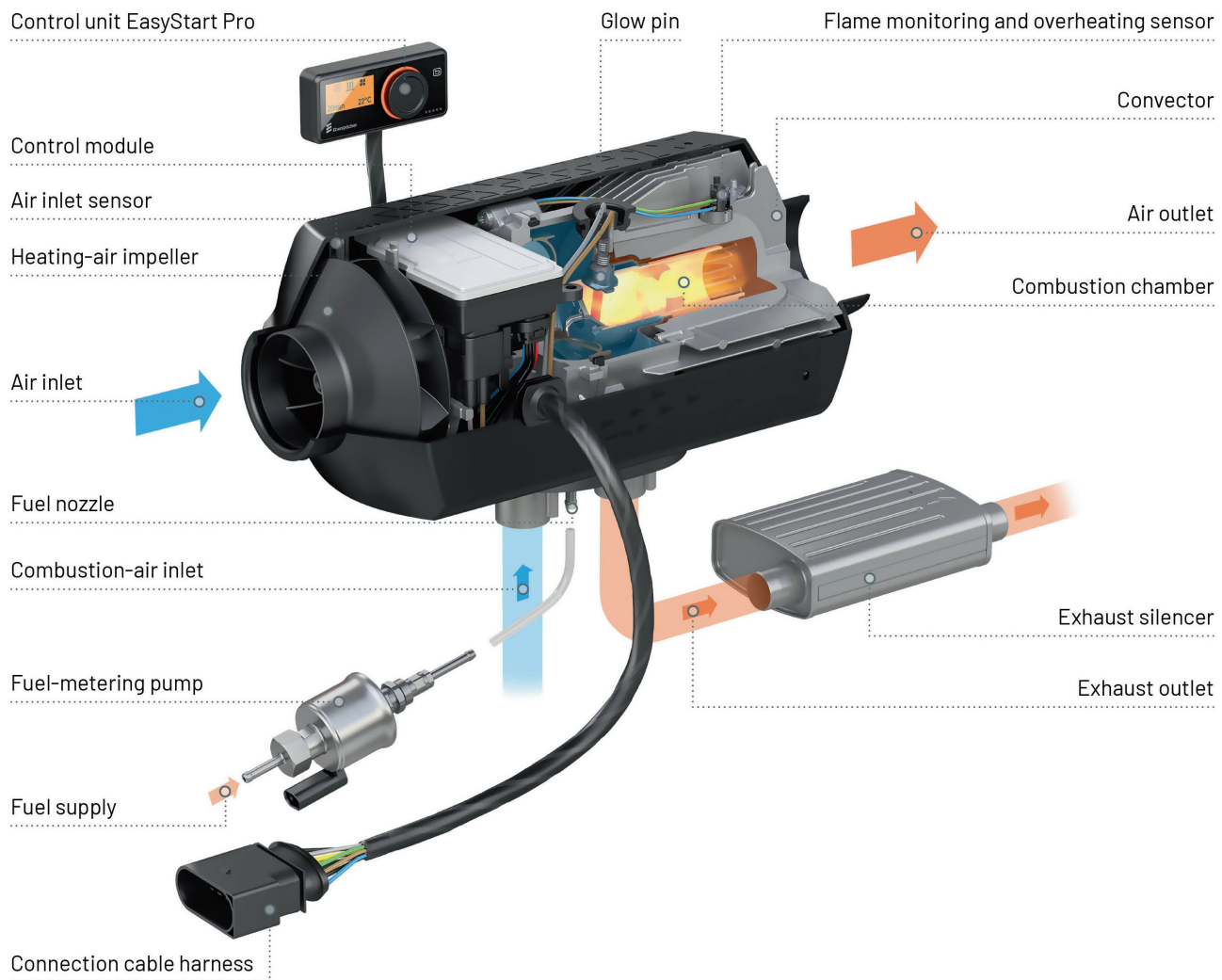
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PRODUCT INFORMATION

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 68 °F or 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.).

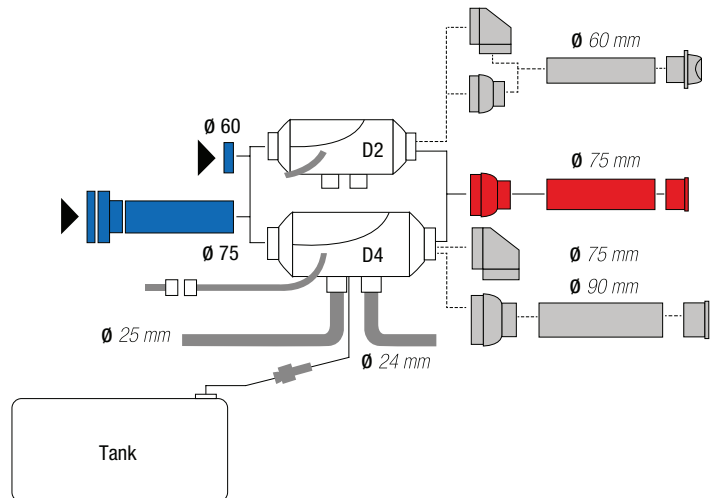
GUIDE VALUES FOR REQUIRED HEATING OUTPUT

Example	Volume of interior	Outside temperature		
		< -15 °C	-15 °C to 0 °C	> 0 °C
Truck cabin	< 8 m ³	4 kW	3 kW (2 kW)*	2 kW
Small bus	8 – 12 m ³	5 kW (4 kW)*	4 kW (3 kW)*	2 kW
Motor home / van	12 – 20 m ³	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 - commercially available (DIN EN 590)	Diesel	Diesel	Gasoline	
Voltage	V	12	24	12
Heating medium		Air		
Heat settings - Controls		Off / minimum / maximum - Stepless		
Heating Perfomance	W	850 - 2,200		1,000 - 2,000
Heating Perfomance	BTU/hr	2900 - 7510		3400 - 6820
Fuel consumption	l/h	- / 0.1 / 0.27		- / 0.14 / 0.26
Fuel consumption	gal/hr	- / 0.03 / 0.07		- / 0.04 / 0.07
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	10.5	21	10.5
Upper voltage limit	V	16	32	16
Interference suppression		Interference suppression class 5 (DIN EN 55025)		
Dimensions L x W x H	mm	310 x 115 x 122		
Weight	Kg or (lbs)	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 - commercially available (DIN EN 590)	Diesel		Gasoline
Voltage V	12	24	12
Heating medium	Air		
Control/heat settings	Off/stepless: min.-max.		
Heating Performance W	-/ 1,050 / 4,000		-/ 1,300 / 4,000
Heating Performance BTU/hr	- / 3583 / 13649		- / 4436 / 13649
Fuel consumption l/h	- / 0.12 / 0.49		- / 0.17 / 0.55
Fuel consumption gal/hr	- / 0.03 / 0.12		- / 0.04 / 0.15
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 commercially available(DIN EN 590)	Diesel		Gasoline
Voltage V	12	24	12
Heating medium	Air		
Control/heat settings	Off/stepless: min.-max.		
Heating Perfomance W	- / 1,050 / 4,000		- / 1,300 / 4,000
Heating Performance BTU/hr	- / 3583 / 13649		- / 4436 / 13649
Fuel consumption l/h	- / 0.12 / 0.49		- / 0.17 / 0.55
Fuel consumption gal/hr	- / 0.03 / 0.12		- / 0.04 / 0.15
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 - commercially available(DIN EN 590)	Diesel		
Voltage	12	24	
Heating medium	Air		
Control/heat settings	Off/stepless: min.-max.		
Heating Performance	W	- / 1,500 / 6,000	- / 2,000 / 7,600
Heating Performance	BTU/hr	- / 5118 / 20473	- / 6824 / 25932
Fuel consumption	l/h	- / 0.16 / 0.74	- / 0.23 / 1.01
Fuel consumption	gal/hr	- / 0.04 / 0.20	- / 0.06 / 0.27
Elec. power consumption, operation	W	7 / 90	11 / 95
Elec. power consumption, start	W	≤ 90	≤ 85
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		

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

AIRTRONIC S3/M3 ACCESSORIES

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

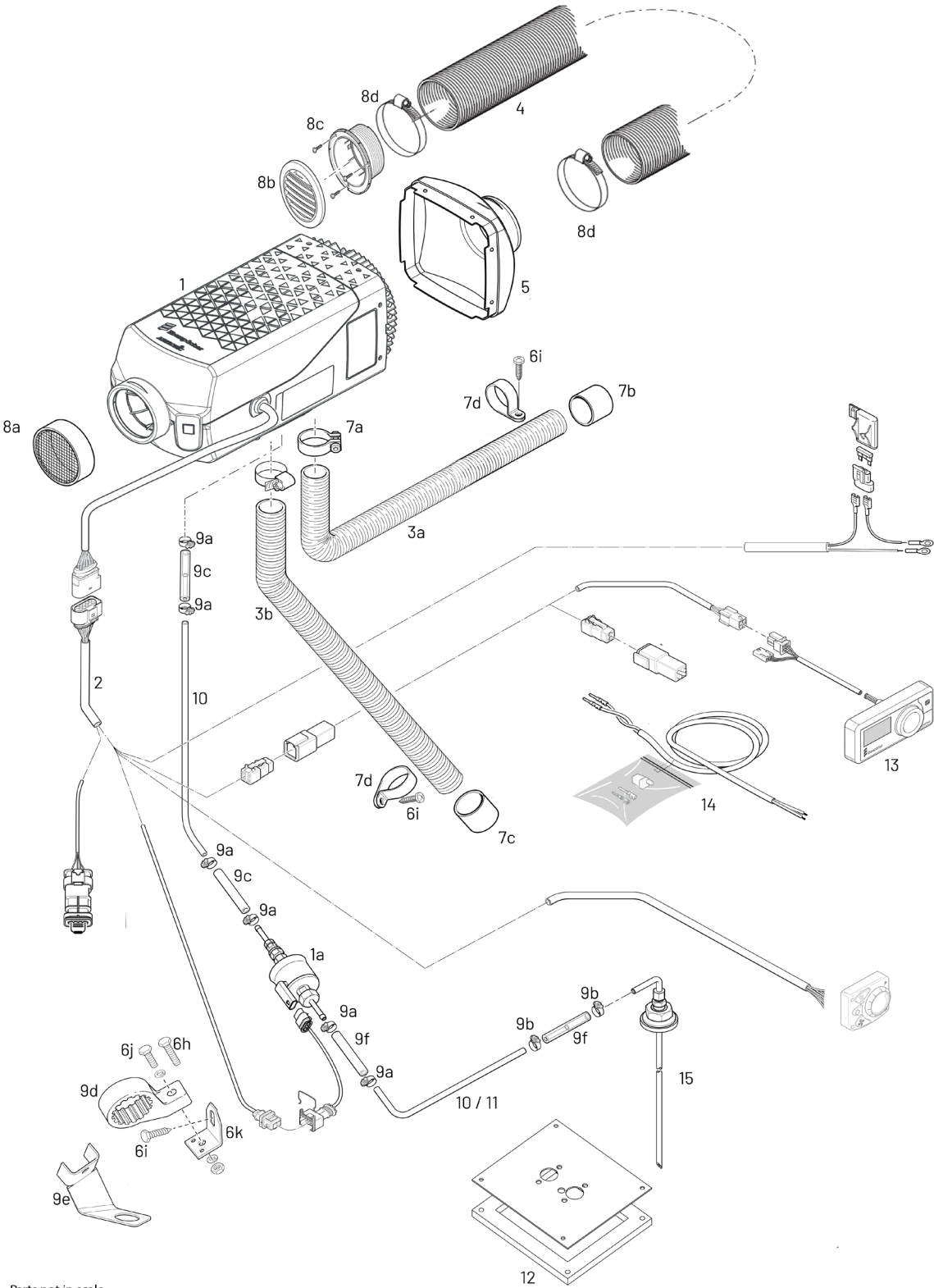
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Clamps
5 mm Fuel Line
Plastic Fuel Line
3.5 mm Fuel Line

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



Parts not in scale

PRODUCT PACKAGE FOR AIRTRONIC S3, M3 AND L3

Heater – scope of supply includes:

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

Installation kit contents for Airtronic S3/M3/L3 Diesel S3 - (20.2829.53.0200):

2	cable harness modular AX2_AX3 12V_24V
3, a-b	Air Intake and Exhaust Assembly
4	Flex Air Hose 60mm/90mm X 0.74m~
5	Hood 60MM/90mm Straight
6, a-l	Bag parts - Mounting Hardware
7, a-e	Bag parts - Air/Exhaust
8, a-d	Bag parts - Ducting
9, a-f	Bag parts - Fuel components
10	Plastic fuel line - 2mm
12	Mounting plate/Seal/Screws

ADDITIONAL/OPTIONAL PARTS

(Not included in kit, to be ordered separately)

13 & 14	CAN ControllerAdapter Cable
15	Fuel pickup tube

Airtronic S3 B2L installation kit (20.2820.29.0200):

2	cable harness modular AX2_AX3 12V_24V
3, a-b	Air Intake and Exhaust Assembly
4	Flex Air Hose 60mm X 0.74m~
5	Hood 60MM Straight
6, a-l	Bag parts - Mounting Hardware
7, a-e	Bag parts - Air/Exhaust
8, a-d	Bag parts - Ducting
9, a-f	Bag parts - Fuel components
10	Plastic fuel line - 2mm
11	Plastic fuel line - 1.5 mm
12	Mounting plate/Seal/Screws

Airtronic XL3 D8L installation kit (20.2830.20.0800)*:

2	cable harness modular AX2_AX3 12V_24V
3, a-b	Air Intake and Exhaust Assembly
4	Flex Air Hose 60mm X 0.74m~
6	Bag parts - AXL3 Hardware
8	Bag parts - AXL3 Fuel components
10	Plastic fuel line 2mm X 6.0m~
16	Exhaust Sleeve 1in x 2ft~
17	Fuel hose 5.0mm X 2.0m
18	Cargo mounting plate assembly
19	Reduction hood 100

* 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

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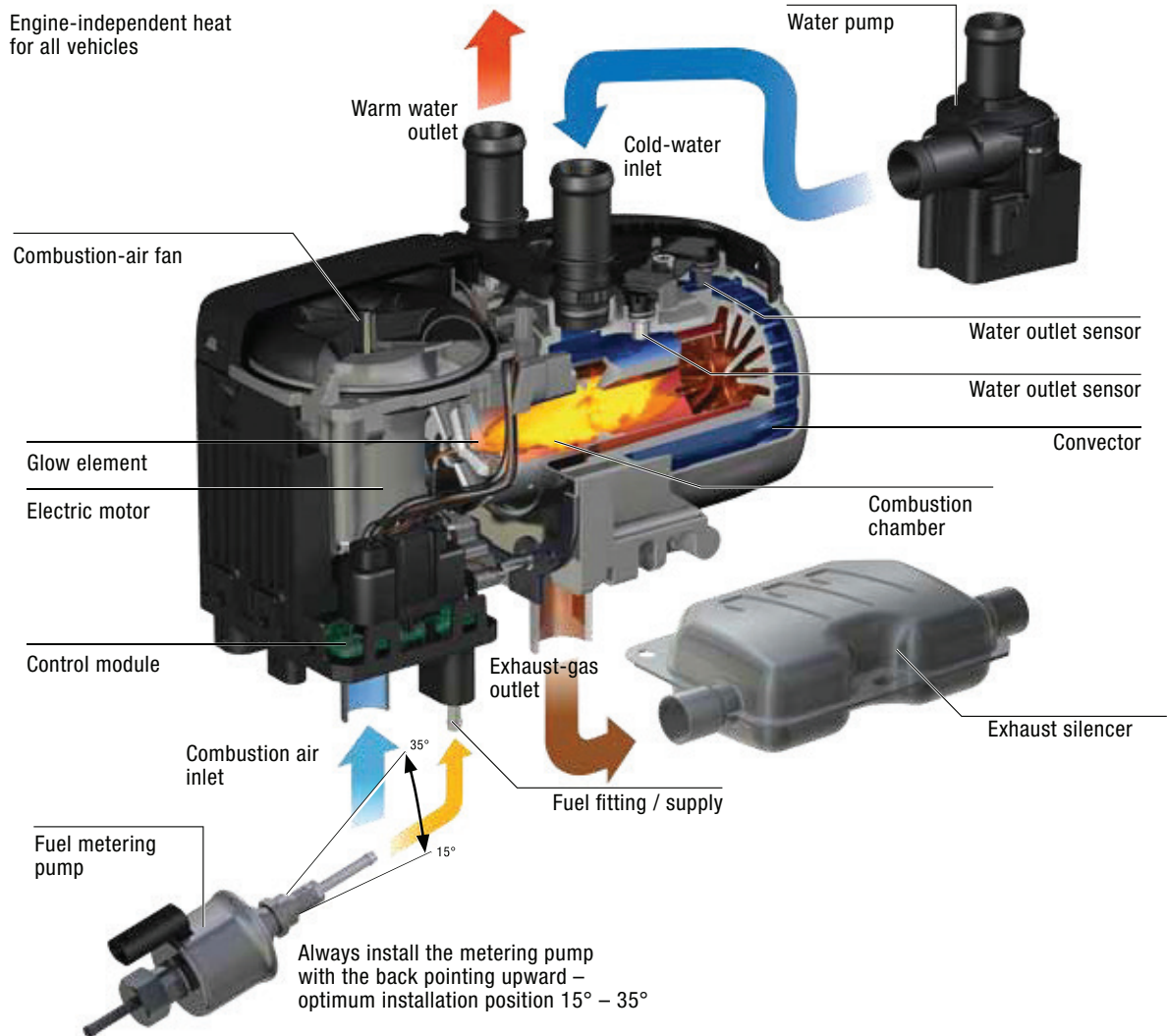
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PRODUCT INFORMATION

HYDRONIC S3 ECONOMY: TECHNOLOGY

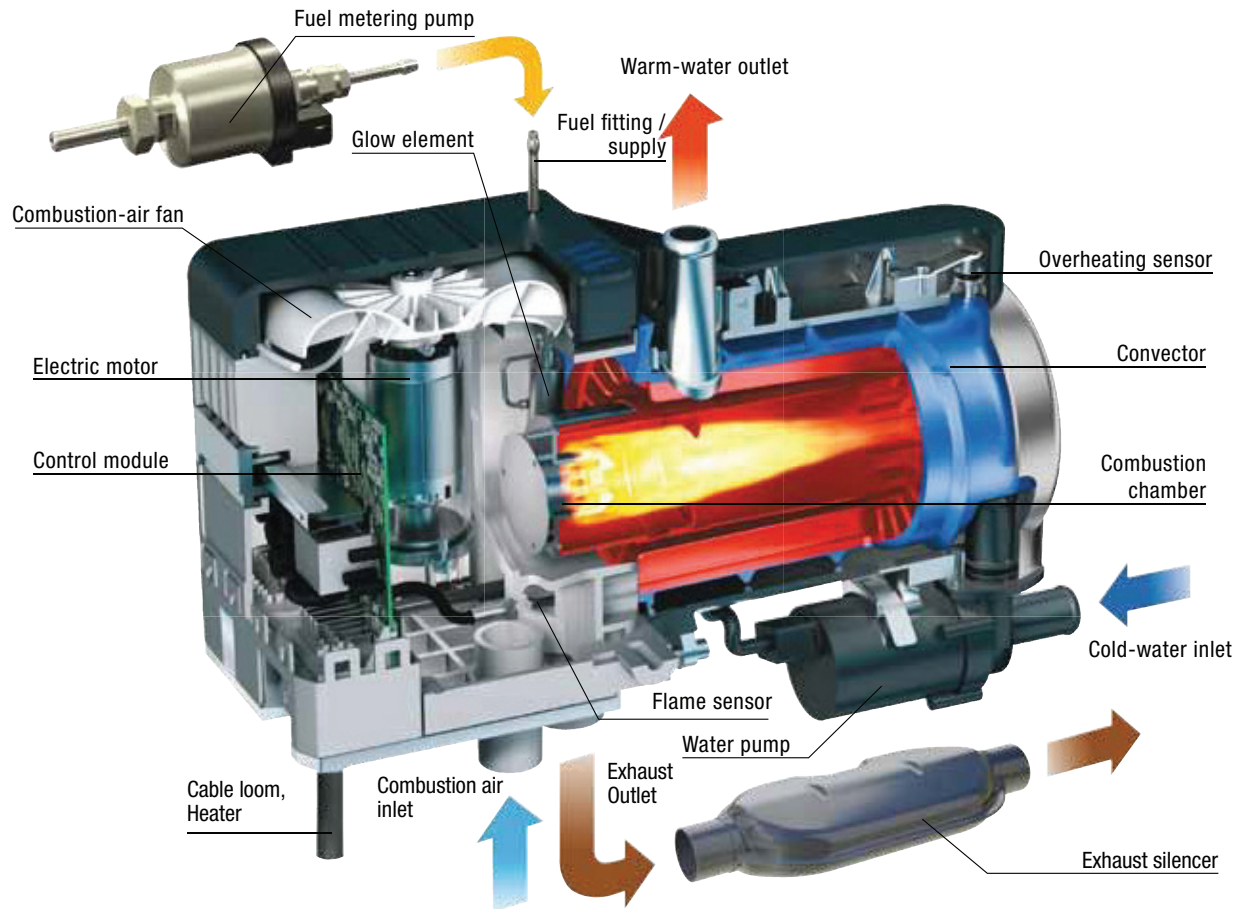


HYDRONIC S3 ECONOMY* FUNCTIONS:

- 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.

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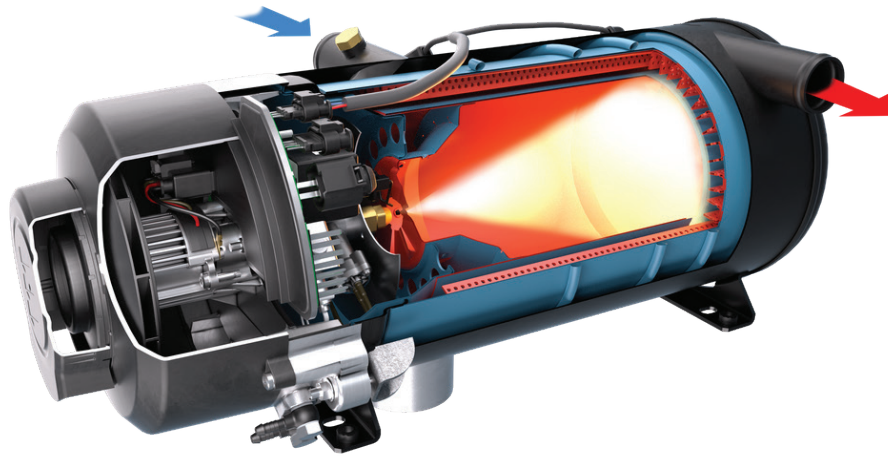
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PRODUCT INFORMATION

HYDRONIC L3 : TECHNOLOGY



HYDRONIC L3 FUNCTIONS:

- 1 • Combustion air is conveyed to the combustion chamber by the fan motor and impeller.
- 2 • A gear pump delivers fuel from the vehicle's tank and builds up pressure against the closed solenoid valve.
- 3 • The solenoid valve opens and the fuel is atomized by the fuel nozzle in the combustion chamber / flame tube.
- 4 • The ignition spark monitor ignites the fuel-air mix.
- 5 • The resulting flame detection by an optical flame sensor switches off the ignition spark monitor, transfers the heat to the cooling water via the convactor, 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 convactor and then routed to the vehicle's own convactor and combustion engine.

PRODUCT INFORMATION - Hydronic S3 heaters



EBERSPÄCHER HYDRONIC

Heater	Hydronic S3 Economy	Hydronic S3 Economy	Hydronic S3 Economy	Hydronic S3 Economy
Product package	Heater	Heater	Heater	Heater
Techn. designation	HS3 CS B5E	HS3 CL B5E	HS3 CS D5E	HS3 CL 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			
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

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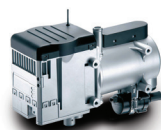
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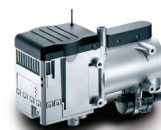
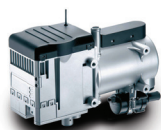
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PRODUCT INFORMATION - Hydronic M II heaters



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

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PRODUCT INFORMATION - Hydronic L3 heaters



EBERSPÄCHER HYDRONIC

Heater	Hydronic L16	Hydronic L24	Hydronic L30	Hydronic L35
Product package	Heater	Heater	Heater	Heater
Techn. designation	Hydronic L3 (HL3-16)	Hydronic L3 (HL3-24)	Hydronic L3 (HL3-30)	Hydronic L3 (HL3-35)
Order no. for heater	25.3042.02.0000	25.3043.02.0000	25.3040.02.0000	25.3041.02.0000
Order no. for compact heater -	25.3043.05.0000	25.3040.05.0000	25.3041.05.0000	
Fuel	Diesel, fuel oil, HVO #	Diesel, fuel oil, HVO #	Diesel, fuel oil, HVO #	Diesel, fuel oil, HVO #
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	65	85	95	110
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	20.4	20.4	20.4	20.4
Upper voltage limit V	32	32	32	32
Dimensions L x W x H mm	544 x 230 x 221	544 x 230 x 221	544 x 230 x 221	544 x 230 x 221
Weight empty** kg	16	16	16	16

* depending on the coolant pump model

Hydrogenated Vegetable Oil

EBERSPÄCHER COOLANT PUMPS FOR HYDRONIC L3



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 up to max 50 % glycol	Water-glycol mix with 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

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PRODUCT INFORMATION - Hydronic L II heaters

				
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 coolant pump model				

EBERSPÄCHER COOLANT PUMPS FOR HYDRONIC L II			
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 up to max 50 % glycol	Water-glycol mix with 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

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HYDRONIC HS3 CS

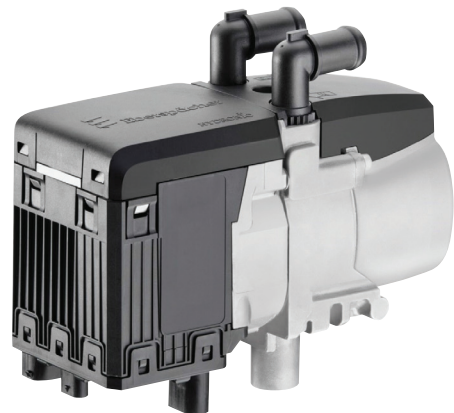
COOLANT HEATER - 17,100 BTU / 19,100 BTU

			Heater	Harness	Fuel System	Coolant Hose	Mounting Bracket	Control Options / Timers	Fuel Pickup Pipe	Hardware Kit	Exhaust Pipe	Intake Pipe	Boxed	Portal Instructions
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													
HS1 to HS3 TRANSITION HARNESSES KIT														
HS1 to HS3 heater harness adaptor	20.2900.70.0516													
Ax1 to Ax2/x3 FMP harness adaptor	20.2900.70.0026													

Item in the kit



Boxed Kit



Hydronic S3 heater

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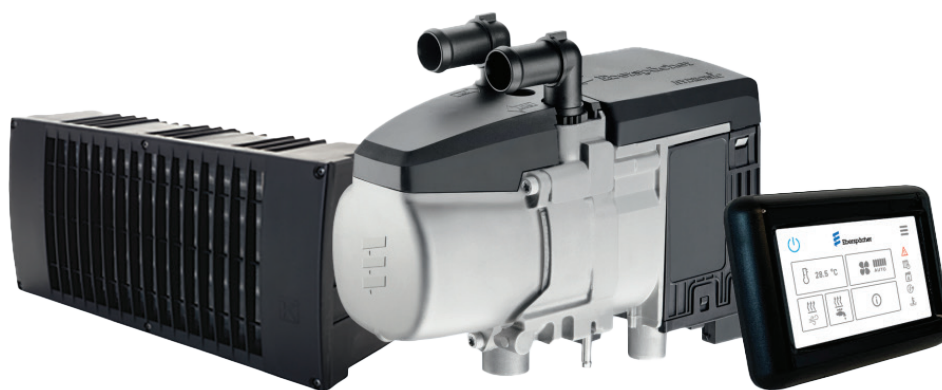
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* Heating Element 1500 W /120 VAC  Item in the kit



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Plastic fuel line 2mm X 8.0m~
Fuel hose 3.5mm X 50mm~
Fuel line adaptor 3.5 TO 5 MM
FMP holder
Clamps

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

HYDRONIC M-II – BUILD YOUR OWN KIT

SERIES: 42,000 BTU - CARB APPROVED

		Heater	Harness	Fuel System	Coolant Hose	Mounting Bracket	Control Options / Timers	Fuel Pickup Pipe	Hardware Kit	Exhaust Pipe	Intake Pipe	Boxed	Portal Instructions
HYDRONIC M II													
STEP 1 - SELECT BASIC KITS:													
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												
Programmable Timer With LVD	25.2800.70.1010												
Programmable Timer With LVD Dual Input	25.2800.70.2020												
Programmable 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

 Item in the kit



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 L3

SERIES: 55,000, 82,000, 102,000, 120,000 BTU

HYDRONIC L3-16			
Basic Heater 24V		25.3042.02.0000	
HYDRONIC L3-24			
Basic Heater 24 volt		25.3043.02.0000	
Hydronic L3-24 Compact			
Water pump Flowtronic 5000 and fuel filter pre-assembled		25.3043.05.0000	
HYDRONIC L3-30			
Basic Heater 24 volt		25.3040.02.0000	
HYDRONIC L3-30 Compact			
Water pump Flowtronic 5000 and fuel filter pre-assembled		25.3040.05.0000	
HYDRONIC L3-35			
Basic Heater 24 volt		25.3041.02.0000	
HYDRONIC L3-35 Compact			
Water pump Flowtronic 5000 and fuel filter pre-assembled		25.3041.05.0000	
Additional parts which have to be ordered separately			
Water Pump, Flowtronic 5000	25.2488.26.0000	Screw, M14 x 1.5	266.09.005
Water pump, Flowtronic 6000 SC	25.2488.25.0000	Rubber buffer M6 x 10	20.1607.65.0002
Water Pump, Flowtronic 5000S	25.1818.30.0000	Height: 15 mm	
Hose clip, Ø 40-47 mm	152.09.017	Fuel return line,	25.1698.05.0400
Hose elbow, Ø 38 mm	25.1799.80.0001	Ø 5 x 3, length: 750 mm	
Connection pipe, Ø 38 mm	25.1214.89.0021	Ball valve	25.2488.05.0200
T-piece, Ø 38-38-38	25.1371.89.0400	Reducer coupling 8 / 6	266.00.026
Reducer, Ø 38/28 mm	25.1214.89.0019	Shroud with hose connection	22.1000.40.0600
Hose clip, Ø 32-39 mm	10.2067.03.2050	1 m flexible hose, Ø 60 mm	10.2114.31.0000
Pipe elbow, Ø 38 mm	25.1214.89.0003	Hose clip 10.2067.05.0070	10.2067.05.0070
Water hose, Ø 38 mm	360.75.413	Air hose fixing kit	22.1000.50.0200
Exhaust pipe socket, Ø 70 mm	22.1000.40.0400	Plastic grille	25.1688.80.0600
Exhaust pipe elbow, Ø 70 mm	22.1000.40.0300	Nozzle holder	22.1000.01.0035
Fuel filter	25.2599.05.0100	Nozzle	10.2067.05.0070
Banjo bolt, M14 x 1.5	104.09.002	Hose connection nozzle	22.1000.01.0005
Sealing ring, A14 x 18	323.16.006	Adapter	25.1226.89.0050
Fuel suction line,	25.2488.05.0400		
Ø 5 x 3, length: 800 mm			
Screw, M14 x 1.5	266.42.004		
Ball bushing	263.61.001		
Union nut, M14 x 1.5	116.09.003		
Fuel pipe, Cu, according to DIN	-----		
1786, Internal diameter Ø 6			
Fuel hose,	360.75.350		
Fuel hose, Ø 5 x 3			
Hose clip, Ø 11 mm	10.2068.01.1098		

CABLES & CONNECTORS

Connection parts electrical HL3	25.3040.89.0100.0A
Adapter cable CAN operating unit	25.3040.89.0200.2A
Adapter cable diagnose	25.3040.89.0300.2A
Supplement kit	25.3040.89.0400.0A
Adapter cable HL2 to HL3	25.3040.89.0500.2A
Adapter cable waterpump Flow 5000/6000SC	25.3040.89.0600.2A



HYDRONIC L3

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

ACCESSORIES

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



HYDRONIC L II



HYDRONIC L II COMPACT

Hydronic L-II Boxed Off-Highway Kits

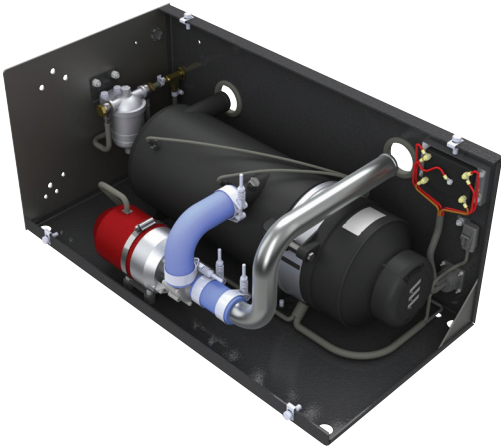
		Heater	Harness	Fuel System	Coolant Hose	Mounting Bracket	Control Options / Timers	Fuel Pickup Pipe	Hardware Ki	Exhaust Pipe	Intake pipe	Boxed enclosure	Portal Instructions
HYDRONIC L-II OFF HIGHWAY													
HYDRONIC 30 L-II Boxed Off-Highway Assembly 12V w/6000 L pump	25.2800.10.3612												
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
Prog Timer With LVD 25.2800.70.1010
Prog Timer With LVD Dual Input 25.2800.70.2020
Prog 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



HYDRONIC L II BOXED ASSLY

TIMERS AND CONTROLLERS

Available Functions					
Order Number	20.2800.70.2200	22.1000.34.1500	20.2800.70.2300	5670433 12V	25.2800.70.1010
Heater On/OFF with status indicator	☒	☒	☒	☒	☒
Run Time limiter with selectable presets	☒	☒	☒	☒	☒
Built in diagnostic with fault code display	☒	☒	☒		
Clearing codes and unlocking capability	☒	☒	☒		
Illuminated turn and push control dial	☒				
Programmable Timer	☒	☒	☒	☒	
Multiple Starts-Day/Week	☒	☒	☒	☒	
Use of residual heat	☒				
Synchronization of two controllers	☒				
High Altitude mode		☒			
Grouping heaters	☒				
Standard Fan Mode	☒	☒			
Programmable LVD	☒	☒	☒		☒
Low voltage shutdown		☒	☒		☒
Onboard temperature sensor	☒				
Setpoint switchable between F and C	☒	☒			
Hour meter			☒		☒
Maintenance message	☒				
External device control	☒	☒			
Easyscan integration	☒				
Multilingual interface	☒	☒			
'Check Heater' warning	☒				
Ambient air sensor	☒			☒	
Diagnostic codes	☒	☒	☒		
Standard fan mode	☒	☒			
10-hour automatic shut-off	☒		☒		
Manual start mode	☒	☒	☒	☒	☒
Program memory	☒	☒		☒	
External inputs	☒	☒			☒
Air heaters	☒	☒	☒		
Coolant heaters	☒	☒	☒	☒	☒

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OPTIONAL ADD-ONS

Control units



Model	EasyStart Pro	EasyStart Timer	EasyStart Select	Airtronic mini-controller
Order number	22.1000.35.2200	22.1000.34.1500	22.1000.34.1300	22.1000.32.0700
Interface	CAN	LIN, S+	LIN	S+

Control unit compatibility with heaters



Hydronic S3
12V
CS Economy

CAN

S+ *

-

-



Hydronic S3
24V CS Commercial

CAN

S+ *

-

-



Hydronic S3
12V CL Economy

-

LIN

LIN

-



Hydronic M II 12/24 V

-

LIN

LIN

-



Hydronic L3
24V (16/24/30/35 kW)

CAN / E-Control

LIN

LIN

-



Hydronic L II
24V (16/24/30/35 kW)

-

S+ *

-

-

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Airtronic S3/M3/L3
12 V Commercial

CAN

LIN

LIN

S+ **

2



Airtronic M3
12V Recreational

CAN

LIN

LIN

S+ **

3



Airtronic
S3/M3/L3/XL3 24V
Commercial

CAN

S+ *
No setpoint input
possible

-

S+ **

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

** With restricted function: no external temperature sensor possible

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

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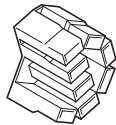
5

CONTROL OPTIONS AND TIMERS

Mini Controller 12 and 24 volt
Mini Controller Knob



Control unit - single part
7-pin bushing connector housing

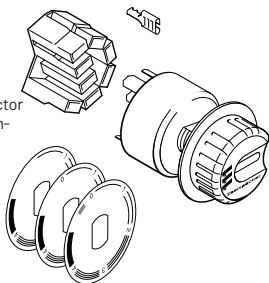


24 volt

Rheostat Switch

* 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



*12 volt
*24 volt
**24 volt

Wi-Fi Remote Control



Airtronic S (2.2 kW)	Airtronic M (4 kW)	Airtronic L (5.5 kW)	Airtronic XL3	Hydronic S (5-6 kW)	Hydronic L3 (16-35 kW)	Hydronic M-II (8-12 kW)	Part number
~	~	~	~				22.1000.32.0700 a
~	~	~	~				206.31.282
~	~	~	~				25.1895.71.0000 25.1896.71.0000 25.1768.71.0000
~	~	~	~				20.2800.70.2300

~ restricted use no diagnostic

CONTROL OPTIONS AND TIMERS

Programmable Timer (No Diagnostic)



12 V
24 V

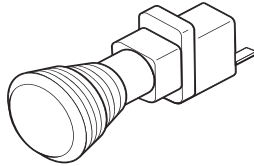
Programmable Timer with LVD



Dual Input

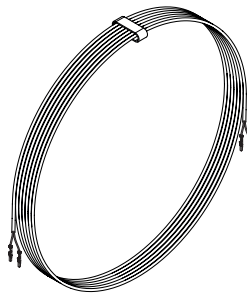
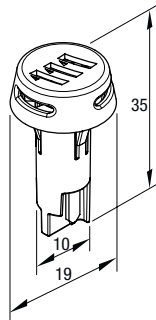
Programmable Timer with LVD, Dual Outputs-Detached
Push button with 24" leads for 25.2800.70.3030

Push / Pull Switch



Push / Pull Switch 12 volt

External and internal temperature control sensor, flush wall-mounted installation
2m Cable harness



Airtronic S (2.2 kW)	Airtronic M (4 kW)	Airtronic L (5.5 kW)	Airtronic XL3	Hydronic S (5-6 kW)	Hydronic L3 (16-35 kW)	Hydronic M-II (8-12 kW)	Part number
				~			5670433
				~			5670434
				~			25.2800.70.1010
				~			25.2800.70.2020
				~			25.2800.70.3030
				~			25.2800.70.3035
				~			5670007
							22.1000.35.2100

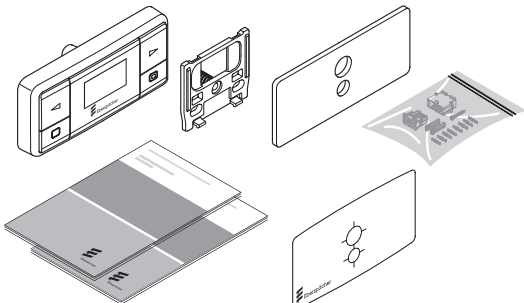
* Can also be combined with control unit

■ unrestricted use ~ restricted use no diagnostic

CONTROL OPTIONS AND TIMERS

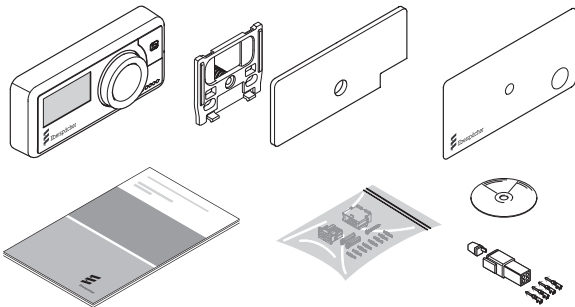
EasyStart Timer

- For;
- Hydronic 1
 - Hydronic 2
 - Hydronic S3 CL
 - Hydronic M2
 - Airtronic 1
 - Airtronic 2
 - Airtronic 3



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

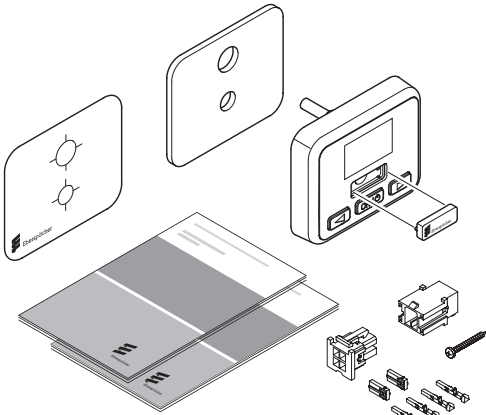
Control Kit - EasyStart Pro with Adaptor



Control Kit - EasyStart Pro with Adaptor
EasyStart Pro 12 V / 24 V

EasyStart Select

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



12 V / 24 V

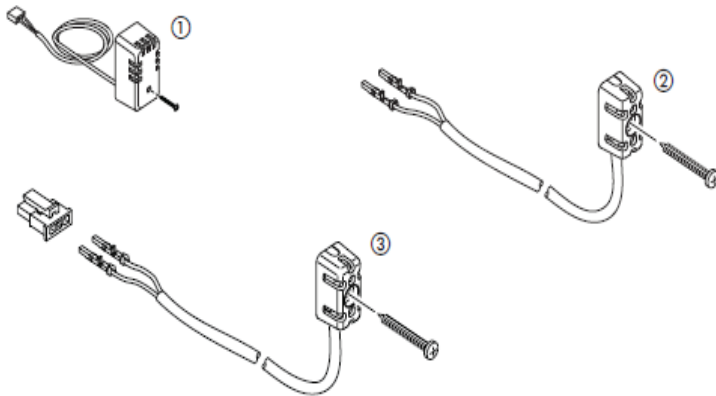
~ = consider heater compatibility

Airtronic S (2.2 kW)	Airtronic M (4 kW)	Airtronic L (5.5 kW)	Airtronic XL3	Hydronic S (5-6 kW)	Hydronic L3 (16-35 kW)	Hydronic M-II (8-12 kW)	Part number
~	~	~	~	~	~	~	22.1000.34.1500
							20.2800.70.2200 22.1000.35.2200
							22.1000.34.1300

CAN BUS CONNECTORS AND TEMPERATURE SENSORS

Temperature Sensor

Remote Temperature Sensor (To be used as air heater's external temperature sensor ONLY)
Controller Temperature Sensor (To be used with EasyStart Timer)
Temperature Sensor (To be used with EasyStart Pro)



	Airtronic S (2.2 kW)			
	Airtronic M (4 kW)			
	Airtronic L (5.5 kW)			
	Airtronic XL3			
	Hydronic S (5-6 kW)			
	Hydronic L3 (16-35 kW)			
	Hydronic M-II (8-12 kW)			
	Part number		25.1774.89.0300 22.1000.34.2200 22.1000.34.5400	

* Use EasyScan to configure input as external temperature sensor

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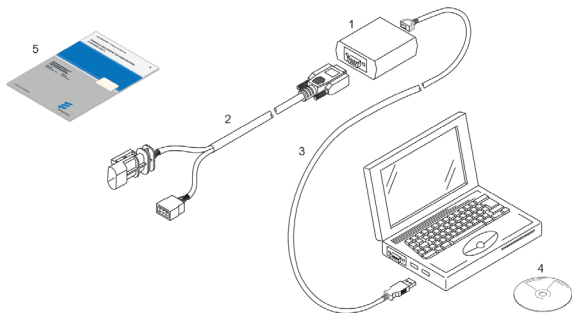
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TESTERS / ADAPTERS / SPECIAL TOOLS

EasyScan



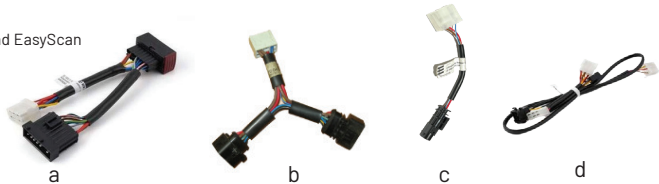
Laptop not included

Tester Adapter North America for EDITH and EasyScan

Diagnostic Adaptor (Airtronic, Hydronic I, Hydronic II)
Diagnostic Adaptor Hydronic M-II
Diagnostic Adaptor Hydronic M-II E-Guardian

Adapter cable

For Diagnostic device, EDiTH Basic and EasyScan



Airtronic / Airtronic M a
Hydronic b
Hydronic 2 / Hydronic 2 C / Hydronic M2 (versions from June 2012) c
Hydronic L / Hydronic L2

Adapter cable for older models of heater
For EDiTH Basic only

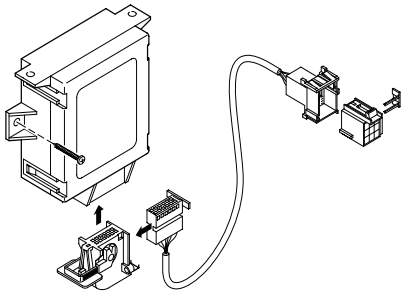


Hydronic M a
Hydronic M2 (versions pre-dating June 2012) b
B / D1 LC compact, B / D3 LC compact, B / D3 LP compact c
B / D1 LC, B / D3 LC, B / D3 LP, B / D5 LC d
D9 W, Hydronic 10 e

Airtronic S (2.2 kW)	Airtronic M (4 kW)	Airtronic L (5.5 kW)	Airtronic XL3	Hydronic S (5-6 kW)	Hydronic L 3 (16-35 kW)	Hydronic M-II (8-12 kW)	Part number
							22.1550.89.0000
							20.2900.70.5057
							25.2800.70.1004
							25.2800.70.0024
							22.1000.31.8600
							20.2900.70.5028
							22.1000.33.7800
							22.1000.31.6600
							22.1000.32.5200
							22.1000.33.4400
							22.1000.30.6900
							22.1000.30.2000
							22.1000.31.8300

TESTERS / ADAPTERS / SPECIAL TOOLS

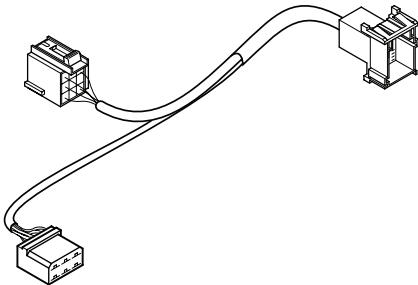
Altitude kit *
Air pressure sensor for heating mode at altitudes up to 3,500 m above sea level



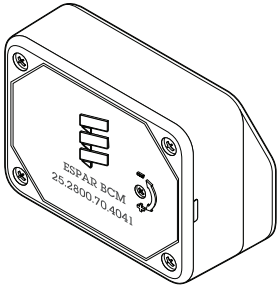
Not meant for Ax3, Ax2 and HS3 heaters

* For use with the Airtronic / Airtronic M and Hydronic / Hydronic 2 labeled "H-Kit" on the factory plate on the side

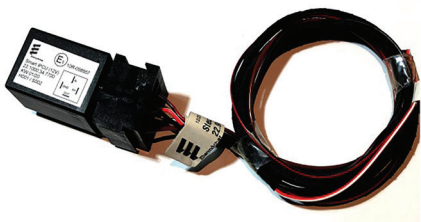
Adapter cable
For air pressure sensor diagnostics



Blower control module 12/24 V - Heavy Duty (BCM)
For coolant heaters



Upgrade kit IPCU Smart 12 V (AD)
For coolant heaters



Airtronic S (2.2 kW)	Airtronic M (4 kW)	Airtronic L (5.5 kW)	Airtronic XL3	Hydronic S (5-6 kW)	Hydronic L3 (16-35 kW)	Hydronic M-II (8-12 kW)	Part number
							22.1000.33.2200
							22.1000.33.3100
							25.2800.70.4041
							24.8800.00.0077

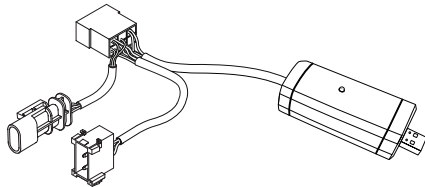
unrestricted use restricted use

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TESTERS / ADAPTERS / SPECIAL TOOLS

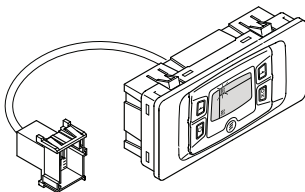
All adapters used with Diagnostic Unit and Edith

Eberspaecher Universal Diagnostic Tool (EUDT)



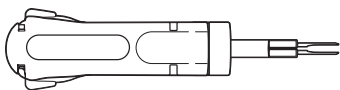
Cannot be used with the newer generation Ax2/Ax3 and Hx3 heaters

Diagnostic Fault Code Retriever

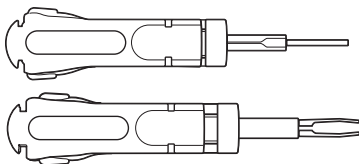


Can be used with first generation Airtronic and Hydronic heaters with a H-KIT ECU and for the second generation Hydronic and Hydronic M II heaters

Terminal Removal Tools



1.6 mm

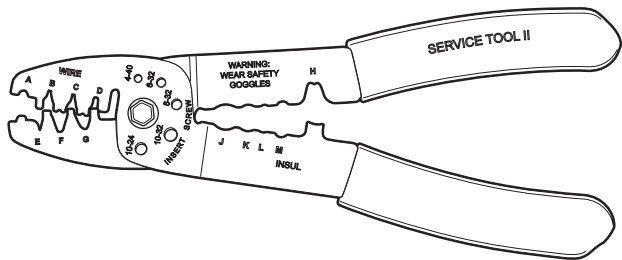


2.8 mm

Micro-Timer AMP Order No. 0-0539960-1
Junior Power timer AMP Order No. 1-1579007-6

1.6 mm
2.8 mm

Wire Crimper



Airtronic S (2.2 kW)	Airtronic M (4 kW)	Airtronic L (5.5 kW)	Airtronic XL3	Hydronic S (5-6 kW)	Hydronic L3 (16-35 kW)	Hydronic M-II (8-12 kW)	Part number
							20.2800.70.1200
							20.2900.70.5060
							206.00.205 206.00.215
							5670003

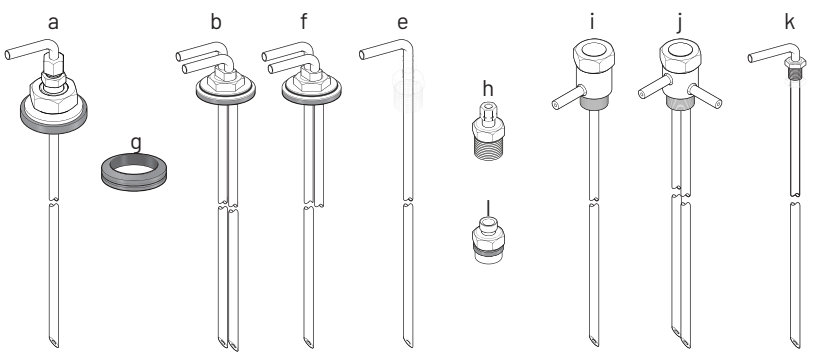
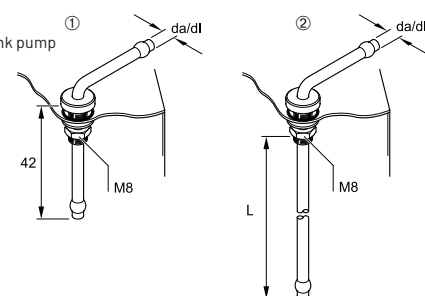
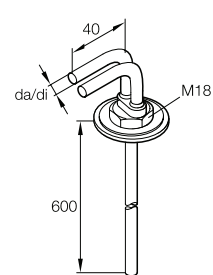
unrestricted use

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.

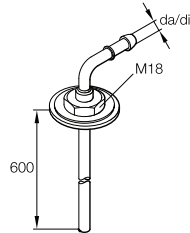
FUEL SYSTEM

																		Part number	
											Airtronic S (2.2 kW)	Airtronic M (4 kW)	Airtronic L (5.5 kW)	Airtronic XL 3	Hydronic S (5-6 kW)	Hydronic L3 (16-35 kW)	Hydronic M-II (8-12 kW)		
																			
Single Pick-up Pipe 2.0 mm Universal PREFERRED (Drill or 1/4" NPT fitting)(66 cm or 26")																		20.2900.20.2010 a	
Single Pick-up Pipe 2.0 mm (66 cm or 26")																		20.2900.20.2042 e	
Double Pick-up Pipe 2.0 mm (56 cm or 22")																		20.2900.20.2057 b	
Fuel Pick-up pipe 2 mm W/FTNG (59.5 cm or 23.5") - Vent fitting 1/2" NPT																		20.2900.20.2004 i	
Dual Vent Fuel Pick-up pipe 2.0 mm (61 cm or 26") - Vent fitting 1/2" 14 NPT																		20.2900.20.2007 j	
Single Pick-Up Pipe 4.0 mm universal (Drill or 1/4" NPT fitting)(66 cm or 26")																		20.2900.20.2050 a	
Fuel Pick-up pipe 4 mm W/FTNG 19.5" - Vent fitting 1/2" NPT																		20.2900.20.4006 i	
Single Pick-up Pipe 4.0 mm with Return PREFERRED (61 cm or 24")																		20.2900.20.2059 f	
Compression Fitting 1/4" NPT																		20.2900.20.2044 h	
Compression Fitting 3/8" NPT																		5520002 h	
Compression Fitting 1/2" NPT																		5520006 h	
Compression FTNG 3/4" NPT																		20.2900.20.2082 h	
Compression FTNG 9/16" w/O-ring																		5520007 l	
Rubber Seal Ring for Fuel Pick-up Pipe																		20.2900.20.2026 g	
Automotive Fuel Pick-up Assembly (48 cm or 18.8")																		22.1000.20.1100 k	
NOTE: The size of the fuel pickup is relative to the size of the heater 2-7 kw heater output requires a 2mm fuel pick up pipe 8-35 kw heater output requires a 4 mm fuel pick up pipe.																			
Tank connection For cars with an inner tank pump 																			
da = 4 mm, di = 2 mm																		22.1000.20.1500 a	
da = 4 mm, di = 2 mm, L = 295 mm																		22.1000.20.1600 b	
Tank connection with return For commercial vehicles 																			
da = 6 mm, di = 4 mm																		25.1226.89.4000	

FUEL SYSTEM

Tank connection

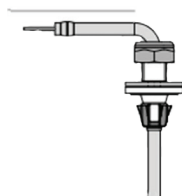
For commercial vehicles



da = 6 mm, di = 2 mm

EasyFix tank connection

For wall thicknesses from 2.8 to 3.5 mm

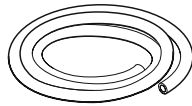


da = 4 mm, di = 2 mm

Fuel hose (linear m)

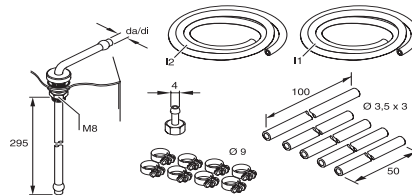
Rubber

*PME-compatible


di = 3.5mm, D = 9.50 mm
*di = 3.5 mm, D= 9.50 mm
di = 5.0 mm, D = 11.0 mm
* di = 5.0 mm, D = 11.0 mm

Tank Connection Kit

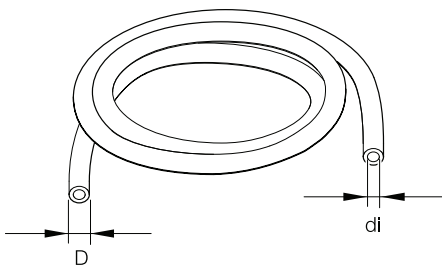
For passenger cars with an inner tank pump



I1 = pipe D; L = 6 m/ I2 = pipe D 4x1; L=6 m / da=4 mm, di = 2 mm

Fuel pipe (linear m)

Plastic


natural-colored, di = 1.5 mm x10.0m , D = 4 mm
natural-colored, di = 1.5 mm x50.0m , D = 4 mm
natural-colored, di = 1.5 mm x100.0m , D = 4 mm
natural-colored, di = 1.5 mm x400.0m , D = 4 mm
natural-colored, 2 mm x 0.8m , D = 4 mm
natural-colored, 2 mm x 1.0m , D = 4 mm
natural-colored, 2 mm x 1.7m , D = 4 mm
natural-colored, 2 mm x 2.0m , D = 4 mm
natural-colored, 2 mm x 3.0m , D = 4 mm
natural-colored, 2 mm x 3.3m , D = 4 mm
natural-colored, 2 mm x 4.3m , D = 4 mm
natural-colored, 2 mm x 5.0m , D = 4 mm
natural-colored, 2 mm x 6.0m , D = 4 mm
natural-colored, 2 mm x 6.5m , D = 4 mm
natural-colored, 2 mm x 8.0m , D = 4 mm
natural-colored, 2 mm x 10.0m , D = 4 mm
natural-colored, 2 mm x 50.0m , D = 4 mm
natural-colored, 2 mm x 100.0m , D = 4 mm
blue, di = 2 mm , D = 4 mm
black, di = 2 mm , D = 6 mm
blue, di = 4 mm , D = 6 mm
4 x 1 (Sold in bulk by meter)
4 x 1.25 (Sold in bulk by meter)

Airtronic S (2.2 kW)	Airtronic M (4 kW)	Airtronic L (5.5 kW)	Airtronic XL3	Hydronic S (5-6 kW)	Hydronic L3 (16-35 kW)	Hydronic M-II (8-12 kW)	Part number
							25.1226.89.5000
							22.1000.20.4500
							360.75.300
							360.75.400
							360.75.350
							360.75.401
							22. 1000.20.1300
							20.2900.20.0067
							20.2900.20.0068
							20.2900.20.0069
							20.2900.20.0070
							20.2900.20.0057
							20.2900.20.0030
							20.2900.20.0058
							20.2900.20.0050
							20.2900.20.0014
							20.2900.20.0023
							20.2900.20.0024
							20.2900.20.0013
							20.2900.20.0015
							20.2900.20.0046
							20.2900.20.0053
							20.2900.20.0060
							20.2900.20.0061
							20.2900.20.0062
							890.31.054
							890.31.125
							890.31.101
							890.31.055
							890.31.118

unrestricted use ~ restricted use

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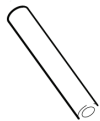
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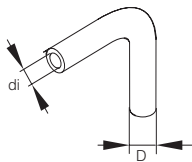
FUEL SYSTEM

Fuel Hose



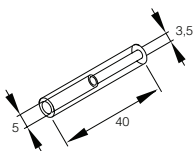
di = 3.5 mm, L = 50 mm

Fuel hose 105° elbow
PME-compatible



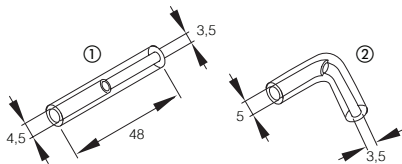
di = 3.5 mm, D = 9.5 mm

Fuel Line Adapter



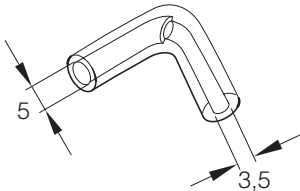
Outer diameter D = 10, 3.5mm to 5mm

Adapter for Hydronic S3 and all Airtronic 3 models



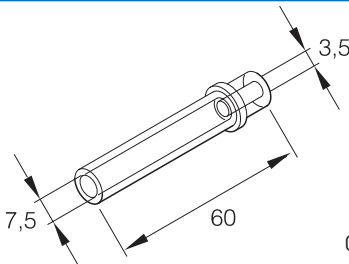
Outer diameter D = 10 mm

Adapter 105° elbow
PME-compatible



Outer diameter D = 10

Adapter for fuel pipes



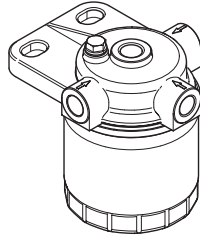
Outer diameter D = 12

Airtronic S (2.2 kW)	Airtronic M (4 kW)	Airtronic L (5.5 kW)	Airtronic XL3	Hydronic S (5-6 kW)	Hydronic L3 (16-35 kW)	Hydronic M-II (8-12 kW)	Part number
							20.2900.20.0007
							25.1888.80.0101
							25.1888.80.0102
							25.2635.05.0007
							25.2110.05.0301
							22.1000.20.3000

unrestricted use ~ restricted use

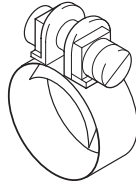
FUEL SYSTEM

Fuel Filter



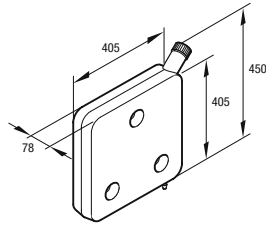
Fuel Filter

Clamp



9 mm x 10 pc (used with 360 75 300)
9 mm x 50 pc (used with 360 75 300)
10 mm (used with 360 75 350)
11 mm x 10 pc (used with 360 75 350)
11 mm x 50 pc (used with 360 75 350)
12 mm
14 mm

Plastic Fuel Tank

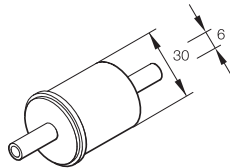


Fuel Tank (10L or 2.6 gal - Blue)

~suitable only for diesel/bio-diesel (FAME)/heating oil

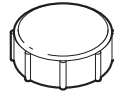
Fuel filter with paper insert

Plastic/installation in front of fuel circulation pump



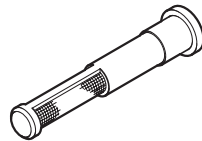
Plastic Cap

suitable for 22.1000.20.2800



Fuel strainer for fuel tank

suitable for 22.1000.20.2800



O-ring for fuel valve, 6mm

suitable for 22.1000.20.2800



Airtronic S (2.2 kW)	Airtronic M (4 kW)	Airtronic L (5.5 kW)	Airtronic XL3	Hydronic S (5-6 kW)	Hydronic L3 (16-35 kW)	Hydronic M-II (8-12 kW)	Part number
							25.2599.05.0100
							20.2900.20.0063
							20.2900.20.0064
							10.2068.01.0098
							20.2900.20.0065
							20.2900.20.0066
							10.2068.01.2098
							10.2068.01.4098
~	~	~	~	~	~	~	22.1000.20.2800
~	~	~	~	~	~	~	25.1156.20.0009
							22.1000.20.2200
~	~	~	~	~	~	~	22.1000.20.280
~	~	~	~	~	~	~	22.1000.20.2804

unrestricted use ~ restricted use

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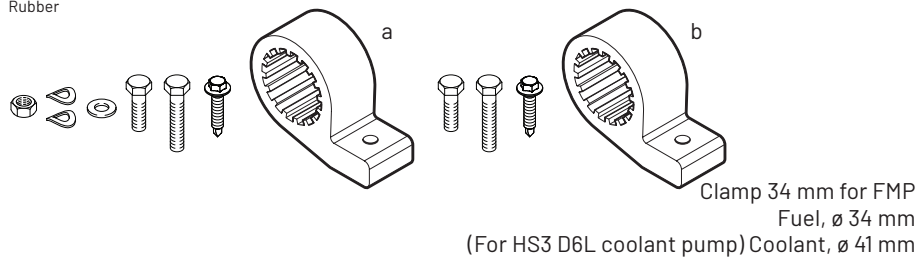
4

5

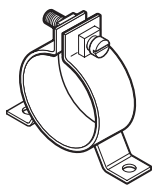
FUEL SYSTEM

Mounting bracket for metering pump
and Flowtronic Water Pump 800 S (see page 76)

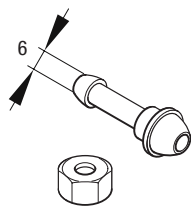
Rubber



Fuel Metering Pump Holder

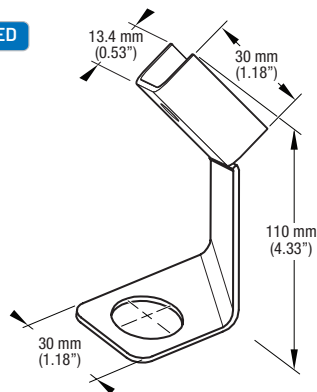


Fuel Connector Nipple and Nut



FMP Bracket

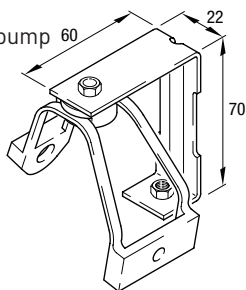
PREFERRED



Mounting bracket for metering pump

For use with boats and camping vehicles

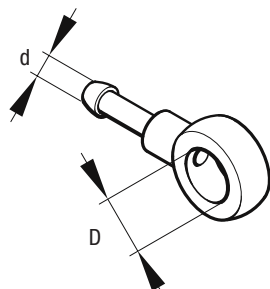
Recommended for mobile homes



Airtronic S (2.2 kW)	Airtronic M (4 kW)	Airtronic L (5.5 kW)	Airtronic XL 3	Hydronic S (5-6 kW)	Hydronic L3 (16-35 kW)	Hydronic M-II (8-12 kW)	Part number
							152.00.200
							22.1000.50.0300 a
							22.1000.50.0700 b
							25.1156.20.0011
							20.2900.20.2071
							20.2900.40.0104
							20.1634.80.0600

FUEL SYSTEM

Banjo fitting



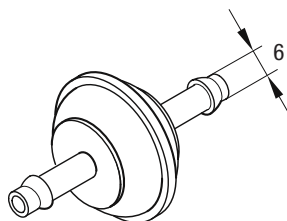
For Hydronic/Hydronic L II heaters

d = 5mm, D = 8mm

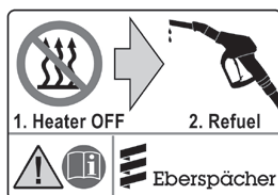
Plastic Fuel Filter with metal strainer

For metering pumps with cup strainer

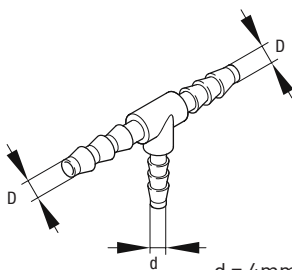
Fuel filter suitable for use with fuel circulation pump only



Information Sticker



Fuel T-piece Plastic



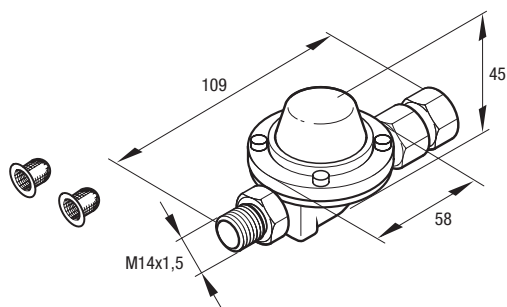
d = 4mm, D = 8mm
d = 6mm, D = 6mm

Pressure Reducer

with cup strainer and hose fitting

Input pressure 0.2 - 4 bar

Control pressure min. 50 mbar, max. 150 mbar



Airtronic S (2.2 kW)	Airtronic M (4 kW)	Airtronic L (5.5 kW)	Airtronic XL3	Hydronic S (5-6 kW)	Hydronic L3 (16-35 kW)	Hydronic M-II (8-12 kW)	Part number
							25.1352.88.0005
							25.1226.89.0037
							25.2652.05.0001
~	~	~	~	~	~	~	262.31.155 262.31.150
							22.1000.20.0800

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.

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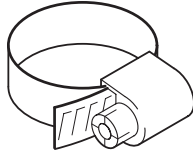
4

5

MOUNTING PARTS

Hose Clip

~ = check connection diameter



$\varnothing$ 16 - $\varnothing$ 25 mm
 $\varnothing$ 32 - $\varnothing$ 50 mm
 $\varnothing$ 33 - $\varnothing$ 57 mm
 $\varnothing$ 50 - $\varnothing$ 70 mm

Hose clip with lug

= check connection diameter



$\varnothing$ 9 - $\varnothing$ 10.5 mm
 $\varnothing$ 21 - $\varnothing$ 24.0 mm

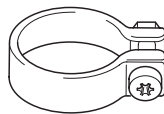
Hose Clip

~ = check connection diameter



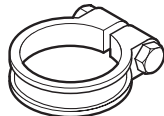
$\varnothing$ 9 mm
 $\varnothing$ 10 mm
 $\varnothing$ 11 mm
 $\varnothing$ 12 mm
 $\varnothing$ 14 mm

Pipe clip for exhaust pipe



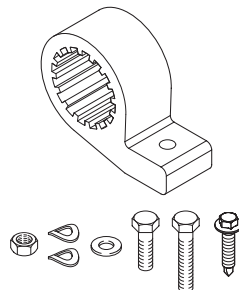
$\varnothing$ 26 - $\varnothing$ 28 mm
 $\varnothing$ 32 - $\varnothing$ 34 mm

Pipe clip for exhaust pipe



$\varnothing$ 42 - $\varnothing$ 45 mm

Holder for metering pump and Flowtronic 800 S water pump Rubber



$\varnothing$ 34 mm
 $\varnothing$ 41 mm

Airtronic S (2.2 kW)	Airtronic M (4 kW)	Airtronic L (5.5 kW)	Airtronic XL3	Hydronic S (5-6 kW)	Hydronic L3 (16-35 kW)	Hydronic M-II (8-12 kW)	Part number
							10.2067.01.6025 10.2067.03.2050 5550001 5550004
							152.61.104 152.61.115
							10.2068.00.9098 10.2068.01.0098 10.2068.01.1098 10.2068.01.2098 10.2068.01.4098
							22.1000.51.4400 22.1000.51.4500
							152.09.004
							22.1000.50.0300 22.1000.50.0700

unrestricted use ~ restricted use

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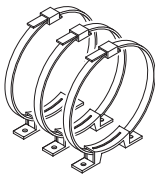
3

4

5

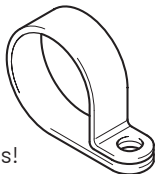
MOUNTING PARTS

Air hose fastening kit
Plastic(3 pcs.)



ø 60 - ø 100 mm

Clip
Galvanized

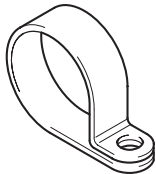


ø 28 mm
ø 28 mm x 10 pc
ø 28 mm x 50 pc

Do not use for flexible exhaust pipes!

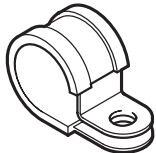
ø 41 mm
ø 50 mm

Clip
Stainless steel



ø 25 mm (for 22 mm Exhaust/ Air Intake)
ø 34 mm (for 30mm Exhaust)

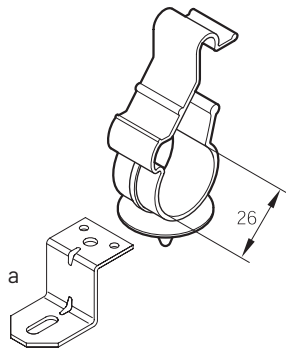
Pipe clip with rubber inlay



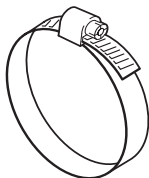
ø 10 mm

Fastening Clip
for water hoses, ø 15 mm - ø 20 mm

a
Holder



Stainless Steel Hose Clamp

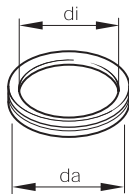


46-70 mm (60 mm or 2.4" Ducting)
59-83 mm (75 mm or 3" Ducting)
84-108 mm (100 mm or 4" Ducting)

Airtronic S (2.2 kW)	Airtronic M (4 kW)	Airtronic L (5.5 kW)	Airtronic XL3	Hydronic S (5-6 kW)	Hydronic L3 (16-35 kW)	Hydronic M-II (8-12 kW)	Part number
							22.1000.50.0200
							152.09.010 20.2900.90.0001 20.2900.90.0005
							152.10.039 152.09.011
							152.10.048 152.09.008
							152.00.139
							156.31.011
							5550004 5550002 5550003

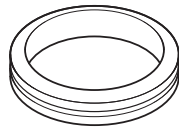
MOUNTING PARTS

Rubber grommet



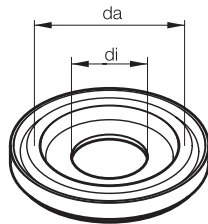
di = 4 - 10 mm , da = 16.5 mm

Gasket for exhaust pipe



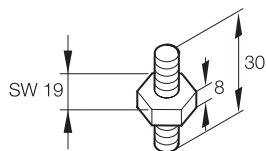
di = 41 mm

Grommet for exhaust pipe



di = 23-30 mm, da = 41 mm
di = 38 - 45 mm, da = 60 mm

Rubber - metal buffer

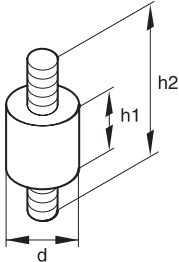


Thread 2 x M6 x 11 mm

Airtronic S (2.2 kW)	Airtronic M (4 kW)	Airtronic L (5.5 kW)	Airtronic XL3	Hydronic S (5-6 kW)	Hydronic L3 (16-35 kW)	Hydronic M-II (8-12 kW)	Part number
							20.1280.09.0103
							20.8542.11.0002
							25.1216.88.0301 20.1282.20.0002
							20.1185.00.0001

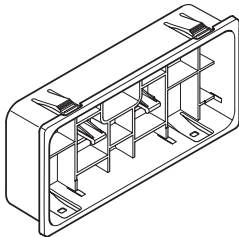
MOUNTING PARTS

Rubber - metal buffer

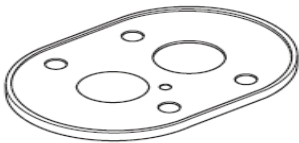


Thread 2 x M8 x 13, d = 30 mm, h1 = 15 mm, h2 = 41 mm
1 inch H, Round Body, 5/16 x 18 NC

Installation frame for EasyStart Timer and Pro (TP7)



Spacer plater
Rubber



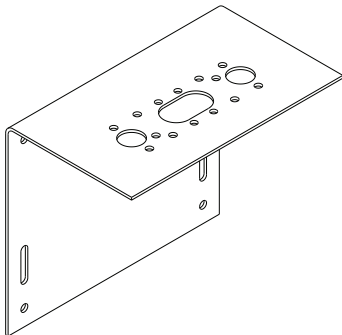
Flange seal

25.2069.01.0002



Device holder
suitable for Airtronic L

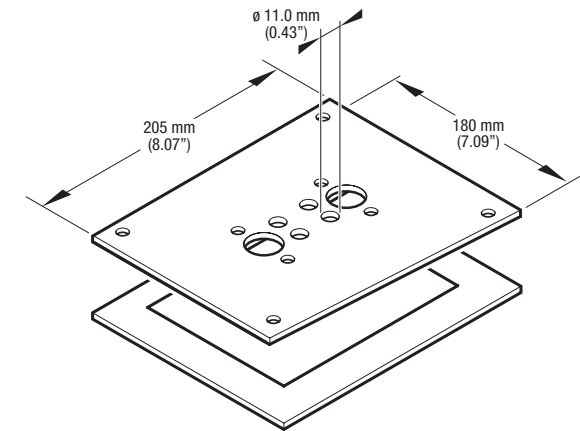
~ = only for Airtronic L3



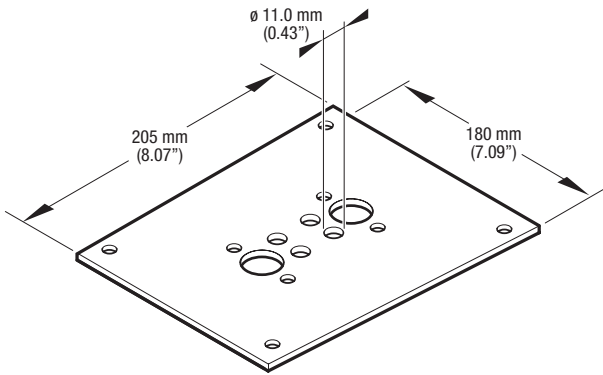
Airtronic S (2.2 kW)	Airtronic M (4 kW)	Airtronic L (5.5 kW)	Airtronic XL3	Hydronic S (5-6 kW)	Hydronic L3 (16-35 kW)	Hydronic M-II (8-12 kW)	Part number
							330.09.002 5540014
							22.1000.51.4100
							25.2069.01.0002
			~				22.1000.51.5200

MOUNTING PARTS

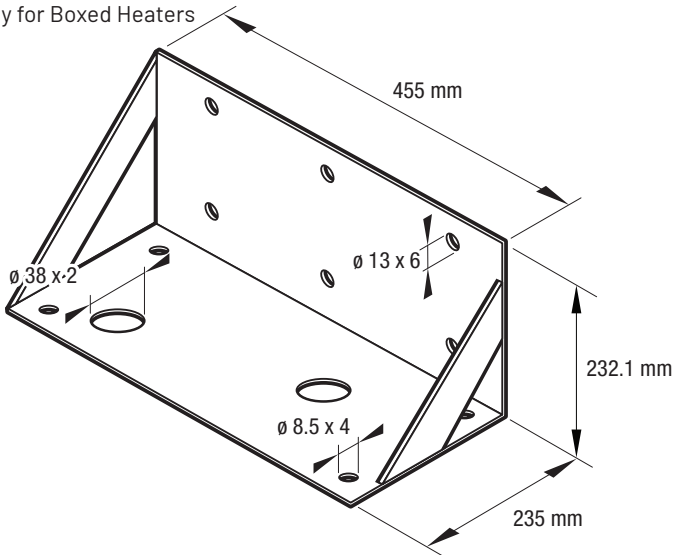
Mounting Plate with Seal



Mounting Plate



Side Frame Mounting Tray for Boxed Heaters

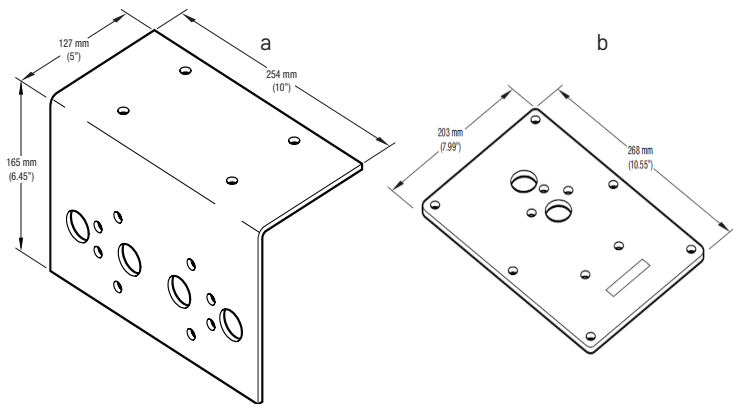


Airtronic S (2.2 kW)	Airtronic M (4 kW)	Airtronic L (5.5 kW)	Airtronic XL3	Hydronic S (5-6 kW)	Hydronic L3 (16-35 kW)	Hydronic M-II (8-12 kW)	Part number
							20.2900.40.0032
							5540001
							20.2900.40.0025
							20.2900.40.0075

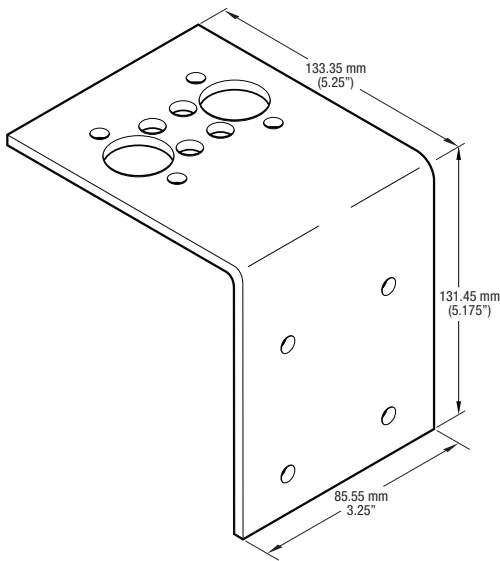
- 1
- 2
- 3
- 4
- 5

MOUNTING PARTS

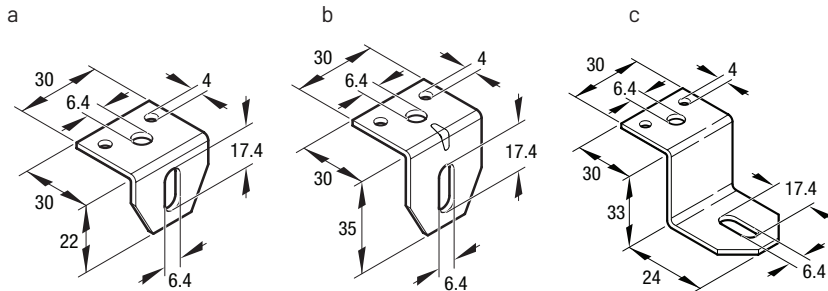
Angle Bracket for Airtronic D5



Mounting Bracket 90°



Metal Angle Bracket for Fuel Metering Pump

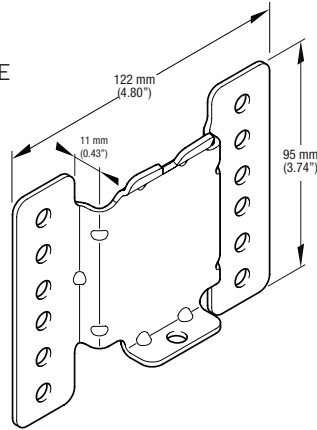


Airtronic S (2.2 kW)	Airtronic M (4 kW)	Airtronic L (5.5 kW)	Airtronic XL3	Hydronic S (5-6 kW)	Hydronic L3 (16-35 kW)	Hydronic M-II (8-12 kW)	Part number
							20.2900.40.0023 a 20.2800.40.0500 b
							5540016
							20.1348.03.0002 a 20.1348.03.0004 b 20.1533.88.0007 c

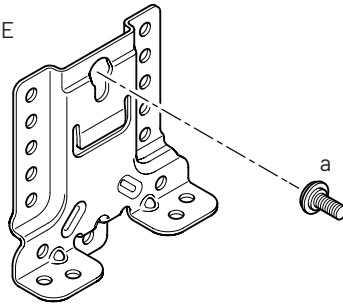
unrestricted use ~ restricted use

MOUNTING PARTS

Mounting bracket for Hydronic S3 D5E

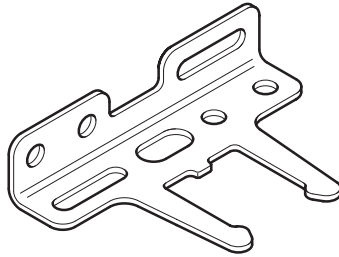


Mounting bracket for Hydronic II D5E



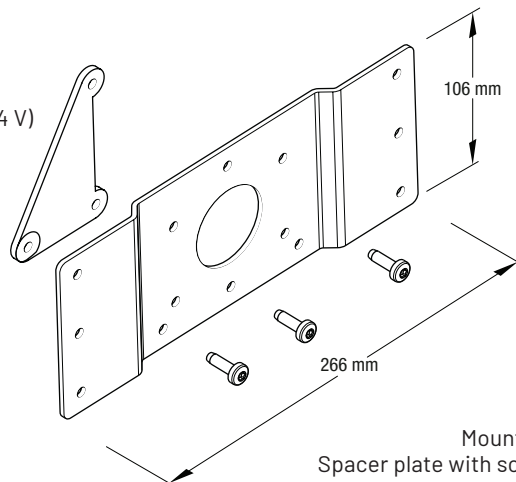
a special screw also required
for Economy/comfort 25.2526.80.0101

Water Pump Bracketed

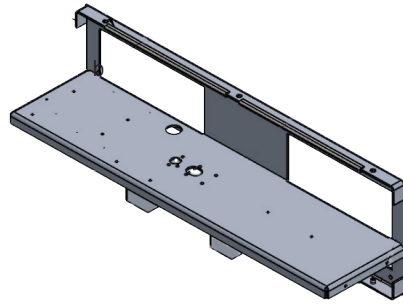


a
Special screw also required:
for Economy / Comfort 25 2526 80 01 01

Mounting bracket for
Hydronic S3 Commercial (24 V)



Airtronic S (2.2 kW)	Airtronic M (4 kW)	Airtronic L (5.5 kW)	Airtronic XL3	Hydronic S (5-6 kW)	Hydronic L3 (16-35 kW)	Hydronic M-II (8-12 kW)	Part number
							22.1000.51.4200
							22.1000.51.3700
							22.1000.51.3900
							22.1000.51.5000 22.9000.51.5100



Airtronic S (2.2 kW)

Airtronic M (4 kW)

Airtronic L (5.5 kW)

Airtronic XL3

Hydronic S (5-6 kW)

Hydronic L3 (16-35 kW)

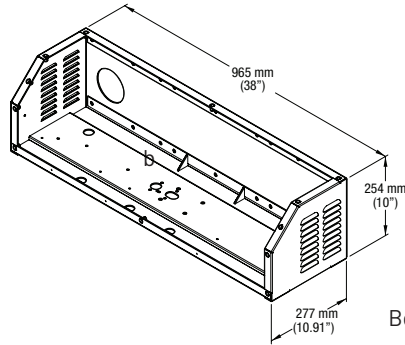
Hydronic M-II (8-12 kW)

Part number

20.2900.40.0602 a
20.2900.40.0601 b
20.2900.40.0603

Technical drawing of a rectangular box (labeled 'a') with dimensions:

- Length: 965 mm (38")
- Height: 254 mm (10")
- Width: 277 mm (10.91")



Airtronic S (2.2 kW)

Airtronic M (4 kW)

Airtronic L (5.5 kW)

Airtronic XL3

Hydronic S (5-6 kW)

Hydronic L3 (16-35 kW)

Hydronic M-II (8-12 kW)

Part number

20.2900.40.0506 a
20.2900.40.0502 b

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)

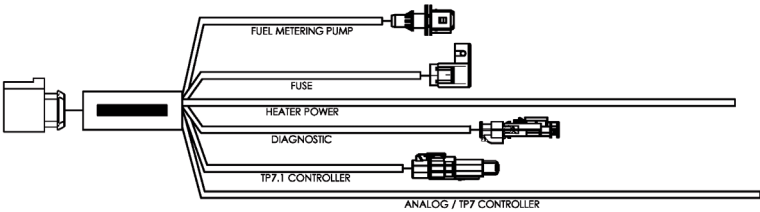


Modular cable harness AX2_AX3 12V_24V

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.



Airtronic S (2.2 kW)	Airtronic M (4 kW)	Airtronic L (5.5 kW)	Airtronic XL3	Hydronic S (5-6 kW)	Hydronic L3 (16-35 kW)	Hydronic M-II (8-12 kW)	Part number
							20.2900.70.0012
							20.2900.70.0013
							20.2900.70.0014



Modular cable harness HS3 CS 12V_24V

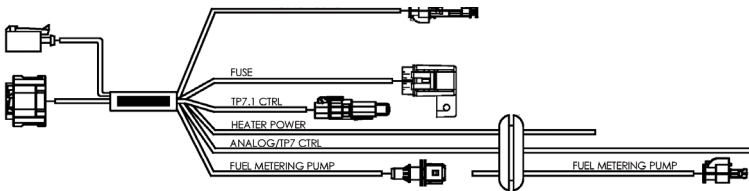
Details: Alternative cable harness for Hydronic S3 (CS) heaters, especially suitable for individually installed units, e.g., when there is a large distance between a heater and control unit or heaters are combined.

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.

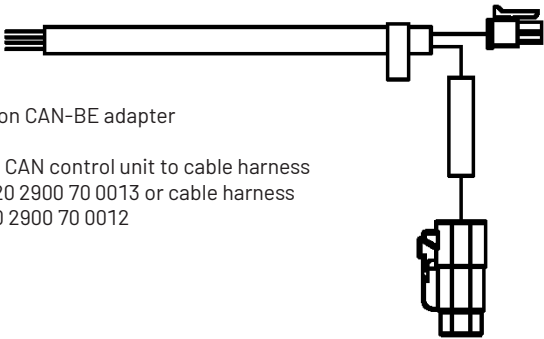
For connection to another heater cable harness from the modular series, 20 2900 70 0015 is required.



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



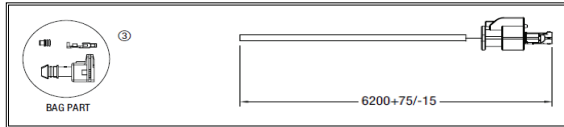
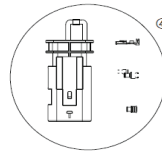
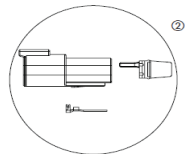
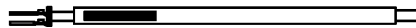
ELECTRICAL PARTS



Harness adapter for combo kits

For connecting two heaters to modular cable harnesses.

Length 9,100 mm

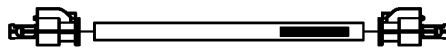


- Deutsch connector, 4 way 2)
- AX2 / HS3 FMP Harness 3)
- Diagnostic Cap 4)



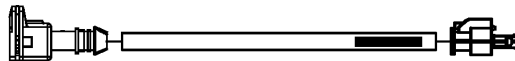
Line section 12V WP

Required if using modular cable harness HS3 CS 12V_24V 20 2900 70 0013 for a 12 V heater.
Length 1,525 mm



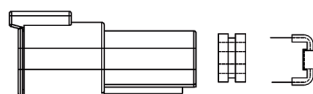
Line section 24V WP

Required if using modular cable harness HS3 CS 12V_24V 20 2900 70 0013 for a 24 V heater.
Length 1,525 mm



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



Airtronic S (2.2 kW)	Airtronic M (4 kW)	Airtronic L (5.5 kW)	Airtronic XL3	Hydronic S (5-6 kW)	Hydronic L3 (16-35 kW)	Hydronic M-II (8-12 kW)	Part number
							20.2900.70.0015
							20.2900.70.0019
							20.2900.70.0020
							20.2900.70.0022
							20.2900.70.0016
							20.2900.70.0018
							20.2900.70.0017

unrestricted use ~ restricted use

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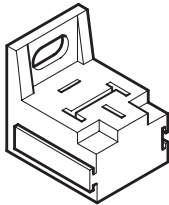
3

4

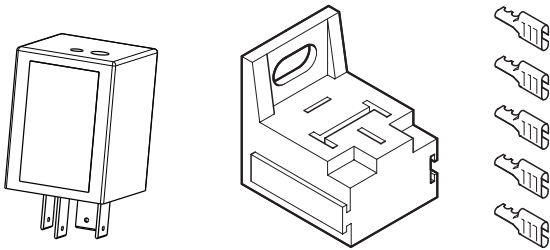
5

ELECTRICAL PARTS

Voltage divider for fan control – single part
Connector block (Base Relay 5 Pin)

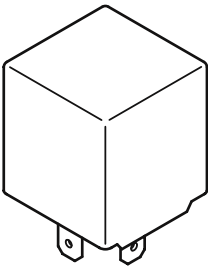


Smart IPCU retrofit kit



-- = for Hydronic S3 Economy 12V (CL and

Relay

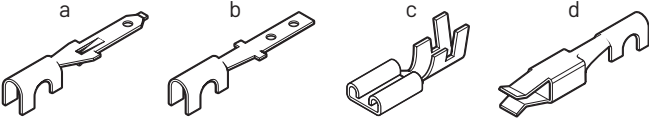
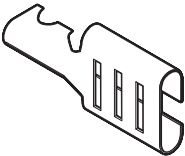
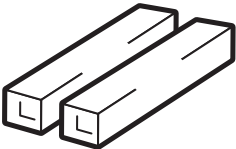


Changeover contact Max. current consumption 40 A - 12v
24v Inc Diode

Airtronic S (2.2 kW)	Airtronic M (4 kW)	Airtronic L (5.5 kW)	Airtronic XL3	Hydronic S (5-6 kW)	Hydronic L3 (16-35 kW)	Hydronic M-II (8-12 kW)	Part number
							203.00.085
				~			24.8800.00.0077
							203.00.097 203.00.066

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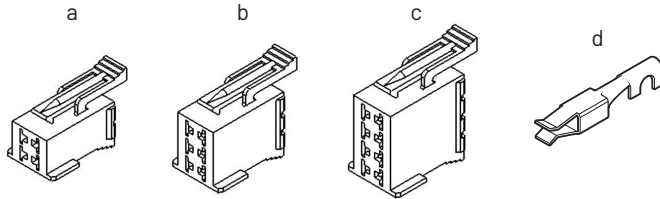
ELECTRICAL PARTS

Terminals		Airtronic S (2.2 kW)	Airtronic M (4 kW)	Airtronic L (5.5 kW)	Airtronic XL3	Hydronic S (5-6 kW)	Hydronic L3 (16-35 kW)	Hydronic M-II (8-12 kW)	Part number	
	10ga - 12ga Female, Tabs								5670174	c
	14ga - 18ga Female, Tabs								5670394	c
	Mini Terminal, AWG 16-20								206.00.180	d
	10ga - 12ga Male								5670176	a
	14ga - 18ga Male								5670175	a
	Mini Terminal, AWG 16-20								206.36.018	b
	Mini Terminal, AWG 14-18								206.00.182	d
Terminal 12033997L									5670199	c
Terminal FE Faston - 18/22 AWG									5670395	
										
Ring Terminal									5670178	
										
(3/8") AWG 10-12										
Plug and Socket Connector									206.00.040	
										

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TERMINALS AND CONNECTORS

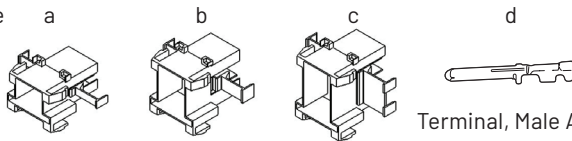
Socket Housing, Male



4 Pin
6 Pin
8 Pin

Terminal, Female AWG 16-20

Socket Housing, Female



4 Pin
6 Pin
8 Pin

Terminal, Male AWG 16-20

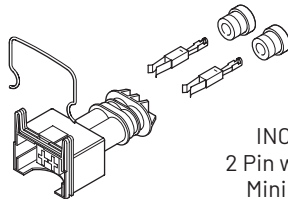
Socket Housing



Male 2 Pin "T"
Female 2 Pin "T"

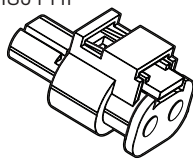
Flat Term & Tab AWG 10-12 for 20631004
Terminal w/Tab 18-14 for 20600099

Fuel Metering Pump Housing Kit for metering pump, with contacts and seals

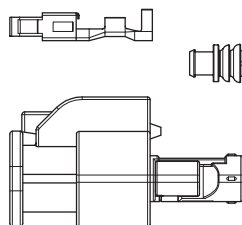


INCLUDES: terminals and seals.
2 Pin with Spring (FMP Connection)
Mini Terminal, Female AWG 16-20

Housing 2W REC MCON 1.2 Ax2/HS3 FMP



FMP Connector Kit for Hydronic S3 and Airtronic

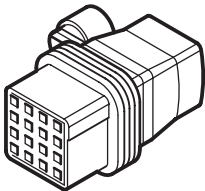


INCLUDES: terminals and seals.

Airtronic S (2.2 kW)	Airtronic M (4 kW)	Airtronic L (5.5 kW)	Airtronic XL3	Hydronic S (5-6 kW)	Hydronic L3 (16-35 kW)	Hydronic M-II (8-12 kW)	Part number	
							206.31.296	a
							206.31.297	b
							206.31.298	c
							206.00.180	d
							206.31.100	a
							206.31.106	b
							206.31.101	c
							206.36.018	d
							206.00.099	a
							206.31.004	b
							5670176	c
							5670394	d
							22.1000.31.8700	
							206.31.290	
							206.00.180	
							206.31.294	
							25.2800.90.0054	

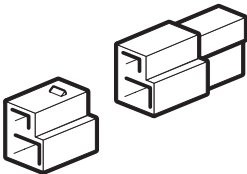
TERMINALS AND CONNECTORS

Hydronic M Square Connector



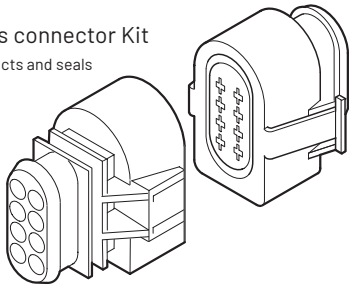
Socket Housing M Stribel Ctrl
Connector with pins

Socket Housing,

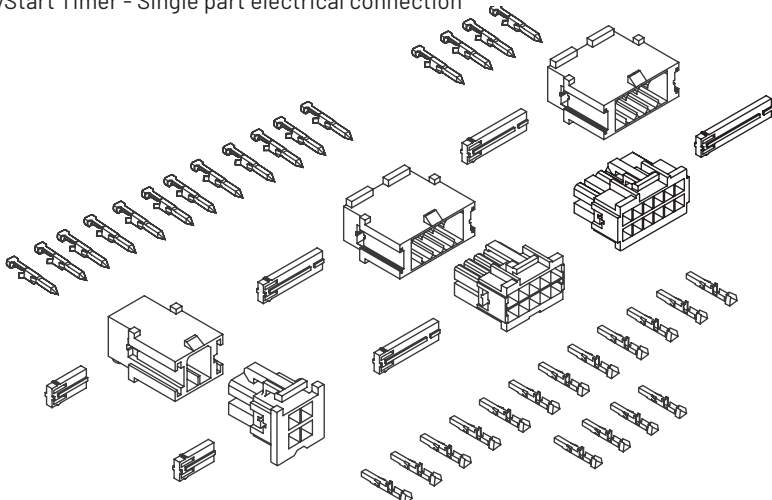


2 Pin with Spring (FMP Connection)
Mini Terminal, Female AWG 16-20
Socket Housing M Stribel Control
Plug for 206 31 319 Stribel

Hydronic 4/5 Main harness connector Kit
For the Hydronic D5S/SC, with contacts and seals



EasyStart Timer - Single part electrical connection



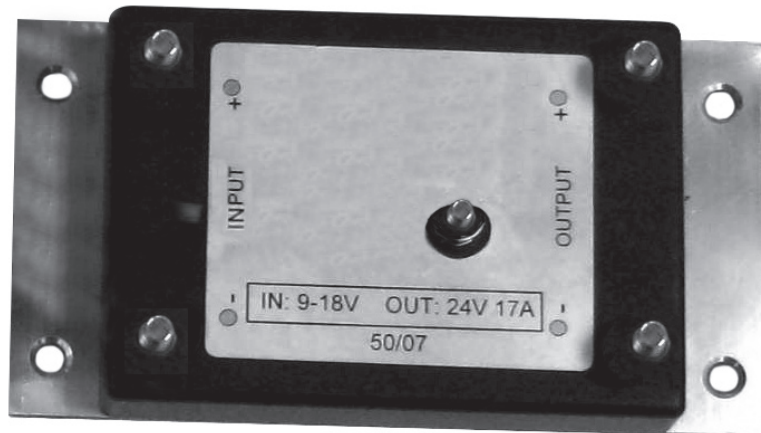
Airtronic S (2.2 kW)	Airtronic M (4 kW)	Airtronic L (5.5 kW)	Airtronic XL3	Hydronic S (5-6 kW)	Hydronic L3 (16-35 kW)	Hydronic M-II (8-12 kW)	Part number
							206.31.319 22.1000.31.9300
							206.31.290 206.00.180 206.31.319 206.75.042
							22.1000.30.1021
							22.1000.34.2600

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POWER CONVERTERS 12V TO 24V

Power Converter 12 - 24 480 W

5673601



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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.

1

2

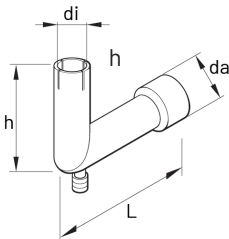
3

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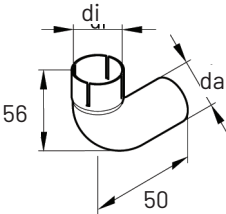
EXHAUST

Exhaust pipe elbow



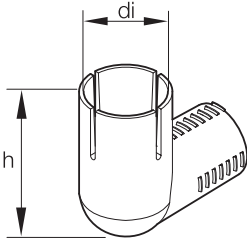
with condensate hole, di = 24 mm, da = 24 mm
without condensate hole, di = 24 mm, da = 24 mm

Exhaust pipe elbow



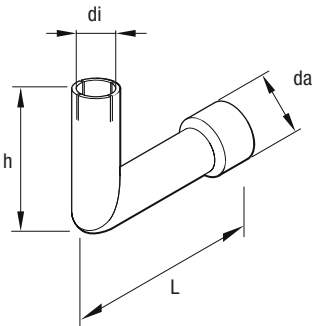
di = 24 mm, da = 24 mm

Elbow for combustion air
Plastic



di = 20 mm, h = 45 mm
di = 25 mm, h = 50 mm

Elbow

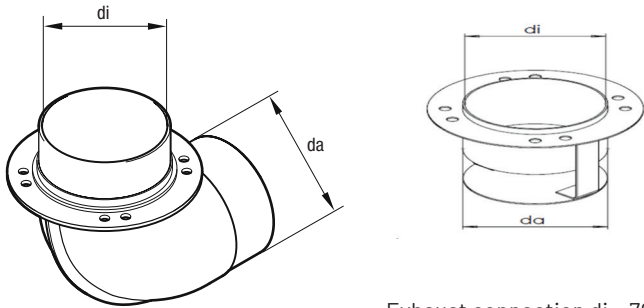


di = 24, da = 30 mm, h = 50 mm, L = 80 mm

Airtronic S (2.2 kW)	Airtronic M (4 kW)	Airtronic L (5.5 kW)	Airtronic XL3	Hydronic S (5-6 kW)	Hydronic L3 (16-35 kW)	Hydronic M-II (8-12 kW)	Part number
							24.0076.07.0100
							24.0172.01.0100
							25.2481.80.0202
							22.1000.40.0002
							22.1000.40.0001
							25.1226.89.5500

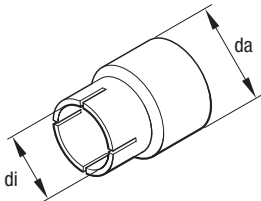
EXHAUST

Exhaust connection



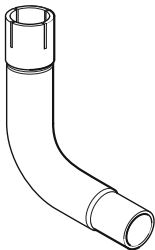
Exhaust connection di = 70 mm, da = 72 mm
Exhaust Elbow di = 70 mm, da = 72 mm

Straight Exhaust Fitting



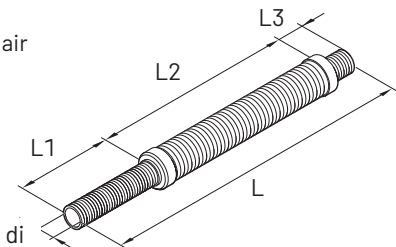
di = 24, da = 30 mm

Exhaust 90° adapter



di = 30 mm

Silencer for combustion air
Flexible

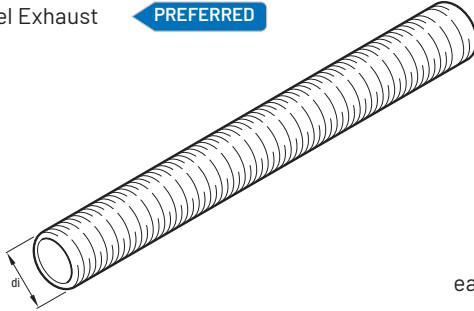


di = 25 mm, L1 = 135 mm, L2 = 405 mm, L3 = 25 mm, L = 565 mm

Airtronic S (2.2 kW)	Airtronic M (4 kW)	Airtronic L (5.5 kW)	Airtronic XL3	Hydronic S (5-6 kW)	Hydronic L3 (16-35 kW)	Hydronic M-II (8-12 kW)	Part number
							22.1000.40.0400 22.1000.40.0300
							25.1520.80.0101
							25.2800.30.1000
							20.1689.80.0500

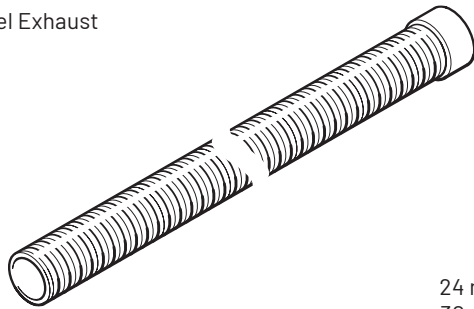
EXHAUST

Flexible Stainless Steel Exhaust

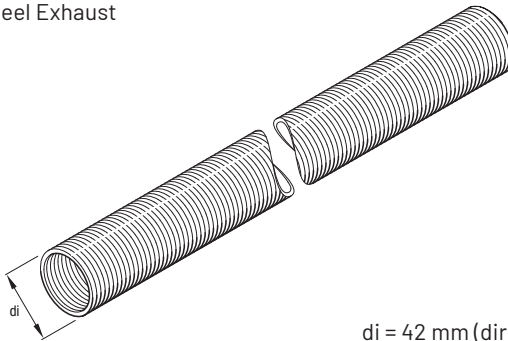
PREFERRED


each - di = 24mm (1.3 mtr)

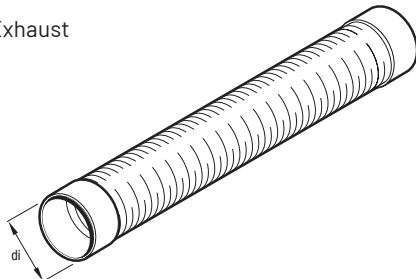
Flexible Stainless Steel Exhaust


 24 mm x 1.0 M with end cap
 30 mm x 1.3 M with end cap

Flexible Stainless Steel Exhaust


 di = 42 mm (direct connect) - per mtr
 di = 24 mm (one layer) - per mtr
 di = 24 mm (two layer) - per mtr
 di = 30 mm (one layer) - per mtr
 di = 30 mm (two layers) - per mtr

Flexible Stainless Steel Exhaust



di = 70 mm (direct connect) - per mtr

Airtronic S (2.2 kW)	Airtronic M (4 kW)	Airtronic L (5.5 kW)	Airtronic XL3	Hydronic S (5-6 kW)	Hydronic L3 (16-35 kW)	Hydronic M-II (8-12 kW)	Part number
							360.61.557
							25.1774.80.0200
							25.1816.80.0800
							5530013
							360.61.550
							360.61.299
							360.61.580
							360.61.300
							5530015

PREFERRED

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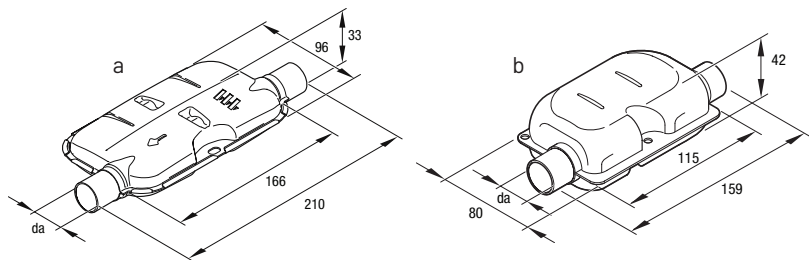
3

4

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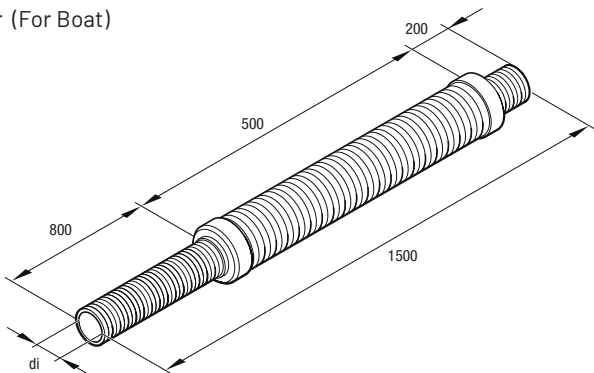
EXHAUST

Exhaust Muffler



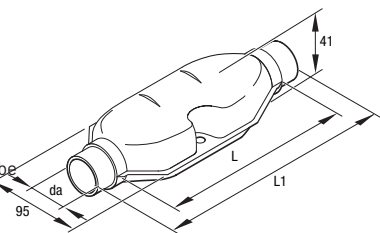
for 24mm (Slimmer-New)
for 24mm (Wider-Old)

Exhaust Muffler (For Boat)



di = 30 mm

Exhaust Muffler

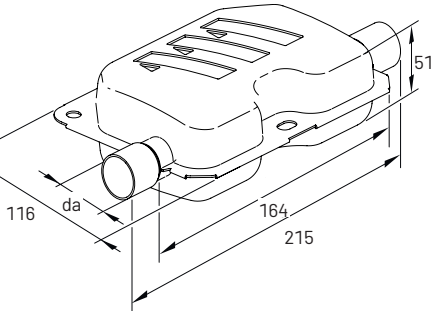


The exhaust silencer must not be installed in boat interiors.

Holder for exhaust silencer, see page 70

da = 30 mm, L = 180 mm, L1 = 224 mm

Exhaust Silencer



The exhaust silencer must not be installed in boat interiors.

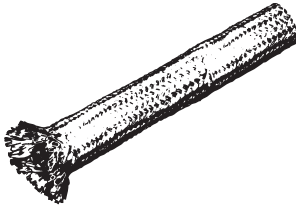
Holder for exhaust silencer, see page 70

da = 24 mm

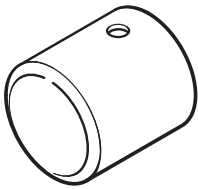
Airtronic S (2.2 kW)	Airtronic M (4 kW)	Airtronic L (5.5 kW)	Airtronic XL3	Hydronic S (5-6 kW)	Hydronic L3 (16-35 kW)	Hydronic M-II (8-12 kW)	Part number
							22.1000.40.0900 a 25.1864.81.0100 b
							25.1226.89.5800
							25.1806.80.0100
							22.1000.40.2100

EXHAUST

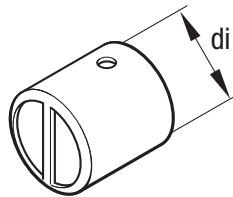
Exhaust Insulation Sock



1" for 22 mm-24 mm, ID Exhaust - per mtr
 2" for 24 mm-42 mm, ID Exhaust - per mtr
 3" for 70 mm, ID Exhaust - per mtr

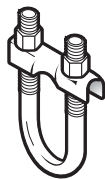
 Exhaust End Cap
 a


b



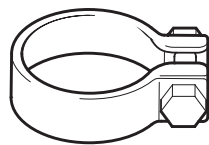
ø 24 mm
 di = 24 mm
 di = 30 mm
 di = 42 mm

Exhaust Clamp for



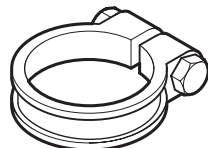
ø 70 mm

Clamp for Exhaust Pipe



ø 31 mm - ø 34 mm
 ø 26 mm
 Exhaust clamp (ø 26 mm - ø 28 mm)

Clamp for Exhaust Pipe



ø 42 mm - ø 45 mm

Airtronic S (2.2 kW)	Airtronic M (4 kW)	Airtronic L (5.5 kW)	Airtronic XL3	Hydronic S (5-6 kW)	Hydronic L3 (16-35 kW)	Hydronic M-II (8-12 kW)	Part number
							5530001
							5530002
							5530003
							25.1482.80.0001 a
							20.2900.30.2400a
							25.1785.80.0200 a
							22.1000.40.0200b
							5530004
							22.1000.51.4500
							152.61.102
							22.1000.50.0500
							152.09.004

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 $A = 19.6 \text{ cm}^2$, guide number 1.0

Hose Ø 75,

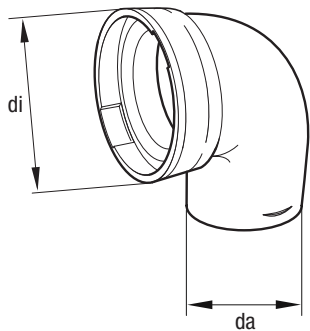
Cross-section area $A = 44.2 \text{ cm}^2$, guide number 0.25

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

unrestricted use ~ restricted use

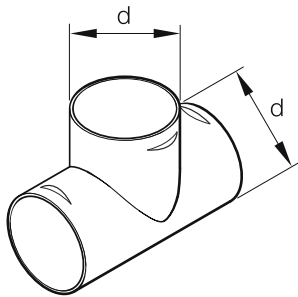
DUCTING

11
90° Bend,
Plastic Elbow



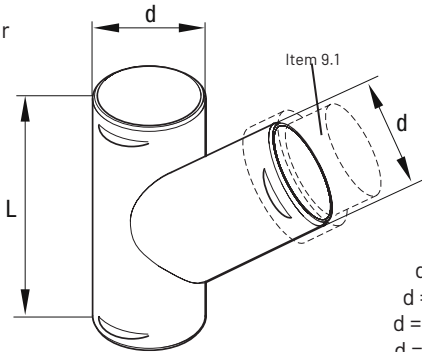
di = 60 mm (2.4"), da = 60 mm (2.4")
di = 75 mm (3"), da = 75 mm (3")

12
Plastic "T" Piece



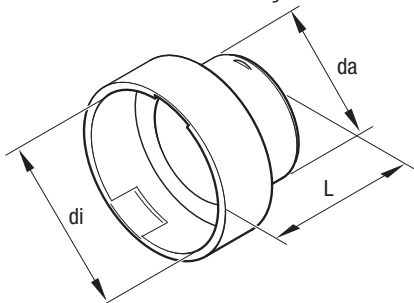
d = 60 mm (2.4")
d = 75 mm (3")
d = 90 mm (3.5")

13
45° Plastic "Y" Connector



d = 75 mm (3"), L = 175 mm
d = 100 mm (4"), L = 230 mm
d = 60 mm (2.4"), L = 145 mm
d = 90 mm (3.5"), L = 180 mm

13.1
Plastic Reducer for "Y" or Ducting Union

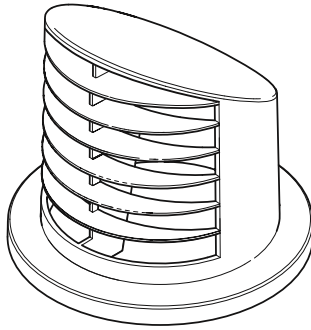


di = 90 mm (3.5"), da = 75 mm (3"), L = 45 mm
di = 75 mm (3"), da = 50 mm (2"), L = 50 mm
di = 100 mm (4"), da = 75 mm (3"), L = 50 mm
di = 100 mm (4"), da = 50 mm (2"), L = 62 mm
di = 75 mm (3"), da = 60 mm (2.4"), L = 45 mm

Airtronic S (2.2 kW)	Airtronic M (4 kW)	Airtronic L (5.5 kW)	Airtronic XL3	Hydronic S (5-6 kW)	Hydronic L3 (16-35 kW)	Hydronic M-II (8-12 kW)	Part number
							25.1688.89.0001
							25.1482.89.0005
							25.1688.89.0002
							22.1000.01.0027
							22.1000.01.0026
							25.1226.89.0044
							25.1226.89.0045
							25.1774.89.0005
							22.1000.01.0021
							22.1000.01.0012
							25.1226.89.0046
							25.1226.89.0047
							25.1226.89.0048
							25.1226.89.0050

DUCTING

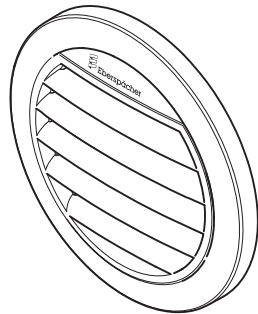
17
90° Upright Vent
(Rotatable)



Suitable for ø 50/60 mm fitting, black
Suitable for ø 75/90 mm fitting, black

Airtronic S (2.2 kW)	Airtronic M (4 kW)	Airtronic L (5.5 kW)	Airtronic XL3	Hydronic S (5-6 kW)	Hydronic L3 (16-35 kW)	Hydronic M-II (8-12 kW)	Part number
	~	~					22.1000.01.0064 22.1000.01.0068

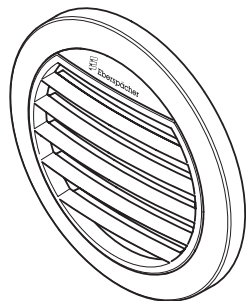
18
30° Outlet Screen (Flat)
Rotatable, see Item 4 for fitting



Suitable for ø 50/60 mm fitting, black)
Suitable for ø 75/90 mm fitting, black)

		~					22.1000.01.0044 22.1000.01.0052
--	--	---	--	--	--	--	------------------------------------

18.1
0° Outlet Screen (Flat)
(For 75/90mm flange)



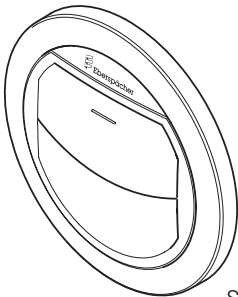
Suitable for 75/90 mm fitting, black)

							22.1000.01.0048
--	--	--	--	--	--	--	-----------------

1
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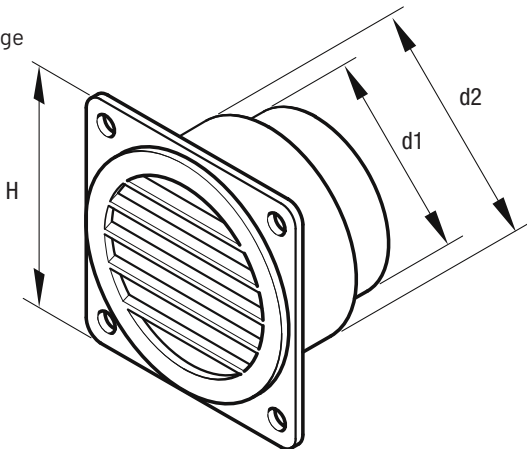
DUCTING

19
Outlet Screen Closable
Rotatable, see Ducting Flange
(Plastic) for fitting



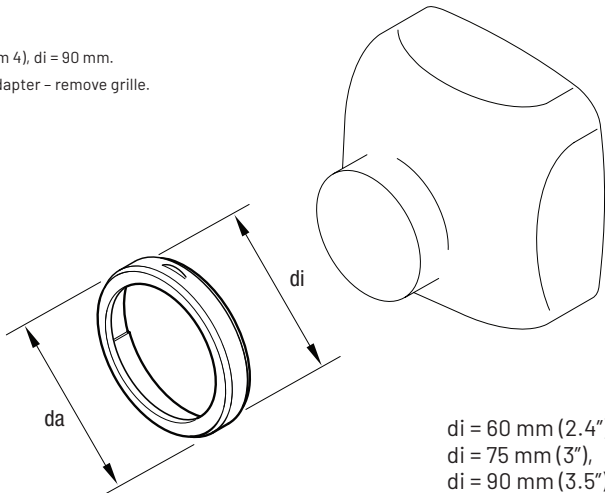
Suitable for ø 50/60 mm fitting, black
Suitable for ø 75/90 mm fitting, black

20
Outlet Vent with Flange
(Rotatable)



d1 = 90 mm (3.5"), d2 = 100 mm (4"), H = 110 mm
d1 = 75 mm (3"), d2 = 100 mm (4"), H = 110 mm

21
Adapter Ring
Protective grille (Item 4), di = 90 mm.
Can be used as an adapter - remove grille.

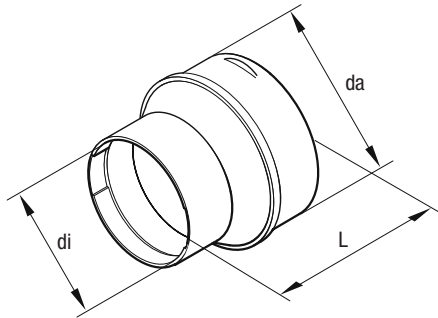


di = 60 mm (2.4"), da = 75 mm (3")
di = 75 mm (3"), da = 90 mm (3.5")
di = 90 mm (3.5"), da = 100 mm (4")

Airtronic S (2.2 kW)	Airtronic M (4 kW)	Airtronic L (5.5 kW)	Airtronic XL3	Hydronic S (5-6 kW)	Hydronic L3 (16-35 kW)	Hydronic M-II (8-12 kW)	Part number
			~				22.1000.01.0072 22.1000.01.0076
			~				20.1609.80.0900 22.1050.89.2100
							22.1000.01.0008 25.1822.89.0001 20.1607.80.0001

DUCTING

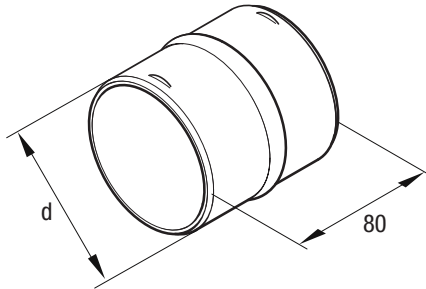
22 Plastic Reducer



~ = Check connection diameter

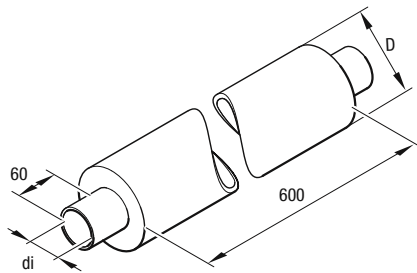
di = 60 mm (2.4"), da = 75 mm (3"), L = 40.5 mm

23 Ducting Union, straight



d = 60 mm (2.4")
d = 75 mm (3")
d = 90 mm (3.5")
d = 100 mm (4")

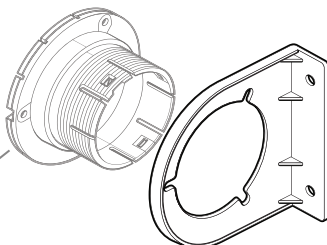
24 Air Silencer (Inlet & Outlet Duct) Hot air, aluminum



~ = Check connection diameter

di = 75 mm, D = 120 mm
di = 100 mm, D = 150 mm

Holder Connection Piece 60 HL



not included

Suitable for ø 50/60 mm fitting, black)

Airtronic S (2.2 kW)	Airtronic M (4 kW)	Airtronic L (5.5 kW)	Airtronic XL3	Hydronic S (5-6 kW)	Hydronic L3 (16-35 kW)	Hydronic M-II (8-12 kW)	Part number
~	~	~	~	~	~	~	25.1688.89.0010
~	~	~	~	~	~	~	22.1000.01.0005
~	~	~	~	~	~	~	22.1000.01.0006
~	~	~	~	~	~	~	22.1000.01.0024
~	~	~	~	~	~	~	22.1000.01.0007
~	~	~	~	~	~	~	25.1226.89.1500
~	~	~	~	~	~	~	25.1226.89.5600
~	~	~	~	~	~	~	22.1000.01.1400

~ unrestricted use ~ restricted use

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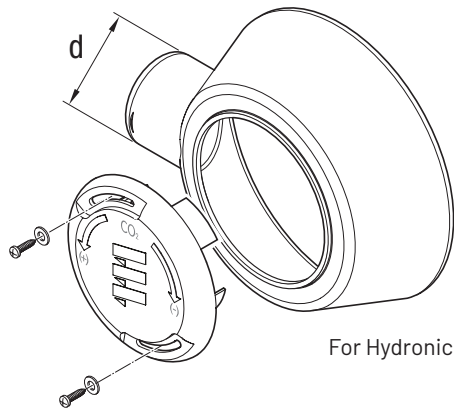
3

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5

INTAKE (COMBUSTION AIR)

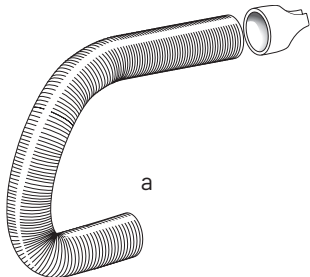
Air Intake Hood



For Hydronic L and L II heaters only

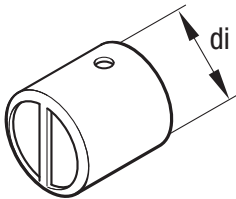
d = 60, mm (2.4")

Combustion Air Intake Flex Hose



per mtr, ID = 25 mm
per mtr, ID = 30 mm
End Cap
Hose Comb. Air - 25mm (1m)
Hose - 20mm APK Comb Air (1m)

Plastic Air Intake End Cap with Crossbar



di = 20 mm
di = 25 mm

Airtronic S (2.2 kW)	Airtronic M (4 kW)	Airtronic L (5.5 kW)	Airtronic XL3	Hydronic S (5-6 kW)	Hydronic L3 (16-35 kW)	Hydronic M-II (8-12 kW)	Part number
							22.1000.40.0600
							10.2114.21.0000 a
							10.2114.25.0000
							25.1480.89.0400 b
							360.00.006
							360.00.099
							25.1688.80.1201
							25.1729.89.0002

unrestricted use ~ restricted use

- 1
- 2
- 3
- 4
- 5

COOLANT SYSTEM - PARTS

General information:

- Install coolant pump no higher than the heater and preferably lower.
- All parts of the heater coolant system must always be below the engine's coolant level.
- When installing a coolant heater, always use hoses approved for use with vehicles, otherwise there is a danger of the hose bursting or layers of the hose separating, clogging the coolant circuit.
- Always secure coolant hoses with hose clips at connections.
- Always route coolant 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 coolant hoses to prevent kinking, and do not leave hoses hanging loose.
- Protect coolant hoses from intense heat or even contact with hot engine parts, e.g. the exhaust pipe.
- Always air-bleed the entire coolant circuit of a vehicle after any assembly operation.
- Please also refer to the safety information on this section in the heater documentation.

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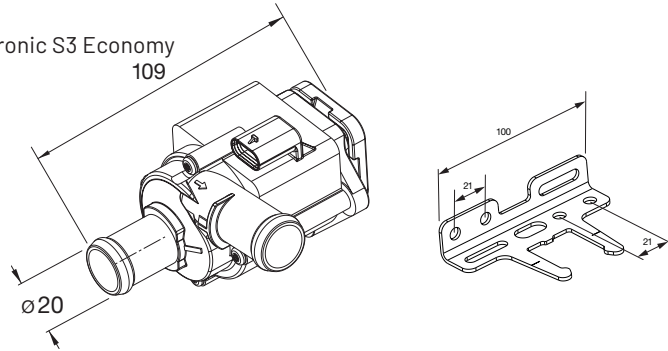
3

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COOLANT PUMPS

Coolant pump 12V for Hydronic S3 Economy

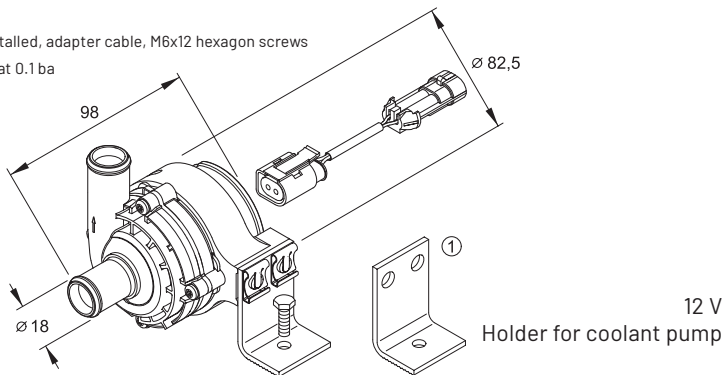


Mounting bracket for coolant pump 12 V
~ = Compatible only with Hydronic S3 Economy

Mounting bracket for coolant pump

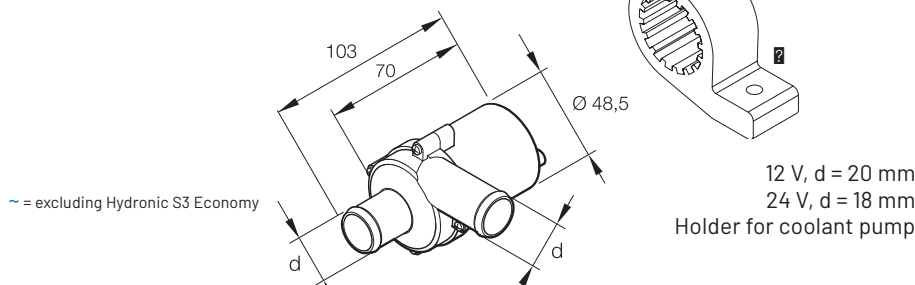
Coolant pump

with mounting bracket installed, adapter cable, M6x12 hexagon screws
Coolant flow rate 850 l / h at 0.1 bar



Flowtronic 800 S coolant pump

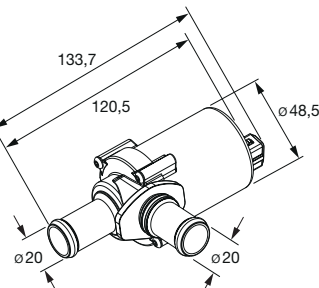
Coolant flow rate 820 l / h at 0.1 bar



~ = excluding Hydronic S3 Economy

Flowtronic 1400 coolant pump

* With Hydronic S3 Economy(12V):
EasyScan programming required (specification
ans an uncontrolled pump)



12 v without holder
24 v without holder
Holder for coolant pump

Airtronic S (2.2 kW)	Airtronic M (4 kW)	Airtronic L (5.5 kW)	Airtronic XL3	Hydronic S (5-6 kW)	Hydronic L3 (16-35 kW)	Hydronic M-II (8-12 kW)	Part number
		~		~			25.2652.25.0000 22.1000.51.3900
							25.2217.27.0000 25.2217.27.0100
							25.2275.25.0000 25.2218.25.0000 22.1000.50.0700
							25.2434.99.2701 25.2435.99.2701 22.1000.50.0700

unrestricted use ~ restricted use

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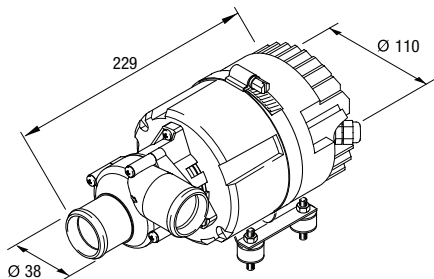
3

4

5

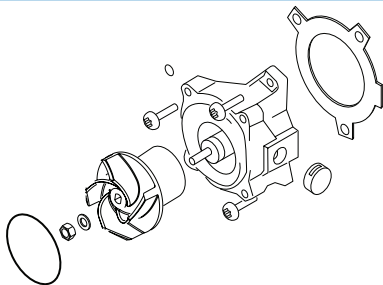
COOLANT PUMPS

Flowtronic 6000 SC coolant pump
With magnetic coupling and mounting bracket
Coolant flow rate 6,000 l / h at 0.4 bar

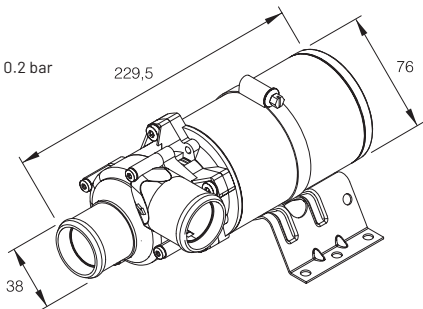


24 V

Flowtronic 6000 SC spares kit

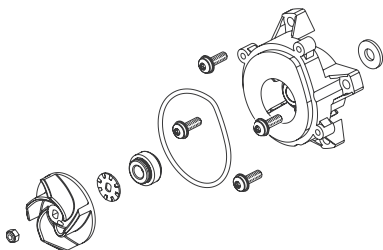


Flowtronic 5000 coolant pump
With mounting bracket, water flow rate 5,200 l / h at 0.2 bar

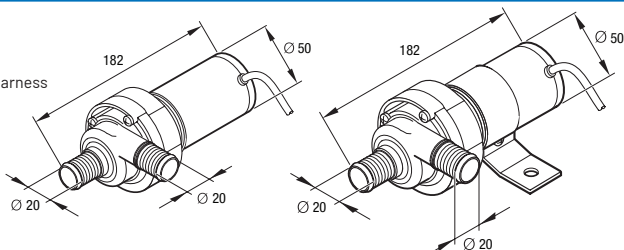


24 V

Flowtronic 5000 spares kit
For coolant pump 25.2488.26.0000



Flowtronic 1200 S coolant pump
With magnetic coupling, 200 mm long cable harness
12 V without mounting bracket,
24 V with mounting bracket
Coolant flow rate 700 l / h at 0.3 bar

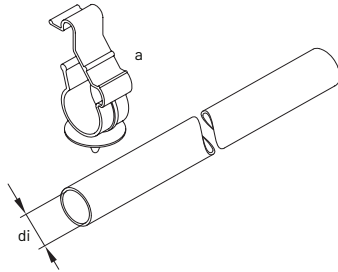


12 V without mounting bracket, cable harness without connector housing
12 V E-Guardian Coolant Pump
24 V with mounting bracket installed, cable harness with flat connector housing

Airtronic S (2.2 kW)	Airtronic M (4 kW)	Airtronic L (5.5 kW)	Airtronic XL3	Hydronic S (5-6 kW)	Hydronic L3 (16-35 kW)	Hydronic M-II (8-12 kW)	Part number
							25.2488.25.0000
							25.2488.99.2510
							25 2488 26 00 00
							25.2488.99.2610
							25.1815.25.0100
							25.2596.25.0100
							25.1816.25.0100

PLUMBING

Coolant hose
wall thickness 4.5 mm

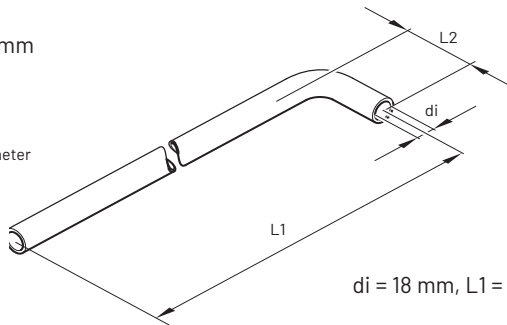


For spacer ring, see page 121

~ = check connection diameter

$$d_i = 18 \text{ mm}, L = 2 \text{ m}$$

Coolant hose
wall thickness 4.5 mm



~ = check connection diameter

$d_i = 18 \text{ mm}$, $L_1 = 1000 \text{ mm}$, $L_2 = 50 \text{ mm}$

Airtronic S (2.2 kW)				
Airtronic M (4 kW)				
Airtronic L (5.5 kW)				
Airtronic XL3				
Hydronic S (5-6 kW)				
Hydronic L3 (16-35 kW)				
Hydronic M-II (8-12 kW)				
Part number	360.75.407	20.1645.80.0001		

■ unrestricted use ~ restricted use

Plastic, $d = 18 \text{ mm}$, $L = 60 \text{ mm}$
 Brass, $d = 18 \text{ mm}$, $L = 55 \text{ mm}$
 Plastic, $d = 20 \text{ mm}$, $L = 60 \text{ mm}$
 Brass, $d = 22 \text{ mm}$, $L = 55 \text{ mm}$

$D = 20 \text{ mm}$, $d = 18 \text{ mm}$ $L = 60 \text{ mm}$

$D = 20 \text{ mm}$, $d = 18 \text{ mm}$, $L = 60 \text{ mm}$

D = 18 mm, d = 15 mm, L = 65 mm
D = 20 mm, d = 20 mm, L = 75 mm

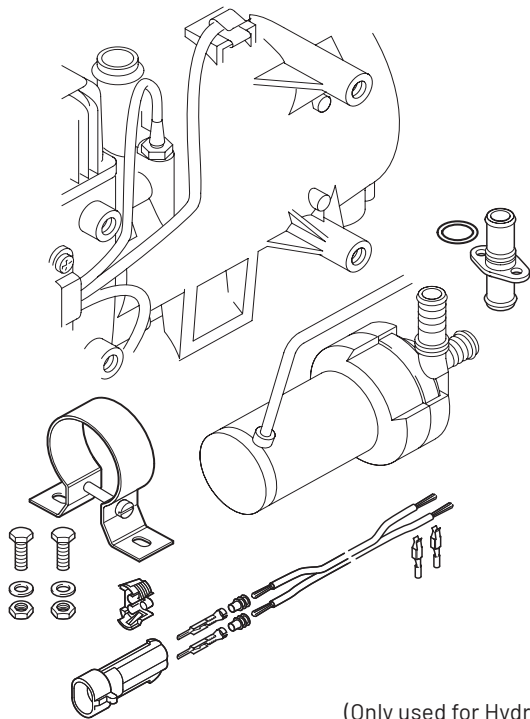
D = 18 mm, d = 15 mm, L = 65 mm
D = 20 mm, d = 20 mm, L = 75 mm
D = 20 mm, d = 20 mm, L = 75 mm

[illegible]

■ unrestricted use ~ Restricted use

PLUMBING

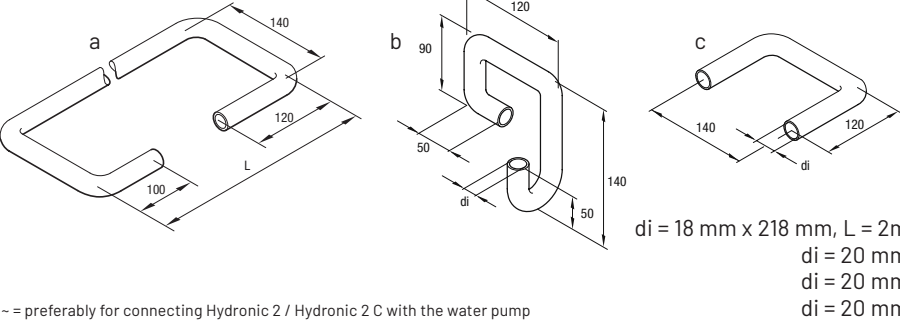
Conversion Kit for Water Pump



(Only used for Hydronic 10/M)

22.1000.10.0100

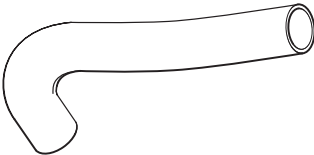
180° Coolant Hose



~ = preferably for connecting Hydronic 2 / Hydronic 2 C with the water pump

20.1690.81.0001 a
25.1917.80.0001 a
25.2526.80.0102 b
24.0117.80.0001 c

90° Hose Bend



20 mm x 0.29 m

20.2900.60.1023

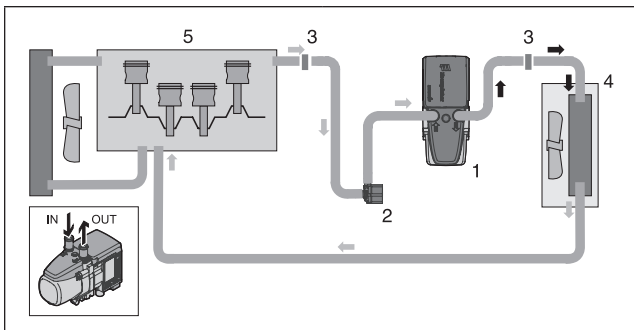
COOLANT CIRCUITS ON A HYDRONIC S3 ECONOMY

"Inline integration" of cooling circuit:

Cut through the coolant feed hose from the vehicle engine to the vehicle convector. Connect the heater and coolant pump to the coolant feed hose using connection fittings and coolant hoses. Run and connect a coolant hose from the coolant pump pressure fitting to the heater coolant 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 | 4 Convactor |
| 2 Coolant pump | 5 Vehicle engine |
| 3 Connecting piece | |

Cooling circuit with check valve:

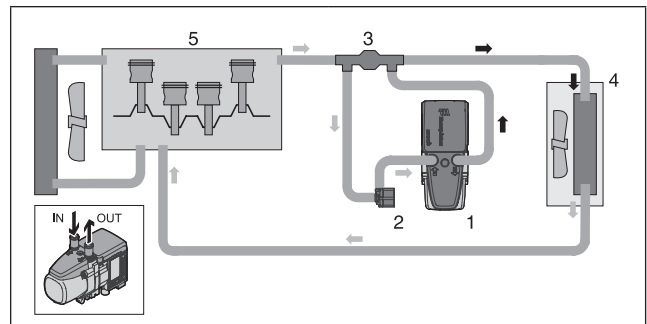
Cut through the coolant feed hose from vehicle engine to the vehicle convector, and insert the check valve. Connect the heater and the coolant pump to the check valve using coolant hoses. Run and connect a coolant hose from the coolant pump pressure fitting to the heater water inlet fitting.

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 | 4 Convactor |
| 2 Coolant pump | 5 Vehicle engine |
| 3 Check valve | |



Note:

- The check valve must be ordered separately.

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COOLANT CIRCUITS ON A HYDRONIC S3 ECONOMY

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.

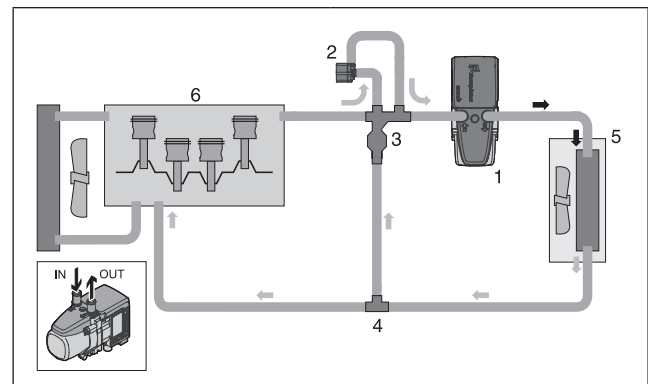
Once the coolant temperature reaches around 67 °C, some of the heat from the heater is also conveyed to the engine. This allows the engine to be pre-heated while preventing the "small cooling circuit" for interior heating from cooling too fast.

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

1

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3

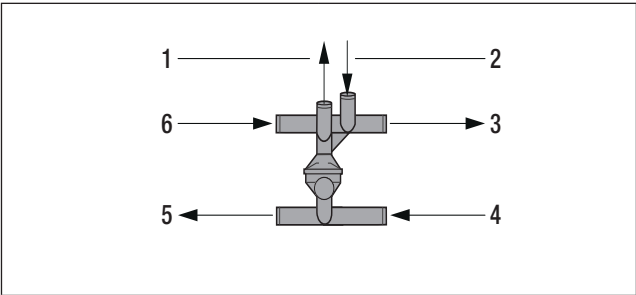
4

5

COOLANT CIRCUITS ON A HYDRONIC S3 ECONOMY

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.

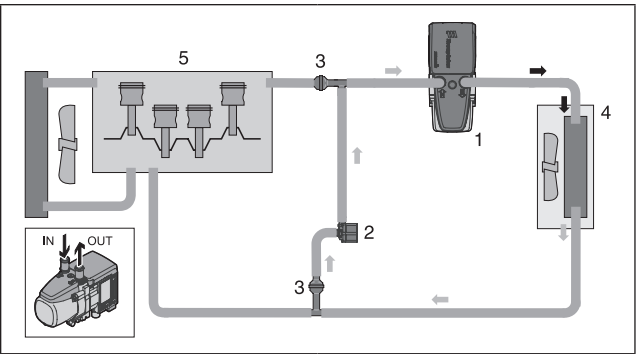


- | | |
|-------------------|--------------------------|
| 1 To water pump | 4 From vehicle convector |
| 2 From water pump | 5 To vehicle engine |
| 3 To heater | 6 From vehicle engine |

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

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

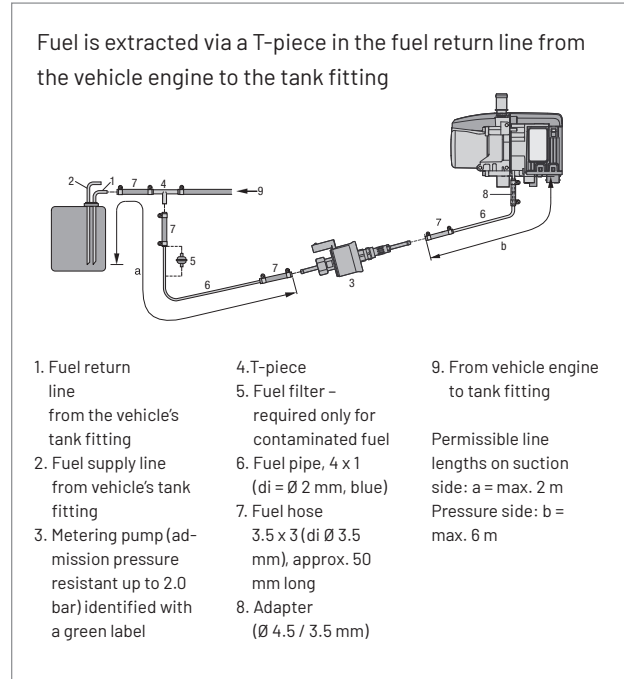
Please note! The following version of the Hydronic S3 Economy includes the admission-pressure-resistant metering pump:

D5E 12 V: 25.2994.05.0000

Gasoline:

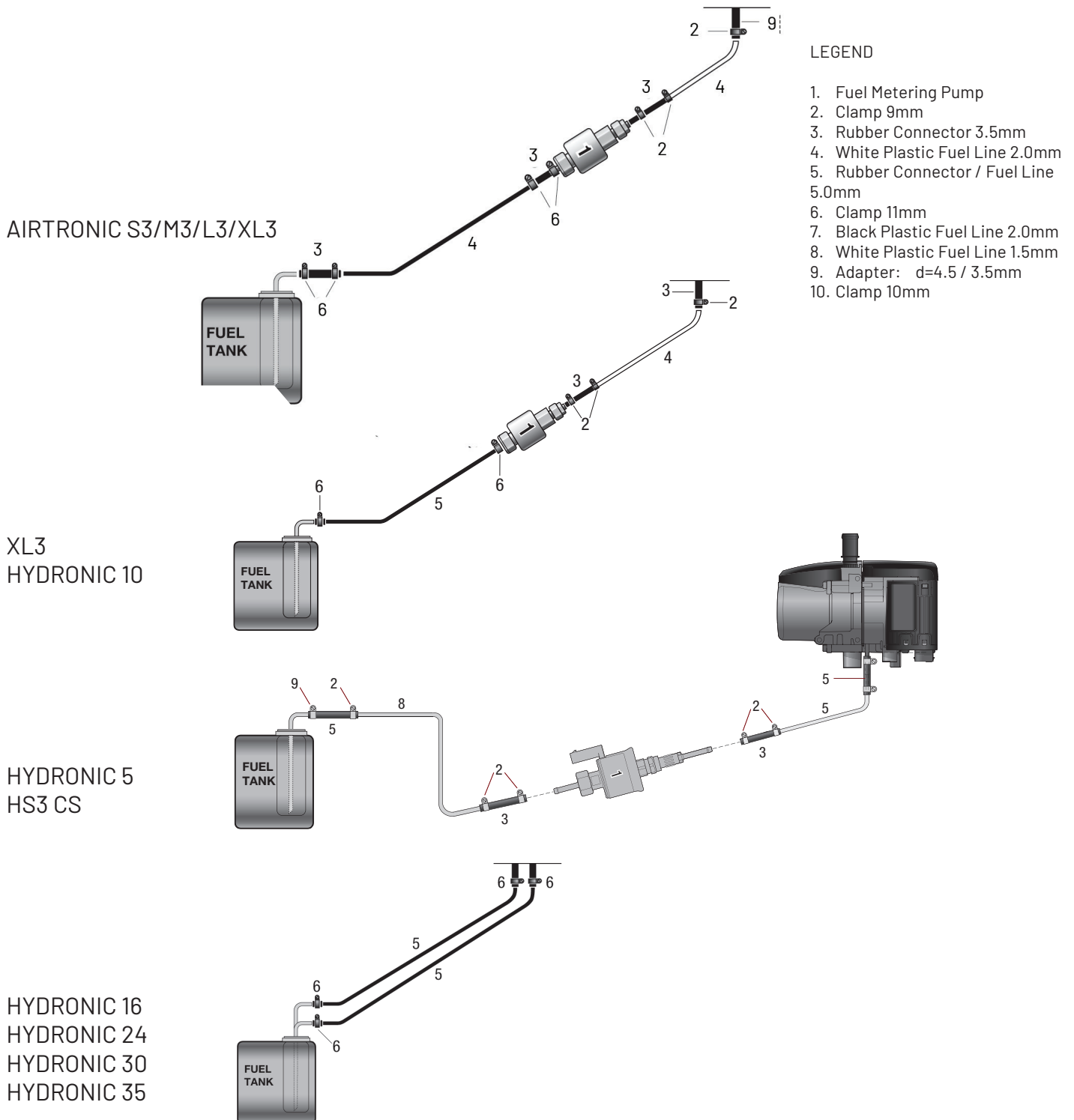
- Gasoline applications with an admission pressure of > 0.2 bar still require the pressure reducer

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.

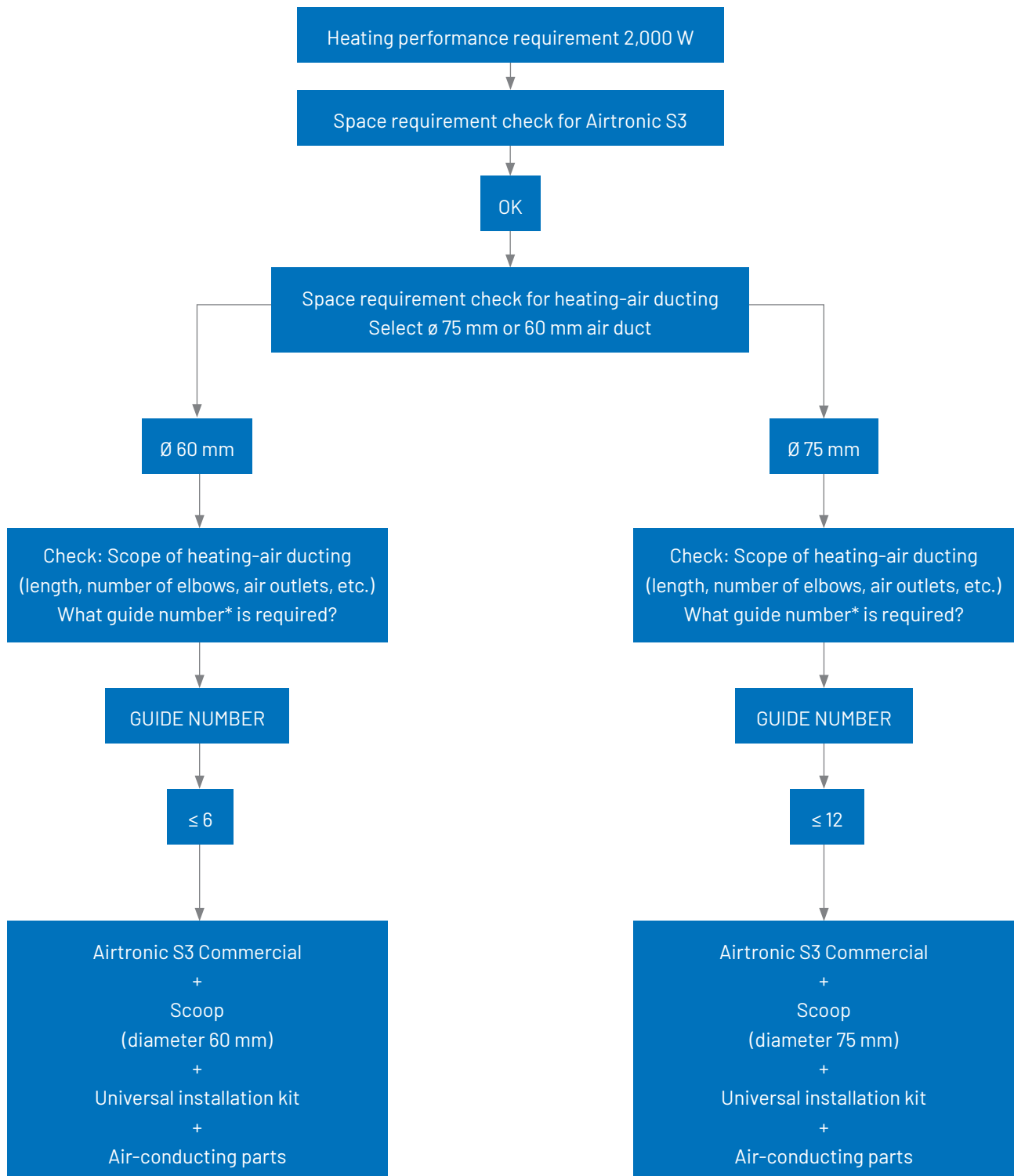


FUEL SYSTEM GUIDE

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.

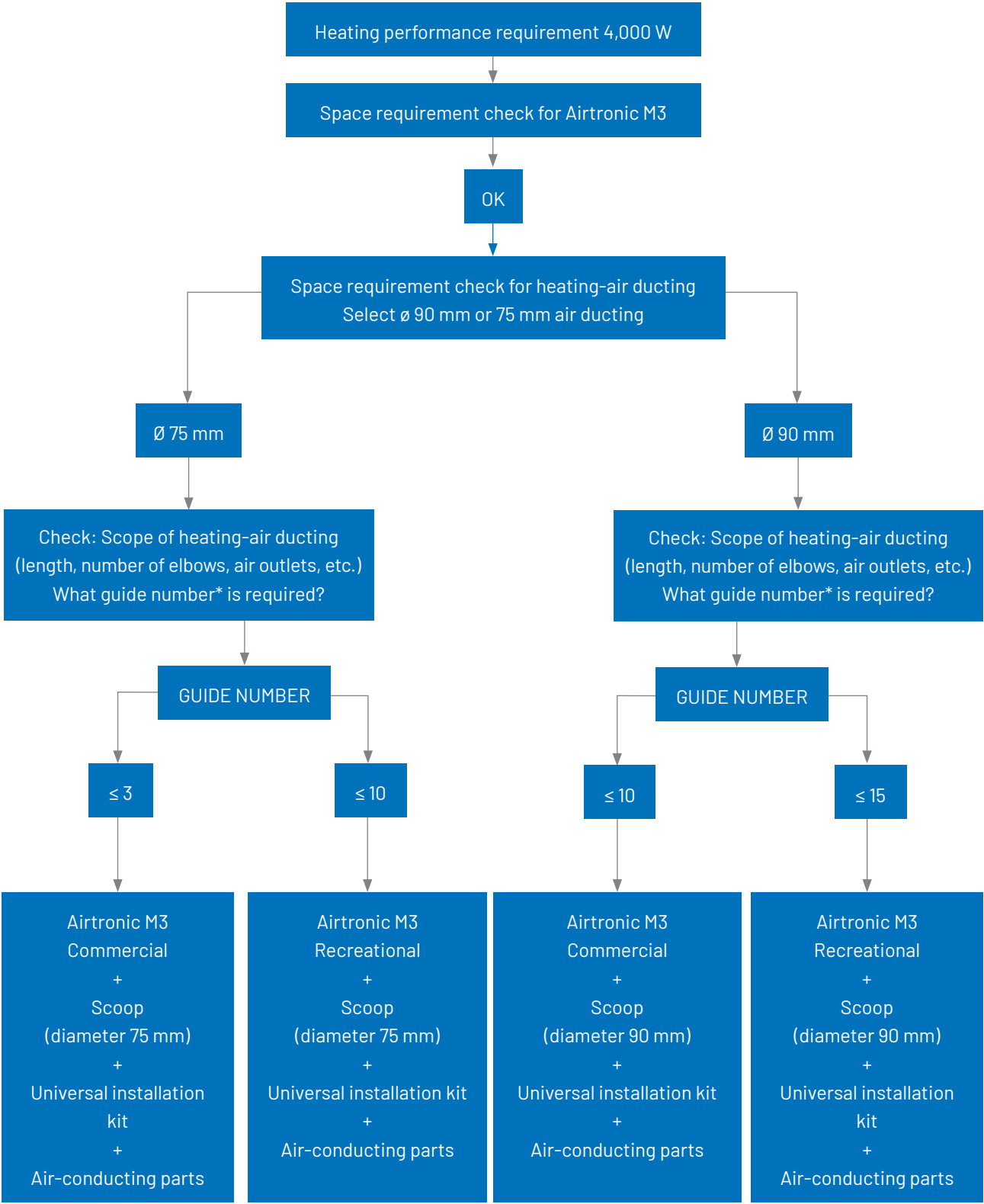


SELECTING THE AIR HEATER



* 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



- 1
- 2
- 3
- 4
- 5

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:

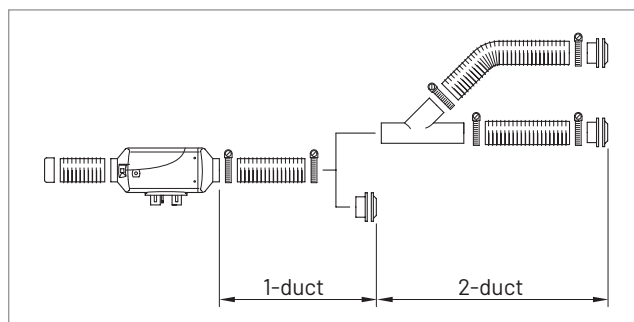
Hose Ø 60,

Cross-section area A = 19.6 cm², guide number 1.0

Hose Ø 75,

Cross-section area A = 44.2 cm², 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, 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.

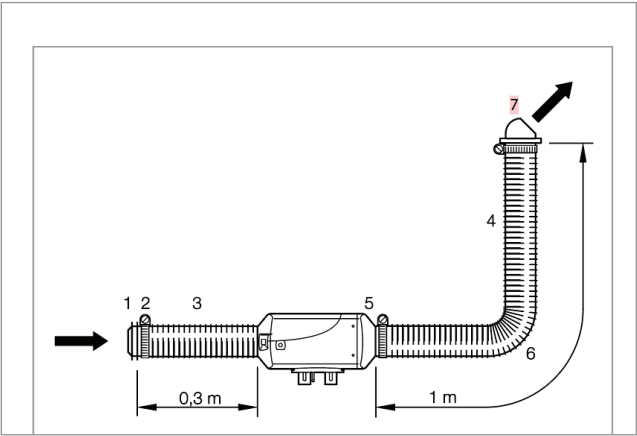


Example calculation for heating-air ducting:

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 inadmissible 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

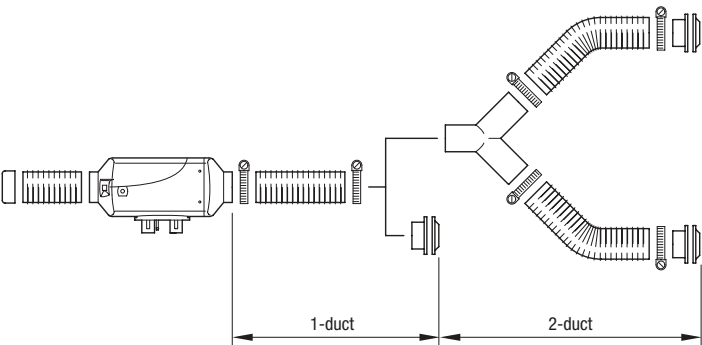
The sum of component ratings for the heating air ducting components must not exceed the heater rating, otherwise the outlet temperature will become too high and trigger the safety cutout switch. If the sum of the component ratings exceeds the heater rating, it can be reduced by selecting a larger diameter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

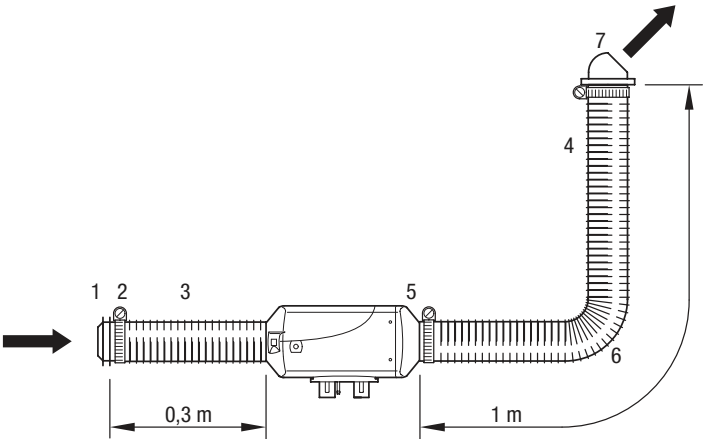
MAIN-LINE DRAWING FOR 1-DUCT AND 2-DUCT HEATING AIR SYSTEM



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

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



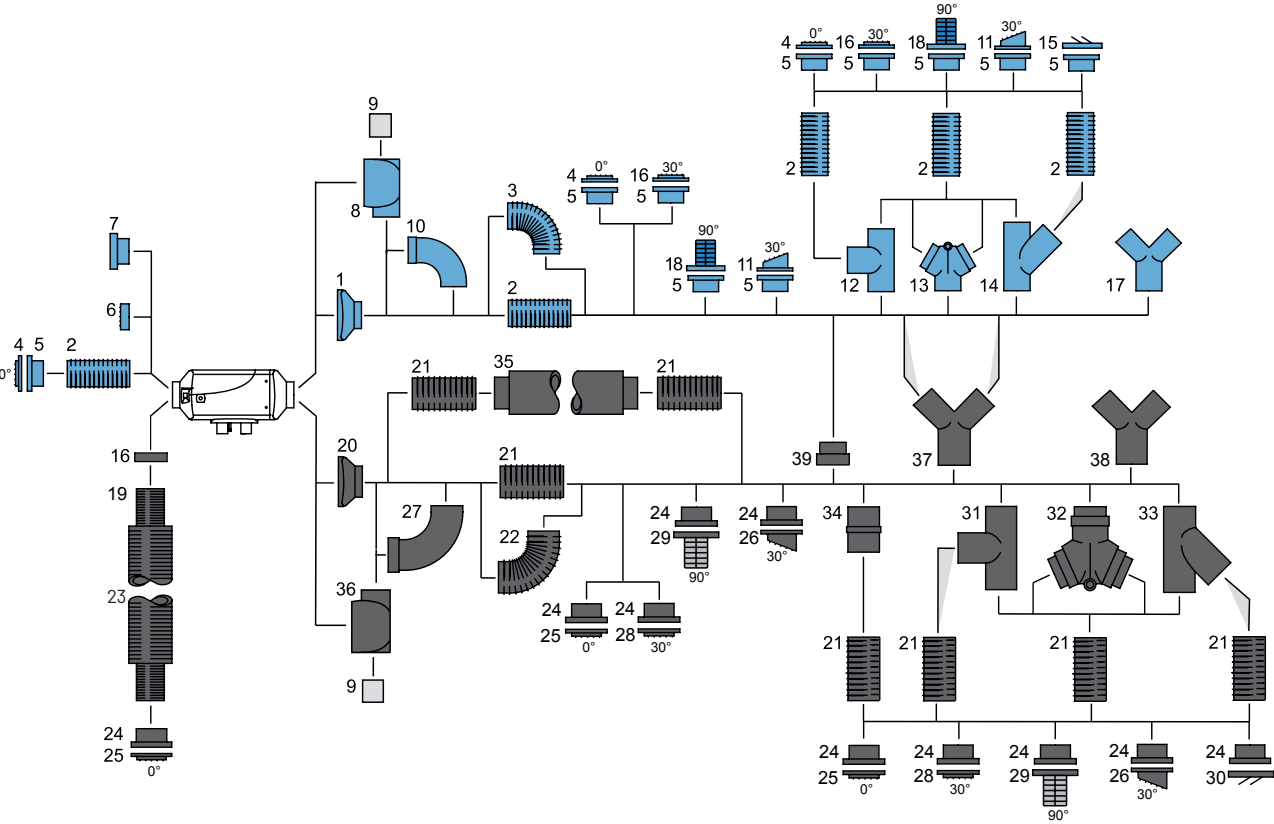
Rating sum = 5.2 and does not exceed the heater rating of 6. The installation is permissible.

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 scoop Ø 60	4.8	-	32
9	Connection fitting Ø 50 for ball-shaped scoop Ø 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 scoop Ø 75	6	-	32
37	Symmetrical plastic Y-junction Ø 75/60/60	-	0.8	42
38	Symmetrical metal Y-junction Ø 75/50/50	-	0.9	42.1
39	Adapter Ø 75 - 60	3.2	-	45

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GUIDE NUMBERS

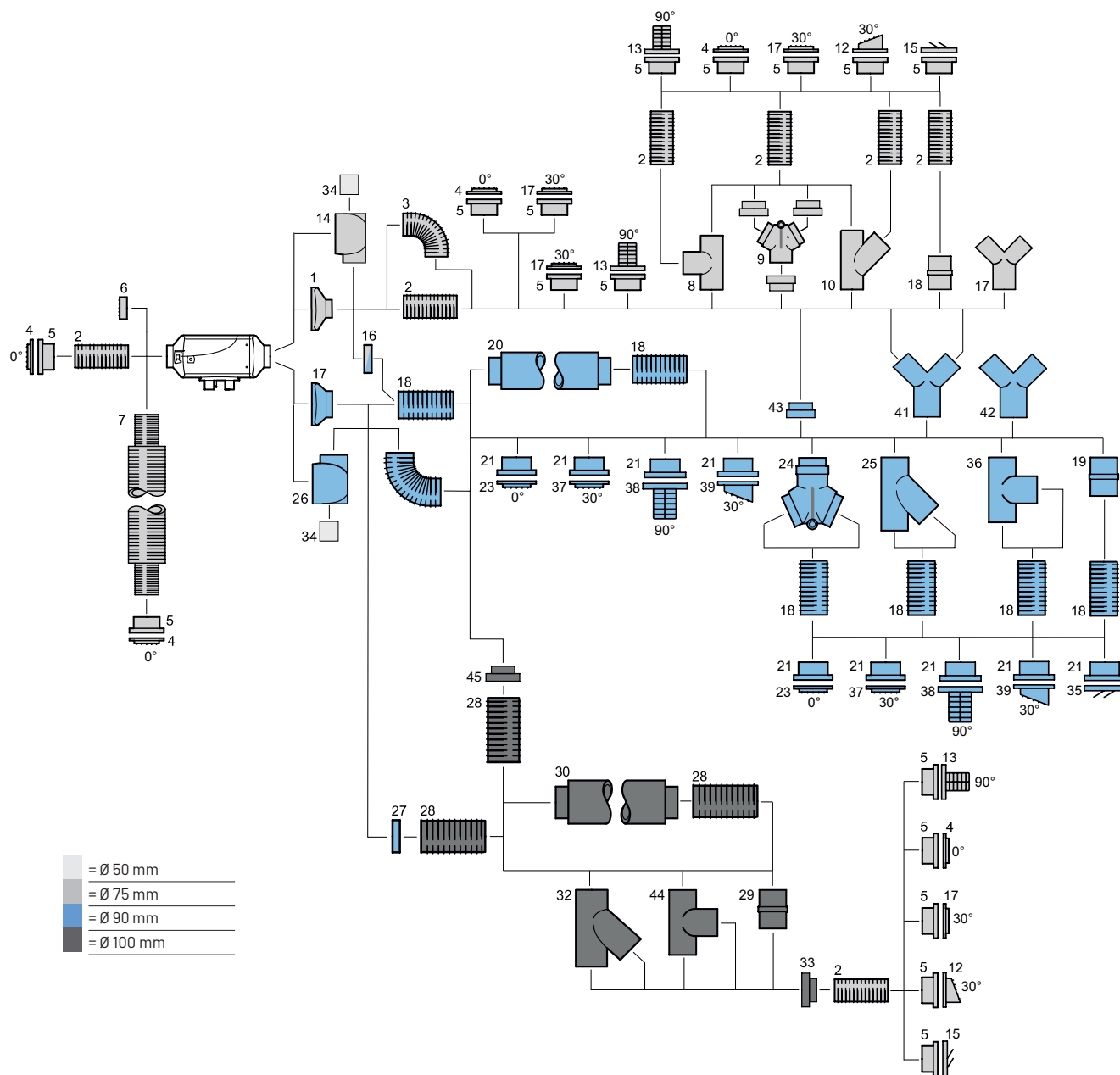
Airtronic M3 Commercial

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		Line guide number		see ser. no., section 8 „Air-conducting parts“
		1-duct		2-duct		
		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 Ø 75	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 Ø 75	0.4	-	0.1	-	11
12	Upright air outlet 30° with fitting Ø 75	0.6	-	0.2	-	10
13	Upright air outlet 90° with fitting Ø 75	1.1	-	0.3	-	14
14	Ball-shaped scoop Ø 75	2.0	-	-	-	32
15	Closable air outlet with fitting Ø 75	-	-	-	-	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 scoop Ø 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

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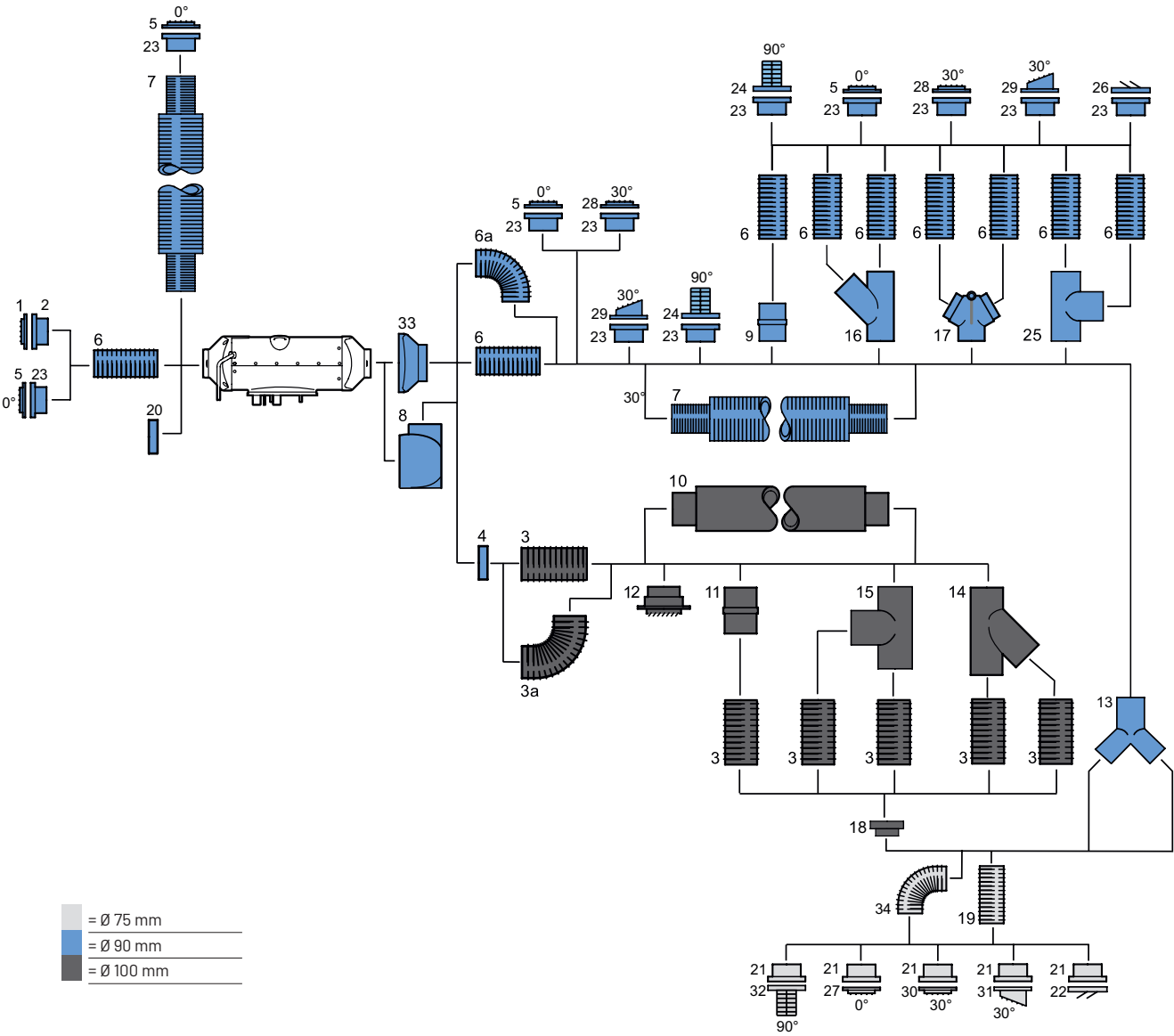
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GUIDE NUMBERS

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 scoop Ø 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

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ELECTRIC HEATERS

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

- i

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 GENERATION 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 to 120	

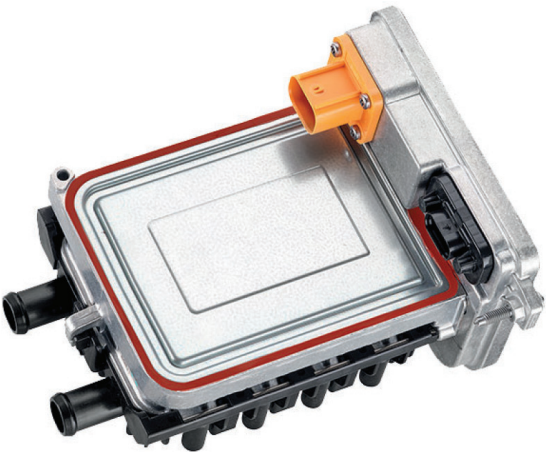
*Un = 360 V, T co = 60 C, Oco" 10 l/min, Coolant = 50:50

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

Description	Part Number
Titronic CHHV 50 G3 T	21.2203.05.0000
Titronic CHHV 70 G3 T	21.2202.05.0000



CHHV 50 G3T / CHHV 70 G3T

NOTES:

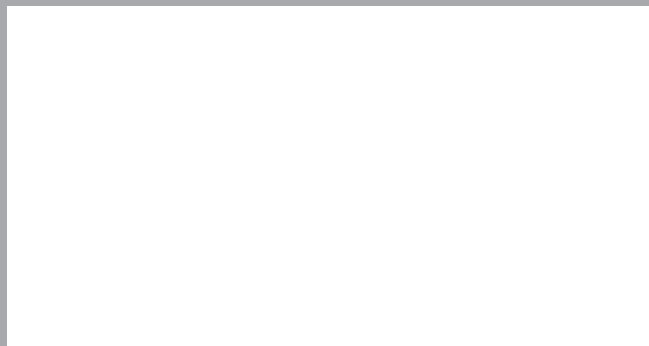
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