

VEHICLE HEATERS, ADDITIONAL PARTS, INSTALLATION TIPS AND TECHNICAL DATA



TABLE OF CONTENTS

1	HEATING SYSTEMS	
	HEATING SYSTEMS – AIR OR WATER	5
	Hydronic – WATER HEATERS	6
	AIRTRONIC – AIR HEATERS	7
2	HYDRONIC	
	TECHNOLOGY	8 – 11
	DEVICE OVERVIEW	12 – 15
	DEVICE RANGE	16
	VEHICLE-SPECIFIC ADDITIONAL PARTS	17
	DOMPLETE PACKAGES / UNIVERSAL INSTALLATION KITS	18
	PARTS RANGE	20 – 22
	CONTROL UNITS	23 – 25
	OPTIONAL ADD-ONS	26 – 33
3	AIRTRONIC	
	TECHNOLOGY	34
	DEVICE OVERVIEW	35 – 36
	DEVICE RANGE	37 – 39
	INSTALLATION PARTS	40 – 55
	CONTROL UNITS	56 – 57
	OPTIONAL ADD-ONS	58 – 59
4	SERVICE	
	EASYSCAN DIAGNOSTIC AND SERVICE TOOL	60 – 61
	OTHER DIAGNOSTIC DEVICES	62
	TESTING EQUIPMENT	63
	SERVICE / REPLACEMENT DEVICE PROGRAM	64
	REPLACEMENT DEVICES PROGRAM	65
	ADDITIONAL HEATERS / OEM HEATERS	66
5	FAN CONTROL	
	FAN & FLAP MODULE EASYFAN	67 – 68
	A/C KIT WITH IPCU FOR CONTROLLING THE VEHICLE'S FAN	69
6	THE BENEFITS	
	THE BENEFITS FOR WORKSHOPS	70
	THE BENEFITS FOR END CUSTOMERS	72 – 73

ACCESSORIES		
7	WATER-CONDUCTING PARTS	76 – 81
8	AIR-CONDUCTING PARTS	83 – 91
9	FUEL-CONDUCTING PARTS	92 – 98
10	ELECTRICAL PARTS / TESTING EQUIPMENT	99 – 113
11	EXHAUST-CONDUCTING AND COMBUSTION-AIR-CONDUCTING PARTS	116 – 123
12	FASTENING PARTS	124 – 133
13	NAME PLATES / INFORMATION SIGNS	134 – 136
14	ADDITIONAL PRODUCTS – CONVECTORS AND INDIVIDUAL DEVICES	137 – 145



1 | HEATING SYSTEMS – AIR OR WATER?

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-HEATERS – 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 transporter at a pleasant level even while it is at a standstill (e.g. overnight).

WATER-BASED PRE-HEATERS – 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 cooling water. An (additional) electric circulation pump distributes the heat, 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 also heat 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 on the one hand, and lowers CO₂ emissions on the other.

Both systems generally run on the vehicle's fuel, straight out of the fuel tank. Depending on the model, heaters can be activated with a timer switch, radio remote control or cellphone.

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1 | HEATING SYSTEMS: HYDRONIC – WATER HEATERS

HYDRONIC 4 KW:

Cab and engine heater



Passenger cars (up to 2.0 l displacement)



Emergency vehicles



Station wagons (with additional thermo-combi valve if using Hydronic 4; ideally use Hydronic 5)



Small agricultural and construction machinery



Motor yachts up to around 22 ft long*

HYDRONIC 5 KW:

Cab and engine heater



Passenger cars, station wagons (up to 2.5 l displacement; for 2.6 l displacement or greater we always recommend the Hydronic 2 Comfort)



Emergency vehicles



Vans, large taxis, minivans



Commercial vehicles, including tandem configurations with air heaters



Construction and agricultural machines



Motor yachts up to around 25 ft long



Motor homes*

HYDRONIC M8 / M10 / M12:



Commercial vehicles from approx. 150 kw engine power



Cargo area heating



Military vehicles



Large agricultural and construction machinery



Motor yachts up to approx. 45 ft long



Motor homes

HYDRONIC L16 / L24 / L30 / L35:



Coaches and city buses



Large freight compartments for goods which need to be kept warm



Container setups



Diesel locomotives



Yachts and ships up to approx. 72 ft long

* The heater is approved for mains operation (230 V/50 Hz), e.g. in camping or parking areas for motor homes or in marinas for boats, only in combination with a special cable harness (order no.: 25 2652 82 11 00, see p.108). The cable harness is included in the universal installation kit for recreational vehicles and boats (order no.: 25 2652 82 00 00).

1 | HEATING SYSTEMS: AIRTRONIC – AIR HEATERS

AIRTRONIC D2:

Heating comfort for a variety of applications.



Truck cabs with sleeping cabins



Construction and agricultural machinery without engine-dependent heating



Forklifts and other plant machinery



Electric vehicles



Yachts up to approx. 22 ft long

AIRTRONIC D4 / D4 PLUS / B4:

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



Large trucks – cabs with sleeping cabins



Vans, small buses



Large agricultural and construction machinery



Yachts up to approx. 35 ft long

AIRTRONIC D3:

For demanding long-term heating requirements.
Quiet and energy-saving.



Motor homes



Minivans, and vehicles used for conferences and consultancy



Large truck / luxury cabs with sleeping cabins

AIRTRONIC D5 / B5:

TRS-enabled, continuously variable, pre-selectable Interior temperature regulation.



Vans, workshop vehicles and 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



Yachts and ships up to approx. 45 ft long

D8 LC:

Continuously variable, pre-selectable interior temperature regulation.



Large freight compartments, containers



Personnel carriers

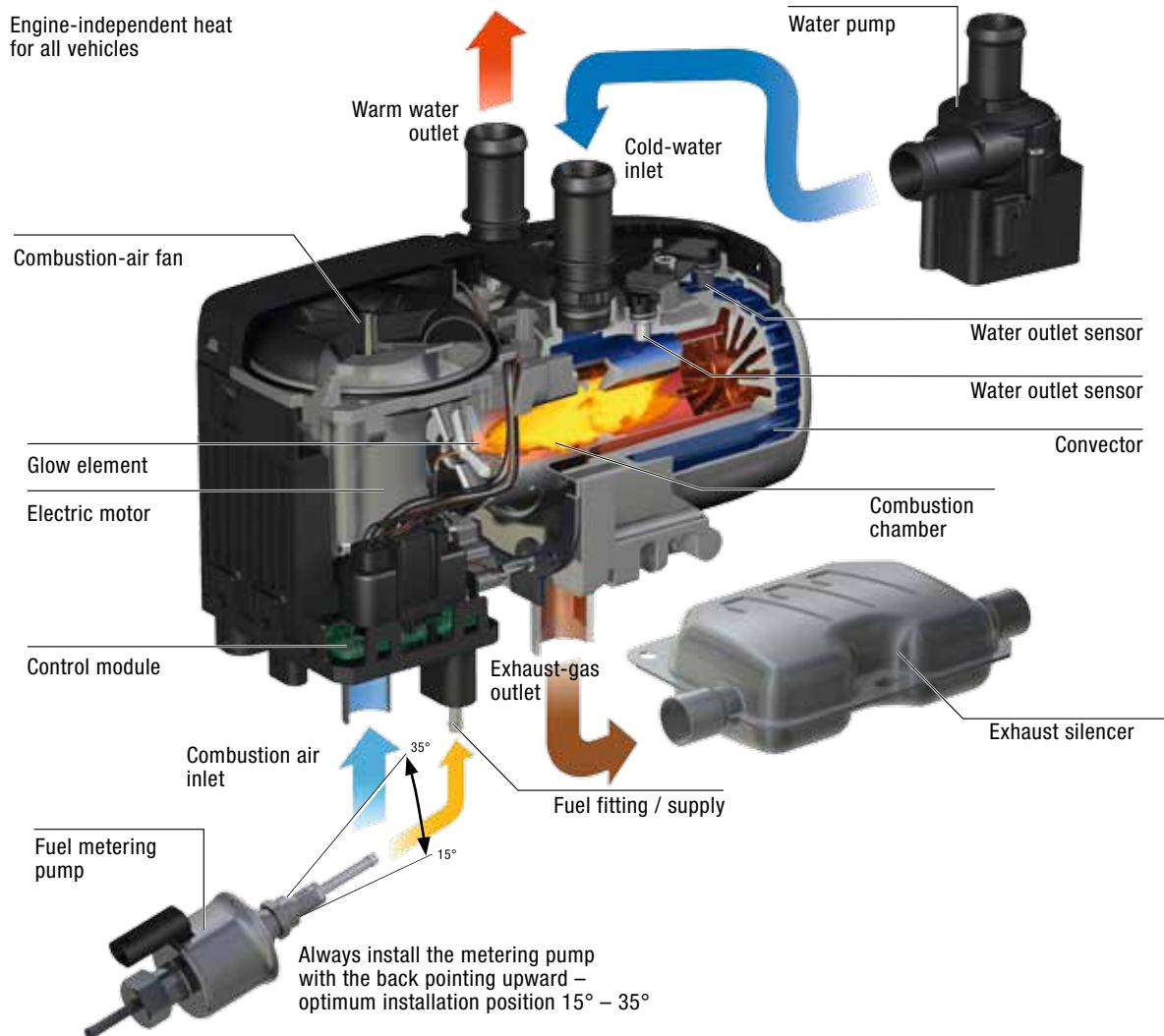


Coaches and city buses



Ships up to around 62 ft long

2 | HYDRONIC S3 ECONOMY: TECHNOLOGY

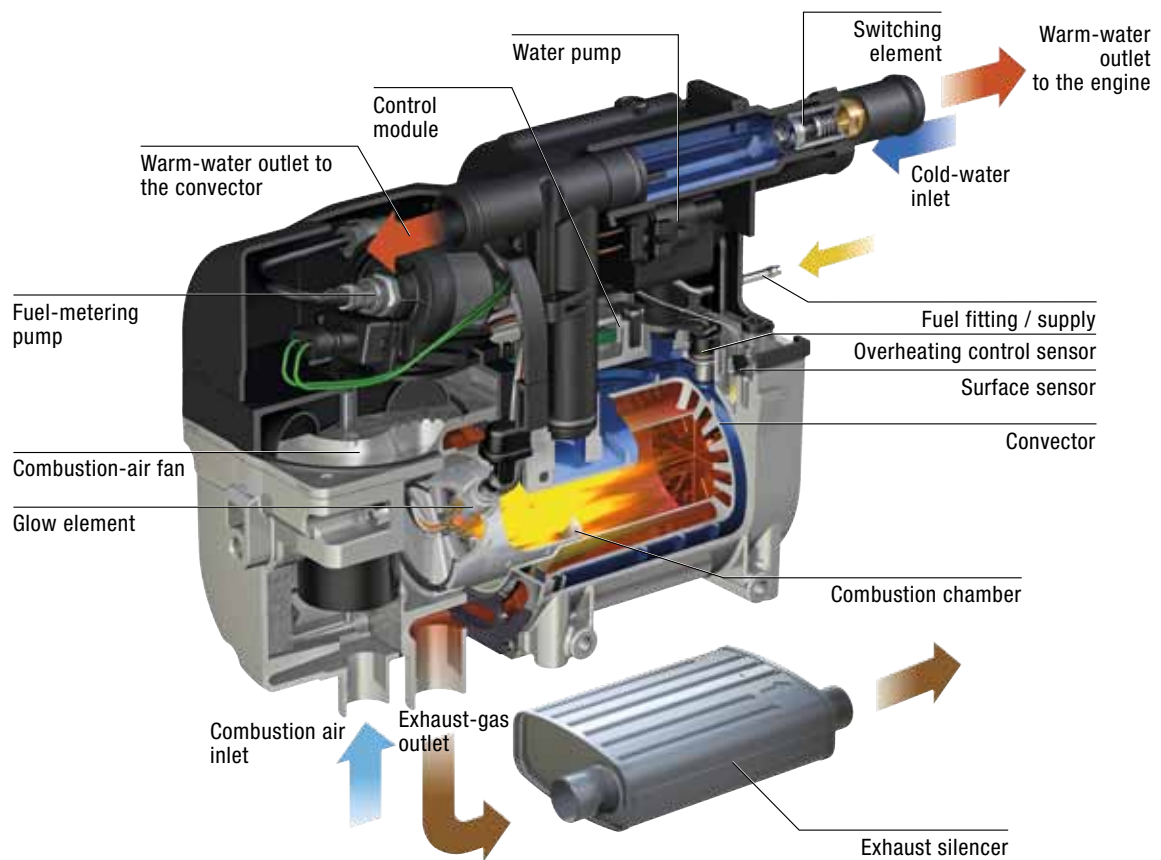


HYDRONIC S3 ECONOMY* FUNCTIONS:

- Combustion air is conveyed to the combustion chamber by the fan motor and impeller.
- Fuel is drawn from the vehicle's tank.
- Fuel is conveyed 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.

* The heater is approved for mains operation (230 V/50 Hz), e.g. in camping or parking areas for motor homes or in marinas for boats, only in combination with a special cable harness (order no.: 25 2652 82 11 00, see p.108). The cable harness is included in the universal installation kit for recreational vehicles and boats (order no.: 25 2652 82 00 00).

2 | HYDRONIC 2 COMFORT: TECHNOLOGY



HYDRONIC 2 COMFORT FUNCTIONS:

- See Hydronic functions (page opposite)
- The Hydronic 2 Comfort has an inbuilt thermostat valve in the comfort circuit which ensures that the vehicle interior is warmed first. When the cooling water temperature is at least 67°C the valve then opens the wider circuit in order to route heat to the vehicle's combustion engine. By this point the vehicle interior has already reached a temperature which enables the windows to thaw completely.
- The Hydronic 2 Comfort is therefore absolutely ideal for short-distance car drivers, as the short heating time puts less load on the vehicle battery.

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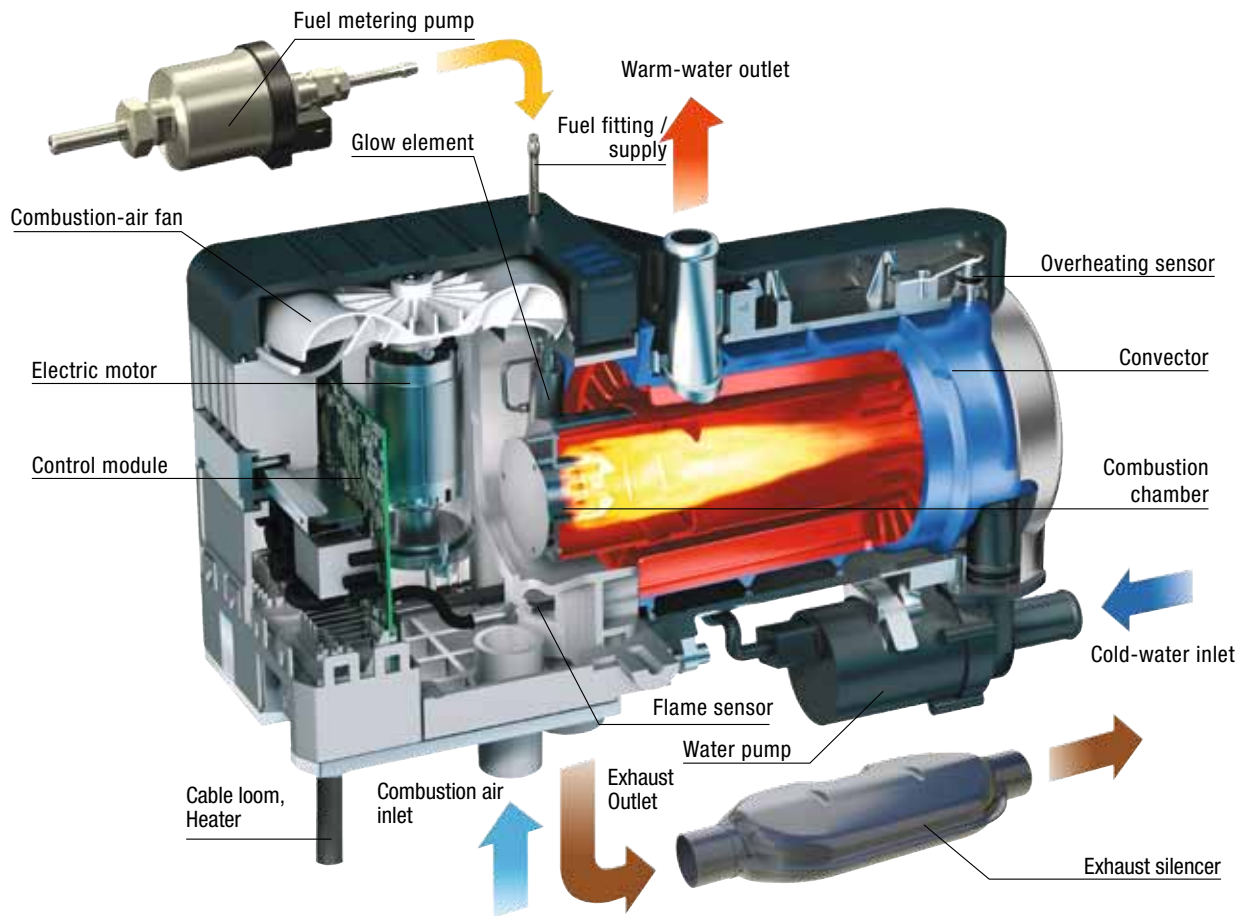
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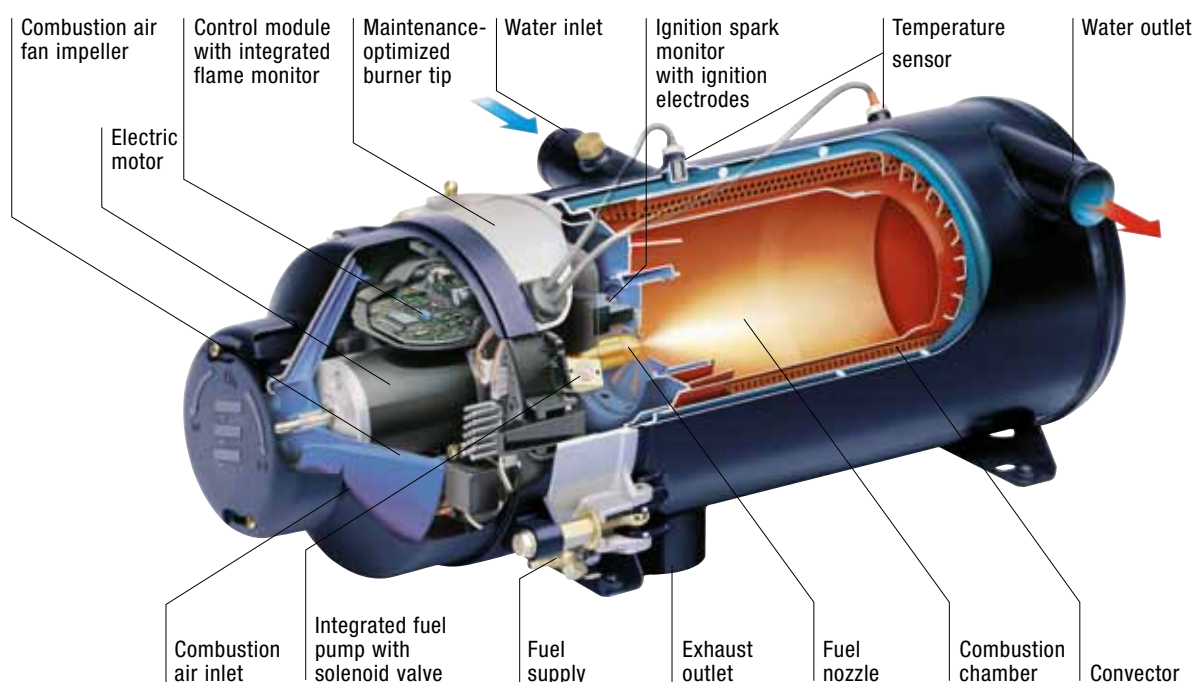
2 | HYDRONIC M: TECHNOLOGY



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 conveyed 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 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.

2 | HYDRONIC L: TECHNOLOGY



HYDRONIC L FUNCTIONS:

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

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EBERSPÄCHER HYDRONIC

					
Heater		Hydronic D5W S	Hydronic D5W SC	Hydronic 2 Comfort	Hydronic 2 Comfort
Product package		Heater	Heater	Heater	Heater
Techn. designation		Hydronic D5W S	Hydronic D5W SC	B 5 SC	D 5 SC
Order no. for heater		25 2218 05 00 00	25 2147 05 00 00	20 1928 05 00 00	25 2598 05 00 00
Fuel		Diesel	Diesel	Gasoline and E85	Diesel and FAME*
Voltage	V	24	24	12	12
Heating medium		Water	Water	Water	Water
Control / heat settings		low / high	low / high	low / high / power	low / high / power
Heat output	W	2,400 / 5,000	2,400 / 5,000	2,300 / 5,000 / 5,200	2,100 / 5,000 / 5,200
Fuel consumption	l / h	0.27 / 0.62	0.27 / 0.62	0.32 / 0.69 / 0.72	0.26 / 0.61 / 0.64
Power consumption, heater	W	10 / 37	10 / 37	6 / 31 / 34	6 / 31 / 34
Power consumption, water pump	W	15	13	16	16
Elec. power consumption, start	W	110	120	130	130
Minimum water throughput	l / h	250	250	250	250
Lower voltage limit	V	20.4	20.4	10.5	10.5
Upper voltage limit	V	32	32	16	16
Interference suppression		5 for VHF / SW / MW, 2 for LW	5 (DIN 57879 / VDE 0879 Part 1)	5 (DIN EN 55025)	5 (DIN EN 55025)
Dimensions L x W x H	mm	220 x 86 x 101.5	220 x 86 x 160	262 x 90 x 184	262 x 90 x 184
Weight empty	kg	2.3	2.9	2.7	2.9

* Diesel with max. 20 % FAME

EBERSPÄCHER HYDRONIC

					
EBERSPÄCHER HYDRONIC					
Heater		Hydronic 2 Economy B4S	Hydronic 2 Economy B5S	Hydronic 2 Economy D4S	Hydronic 2 Economy D5S
Product package		Heater	Heater	Heater (with or without APRMP)*	Heater (with or without APRMP)*
Techn. designation		B4S 12V	B5S 12V	D4S 12V DP	D5S 12V DP
Order no. for heater		20 1909 05 00 00	20 1904 05 00 00	25 2554 05 00 00	25 2526 05 00 00
Order no. for heater with APRMP*		—	—	25 2558 05 00 00	25 2557 05 00 00
Fuel		Gasoline and E85	Gasoline	Diesel	Diesel
Voltage	V	12	12	12	12
Heating medium		Water	Water	Water	Water
Control / heat settings		low / high / power	low / high / power	low / high / power	low / high / power
Heat output	W	2,300 / 4,000 / 4,400	2,300 / 5,000 / 5,200	2,100 / 4,100 / 4,300	2,100 / 5,000 / 5,200
Fuel consumption	l / h	0.32 / 0.55 / 0.62	0.32 / 0.69 / 0.72	0.26 / 0.5 / 0.52	0.26 / 0.61 / 0.64
Power consumption, heater	W	12 / 21 / 27	12 / 37 / 40	12 / 21 / 27	12 / 37 / 40
Power consumption, water pump	W	11	11	11	11
Elec. power consumption, start	W	120	120	120	120
Minimum water throughput	l / h	250	250	250	250
Lower voltage limit	V	10.5	10.5	10.5	10.5
Upper voltage limit	V	16	16	16	16
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	214 x 86 x 139	214 x 86 x 139	214 x 86 x 139	214 x 86 x 139
Weight empty	kg	2.4	2.4	2.4	2.4

* APRMP = pressure-resistant metering pump



EBERSPÄCHER HYDRONIC

Heater	Hydronic 2 Ethanol E4S		
Product package	Heater		
Techn. designation	E4S 12V		
Order no. for heater	20 1920 05 00 00		
Fuel	E85 bio-ethanol according to DIN 51625 / E100		
Voltage	V	12	
Heating medium	Mixture of water and (max 50 %) coolant		
Control / heat settings	low / high / power		
Heat output	W	1,300 / 3,700 / 4,300	
Fuel consumption	l / h	0.23 / 0.67 / 0.78	
Power consumption, heater	W	7 / 20 / 27	
Power consumption, water pump	W	11	
Elec. power consumption, start	W	120	
Minimum water throughput	l / h	250	
Lower voltage limit	V	10.5	
Upper voltage limit	V	16	
Interference suppression	5 (DIN EN 55025)		
Dimensions L x W x H	mm	214 x 86 x 139	
Weight empty	kg	2.4	



EBERSPÄCHER HYDRONIC

Heater	Hydronic S3 Economy*	Hydronic S3 Economy*	Hydronic S3 Economy*	Hydronic S3 Economy*
Product package	Heater	Heater	Heater	Heater
Techn. designation	Hydronic S3 Economy B4E	Hydronic S3 Economy B5E	Hydronic S3 Economy D4E	Hydronic S3 Economy D5E
Order no. for heater	20 1994 05 0000	20 1993 05 0000	25 2913 05 0000	25 2912 05 0000
Order no. for heater with APRMP*	—	—	25 2922 05 0000	25 2921 05 0000
Fuel	Gasoline	Gasoline	Diesel	Diesel
Voltage	V	12	12	12
Heating medium	Water	Water	Water	Water
Control / heat settings	Infinitely variable	Infinitely variable	Infinitely variable	Infinitely variable
Heat output	W	1,800 to 4,300	1,800 to 5,000	1,300 to 4,300
Fuel consumption	l / h	0.57	0.67	0.53
Power consumption, heater	W	7 / 24	7 / 32	5 / 27
Power consumption, water pump	W	17	17	17
Elec. power consumption, start	W	135	135	135
Minimum water throughput	l / h	300	300	300
Lower voltage limit	V	10.5	10.5	10.5
Upper voltage limit	V	16	16	16
Protection rating	Heater: IP5K6K, IP5K9K, Control module: IP6K6K, IP6K9K		Heater: IP5K6K, IP5K9K, Control module: IP6K6K, IP6K9K	
Dimensions L x W x H	mm	215 x 91 x 124	215 x 91 x 124	215 x 91 x 124
Weight empty	kg	2.0	2.0	2.0

* The heater is approved for mains operation (230 V/50 Hz), e.g. in camping or parking areas for motor homes or in marinas for boats, only in combination with a special cable harness (order no.: 25 2652 82 11 00, see p.108). The cable harness is included in the universal installation kit for recreational vehicles and boats (order no.: 25 2652 82 00 00).

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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 00 00	25 2471 05 00 00	25 2434 05 00 00	25 2435 05 00 00
Fuel	Diesel and FAME (biodiesel)	Diesel and FAME (biodiesel)	Diesel	Diesel
Voltage V	12	24	12	24
Heating medium	Water	Water	Water	Water
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 00 00	25 2473 05 00 00
Fuel	Diesel	Diesel
Voltage V	12	24
Heating medium	Water	Water
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

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 00 00	25 2487 02 00 00	25 2599 02 00 00	25 2600 02 00 00
Order no. for compact heater	—	25 2487 05 00 00	25 2599 05 00 00	25 2600 05 00 00
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	Water	Water	Water	Water
Heat output W	16,000	24,000	30,000	35,000
Fuel consumption l / h	2	2.9	3.65	4.2
Power consumption, heater W	60	80	105	120
Power consumption, water pump W	104 – 210*	104 – 210*	104 – 210*	104 – 210*
Minimum water throughput l / h	1,400	2,000	2,600	3,000
Lower voltage limit V	20	20	20	20
Upper voltage limit V	30	30	30	30
Dimensions L x W x H mm	600 x 230 x 222	600 x 230 x 222	600 x 230 x 222	600 x 230 x 222
Weight empty** kg	18	18	18	18

* depending on the water pump model

EBERSPÄCHER WATER
PUMPS FOR HYDRONIC L

Water pumps	Flowtronic 5000	Flowtronic 5000 S	Flowtronic 6000 SC
Order no. for water pump	25 2488 26 00 00	25 1818 30 00 00	25 2488 25 00 00
Coolant	Water-glycol mix with up to max 50 % glycol	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	5,200 at 0.2 bar	6,000 at 0.4 bar
Operating pressure bar	max. 2	max. 2	max. 2
Nominal voltage V	24	24	24
Elec. power consumption W	104	104	210
Protection class	IP5K4	IP54A	IP25 (potted electronics)
Dry running	No	No	Yes – motor switches itself off after 45 minutes
Shaft-impeller connector	Mechanical seal	Magnetic coupling	Magnetic coupling
Weight empty* kg	2.04	2.2	2.5

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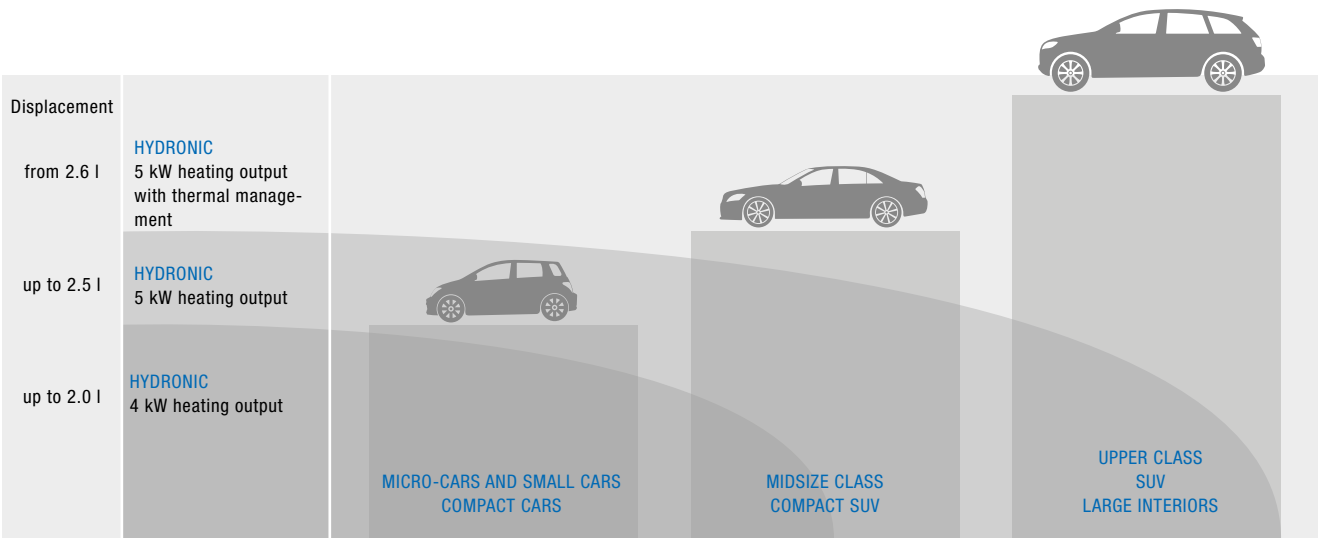
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2 | WATER-HEATER RANGE FOR CARS



ADVANTAGES:

- Hydronic S3 Economy: New bracket design plus straight and 90° angled water fittings (rotatable through 360°) which can be used in any combination for faster installation. New installation recommendations and kits are available.
- Hydronic 2 Economy APRMP (pressure-resistant metering pump): Faster installation as there is no need to remove the tank. Please see the relevant installation recommendations, plus optional add-ons on page 24, for the range of cars for which this equipment is suitable.
- Hydronic 2 Comfort: Faster installation if thermal management is required. There is no need to install a separate comfort installation kit.
- The Biodiesel M8, Standard M10 and Hydronic M12 provide increased power for larger engines and cabins, e.g. large trucks, small buses, cargo areas.
- The Hydronic L, 16 – 35 kW, is ideally suited for buses, trains, boats and cargo areas.

FUEL COMPATIBILITY:

- **Multifuel E85:** The Hydronic 2 B5S and B5SC with fuel kit (E85 kit) for heating electric vehicles and multifuel vehicles; fuel kit order number 22 1000 20 31 00.
- **Biodiesel:** Hydronic S3 Economy (up to 30 %), Hydronic 2 Economy (up to 20 %), Hydronic 2 Comfort (up to 20 %), Hydronic (up to 10 %), Hydronic M8 (100 %), Hydronic M10 / M12 (up to 20 %).
- **E10:** all (professionally installed) water heaters.

EXPERT TIPS FOR INSTALLING THE PRESSURE-RESISTANT METERING PUMP: You need to know the fuel pressure and temperature. The end of the fuel return line must be just above the floor of the tank and must not be fitted with a check valve. Diesel vehicles can then be connected straight to the return line. Please also always take note of the technical description of the particular equipment.

2 | VEHICLE-SPECIFIC ADDITIONAL PARTS

The product package for individual devices generally includes the heater itself, the fuel-metering pump and the water pump. For retrofitting vehicles for which Eberspächer provides installation recommendations, a vehicle-specific installation kit (IK) and, if applicable, an air-conditioning kit are also required.

Heater	▪ Contents ▪ Heater ▪ Water pump ▪ Metering pump	
Vehicle-specific installation kit	▪ Heater mounting bracket ▪ Water hoses ▪ Fuel lines ▪ Cable harnesses ▪ Combustion-air hose ▪ Exhaust hose with silencer and if applicable, A/C kit	
EasyFan / A/C kit	▪ Cable harness ▪ Preconfigured cable harness ▪ Relay ▪ IPCU (see also Service, options with IPCU, if there is no EasyFan / A/C kit)	
Control unit	▪ Easy Start Select / Timer / Remote / Remote+ / EasyStart Web	

IMAGES ARE FOR ILLUSTRATIVE PURPOSES ONLY

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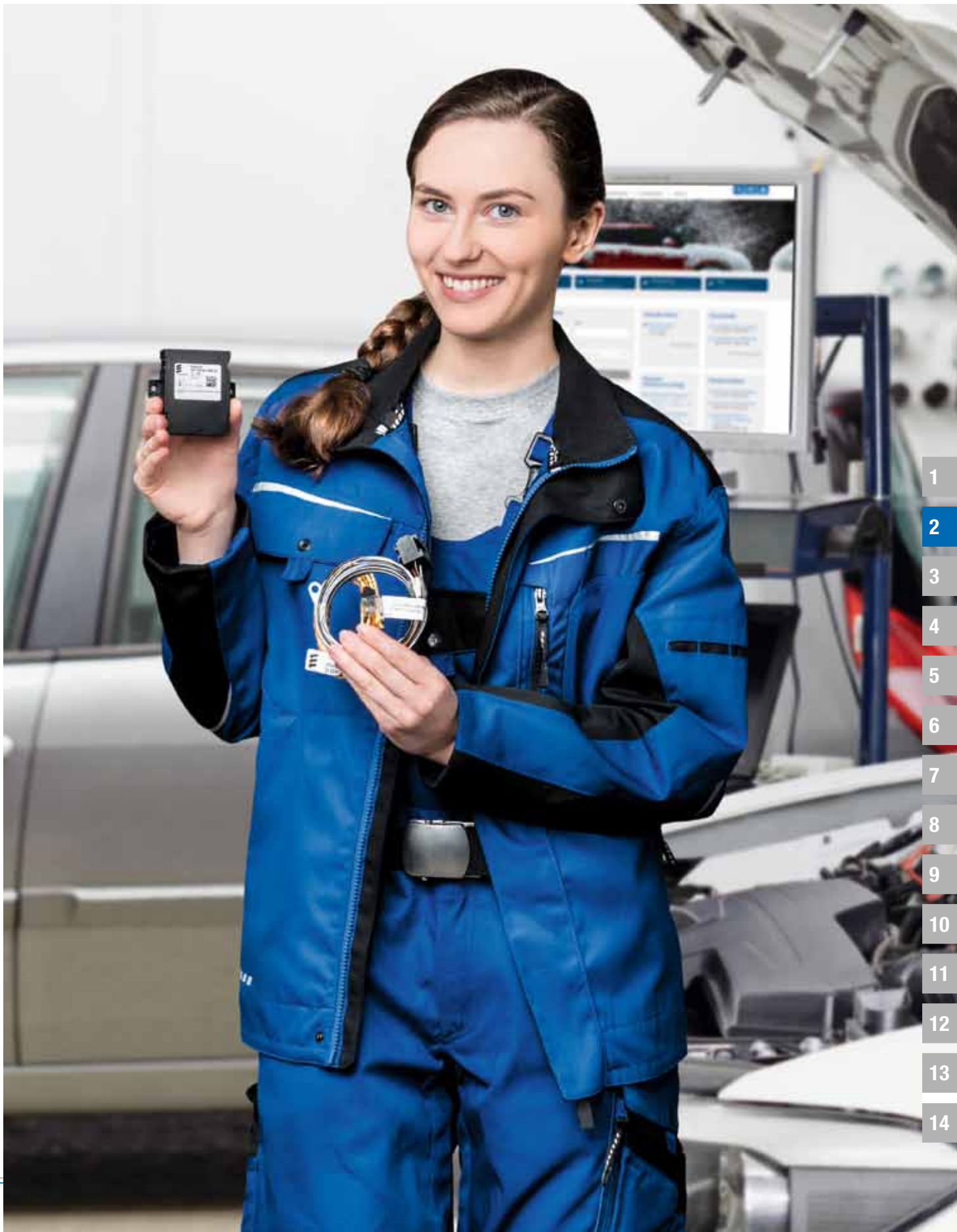
2 | COMPLETE PACKAGES / UNIVERSAL INSTALLATION KITS

The following table shows the housing types and product packages of the various water heater models along with their corresponding installation kits. In contrast with individual devices, complete packages include the heater (incl. fuel-metering and water pump) and universal installation kit. The universal installation kit includes a host of (vehicle independent) parts required for installation. In this case, additional vehicle-specific installation parts are required which are not listed in the respective installation recommendations. If Eberspächer provides no installation recommendations for a particular vehicle, you can still retrofit a pre-heater using a complete package (see also the next section, "Hydronic – retrofit parts range for passenger cars", step 4B). S-models have a space-saving housing design, with the fuel-metering and water pump mounted on the outside. SC-models generally have the water pump on the inside of the equipment, and on diesel heaters the fuel-metering pump is also on the inside. For gasoline versions the fuel-metering pump is generally installed on the outside.

Water heaters	Heater	Individual devices	Complete package	Vehicle-specific IK A/C kit if applicable	Universal IK
Hydronic	25 2218 05 00 00	x			25 2218 80 00 00
	25 2147 05 00 00	x			25 2009 80 00 00
	20 1861 05 00 00 20 1663 05 00 00		x x		
	25 2418 05 00 00 25 2386 05 00 00		x x		
	25 2385 05 00 00 25 2390 05 00 00		x x		
Hydronic 2 Economy	25 2558 05 00 00 25 2554 05 00 00 25 2557 05 00 00 25 2526 05 00 00 20 1909 05 00 00 20 1904 05 00 00	x x x x x x		x x x x x x	25 2526 81 00 00
Hydronic 2 Ethanol E4S	20 1920 05 00 00	x x		x x	20 1920 82 00 00 20 1920 83 00 00**
Hydronic 2 Comfort	20 1928 05 00 00 25 2598 05 00 00	x x		x x	25 2598 80 00 00
Hydronic S3 Economy*	20 1963 05 00 00 20 1952 05 00 00 25 2694 05 00 00 25 2652 05 00 00	x x x x		x x x x	25 2652 80 00 00
Hydronic M2	25 2470 05 00 00 25 2471 05 00 00 25 2434 05 00 00 25 2435 05 00 00 25 2472 05 00 00 25 2473 05 00 00	x x x x x x			25 2435 81 00 00

* The heater is approved for mains operation (230 V/50 Hz), e.g. in camping or parking areas for motor homes or in marinas for boats, only in combination with a special cable harness (order no.: 25 2652 82 11 00, see p.108). The cable harness is included in the universal installation kit for recreational vehicles and boats (order no.: 25 2652 82 00 00).

** IK with cat.



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2 | RETROFIT PARTS RANGE FOR PASSENGER CARS

INSTALLATION OF THE HYDRONIC WATER HEATER / HYDRONIC 2 WITH 4 OR 5 KW HEATING OUTPUT:

1 | LOGGING INTO THE PARTNER PORTAL

Log into the Eberspächer Partner Portal with your personal access details (email and password):
<http://partner.eberspaecher.com>



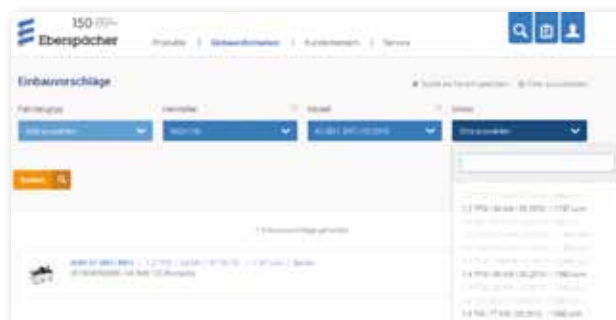
2 | "INSTALLATION INFORMATION" PANE

Next, select the "Installation Information / Installation Recommendations" tab.



3 | SELECTING YOUR VEHICLE TYPE

Using the dropdown menu, select the required vehicle and confirm with the “Search” button.



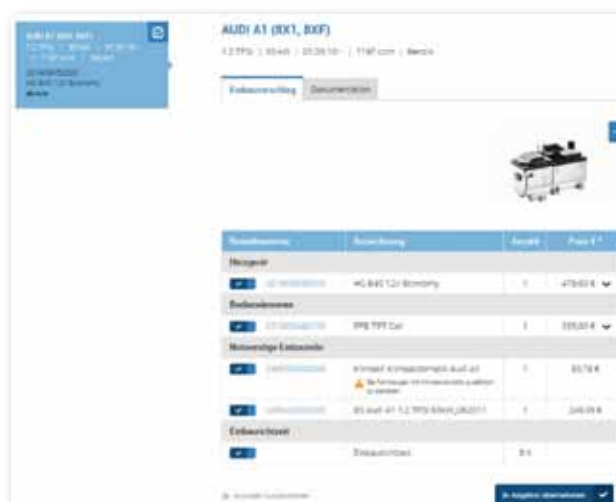
4A | THERE IS AN INSTALLATION RECOMMENDATION FOR THE VEHICLE

If there is an existing retrofit installation recommendation for the vehicle, the vehicle model will be listed along with the recommended heater, including the price (excl. sales tax). Click on the vehicle in the list. The parts required for the installation are now displayed:

- Recommended **heater** (including water pump and fuel metering pump)
- **Control unit**
- **Vehicle-specific installation kit** including all parts required for the mechanical installation
- **A/C kit** if applicable (for models with automatic air conditioning)
- Additional installation parts if applicable
- Recommended **installation guide time**

* Heaters and control units with a black arrow after the price can be adapted if necessary by clicking the arrow and making a selection.

If you click the “Get estimate” button, this will take you to the estimates pane where you can obtain a quote.



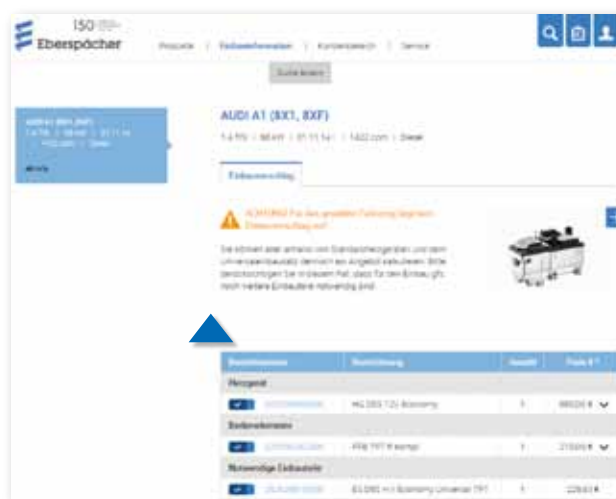
4B | THERE IS NO INSTALLATION RECOMMENDATION FOR THE VEHICLE

EXPERT TIPS

If there is no installation recommendation, you will see a note to this effect and the installation recommendation will be grayed out. However, it may still be possible to retrofit an Eberspächer pre-heater in the selected vehicle by using the universal installation kit. The required installation parts are displayed.

- Recommended **heater**
- **Control unit**
- **Required installation parts**
- **Installation guide time**

* Heaters and control units with a black arrow after the price can be adapted if necessary by clicking the arrow and making a selection.



2 | RETROFIT PARTS RANGE

INSTALLATION OF THE HYDRONIC M WATER HEATER WITH 8 – 12 KW HEATING OUTPUT:

Installation parts for the **Hydronic-M** heaters are usually heavily application-dependent. Planning installation of these heaters requires not only the heater and universal installation kit but also, where applicable, additional installation parts that need to be determined during installation planning. Please see the section on “Accessories” for the corresponding additional parts. For example, with convector and boiler installations, a wide range of heating options can be used in parallel.

Hydronic-M heater installations generally require the following parts:

- Hydronic M heater with 8 kW, 10 kW or 12 kW output, 12 or 24 V
- Hydronic M universal installation kit
- Control unit (of your choice)
- Additional installation parts based on application, if applicable (see also “Accessories” section)

See also the sections on “Complete packages / universal installation kits”, “Device range” and “Control units”.

INSTALLATION OF THE HYDRONIC L WATER HEATER WITH 16 – 35 KW HEATING OUTPUT:

Installation parts for the **Hydronic L** heaters are also heavily application-dependent. As a result there is no universal installation kit for these heaters.

Alongside the heater, installation planning needs to include some additional installation parts which have to be specified during planning. Please see the section on “Accessories” for the corresponding additional parts. Again, for example, there is a host of heating options that can be used in parallel in convector and boiler installation.

The **24 kW, 30 kW and 35 kW heater variants** are available individually as well as in a compact version. To make heater installation easier the compact version comes with the water pump and fuel filter and their installation parts pre-installed.

- Hydronic L 16 kW, 24 kW, 30 kW or 35 kW heater as individual device or compact version
- Additional parts for connecting the water circuit
- Additional parts for the fuel supply
- Additional parts of the exhaust system
- Control unit (of your choice)

See also the sections on “Device range” and “Control units”.

Our **Technical Hotline** can provide you with advice and support on this: **Phone: 0180 5 26 26 26**

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2 | CONTROL UNITS

ACCESSORIES	EasyStart Select	EasyStart Timer	EasyStart Remote	EasyStart Remote+	EasyStart Web
Temperature sensor for displaying interior temperature	—	22 1000 34 22 00	—	Included in the product package	Included in the product package
Timer trim	—	22 1000 51 41 00	—	—	—

APPROVED COMBINATIONS

		SLAVE CONTROL UNITS				
		EasyStart Select	EasyStart Timer	EasyStart Remote	Button	EasyStart Web
MASTER CONTROL UNITS	EasyStart Timer	X	X	X	X	—
	EasyStart Remote+	X	X	—	Included in the product package	—
	EasyStart Web	X	X	X	Included in the product package	—

EasyStart Web:

This product can be combined with one of the following control units from the EasyStart family: EasyStart Select, EasyStart Timer, EasyStart Remote.

EasyStart Timer and EasyStart Remote+:

APPROVED COMBINATIONS OF HEATER AND CONTROL UNIT:

OPTION 1

You can control a second heater by using the DAT line (purple) and the diagnostic line (blue and white). However, it is not possible to connect an additional control unit. Diagnostics can be run for both heaters.

OPTION 2

You can switch on any device by activating the switch output (switch on / vehicle blower output). A second control unit can be connected via the DAT line (purple). Diagnostics is available for the first heater but not for the second.

COMPATIBILITY MODE FOR HEATERS WITHOUT EBERSPÄCHER DIAGNOSTICS, E.G. HYDRONIC 24 V AND HYDRONIC L2:

Heater diagnostics cannot be run via the control unit.



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2 | CONTROL UNITS

CONTROL UNITS					
					
Model	EasyStart Select Control unit	EasyStart Timer Timer	EasyStart Remote Remote control	EasyStart Remote+ Remote control	EasyStart Web**/** Web-based remote control
Order number	22 1000 34 13 00	22 1000 34 15 00	22 1000 34 23 00	22 1000 34 17 00	22 1000 34 51 00
Description	Basic version	Comfort version	Basic version	Comfort version	Operation by smartphone app (available for iPhone and Android) or web app (browser version)
Functions	Heating / ventilation on / off	- Heating / ventilation on / off - Program / delete pre-select mode - Long-press function for immediate heating - A second / additional heater can be operated	- Heating / ventilation on / off - Operating time adjustable	- Heating / ventilation on / off - Program / delete pre-select mode - Long-press function for immediate heating - A second / additional heater can be operated	Heating / ventilation on / off
Programming the timer	–	- Three programming locations within seven days - Selection of individual days of the week or one of three time periods (Mo.–Fr. / Sa.+Su. / Mo.–Su.)	–	- Three programming locations within seven days - Selection of individual days of the week or one of three time periods (Mo.–Fr. / Sa.+Su. / Mo.–Su.)	- Three programming locations within seven days - Selection of individual days of the week or one of three time periods (Mo.–Fr. / Sa.+Su. / Mo.–Su.)
Timer programming: automatic heating time calculation	–	Optional with connection of temperature sensor	–	Yes	Yes
Immediate start-up mode running time	60 min. preset	Adjustable 10 – 120 min.	Adjustable 10, 20, 30, 40, 50 or 60 min.	Adjustable 10 – 120 min.	Adjustable 10 – 720 min.
Pre-ventilation*	Yes	Yes	Yes	Yes	Yes
Display Interior temperature	–	Optional	–	Yes	Yes
Feedback	- Status: Heater - Status: Connection to the heater	- Status: Heater - Status: Connection to the heater	- Data transfer successful - Status: Heater - Status: Connection to the heater	- Data transfer successful - Status: Heater and timer - Status: Connection to the heater	- Status: Heater and timer - Feedback via app or browser version - Status: Connection to the heater
Range	–	–	Up to 1 km under optimum conditions	Up to 1 km under optimum conditions	Unlimited (given network coverage)
Display	LED-illuminated ICON display. Lighting can be integrated with vehicle lighting circuit.	Matrix display illuminated with LEDs. Lighting can be integrated with vehicle lighting circuit.	Two-tone LED	Matrix display illuminated with LEDs.	Display on smartphone app or web browser. Illuminated button in the vehicle.

* Depending on heater type

** End users can pre-book connectivity at standard cellphone rates for 12 months at a time at www.myeberspaecher.com

*** Network coverage available in the following countries: Austria, Belgium, Czech Republic, Denmark, Estonia, Finland, France, Germany, Great Britain and Northern Ireland, Italy, Latvia, Lithuania, Netherlands, Norway, Poland, Romania, Russia, Sweden, Switzerland, Turkey, Ukraine and Belarus.

2 | CONTROL UNITS – EASYSTART WEB*



1. ADVANTAGES (FUNCTIONS):

- Pre-installed SIM chip instead of having to fit a SIM card
- Integrated antenna in the receiver allows for easy installation
- Hardware backward compatible with most pre-heaters from 2007 onward
- Package includes On / Off button with operating display
- Package includes temperature sensor
- Remote browser diagnostics available (on approval by end customer)

2. FURTHER FEATURES:

- Use of all available networks for optimum connectivity
- No need to fit or replace a SIM card
- Roaming function enables use in other countries without additional costs
- Convenient, cost-effective pre-booking of a flat rate for 12 months at a time
- Intuitive operation with newly designed smartphone app
- Compatibility with all internet-enabled devices via wireless-optimized browser version
- Automatic running time calculation
- Undervoltage warning for vehicle battery
- Current status display (e.g. operational state, interior temperature and timer)
- Another control unit from the EasyStart TP7 family can be used in addition
- Flexible heater control with the various control units

TECHNICAL DATA:

Order number		22 1000 34 5100
Dimensions L x W x H (without fastening brackets)	mm	66 x 106 x 25
Protection rating		IP 40 to ISO 20653
Average standby current draw	mA	Standby mode < 1
Current draw	A	During "Call-in" < 0.5
Max. continuous current draw (during operation)	mA	< 30
Operating temperature	°C	-40 to +85
Wireless module		Integrated quad-band GSM module (2G)
Service life		Standby mode: > 10 a During operation: > 6,000 h Button: > 10,000 actuations

* Network coverage available in the following countries: Austria, Belgium, Czech Republic, Denmark, Estonia, Finland, France, Germany, Great Britain and Northern Ireland, Italy, Latvia, Lithuania, Netherlands, Norway, Poland, Romania, Russia, Sweden, Switzerland, Turkey, Ukraine and Belarus.

2 | OPTIONAL ADD-ONS

ADDITIONAL HEATER KIT:

- Order number: 24 8532 00 0000
- Designation: ES additional heater kit for Hydronic 2 with EasyStart
- Area of application: Hydronic 2 Economy in combination with EasyStart

Expands pre-heater functionality for additional heating when driving (providing added value). The heating is switched on and off based on the outside temperature when the combustion engine is running. If the outside temperature is lower than around 5 °C the heating switches on, and switches off at higher temperatures.

PRE-VENTILATION OPTION:

- The Hydronic 12 V and Hydronic 2 Economy and Comfort have a pre-ventilation function
- Both this and the EasyStart control units are automatically detected (see Commissioning EasyStart)

ALTITUDE KIT*:

Suitable for Hydronic and Hydronic 2 and is required from altitudes of around 1,500 m. When the heater starts, the pressure sensor measures the atmospheric pressure cyclically and sends the measured values to the heater control module. The control module evaluates the measured values and if required, adjusts the fuel feed in the metering pump to the current atmospheric pressure. It begins reducing fuel feed at around 1,400 m, which immediately starts to reduce heating power by around 9 % for every 1,000 m in altitude.

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

Technical data:

Max. permissible height: approx. 3,500 m

Measuring range: 600 hPa to 1,150 hPa

Nominal voltage: 12 / 24 V

Operating voltage: 8 to 32 V

Dimensions: 76 x 76 x 29 mm

Operating temperature: -40 °C to +85 °C

IDENTIFICATION LABEL:

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

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



Fig.: Identification label



Fig.: Sticker on heater box

Technical Hotline: 01805 262626

* The Hydronic M8, M10 and M12 feature the automatic altitude adjustment function. The heating can be operated up to altitudes of 3,500 m.

2 | OPTIONAL WATER CIRCUITS ON A HYDRONIC S3 ECONOMY* EXAMPLE

“INLINE INTEGRATION” OF COOLING CIRCUIT:

Cut through the vehicle's water feed hose from the engine and the convector.

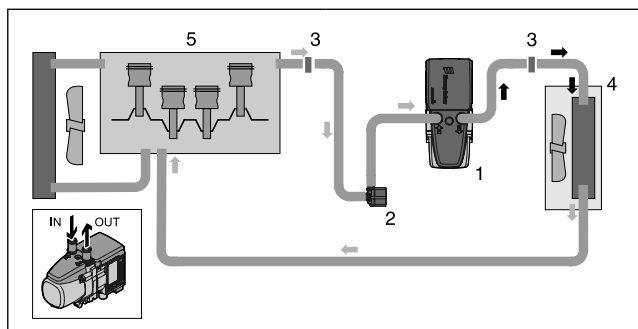
Connect the heater and water pump to the water feed hose using the connection fittings and water hoses.

Run and connect a water hose from the water pump pressure fitting to the heater water inlet fitting.

Heating characteristic

When the heater is switched on, heat is initially only conveyed to the vehicle's engine via the vehicle convector.

Once the coolant temperature reaches approx. 30 °C, the vehicle's fan starts up and heat is supplied to the passenger compartment as well.



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

COOLING CIRCUIT WITH CHECK VALVE:

Cut through the vehicle's water feed hose from the engine to the convector and insert the check valve.

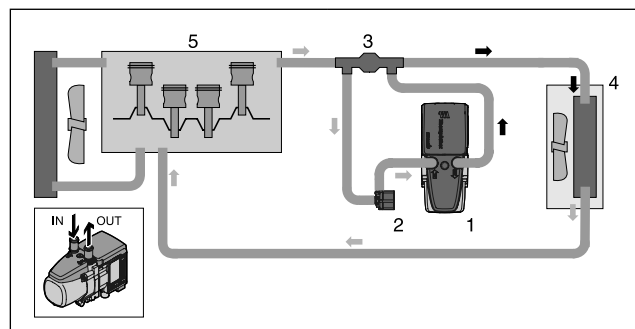
Connect the heater and the water pump and hoses to the check valve.

Run and connect a water hose from the water pump pressure fitting to the heater water inlet fitting.

Heating characteristic

When the heater is switched on, heat is initially only conveyed to the vehicle's engine via the vehicle convector.

Once the coolant temperature reaches approx. 30 °C, the vehicle's fan starts up and heat is supplied to the passenger compartment as well.



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

i NOTE:

- The “cooling circuit with check valve” maintains the effectiveness of the vehicle heating when the heater is switched off.
- The check valve must be ordered separately – see page 80 for order number.

* The heater is approved for mains operation (230 V/50 Hz), e.g. in camping or parking areas for motor homes or in marinas for boats, only in combination with a special cable harness (order no.: 25 2652 82 11 00, see p.108). The cable harness is included in the universal installation kit for recreational vehicles and boats (order no.: 25 2652 82 00 00).

2 | OPTIONAL WATER CIRCUITS ON A HYDRONIC S3 ECONOMY* EXAMPLE

COOLING CIRCUIT WITH COMBI VALVE:

Using the 5-connection combi valve

If the water feed and return lines between the vehicle's engine and convector are installed separately in the engine compartment, the 5-connection combi valve must be used along with a T-piece.

Using the 6-connection combi valve

If the water feed and return lines between the vehicle's engine and convector are installed in parallel in the engine compartment, the 6-connection combi valve 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

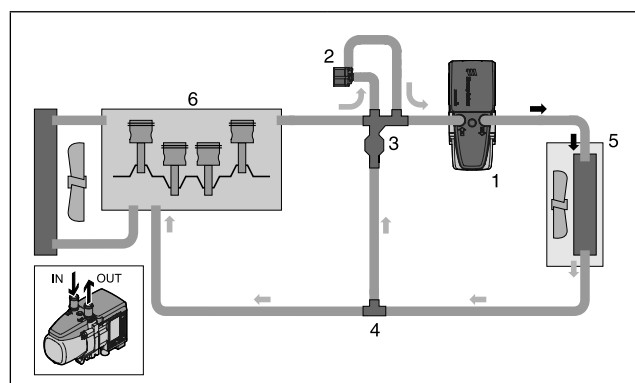
When the vehicle's engine is operating, heat is distributed evenly between its convector and engine, making the warmup phase even shorter and heating the vehicle interior.

INSTALLING A COMBI VALVE WITH 5 CONNECTIONS:

Cut the water feed hose running from the vehicle's engine and convector, and install the combi valve.

Cut through the water return hose from the vehicle's convector and engine and insert the T-piece.

Connect the heater and water pump and hoses to the combi valve and T-piece as shown in the drawing.



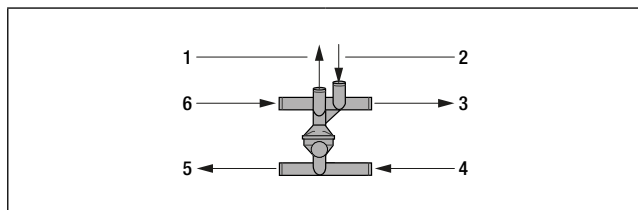
- | | |
|-------------------------------|---------------------|
| 1 Heater | 4 T-piece |
| 2 Water pump | 5 Vehicle convector |
| 3 Combi valve (5 connections) | 6 Vehicle engine |

* The heater is approved for mains operation (230 V/50 Hz), e.g. in camping or parking areas for motor homes or in marinas for boats, only in combination with a special cable harness (order no.: 25 2652 82 11 00, see p.108). The cable harness is included in the universal installation kit for recreational vehicles and boats (order no.: 25 2652 82 00 00).

INSTALLING A COMBI VALVE WITH 6 CONNECTIONS:

Cut the water feed and return lines between the vehicle's engine and convector and install the combi valve.

Connect the heater and water pump and hoses to the combi valve 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)**

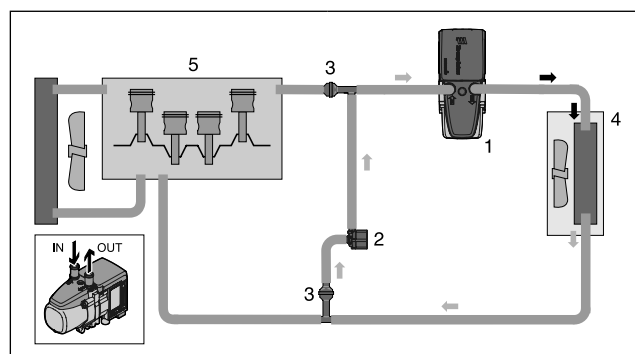
Cut the water feed and return lines between the vehicle's engine and convector and insert the combi valve.

Install the heater in the water feed hose between the check valve and the vehicle's convector

Connect the water pump and hoses to the check valve.

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's fan starts up and more heat is supplied to the passenger compartment.



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

2 | OPTIONAL WATER CIRCUITS ON A HYDRONIC S2 ECONOMY EXAMPLE

2. WATER CIRCUIT WITH THERMAL COMBI VALVE:

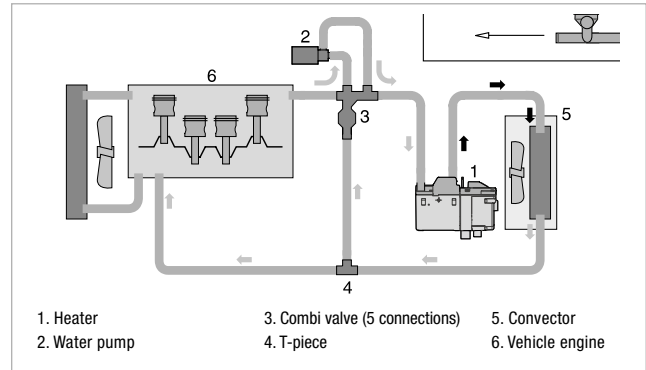
- Large engines > 2.5 l and / or large cabins
- Small and compact cars, short distances
- Advantage: Switchover at 67 °C, variable cost-effective installation as combi valve with five or six connections
- Partial through-flow of engine from 67 °C
- Prioritizes cabin heat

INSTALLING A COMBI VALVE WITH FIVE CONNECTIONS:

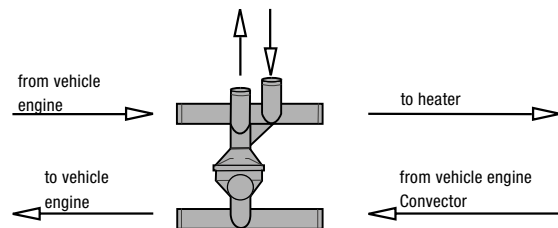
Cut through the vehicle's water feed hose from the engine to the convector and insert the combi valve. Cut through the water return hose from the vehicle's convector and engine and insert the T-piece. Connect the heater and water pump and hoses to the combi valve and T-piece as shown in the drawing.

INSTALLING A COMBI VALVE WITH 6 CONNECTIONS:

Cut through the water feed and return hoses between the vehicle's engine and convector and insert the combi valve. Connect the heater and water pump and hoses to the combi valve as shown in the drawing.



Combi valve (6 connections) water pump



HEATING CHARACTERISTIC IN PRE-HEATING MODE – SMALL COOLING CIRCUIT:

Until the coolant temperature reaches around 67 °C, the heater initially conveys heat to the vehicle's own convector only, so that the vehicle interior heats up quickly.

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 WATER CIRCUIT:

When the engine is running, the heat from the vehicle's convector and engine are distributed equally, speeding up the warmup phase and the heating of the vehicle interior.

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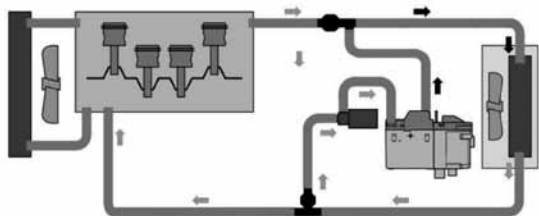
13

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RETROFIT KITS WITH WATER CHECK VALVE:

	Retrofit kit 1	Retrofit kit 2
Order no.	24 0348 80 00 00	24 0349 80 00 00
Suitable heaters	Hydronic plus Universal IK	Hydronic plus Universal IK
ø water hose for vehicle	18 mm	20 mm
TYPE of water circuit	Interior heating	Interior heating

Interior pre-heating only



2 | OPTIONAL WATER CIRCUITS ON A HYDRONIC 2 COMFORT EXAMPLE

You can choose from a number of options when it comes to installing the new Hydronic 2 Comfort. The installation can be adapted to a wide variety of customer requirements by prioritizing the preferred type of heating required.

1. COMFORT INSTALLATION: PRIORITIZATION OF THE INTERIOR:

This version is the most frequently used installation variant. Using the bypass, the interior and then the engine is heated (from around 67 °C).

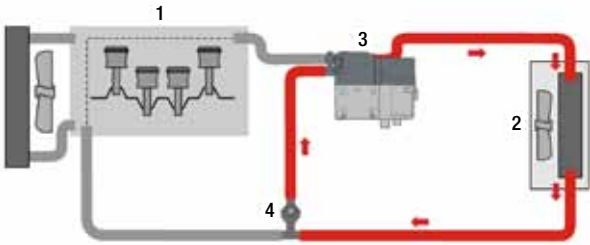
2. SOLENOID VALVE INSTALLATION FOR SPECIFIC MARKETS: PRIORITIZATION OF THE ENGINE

This circuit option, which heats the engine first and then the interior (from approx. 67 °C) is available for specific markets which have a preference for rapidly heating the engine first.

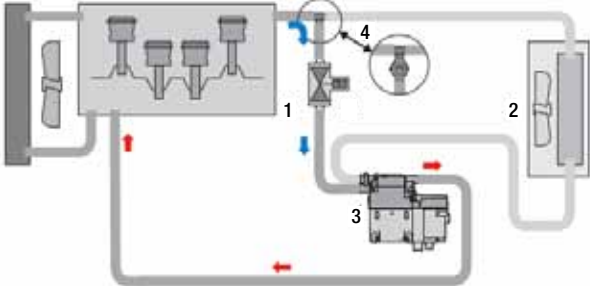
3. CLASSIC PRE-HEATER INSTALLATION: IN-LINE WATER CIRCUIT:

Like any other pre-heater, the Hydronic 2 Comfort can of course also be installed in-line in the water circuit. An additional dummy plug is required to do this. Ideal for installation jobs that need to be performed at short notice.

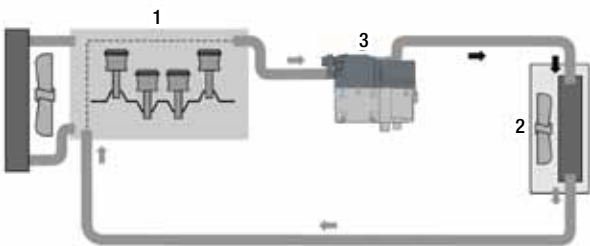
1. Comfort installation: prioritization of the interior



2. Solenoid valve installation for specific markets: prioritization of the engine



3. Classic pre-heater installation: in-line water circuit



- 1. Engine
- 2. Convector
- 3. Hydronic 2 Comfort
- 4. Check valve

2 | HYDRONIC 2 OPTIONAL ADD-ONS – FUEL SUPPLY

DIESEL:

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

Please note! The following versions of the Hydronic 2 Economy include the pressure-resistant metering pump:

D4S 12 V: 25 2558 05 00 00

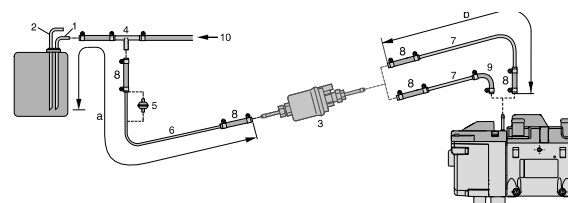
D5S 12 V: 25 2557 05 00 00

GASOLINE:

- Gasoline applications with a pressure of > 0.2 bar also 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 08 00) or a separate tank connection.

Fuel is extracted via a T-piece in the fuel return pipe from the engine to the tank cover



1. Fuel return line from vehicle tank cover

2. Fuel supply line from vehicle tank cover

3. Metering pump (pressure resistant up to 2.0 bar) identified with a green label

4. T-piece

5. Fuel filter – only required for contaminated fuel

6. Fuel hose, 4 x 1 (di = 2 mm, blue)

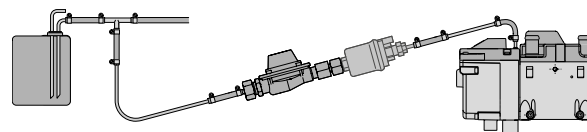
7. Fuel hose, 4 x 1.25 (di = 1.5 mm, transparent)

8. Fuel hose, 3.5 x 3 (di = 3.5 mm)

9. Elbow, 105°

10. From the vehicle tank to the engine

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



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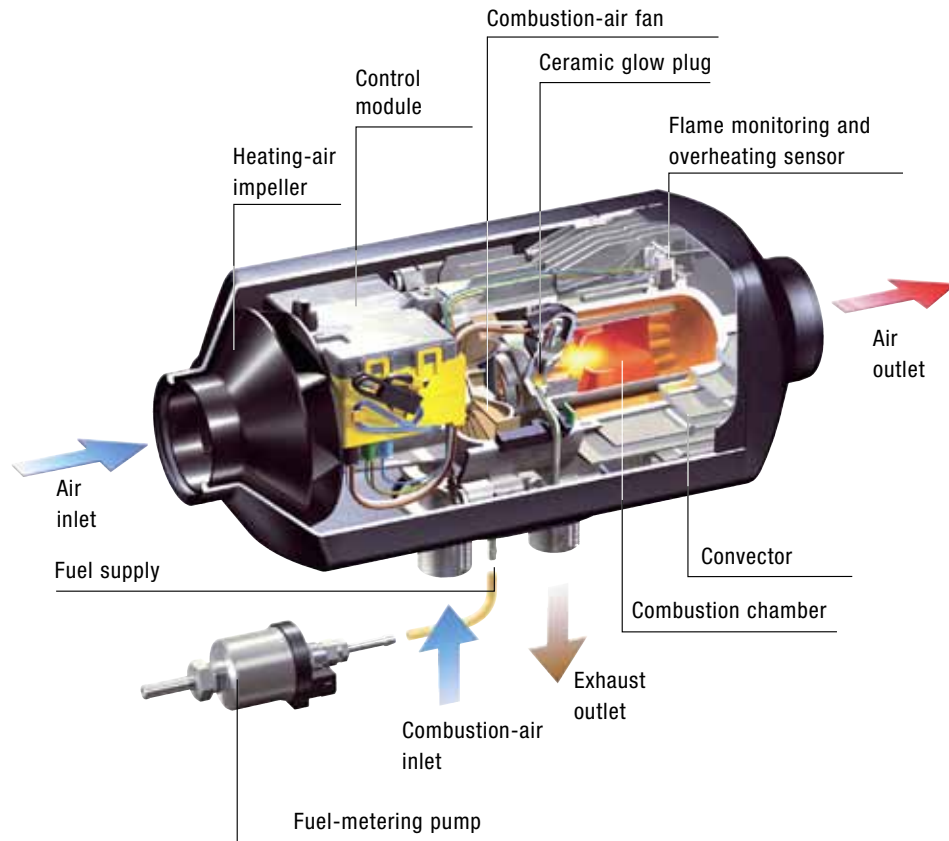
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3 | AIRTRONIC: TECHNOLOGY



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 conveyed 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.

EBERSPÄCHER AIRTRONIC



Heater	Airtronic D2	Airtronic D2	Airtronic D3	Airtronic B4
Product package	Heater OR complete package	Heater OR complete package	Heater	Heater
Techn. designation	Airtronic (D2)	Airtronic (D2)	Airtronic M (D3)	Airtronic M (B4)
Order no. for heater	25 2069 05 00 00	25 2070 05 00 00	25 2317 05 00 00	20 1812 05 00 00
Order no. for complete package	25 2675 05 00 00	25 2676 05 00 00	—	—
Fuel	Diesel	Diesel	Diesel	Gasoline
Voltage V	12	24	12	12
Heating medium	Air	Air	Air	Air
Control / heat settings	off / low / medium / high / power	off / low / medium / high / power	off / low / medium / high / power	off / low / medium / high / power
Heat output W	– / 850 / 1,200 / 1,800 / 2,200	– / 850 / 1,200 / 1,800 / 2,200	– / 900 / 1,600 / 2,200 / 3,000	– / 1,300 / 2,100 / 3,200 / 3,800
Fuel consumption l / h	– / 0.1 / 0.15 / 0.23 / 0.28	– / 0.1 / 0.15 / 0.23 / 0.28	– / 0.11 / 0.2 / 0.28 / 0.38	– / 0.18 / 0.29 / 0.46 / 0.54
Elec. power consumption, operation W	5 / 8 / 12 / 22 / 34	5 / 8 / 12 / 22 / 34	5 / 7 / 10 / 16 / 24	5 / 9 / 15 / 29 / 40
Elec. power consumption, start W	100	100	100	100
Air flow volume w/o backpressure kg / h	13 / 40 / 60 / 90 / 105	13 / 40 / 60 / 90 / 105	24 / 60 / 90 / 120 / 150	24 / 85 / 120 / 160 / 185
Lower voltage limit V	10.2	21	10.5	10.5
Upper voltage limit V	16	32	16	16
Interference suppression	Disturbance class 5 (DIN EN 55025)	Disturbance class 5 (DIN EN 55025)	Disturbance class 5 (DIN EN 55025)	Disturbance class 5 (DIN EN 55025)
Dimensions L x W x H mm	310 x 115 x 122	310 x 115 x 122	376 x 140 x 150	376 x 140 x 150
Weight empty kg	2.7	2.7	4.5	4.5
Ventilation mode	available	available	available	available

EBERSPÄCHER AIRTRONIC



Heater	Airtronic D4	Airtronic D4	Airtronic D4 Plus	Airtronic D4 Plus
Product package	Heater	Heater	Heater	Heater
Techn. designation	Airtronic M (D4)	Airtronic M (D4)	Airtronic M (D4 Plus)	Airtronic M (D4 Plus)
Order no. for heater	25 2113 05 00 00	25 2114 05 00 00	25 2484 05 00 00	25 2498 05 00 00
Fuel	Diesel	Diesel	Diesel	Diesel
Voltage V	12	24	12	24
Heating medium	Air	Air	Air	Air
Control / heat settings	off / low / medium / high / power	off / low / medium / high / power	off / low / medium / high / power	off / low / medium / high / power
Heat output W	– / 900 / 2,000 / 3,000 / 4,000	– / 900 / 2,000 / 3,000 / 4,000	– / 900 / 2,000 / 3,000 / 4,000	– / 900 / 2,000 / 3,000 / 4,000
Fuel consumption l / h	– / 0.11 / 0.25 / 0.38 / 0.51	– / 0.11 / 0.25 / 0.38 / 0.51	– / 0.11 / 0.25 / 0.38 / 0.51	– / 0.11 / 0.25 / 0.38 / 0.51
Elec. power consumption, operation W	5 / 7 / 13 / 24 / 40	5 / 7 / 13 / 24 / 40	5 / 7 / 16 / 30 / 55	5 / 7 / 16 / 30 / 55
Elec. power consumption, start W	100	100	100	100
Air flow volume w/o backpressure kg / h	24 / 60 / 110 / 150 / 185	24 / 60 / 110 / 150 / 185	22 / 55 / 100 / 140 / 175	22 / 55 / 100 / 140 / 175
Lower voltage limit V	10.5	21	10.5	21
Upper voltage limit V	16	32	16	32
Interference suppression	Disturbance class 5 (DIN EN 55025)	Disturbance class 5 (DIN EN 55025)	Disturbance class 5 (DIN EN 55025)	Disturbance class 5 (DIN EN 55025)
Dimensions L x W x H mm	376 x 140 x 150	376 x 140 x 150	376 x 140 x 150	376 x 140 x 150
Weight empty kg	4.5	4.5	4.5	4.5
Ventilation mode	available	available	available	available

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EBERSPÄCHER AIRTRONIC



Heater		Airtronic B5	Airtronic D5	Airtronic D5
Product package		Heater	Heater	Heater
Techn. designation		Airtronic L (B5)	Airtronic L (D5)	Airtronic L (D5)
Order no. for heater		20 1859 05 00 00	25 2361 05 00 00	25 2362 05 00 00
Fuel		Gasoline	Diesel	Diesel
Voltage	V	12	12	24
Heating medium		Air	Air	Air
Control / heat settings		low / medium / high / power	low / medium / high / power	low / medium / high / power
Heat output	W	2,000 / 2,700 / 4,800 / 5,500	1,600 / 2,700 / 4,800 / 5,500	1,600 / 2,700 / 4,800 / 5,500
Fuel consumption	l / h	0.27 / 0.37 / 0.65 / 0.75	0.2 / 0.34 / 0.58 / 0.66	0.2 / 0.34 / 0.58 / 0.66
Elec. power consumption, operation	W	15 / 30 / 80 / 85	25 / 35 / 80 / 85	25 / 35 / 80 / 85
Elec. power consumption, start	W	250	250	250
Air flow volume w/o backpressure	kg / h	125 / 180 / 275 / 280	155 / 190 / 275 / 280	155 / 190 / 275 / 280
Lower voltage limit	V	10.5	10.5	21
Upper voltage limit	V	16	16	32
Interference suppression		Disturbance class 5 (DIN EN 55025)	Disturbance class 5 (DIN EN 55025)	Disturbance class 5 (DIN EN 55025)
Dimensions L x W x H	mm	530 x 170 x 185	530 x 170 x 185	530 x 170 x 185
Weight empty	kg	9.3	9.3	9.3
Ventilation mode		available	available	available

EBERSPÄCHER AIRTRONIC



Heater		D8 LC	D8 LC
Product package		Heater	Heater
Techn. designation		8 L (D8 LC)	8 L (D8 LC)
Order no. for heater		25 1890 00 00 00	25 1891 00 00 00
Fuel		Diesel	Diesel
Voltage	V	12	24
Heating medium		Air	Air
Control / heat settings		low / high	low / high
Heat output	W	3,500 / 8,000	3,500 / 8,000
Fuel consumption	l / h	0.4 / 1.05	0.4 / 1.05
Elec. power consumption, operation	W	115	115
Elec. power consumption, start	W	330	380
Air flow volume w/o backpressure	kg / h	310	310
Lower voltage limit	V	10	20
Upper voltage limit	V	14	28
Interference suppression		Long-distance (additional measures possible)	Long-distance (additional measures possible)
Dimensions L x W x H	mm	653 x 260 x 250	653 x 260 x 250
Weight empty	kg	14	14
Ventilation mode		available	available

3 | SELECTING THE AIR HEATER

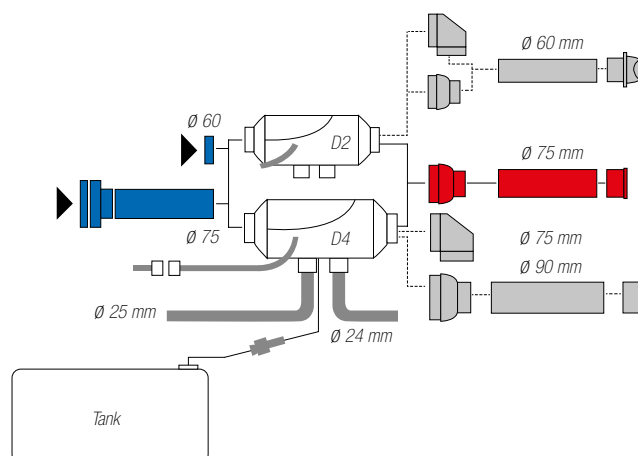
The heating output information provided refers to heating the interior of a cold vehicle to around 20 °C in cold outside temperatures. If the heater only needs to maintain the existing temperature of the interior, less heating power is required. The heating outputs are only guide values. The exact heating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

GUIDE VALUES FOR REQUIRED HEATING OUTPUT		Outside temperature		
Example	Volume of interior	< -15 °C	-15 °C to 0 °C	> 0 °C
Truck cabin	< 8 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
Yacht / boat	> 20 m ³	see documentation: Marine catalog		

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

RANGE OF DEVICES AND THEIR RESPECTIVE ADVANTAGES:

- **Airtronic D2:** the smallest air heater on the market, advantageous in cramped installation spaces.
- **Airtronic D4:** output 4,000 W, air ducting 90 mm, for vans and suitably sized trucks; offers the advantage of high power within a reasonable installation space, wide range of applications, from 900 W (gasoline 1,300 W) to 4,000 W.
- **Airtronic D3:** in well insulated vehicles, 3,000 W, 90 mm air ducting, energy-saving benefits of 7 – 24 W which makes it quiet and fuel-efficient, wide-ranging application 900 – 3,000 W.
- **Airtronic D4 Plus:** generally for longer air ducting, with the advantage of a higher air flow volume with 90 and / or 75 mm ducting.



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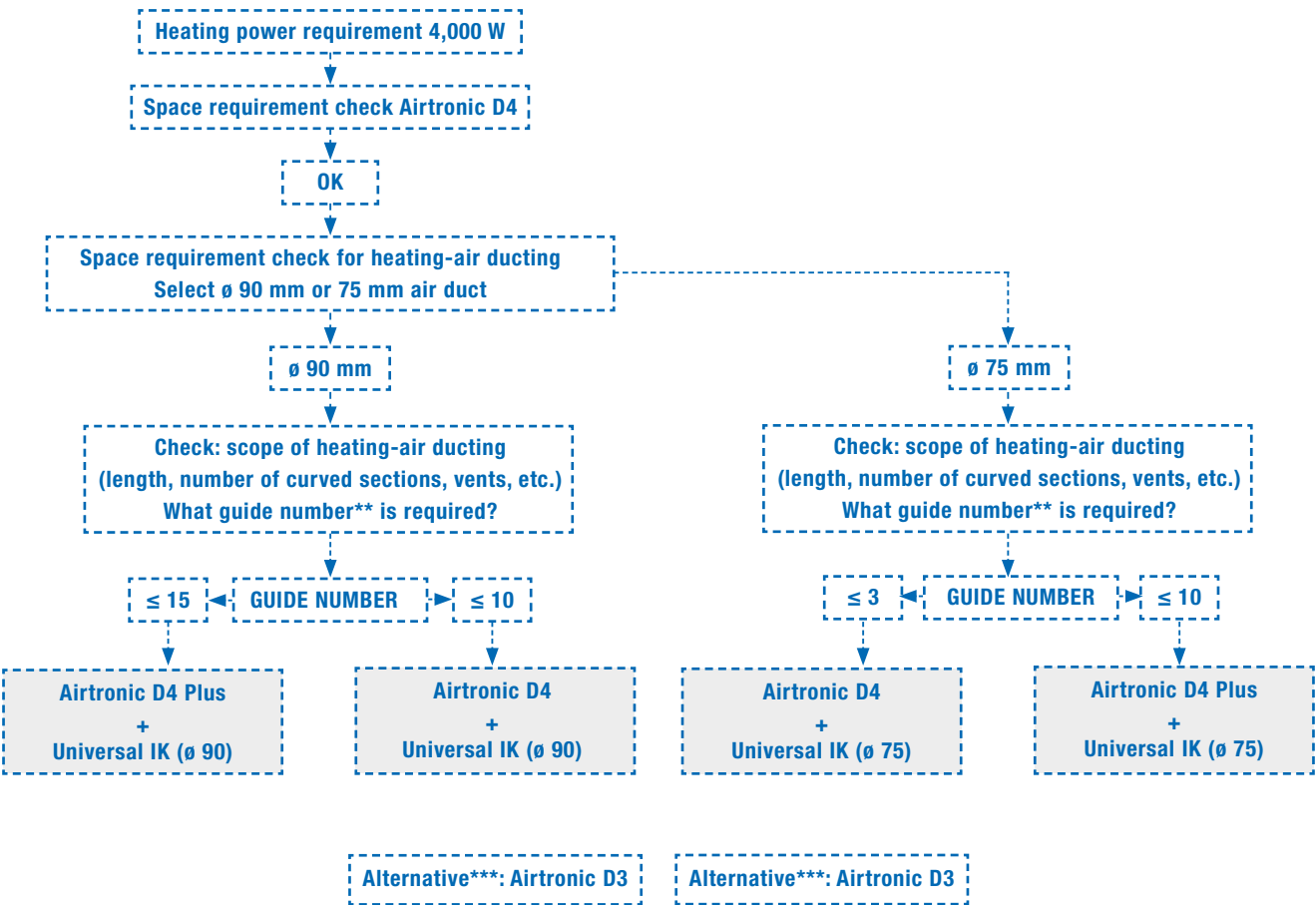
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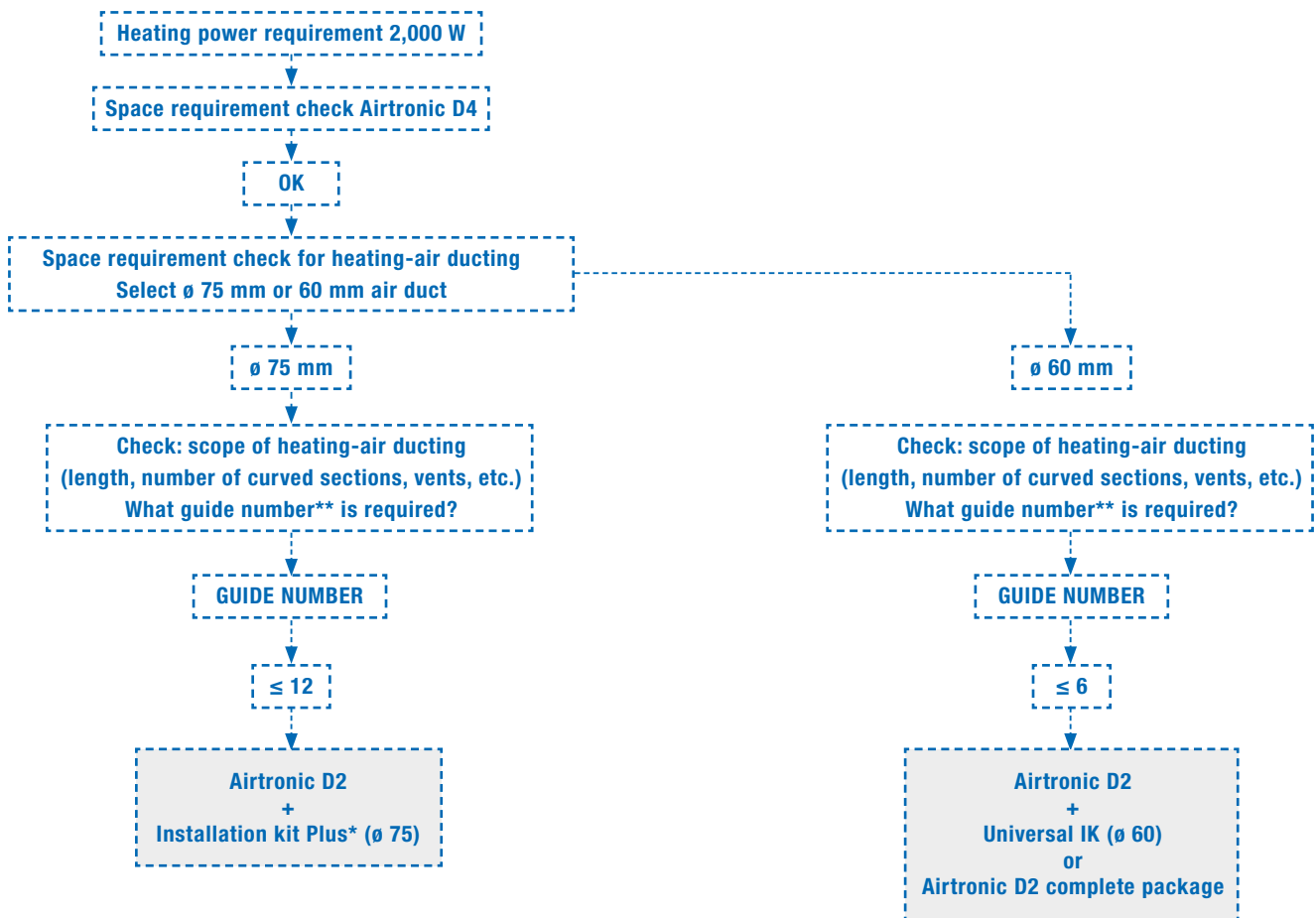
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3 | SELECTING THE AIR HEATER



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* Installation kit Plus = expanded product package

** 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.

*** Airtronic D3 option: lower heating power (3,000 W) and therefore lower power consumption + and quieter operation => e.g. for well-insulated cabins

3 | INSTALLATION KITS

GENERAL NOTES ON HEATING-AIR DUCTING:

Heating-air ducting can also be mounted onto the heater. Each part has a line guide number which 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 inadmissible level, we have calculated a heater guide number for each heater and a line guide number for each heating-air ducting; 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 ducts connected to the heater must not be greater than the heater guide number, as otherwise the vent temperature would be inadmissibly 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:

After 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. Note the information on air ducting and calculating the total of the guide line numbers starting on page 42.

When using two air ducts or multiple vents, 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 cross-section or two lines the same, routed in parallel = 1 / 4 of the guide number.

Example:

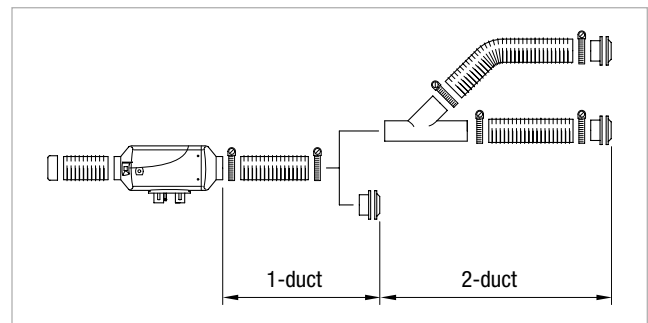
Hose $\varnothing$ 60 mm

Cross-section A = 19.6 cm², guide number 1.0

Hose $\varnothing$ 75,

Cross-section 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 CONTROL UNITS:

To counter the uneven distribution of warm air in systems with multiple ducts and vents, we have developed innovative air flow regulating elements that are simply clipped into the hose connection fitting of the air vent. These patented regulating elements reduce the air flow cross-section accordingly and therefore the amount of air that escapes. Available for fitting diameters 60, 75 and 90 mm.



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THE NEW RANGE OF AIR VENTS:

Particularly colorfast and durable even at high temperatures, the covers of our completely re-designed range of vents 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 cover and fitting or fitting and air hose for easy assembly.
- Fittings available in 50, 60, 75 and 90 mm.



HEATER GUIDE NUMBERS:

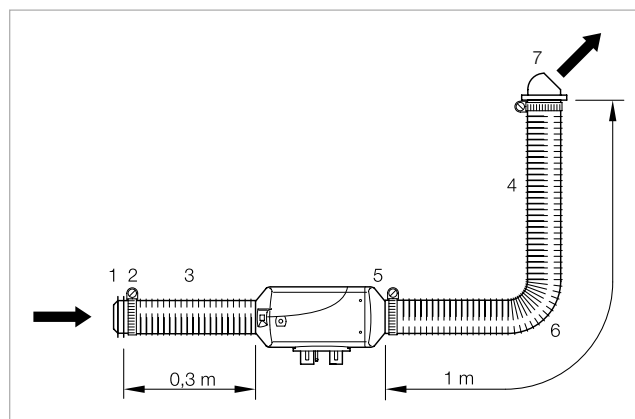
HEATER	GUIDE NUMBER
Airtronic D2 with scoop 60	6
Airtronic D2 with scoop 75	12
Airtronic D3 / D4 / B4 with scoop 75	3
Airtronic D3 / D4 / B4 with scoop 90	10
Airtronic D4 Plus with scoop 75 (air-recirculation mode)	8
Airtronic D4 Plus with scoop 75 (in fresh-air mode)	10
Airtronic D4 Plus with scoop 90	15

EXAMPLE CALCULATION FOR HEATING-AIR DUCTING:

Airtronic: Heater guide no = 6

NO.	DESCRIPTION	LINE GUIDE NUMBER
1	Protective grille	1.7
2	Connectors ø 60	1.7
3	Flex. Pipe ø 60, 0.3 m long	0.3
4	Flex. Pipe ø 60, 1.0 m long	1.0
5	Straight air scoop, ø 60	0
6	1 x 90° elbow, flex. pipe	0.6
7	Rotating air vent	1.4
Total of the line guide numbers		5.0

Total of line guide numbers, 5.0, does not exceed the heater guide number 6, so the installation is admissible.



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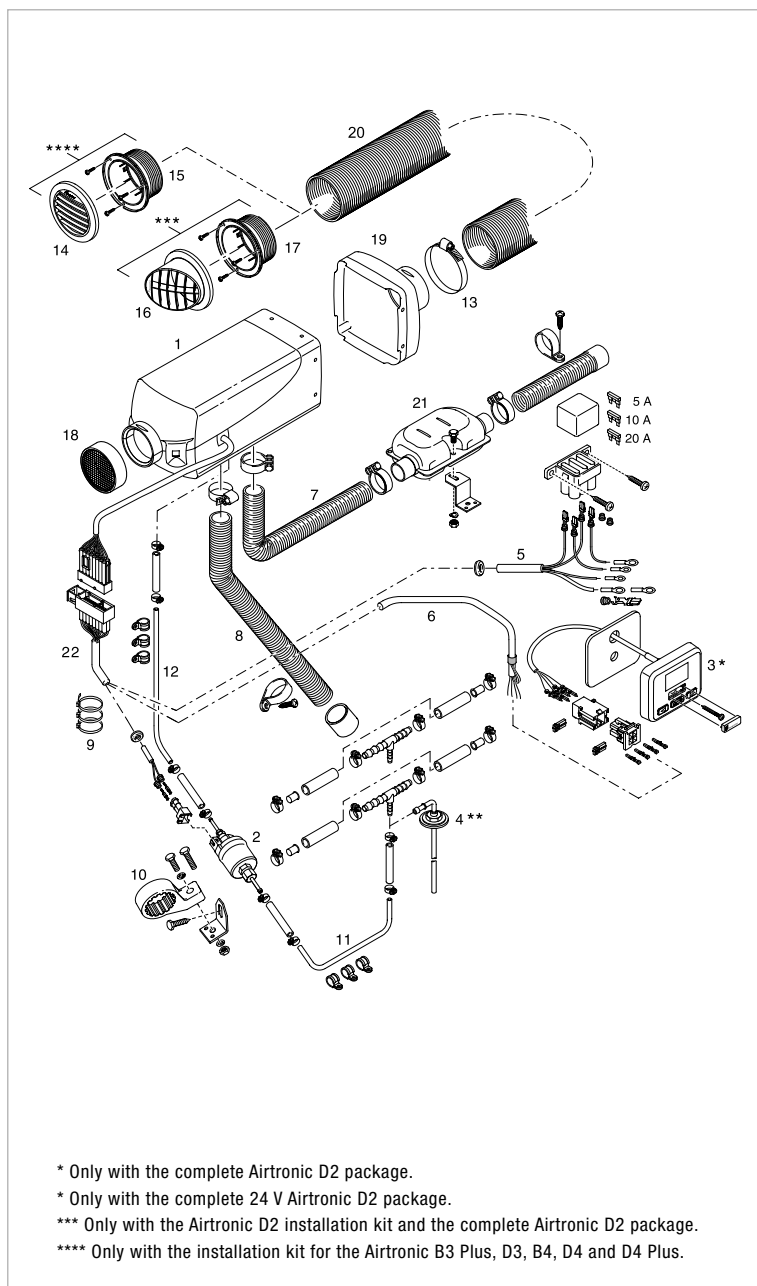
3 | UNIVERSAL INSTALLATION KIT

Air heaters	Heater	Complete package
Airtronic D2, 12 V	25 2069 05 0000	25 2675 05 0000
Airtronic D2, 24 V	25 2070 05 0000	25 2676 05 0000
Airtronic D3, 12 V	25 2317 05 0000	
Airtronic B4, 12 V	20 1812 05 0000	
Airtronic D4, 12 V	25 2113 05 0000	
Airtronic D4, 24 V	25 2114 05 0000	
Airtronic D4 Plus, 12 V	25 2484 05 0000	
Airtronic D4 Plus, 24 V	25 2498 05 0000	

UNIVERSAL IK	Air scoop ø 60 mm Heater guide number 6	Air scoop ø 90 mm Heater guide number 10	Air scoop ø 90 mm Heater guide number 15	Air scoop ø 75 mm Heater guide number 3	Air scoop ø 75 mm Heater guide number 8, air-recirculation mode Heater guide number 8, fresh-air mode
Airtronic D2, 12 V	25 2069 80 0000				
Airtronic D2, 24 V	25 2069 80 0000				
Airtronic D3, 12 V		25 2113 80 0000		25 2484 80 0000	
Airtronic B4, 12 V		25 2113 80 0000		25 2484 80 0000	
Airtronic D4, 12 V		25 2113 80 0000		25 2484 80 0000	
Airtronic D4, 24 V		25 2113 80 0000		25 2484 80 0000	
Airtronic D4 Plus, 12 V			25 2113 80 0000		25 2484 80 0000
Airtronic D4 Plus, 24 V			25 2113 80 0000		25 2484 80 0000

PLEASE NOTE:

- See page 56 for control units.
- Parts with no image number are small parts which are bagged.
- If the installation requires additional parts, see page 83.
- For notes on the heater guide numbers, see pages 40 and 48.



HEATER – PRODUCT PACKAGE:

- | | |
|---|------------------|
| 1 | Airtronic heater |
| 2 | Metering pump |

COMPLETE PACKAGE – PRODUCT PACKAGE:

- | | |
|---|---|
| 1 | Airtronic heater |
| 2 | Metering pump |
| – | Installation kit with ø 60 mm air scoop |
| 3 | EasyStart Select |
| 4 | Fuel tank extractor – only with complete package
25 2676 05 0000 |

UNIVERSAL INSTALLATION KIT – PRODUCT PACKAGE:

- | | |
|----|--|
| 5 | Cable harness, pos / neg (included with Item 22) |
| 6 | Cable harness, operation (included with Item 22) |
| 7 | Flexible exhaust pipe (1 m long) |
| 8 | Combustion-air hose (1 m long) |
| 9 | Cable tie (2x 10) |
| 10 | Mounting bracket, metering pump |
| 11 | Pipe, 6 x 2 (1.5 m long) |
| 12 | Pipe, 4 x 1.25 (7.5 m long) |
| 13 | Hose clip (1x) |
| 14 | Vent, 30° (ø 75 / 90 mm) |
| 15 | Fitting (ø 75 mm) |
| 16 | Flat vent, 30° (ø 50 / 60 mm) |
| 17 | Fitting (ø 60 mm) |
| 18 | Grille |
| 19 | Scoop |
| 20 | Flexible pipe |
| 21 | Exhaust silencer |
| 22 | Cable harness, heater |

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3 | “PLUS” INSTALLATION KITS

“PLUS” INSTALLATION KITS ARE IDEAL FOR INSTALLATIONS IN MOTOR HOMES AND BOATS.

INSTALLATION KIT “PLUS”	Air scoop ø 75 mm Heater guide number 12
Airtronic D2, 12 V	25 2069 82 0000
Airtronic D2, 24 V	25 2069 82 0000

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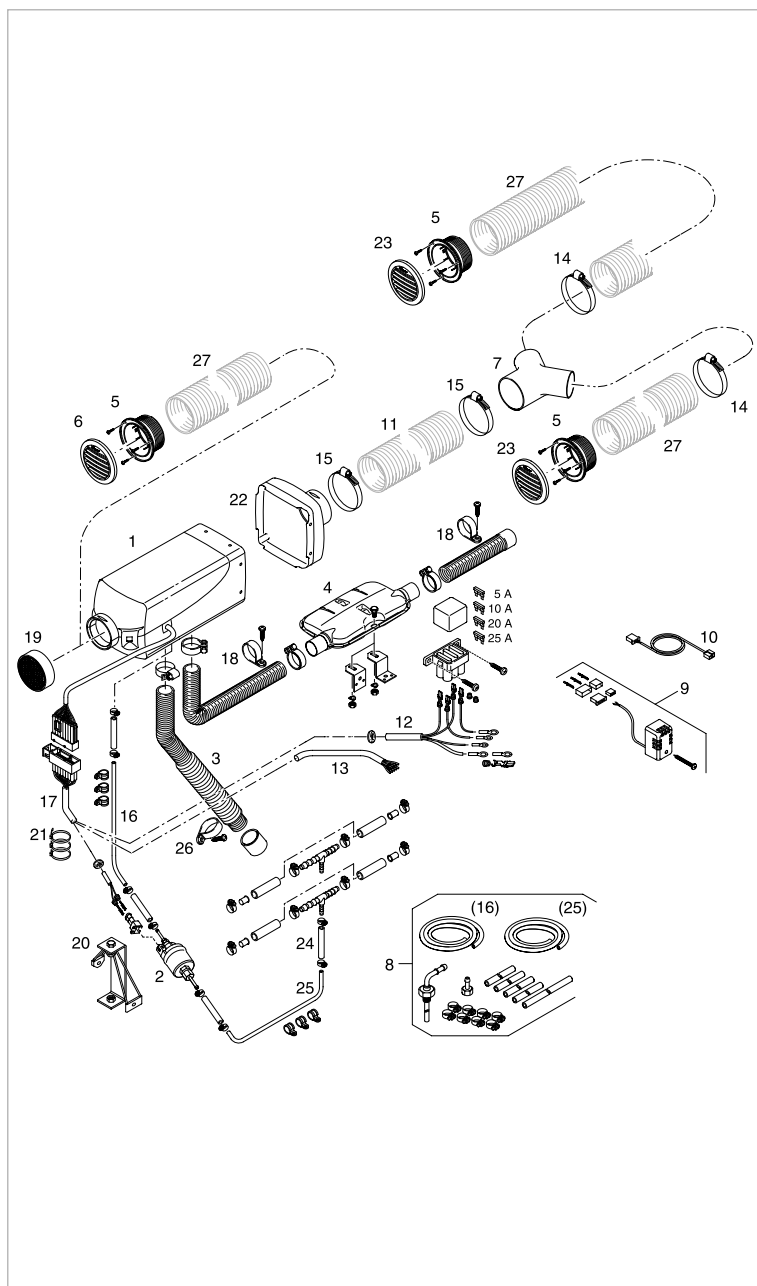
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PLEASE NOTE:

- See page 56 for control units.
- Parts with no image number are small parts which are bagged.
- If the installation requires additional parts, see page 83.
- For notes on the heater guide numbers, see pages 40 and 48.


HEATER – PRODUCT PACKAGE:

- | | |
|---|------------------|
| 1 | Airtronic heater |
| 2 | Metering pump |

INSTALLATION KIT “PLUS” – PRODUCT PACKAGE:

- | | |
|----|--|
| 3 | Combustion-air intake silencer |
| 4 | Exhaust silencer |
| 5 | Fitting (3x Ø 60 mm) |
| 6 | Flat vent, 0° (Ø 50 / 60 mm) |
| 7 | Y-junction (Ø 75 / 60 / 60 mm) |
| 8 | Tank connection kit |
| 9 | Temperature control sensor |
| 10 | Cable harness for temperature control sensor |
| 12 | Cable harness, pos / neg (included with Item 17) |
| 13 | Cable harness, operation (included with Item 17) |
| 14 | Hose clip (2x Ø 60 mm) |
| 15 | Hose clip (2x Ø 75 mm) |
| 16 | Pipe 4 x 1.25 (6 m long; included with Item 8) |
| 17 | Cable harness, heater |
| 18 | Flexible exhaust pipe (1 m long) |
| 19 | Grille |
| 20 | Holder, metering pump |
| 21 | Cable tie (2 sets) |
| 22 | Air scoop (Ø 75 mm) |
| 23 | Flat vent, 30° (2x Ø 50 / 60 mm) |
| 24 | Adapter Ø 6 / 4 |
| 25 | Pipe 4 x 1 (6 m long; included with item 8) |
| 26 | Pipe clip Ø 50 mm |

NOT IN PRODUCT PACKAGE:

- | | |
|----|---|
| 11 | Flexible pipe (Ø 75 mm) for heating-air ducting |
| 27 | Flexible pipe (Ø 60 mm) for heating-air ducting |

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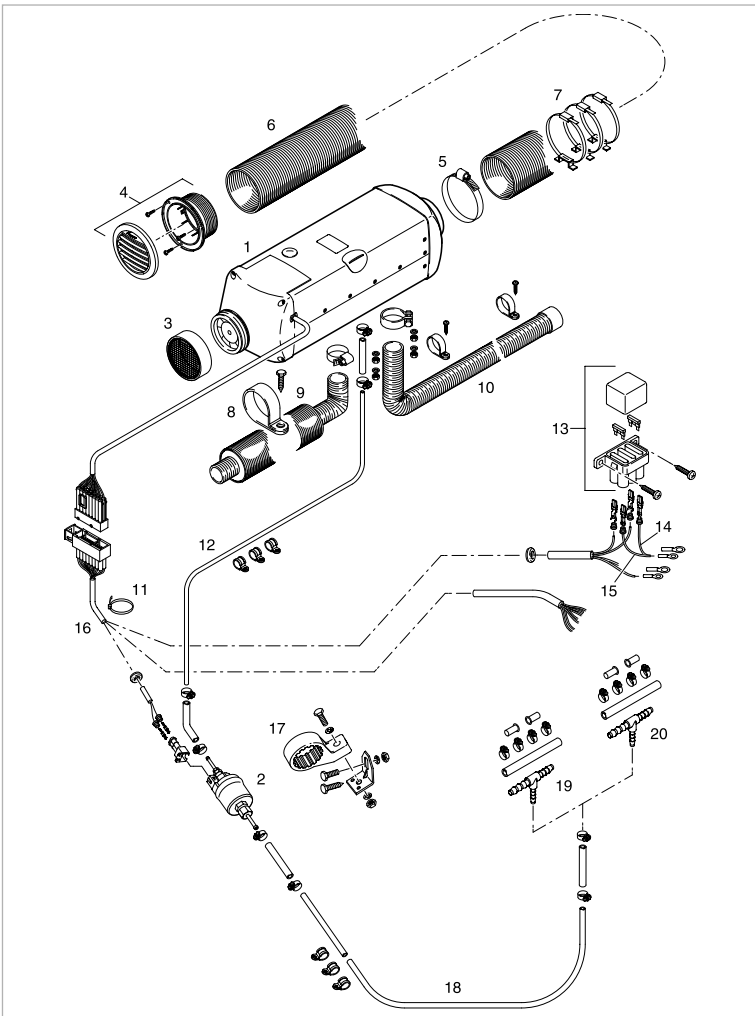
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3 | INSTALLATION PARTS

Air heaters	Heater	Universal IK
Airtronic L – B5, 12 V	20 1859 05 0000	25 2361 80 0000
Airtronic L – D5, 12 V	25 2361 05 0000	25 2361 80 0000
Airtronic L – D5, 24 V	25 2362 05 0000	25 2361 80 0000

PLEASE NOTE:

- See page 56 for control units.
- Parts with no image number are small parts which are bagged.
- If the installation requires additional parts, see page 83.



HEATER – PRODUCT PACKAGE:

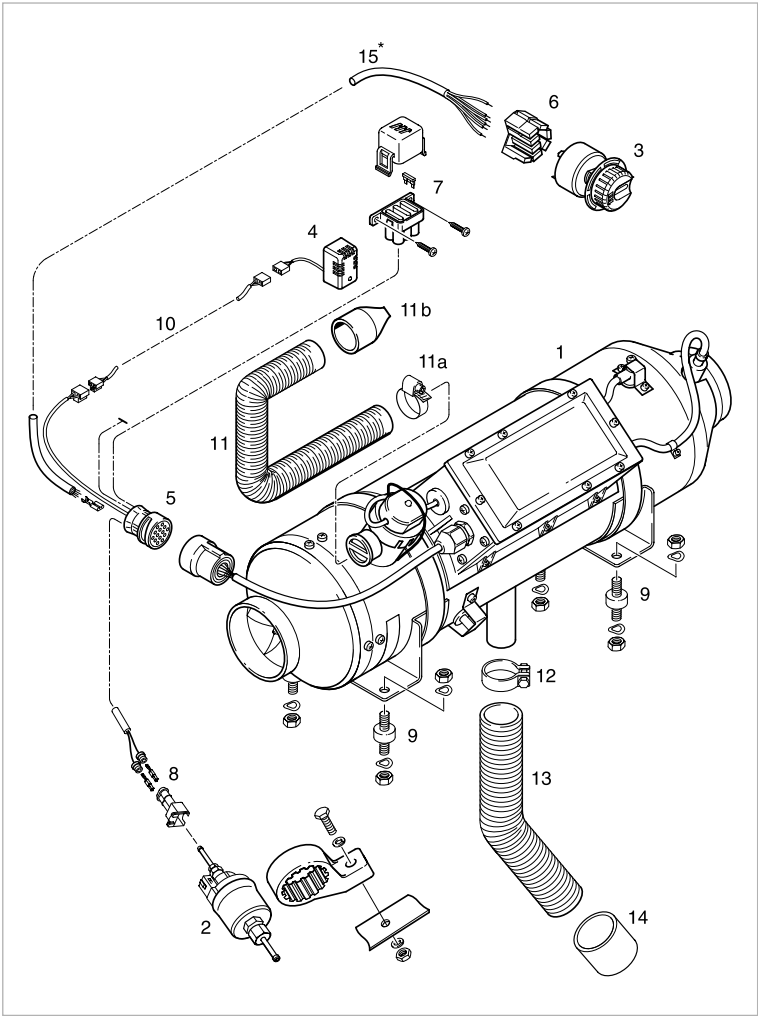
- | | |
|---|------------------|
| 1 | Airtronic heater |
| 2 | Metering pump |

UNIVERSAL INSTALLATION KIT – PRODUCT PACKAGE:

- | | |
|----|-----------------------------------|
| 3 | Grille, ø 90 mm |
| 4 | Flat vent, 30° with 90 mm fitting |
| 5 | Hose clip, ø 90 mm – 110 mm (2 x) |
| 6 | Flexible hose ø 90 mm |
| 7 | Bracket (3x) |
| 8 | Pipe clip, ø 50 mm |
| 9 | Intake silencer |
| 10 | Flexible exhaust pipe ø 24 mm |
| 11 | Cable tie 200 (2 x 10) |
| 12 | Fuel pipe, 4 x 1.25, 7.5 m long |
| 13 | Fuse holder |
| 14 | Plus cable, 1 ² rt |
| 15 | Plus cable, 4 ² rt |
| 16 | Cable harness |
| 17 | Holder, metering pump |
| 18 | Fuel pipe, 6 x 2, 1.5 m long |
| 19 | Hose connector 8 / 6 / 8 |
| 20 | Hose connector 10 / 6 / 10 |

Air heaters	Heater
D8 LC, 12 V	25 1890 00 0000
D8 LC, 24 V	25 1891 00 0000

- PLEASE NOTE:
- See page 56 for control units.
 - Parts with no image number are small parts which are bagged.
 - If the installation requires additional parts, see page 83.



HEATER – PRODUCT PACKAGE:

1	Heater, pre-mounted
2	Metering pump with integrated fuel filter and mounting bracket
3	Control unit
4	Temperature sensor, external
5	Cable harness with connection parts
6	Bushing connector housing with connection parts
7	Blade fuse with fuse holder
8	Bushing connector housing with busing connectors and seals (2 x)
9	Rubber-metal buffer with fastening parts (4 x)

NOT INCLUDED IN PRODUCT PACKAGE:

10	Cable harness, temperature sensor	25 1482 89 4000
11	Combustion air hose	10 2114 25 0000
11a	Hose clip	10 2067 03 2050
11b	End sleeve for combustion-air hose	25 1480 89 0400
12	Pipe clip for flex. exhaust pipe LW42	152 05 005
13	Flexible exhaust pipe LW42	360 61 381
14	End sleeve for flex. exhaust pipe LW42	22 1000 40 0200
–	Exhaust pipe (rigid)	047 05 044
15*	Cable harness, control unit	

* Self-assembly with the 5 m cable harness (Order no. 22 1000 30 0300). Cut the existing connectors off the cable harness. Prepare the cable strands for the bushing connectors and fit them. The bushing connectors are included in the product package. Connect the cable harness to the cable harness connector (5) and to the bushing connector housing of the control unit (6) following the circuit diagrams at the end of the documentation.

3 | GUIDE NUMBERS

AIRTRONIC

Heater number **6** – with $\varnothing$ 60 air scoop

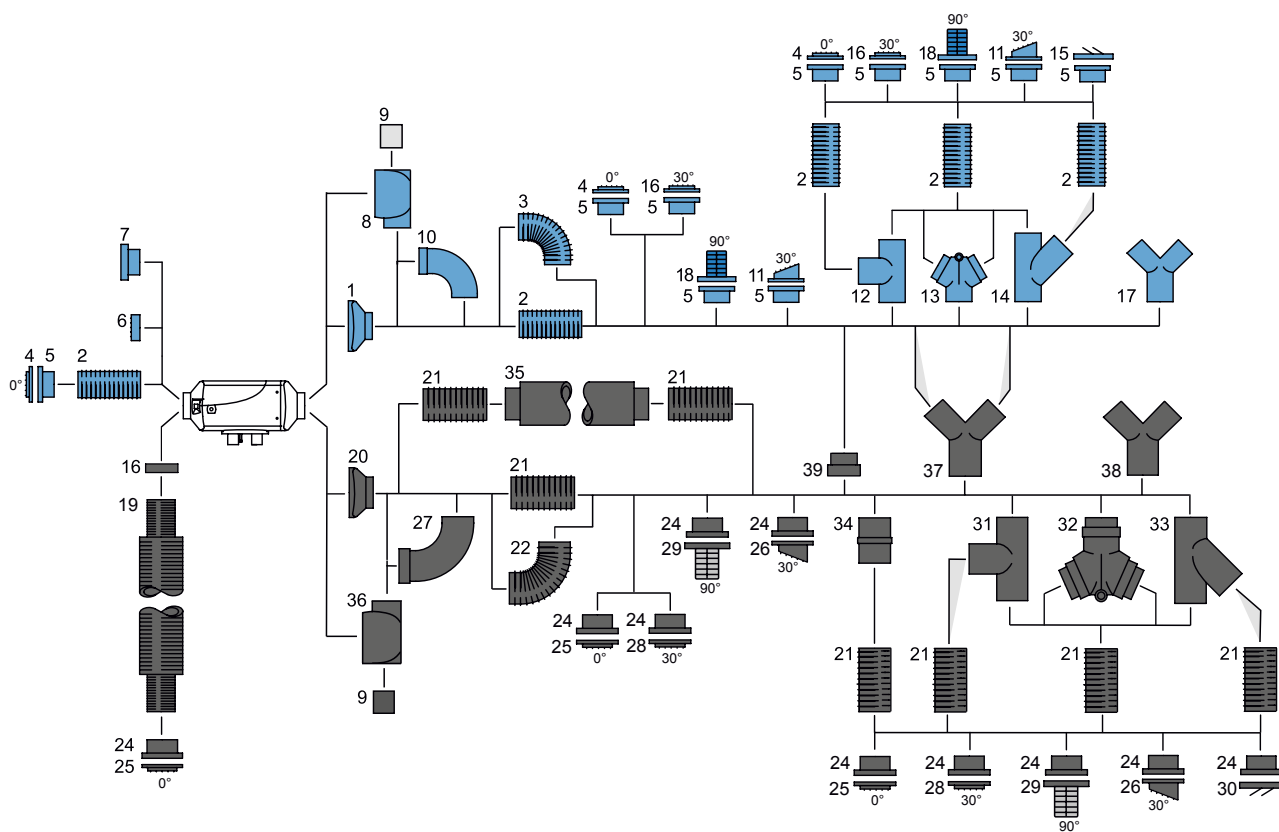
Heater number **12** – with $\varnothing$ 75 air scoop

The drawing shows the application options for the main air ducts.

There are no installation examples.

PLEASE NOTE:

For an explanation of one- and two-duct heating-air ducting, see page 40.



■	= $\varnothing$ 50 mm
■	= $\varnothing$ 60 mm
■	= $\varnothing$ 75 mm

NO.	NAME (DIMENSIONS IN MM)	LINE GUIDE NUMBER 1-DUCT	LINE GUIDE NUMBER 2-DUCT	SEE SERIES NO. SEC. 7 AIR-CONDUCTING PARTS
Heating-air duct with ø 60 scoop (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 vent, 0° with ø 60 fitting	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	ø 50 connection fitting for ø 60 ø 75 ball-shaped scoops	4.5	–	31
10	Pipe elbow, 90° ø 60	4	–	33
11	Upright vent, 30° with ø 60 fitting	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 vent ø 50 / 60	–	–	12
16	Flat vent, 30° ø 50 / 60	0.7	0.2	11
17	Symmetrical metal Y-junction ø 60 / 50 / 50	–	0.3	42
18	Upright vent, 90° ø 50 / 60	n / a	n / a	14
Heating-air duct with ø 75 scoop (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, flex. pipe, ø 75	0.2	–	1
23	Intake silencer, ø 75	0.7	–	4
24	Fitting, ø 75	0	0	20
25	Flat vent, 0° ø 75 / 90 with ø 75 fitting	0.6	0.1	13
26	Upright vent, 30° ø 75 / 90 with ø 75 fitting	0.5	0.15	10
27	Pipe elbow, 90° ø 75	4.5	–	33
28	Flat vent, 30° with ø 75 fitting	0.5	0.15	11
29	Upright vent, 90° with ø 75 fitting	0.8	0.15	14
30	Closable vent ø 75 / 90 with ø 75 fitting	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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3 | GUIDE NUMBERS

AIRTRONIC M

Heater number **3** – with $\varnothing$ 75 air scoop

Heater number **10** – with $\varnothing$ 90 air scoop

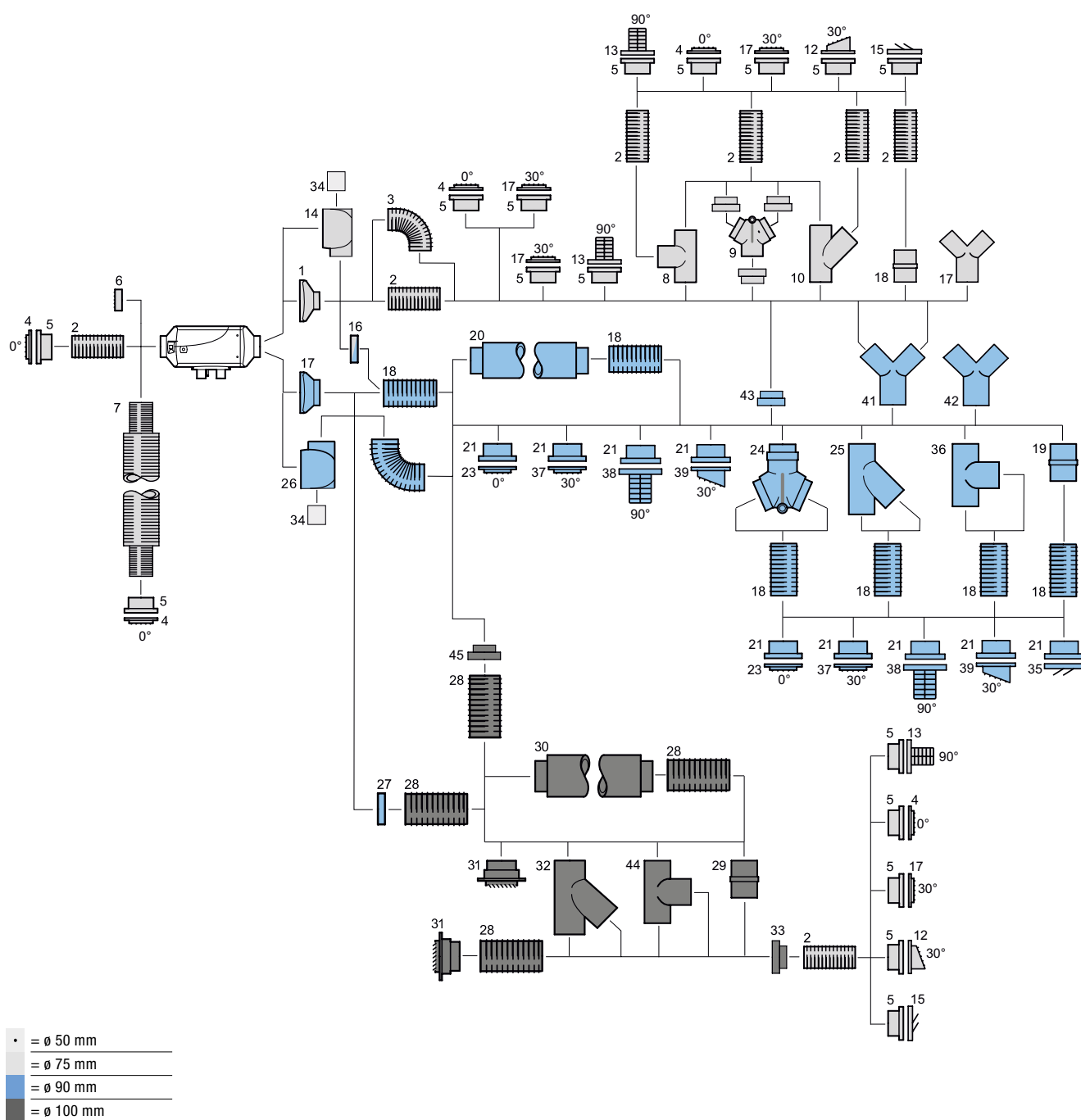
The drawing shows the application options for the main air ducts.

There are no installation examples.

* Heater guide numbers for the Airtronic D4 Plus are different, see page 42.

PLEASE NOTE:

For an explanation of one- and two-duct heating-air ducting, see page 40.



NO.	NAME (DIMENSIONS IN MM)	LINE GUIDE NUMBER 1-DUCT		LINE GUIDE NUMBER 2-DUCT		SEE SERIES NO. SEC. 7 AIR-CONDUCTING PARTS
		ø 75	ø 90	ø 75	ø 90	
	Heating-air duct with a ø 75 scoop (heater guide number 3)					
1a	Scoop, ø 75	0	–	–	–	21
2	Flex. pipe ø 75 per m	1	–	0.25	–	1
3	90° elbow, flexible pipe, ø 75	0.2	–	–	–	1
4	Flat vent, 0° with ø 75 fitting	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 75 / 90 adapters	–	–	1.8	–	40
10	Plastic Y-junction ø 75 / 75 / 75	–	–	0.6	–	43
11	Flat vent, 30° with ø 75 fitting	0.4	–	0.1	–	11
12	Upright vent, 30° with ø 75 fitting	0.6	–	0.2	–	10
13	Upright vent, 90° with ø 75 fitting	1.1	–	0.3	–	14
14	Ball-shaped scoop, ø 75	2.0	–	–	–	32
15	Closable vent with ø 75 fitting	–	–	–	–	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 duct with ø 90 scoop (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 vent, 0° with ø 90 fitting	–	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
30	Silencer, ø 100	–	0.5	–	–	3
31	Rotatable vent 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 50x ø 75	–	–	–	1.0	31
34b	Connection fitting 50x ø 90	–	–	–	2.5	31
35	Closable vent with ø 90 fitting	–	–	–	–	12
36	T-junction, ø 90	–	–	–	0.6	35
37	Flat vent, 30° with ø 90 fitting	–	2.0	–	0.4	11
38	Upright vent, 90° with ø 90 fitting	–	2.7	–	0.3	14
39	Upright vent, 30° with ø 90 fitting	–	2.4	–	0.6	10
40	90° elbow, flexible 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 D4 Plus

3 | GUIDE NUMBERS

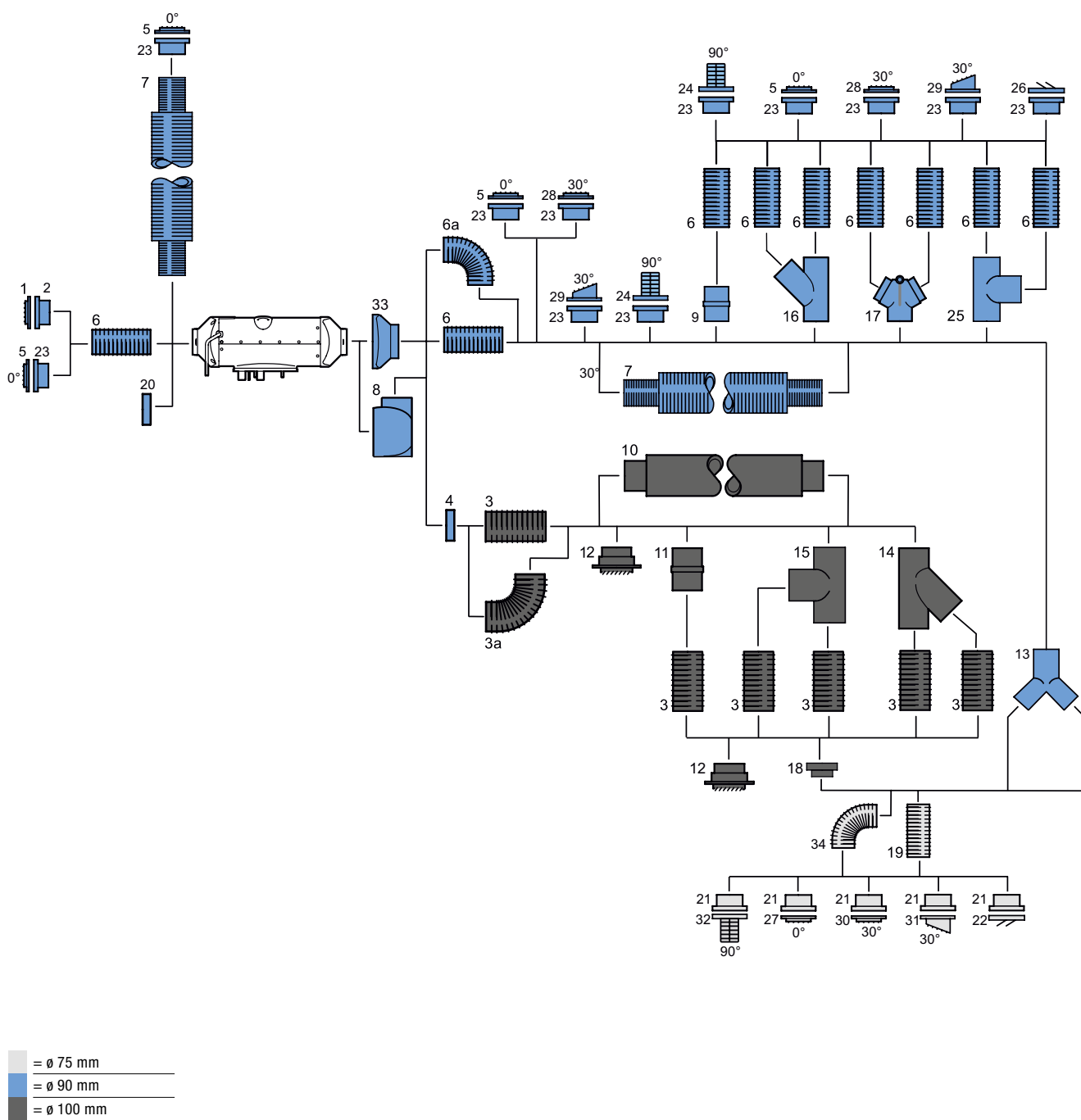
AIRTRONIC L

Heater number **10**

The drawing shows the application options for the main air ducts.
There are no installation examples.

PLEASE NOTE:

For an explanation of one- and two-duct heating-air ducting, see page 40.



NO.	NAME (DIMENSIONS IN MM)	LINE GUIDE NUMBER 1-DUCT	LINE GUIDE NUMBER 2-DUCT	SEE SERIES NO. SEC. 7 AIR-CONDUCTING PARTS
Heating-air duct with ø 90 scoop (heater guide number 10)				
1	Metal grille vent ø 90	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, flexible pipe, ø 100	0.6	–	1
4	Adapter ø 90 / 100	0	–	45
5	Flat vent, 0° with ø 90 fitting	1	0.2	13
6	Flexible pipe, ø 90, per m	1	0.25	1
6a	90° elbow, flexible 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
12	Flat vent, ø 100, 30°	2	0.5	11.1
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 vent with ø 75 fitting	–	–	12
23	Fitting, ø 90	0	0	16
24	Upright vent, 90° with ø 90 fitting	3	0.8	14
25	T-junction ø 90 / 90 / 90	–	0.6	35
26	Closable vent with ø 90 fitting	–	–	12
27	Flat vent, 0° with ø 75 fitting	2.5	0.7	13
28	Flat vent, 30° with ø 90 fitting	1.7	0.4	11
29	Upright vent, 30° with ø 90 fitting	2.3	0.6	10
30	Flat vent, 30° with ø 75 fitting	2.7	0.8	11
31	Upright vent, 30° with ø 75 fitting	2.1	0.5	10
32	Upright vent, 90° with ø 75 fitting	4.7	1.2	14
33	Scoop, ø 90	0	0	–
34	90° elbow, flexible pipe, ø 75	1	0.25	1

* Item 4 – when using the ø 90 / 100 adapter, cut the grille

3 | GUIDE NUMBERS

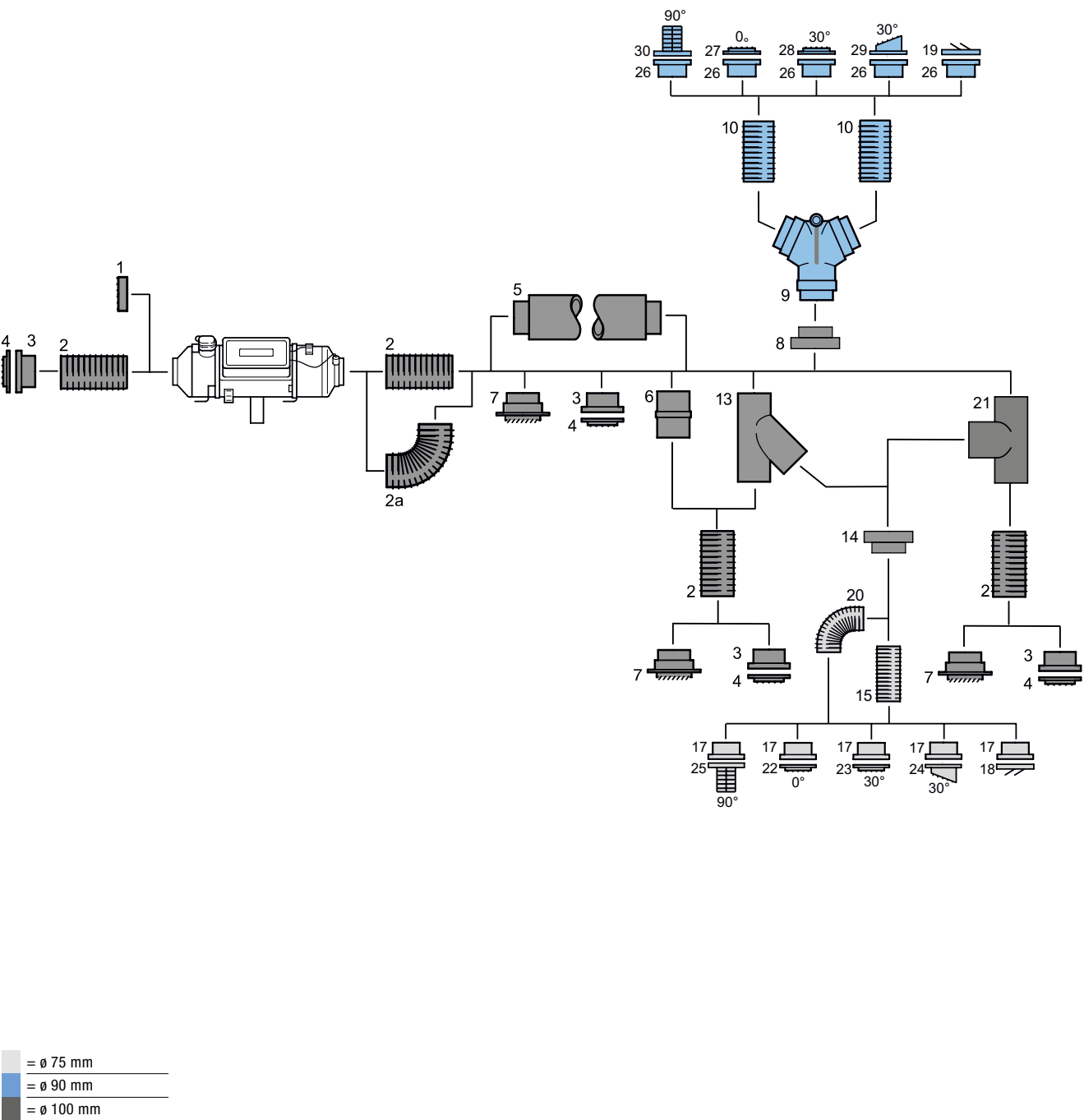
AIR HEATER 8 L

Heater number **8**

The drawing shows the application options for the main air ducts.
There are no installation examples.

PLEASE NOTE:

For an explanation of one- and two-duct heating-air ducting, see page 40.



NO.	NAME (DIMENSIONS IN MM)	LINE GUIDE NUMBER 1-DUCT	LINE GUIDE NUMBER 2-DUCT	SEE SERIES NO. AIR-CONDUCTING PARTS
Heating-air duct with ø 100 scoop (heater guide number 8)				
1	Grille, ø 100	0.1	–	17
2	Flexible pipe, ø 100, per m	1	0.25	1
2a	90° elbow, flexible pipe, ø 100	0.5	0.15	1
3	Metal hose fitting, ø 100	0	0	18
4	Grille, ø 100	1.8	0.1	13.1
5	Silencer, ø 100	1.1	0.25	3
6	Hose connector fitting, ø 100	0.5	0.1	44
7	Rotatable vent ø 100	5.5	1.2	11.1
8	Adapter ø 90 – 100	1.4	–	45
9	Butterfly valve, ø 90 / 90 / 90	–	2.6	40
10	Flexible pipe, ø 90, per m	3	0.8	1
13	Y-junction, ø 100	–	0.4	43
14	Adapter ø 75 – 100	6.1	–	47
15	Flexible pipe, ø 75, per m	–	2	1
17	Fitting, ø 75	0	0	16
18	Closable vent 75	–	–	12
19	Closable vent 90	–	–	12
20	90° elbow, flexible pipe, ø 75	–	1.1	1
21	T-junction, ø 100	–	0.2	35
22	Flat vent, 0° with ø 75 fitting	–	1.3	13
23	Flat vent, 30° with ø 75 fitting	–	1.5	11
24	Upright vent, 30° with ø 75 fitting	–	1.6	10
25	Upright vent, 90° with ø 75 fitting	–	1.8	14
26	Fitting, 90	0	0	16
27	Flat vent, 0° with ø 90 fitting	–	0.8	13
28	Flat vent, 30° with ø 90 fitting	–	1.1	11
29	Upright vent, 30° with ø 90 fitting	–	1.1	10
30	Upright vent, 90° with ø 90 fitting	–	1.3	14

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3 | CONTROL UNITS

CONTROL UNITS					
					
Model	EasyStart Select Control unit	EasyStart Timer Timer	EasyStart Remote Remote control	EasyStart Remote+ Remote control	EasyStart Web**/** Web-based remote control
Order number	22 1000 34 13 00	22 1000 34 15 00	22 1000 34 23 00	22 1000 34 17 00	22 1000 34 51 00
Description	Basic version	Comfort version	Basic version	Comfort version	Operation by smartphone app (available for iPhone and Android) or web app (browser version)
Functions	Heating / ventilation on / off	- Heating / ventilation on / off - Program / delete pre-select mode - Long-press function for immediate heating - A second / additional heater can be operated	- Heating / ventilation on / off - Operating time adjustable	- Heating / ventilation on / off - Program / delete pre-select mode - Long-press function for immediate heating - A second / additional heater can be operated	Heating / ventilation on / off
Programming the timer	–	- Three programming locations within seven days - Selection of individual days of the week or one of three time periods (Mo.–Fr. / Sa.+Su. / Mo.–Su.)	–	- Three programming locations within seven days - Selection of individual days of the week or one of three time periods (Mo.–Fr. / Sa.+Su. / Mo.–Su.)	- Three programming locations within seven days - Selection of individual days of the week or one of three time periods (Mo.–Fr. / Sa.+Su. / Mo.–Su.)
Timer programming: automatic heating time calculation	–	Optional with connection of temperature sensor	–	Yes	Yes
Immediate start-up mode running time	60 min. preset	Adjustable 10 – 120 min.	Adjustable 10, 20, 30, 40, 50 or 60 min.	Adjustable 10 – 120 min.	Adjustable 10 – 720 min.
Pre-ventilation*	Yes	Yes	Yes	Yes	Yes
Display Interior temperature	–	Optional	–	Yes	Yes
Feedback	- Status: Heater - Status: Connection to the heater	- Status: Heater - Status: Connection to the heater	- Data transfer successful - Status: Heater - Status: Connection to the heater	- Data transfer successful - Status: Heater and timer - Status: Connection to the heater	- Status: Heater and timer - Feedback via app or browser version - Status: Connection to the heater
Range	–	–	Up to 1 km under optimum conditions	Up to 1 km under optimum conditions	Unlimited (given network coverage)
Display	LED-illuminated ICON display. Lighting can be integrated with vehicle lighting circuit.	Matrix display illuminated with LEDs. Lighting can be integrated with vehicle lighting circuit.	Two-tone LED	Matrix display illuminated with LEDs.	Display on smartphone app or web browser. Illuminated button in the vehicle.

* Depending on heater type

** End users can pre-book connectivity at standard cellphone rates for 12 months at a time at www.myeberspaecher.com

*** Network coverage available in the following countries: Austria, Belgium, Czech Republic, Denmark, Estonia, Finland, France, Germany, Great Britain and Northern Ireland, Italy, Latvia, Lithuania, Netherlands, Norway, Poland, Romania, Russia, Sweden, Switzerland, Turkey, Ukraine and Belarus.

3 | CONTROL UNITS

ACCESSORIES	EasyStart Select	EasyStart Timer	EasyStart Remote	EasyStart Remote+	EasyStart Web
Temperature sensor for displaying interior temperature	—	22 1000 34 22 00	—	Included in the product package	Included in the product package
Timer trim	—	22 1000 51 41 00	—	—	—

APPROVED COMBINATIONS

		SLAVE CONTROL UNITS				
		EasyStart Select	EasyStart Timer	EasyStart Remote	Button	EasyStart Web
MASTER CONTROL UNITS	EasyStart Timer	X	X	X	X	—
	EasyStart Remote+	X	X	—	Included in the product package	—
	EasyStart Web	X	X	X	Included in the product package	—

EasyStart Web:

This product can be combined with one of the following control units from the EasyStart family: EasyStart Select, EasyStart Timer, EasyStart Remote.

EasyStart Timer and EasyStart Remote+

APPROVED COMBINATIONS OF HEATER AND CONTROL UNIT:

OPTION 1

You can control a second heater by using the DAT line (purple) and the diagnostic line (blue and white). However, it is not possible to connect an additional control unit. Diagnostics can be run for both heaters.

OPTION 2

You can switch on any device by activating the switch output (switch on / vehicle blower output). A second control unit can be connected via the DAT line (purple). Diagnostics is available for the first heater but not for the second.

COMPATIBILITY MODE FOR HEATERS WITHOUT EBERSPÄCHER DIAGNOSTICS,

E.G. AIR HEATER D8 LC:

Heater diagnostics can be run with TP6 control units and EDiTH diagnostics (diagnosis of up to five faults). Air heaters also require a separate control unit for inputting setpoints.



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3 | OPTIONAL ADD-ONS

AIR-RECIRCULATION MODE WITH INTERNAL TEMPERATURE SENSOR:



STANDARD SETUP:

Air-recirculation mode with measurement of actual temperature by temperature sensor in heater.

OPTIONAL ADD-ON 1:

Fresh-air mode with measurements of actual temperature using external temperature sensor installed separately in a suitable area for measuring the required temperature.

OPTIONAL ADD-ON 2 – PRE-VENTILATION:

Airtronic heaters come with the pre-ventilation function. Both this and the EasyStart control units are automatically detected (see Commissioning EasyStart control units). For other heaters or control units, see the technical information.

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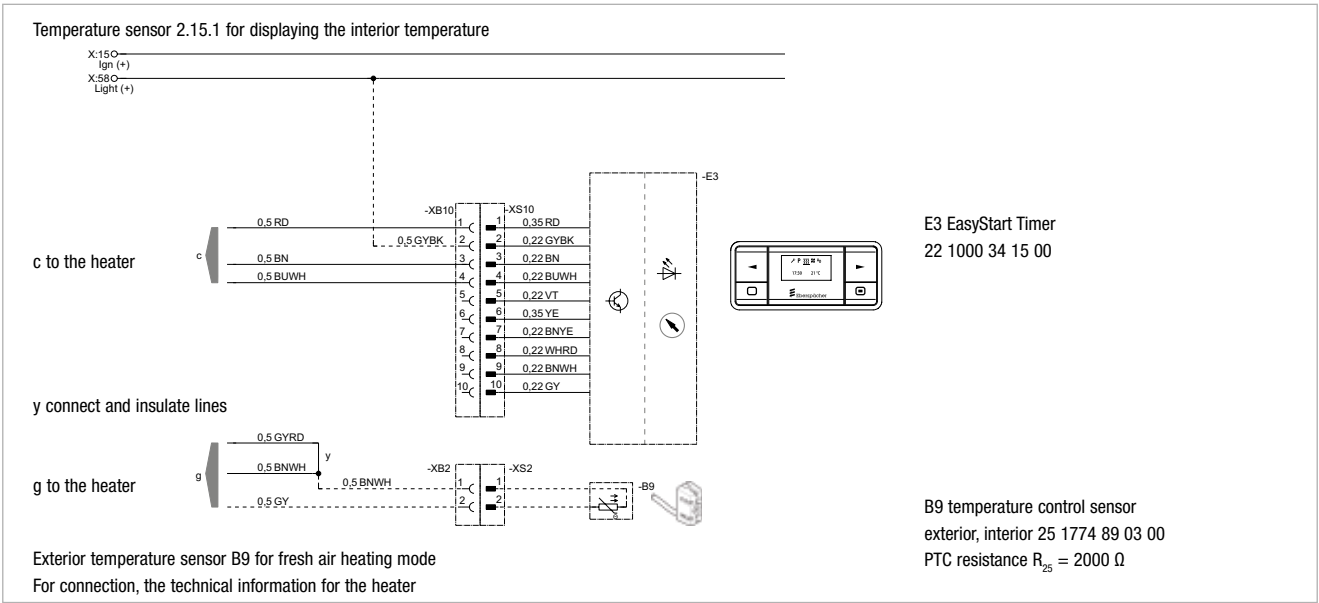
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FRESH-AIR MODE WITH EXTERNAL SENSOR:



OVERVIEW: FRESH-AIR MODE AND TEMPERATURE DISPLAY OPTIONS ON THE EASYSTART CONTROL UNITS, EasyStart Timer EXAMPLE:



4 | SERVICE: EASYSCAN DIAGNOSTIC AND SERVICE TOOL

EASYSCAN – THE NEW DIAGNOSTIC AND SERVICE TOOL FOR PRE-HEATER SYSTEMS:

EasyScan is the diagnostic and service tool for the decades to come – it is the workshop's future-proof solution for challenges in the long term. The proprietary Eberspächer standard is no longer used. Instead, the new tool is compatible with widely used standards in the automotive industry. The diagnostic unit can be connected to the vehicle's OBD port, if permitted by the vehicle manufacturer. The new tool is the successor to our existing diagnostics system EDiTH and accordingly, is backward compatible. Usually air and water heaters from 2007 and 2009, respectively, can be diagnosed.



Fig.: Component or workshop test

1. ADVANTAGES (FUNCTIONS):

- Compatibility with universally applicable automotive standards (CAN, UDS)
- New, modern, user-friendly interface
- Comprehensive evaluation of current operating status
- Automatic creation of a usage profile
- Error analysis of devices and components
- Error code output for heaters with CAN communication including additional system parameters
- Heating application function check
- Commissioning support for heating systems with CAN communication
- Integrated results log at the end of commissioning and for diagnostic sessions
- Existing heater adapters can continue to be used
- Direct link to the Eberspächer Partner Portal at any time
- Set up for installing datasets, e.g. for the Fan and Flap Module EasyFan as well as EasyStart Web updates

2. FURTHER FEATURES:

- PC software is downloaded via the Partner Portal
- Alternative for installing and updating software locally from a data carrier
- Ongoing updates provided on the Partner Portal
- Product package: VCI, USB cable and Y adapter cable (connection for existing heaters and forthcoming applications)



TECHNICAL DATA:

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

PC system requirements:

- Standard PC or laptop with Windows 7 or later
- Hardware: Processor speed min. 1 GHz, depending on system configuration and data complexity
- RAM: min. 1 GB (3 GB recommended)
- USB port
- OS: Windows 7 (32- + 64-bit, SP1) or later

Languages	DE / EN In progress: FR / IT / CZ / PL / CN / JP / KO / RU Other languages on request
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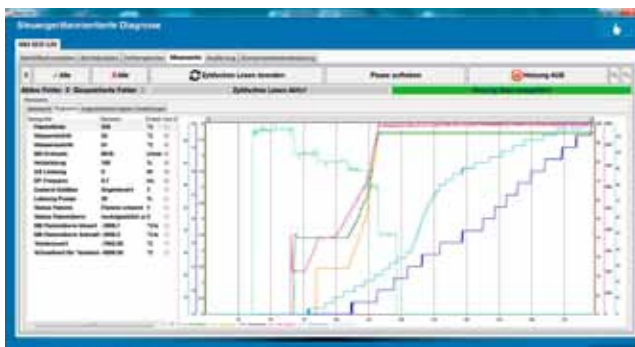


Fig.: Graphic representation of startup process

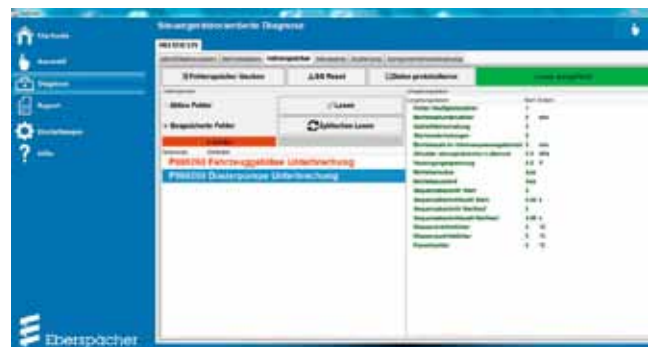


Fig.: Error memory readout

4 | SERVICE: ADDITIONAL DIAGNOSTIC DEVICES

EBERSPÄCHER DIAGNOSTICS OPTIONS:

- **EasyScan:** requires PC, ISO adapter and software – see heater fault finding or introduction to EasyScan on the Service Portal
- **With EasyStart control units:**
See heater and control unit fault finding on the Partner Portal

- With existing diagnostic devices 22 1512 89 0000 and 22 1529 89 0000 and with the new diagnostic device 22 1545 89 00 00
See heater fault finding and introduction to diagnostic device on the Service Portal

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

EASYSCAN:

- Reads out general heater data, e.g. running times for function tests in the vehicle and on the test bench, parameter displays
- Individual component activation for components testing or line filling
- Recommended basic installation

USE THE DIAGNOSTIC DEVICE 22 1545 89 00 00:

- If EasyScan and PC are not available
- If EasyStart Select, Timer, Remote, Remote+ or Web is not installed
- As a replacement for defective diagnostic devices 22 1512 89 00 00 and 22 1529 89 00 00

DIAGNOSTIC DEVICES:

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

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4 | TESTING EQUIPMENT

TESTING EQUIPMENT FOR HEATERS:



Designation	Item no.
EasyScan	22 1550 89 00 00
Diagnostic device (new timer)	22 1545 89 00 00

CURRENT ADAPTER CABLES:



Designation	Item no.
Hydronic I 3/4/5 kW	22 1000 31 63 00
Hydronic 2 Economy / Comfort	22 1000 33 78 00
Hydronic M-II	22 1000 33 78 00
Hydronic 10 (25 2161/25 2162)	22 1000 32 52 00
Hydronic 16/24/30/35	22 1000 31 66 00
Hydronic 2 (OEM)	22 1000 32 64 00
Airtronic (D2/D3/D3 Plus/D4/D4 Plus)	22 1000 31 86 00

ADAPTER CABLES FOR OLDER HEATERS:



Designation	Item no.
Air heater compact	22 1000 30 69 00
Air heater C (D1L C DAF)	22 1000 30 20 00
D9W, Hydronic 10 (old diagnostic timer)	22 1000 30 05 00
D9W, Hydronic 10	22 1000 31 83 00
Hydronic 10 (25 2161/25 2162)	22 1000 32 52 00
D1/3LC MAN	22 1000 30 32 00
Hydronic 30 Neoplan	22 1000 31 16 00
D1LC/D1LC compact RVI	22 1000 31 23 00
D1/3LC compact DAF	22 1000 31 21 00

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4 | SERVICE / REPLACEMENT DEVICE PROGRAM

OVERVIEW OF REPLACEMENT HEATERS (RECONDITIONED DEVICES, FOR DEFECTS OCCURRING BETWEEN 1 AND 48 MONTHS):

HEATER	Designation	Order number
Hydronic B4W S	Facelift version replacement device	20 1852 97 01 00
Hydronic B4W SC	Facelift version replacement device	20 1821 97 01 00
Hydronic B5W S	Facelift version replacement device	20 1819 97 01 00
Hydronic B5W SC	Facelift version replacement device	20 1820 97 01 00
Hydronic D4W S	Facelift version replacement device	25 2355 97 01 00
Hydronic D4W SC	Facelift version replacement device	25 2221 97 01 00
Hydronic D5W S 12 V	Facelift version replacement device	25 2217 97 01 00
Hydronic D5W SC	Facelift version replacement device	25 2219 97 01 00
Hydronic D5W S 24 V	Facelift version replacement device	25 2218 97 01 00
Hydronic 2 Economy D4S	Replacement device	25 2554 97 01 00
Hydronic 2 Economy D5S	Replacement device	25 2526 97 01 00
Hydronic 2 Economy B4S	Replacement device	20 1909 97 01 00
Hydronic 2 Economy B4S	Replacement device	20 1904 97 01 00
Airtronic D2 12 V	Replacement device	25 2069 97 01 00
Airtronic D2 24 V	Replacement device	25 2070 97 01 00
Airtronic D4 12 V	Replacement device	25 2113 97 01 00
Airtronic D4 24 V	Replacement device	25 2114 97 01 00
Airtronic D4 Plus 12V	Replacement device	25 2484 97 01 00
Airtronic D4 Plus 12V	Replacement device	25 2498 97 01 00

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4 | REPLACEMENT DEVICE PROGRAM

OVERVIEW OF NEW DEVICES (REQUIRED FOR DEFECTS OCCURRING FROM 48 MONTHS):

HEATER	Designation	Order number
Hydronic B4W S 12 V	Facelift version replacement device	20 1852 97 02 00
Hydronic B4W SC 12 V	Facelift version replacement device	20 1821 97 02 00
Hydronic D4W S 12 V	Facelift version replacement device	25 2355 97 02 00
Hydronic D4W SC 12 V	Facelift version replacement device	25 2221 97 02 00
Hydronic B5W S 12 V	Facelift version replacement device	20 1819 97 02 00
Hydronic B5W SC 12 V	Facelift version replacement device	20 1820 97 02 00
Hydronic D5W S 12 V	Facelift version replacement device	25 2217 97 02 00
Hydronic D5W SC 12 V	Facelift version replacement device	25 2219 97 02 00
Hydronic D5W S 24 V	Facelift version replacement device	25 2218 97 02 00
Airtronic D2 12 V	Replacement device	25 2069 97 02 00
Airtronic D2 24 V	Replacement device	25 2070 97 02 00
Airtronic D4 12 V	Replacement device	25 2113 97 02 00
Airtronic D4 24 V	Replacement device	25 2114 97 02 00

PLEASE NOTE THE FOLLOWING AS REGARDS HYDRONIC HEATERS:

When replacing older generation heaters with facelift devices, you will also need the following parts:

- | | |
|-------------------------------------|------------------|
| ■ 1x facelift unit mounting bracket | 25 2220 80 00 01 |
| ■ 1x fastening screw | 100 10 101 |
| ■ 2x 20 / 18 water hose reducers | 20 1645 89 00 06 |

Old generation Hydronic 4KW heaters are
20 mm shorter than the facelifted 4KW heater.

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4 | ADDITIONAL HEATERS / OEM HEATERS

ADDITIONAL HEATERS	Designation	Order number
D3W Z 12 V	VW T4, PME	25 2121 05 00 00
D5W Z 12 V	VW Sharan MPV from 2000 onwards	25 2163 05 00 00
D5Z-F 12 V	VW Sharan MPV from 2004 onwards	25 2278 05 00 00
D5W Z 12 V	DC Sprinter T1N	25 2162 05 00 00
D5W Z 12 V	DC TO (Vito + V-Class)	25 2124 05 00 00

OEM HEATERS	Designation	Order number
D5W S 12 V	DC Sprinter T1N T2W	25 2091 05 00 00
D4W S 12 V	VW Sharan MPV + T4	25 2123 05 00 00
D5W S 12 V TO	Vito V Class DC	25 2125 05 00 00
D5W S 12 V	VW Sharan	25 2164 05 00 00
D5S-F 12 V	VW Sharan MPV	25 2279 05 00 00

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5 | FAN AND FLAP MODULE EASYFAN

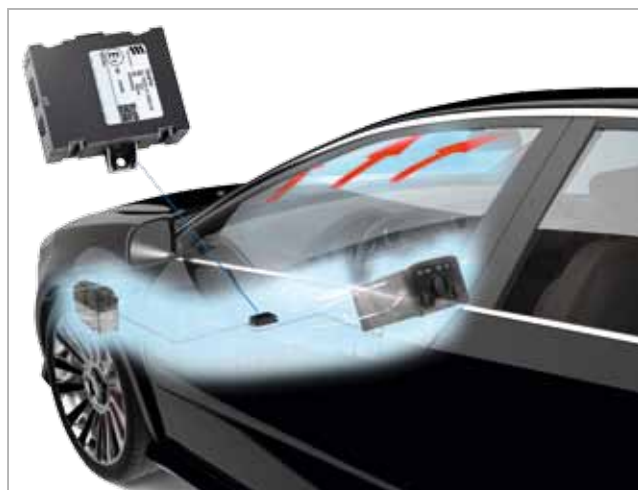
EASYFAN – THE NEW FAN & FLAP MODULE FOR HYDRONIC 1, 2 AND S3 ECONOMY IN PASSENGER CAR APPLICATIONS:

The Fan & Flap module EasyFan is a product developed in-house for activating vehicle fans and air and heating flaps. As a customer you will benefit from the usual high-quality Eberspächer support and well-maintained data.



1. ADVANTAGES (FUNCTIONS):

- Automatic activation of vehicle fan and air and heating flaps: no need for the user to set the fan or flaps to “Defrost” in the vehicle before the heating process
- All previously selected fan and flap settings are automatically restored after the heating process or after the engine has started
- For Hydronic 1, 2 and S3 Economy, delivered pre-programmed for vehicle-specific installation
- Automotive electronics fault protection: no physical connection between product and CAN unless the engine is switched off, otherwise automatic cutoff



2. FURTHER FEATURES:

- Vehicle-specific EasyFan modules are available for a wide range of cars and A/C versions
- Impress customers who own the following brands of car:
 - Volkswagen, Škoda, Seat
 - Audi
 - Mercedes-Benz
 - BMW
 - Renault, Nissan
 - Toyota
 - Peugeot, Citroën
 - Ford

As always, for more details please visit:
partner.eberspaecher.com

- Input signal:
 - First interface (Hydronic 1 and 2): EasyFan is activated via the heater's fan output
 - Second interface (Hydronic S3 only): EasyFan is activated via a CAN message from the heater
- Output signal:
 - Fan and flap settings are controlled via CAN messages to the climate control unit
 - Two hardware versions for high- and low-speed CAN are available to accommodate the various car bus systems on the market.

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5 | FAN AND FLAP MODULE EASYFAN

TECHNICAL DATA:

Programmed versions		For part numbers, see the vehicle-specific A/C kit on the Partner Portal
Current draw	mA	50
Closed-circuit current	mA	0.1
Protection rating		IP 40
Operating temperature	°C	– 40 to +85
Dimensions L x W x H (with fastening brackets)	mm	72 x 76 x 23

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5 | A/C KIT WITH IPCU FOR CONTROLLING THE VEHICLE'S FAN

THE IPCU IS PART OF THE A/C KIT:

A/C kits should be installed first!

OPTIONS:

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

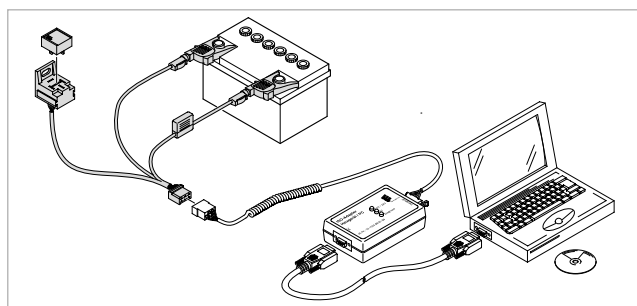
WARNING:

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

PROGRAMMING OPTIONS WITH EDITH BASIC:

Adapter cable for IPCU configuration

Order no.: 22 1000 32 74 00



INTRODUCTION TO TAKING MEASUREMENTS WITH THE RELEVANT INSTRUMENTS:

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

TAKING MEASUREMENTS:

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

No clear change:

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

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6 | THE BENEFITS FOR WORKSHOPS

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

MORE TURNOVER AND BETTER WORKSHOP UTILIZATION:

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

POTENTIAL:

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

PARTNERSHIP:

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

HERE'S HOW YOU CAN SUPPORT SALES INTERNALLY:

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

SO WHEN YOU'RE PLANNING, HERE ARE THE KEY AREAS TO CONSIDER:

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

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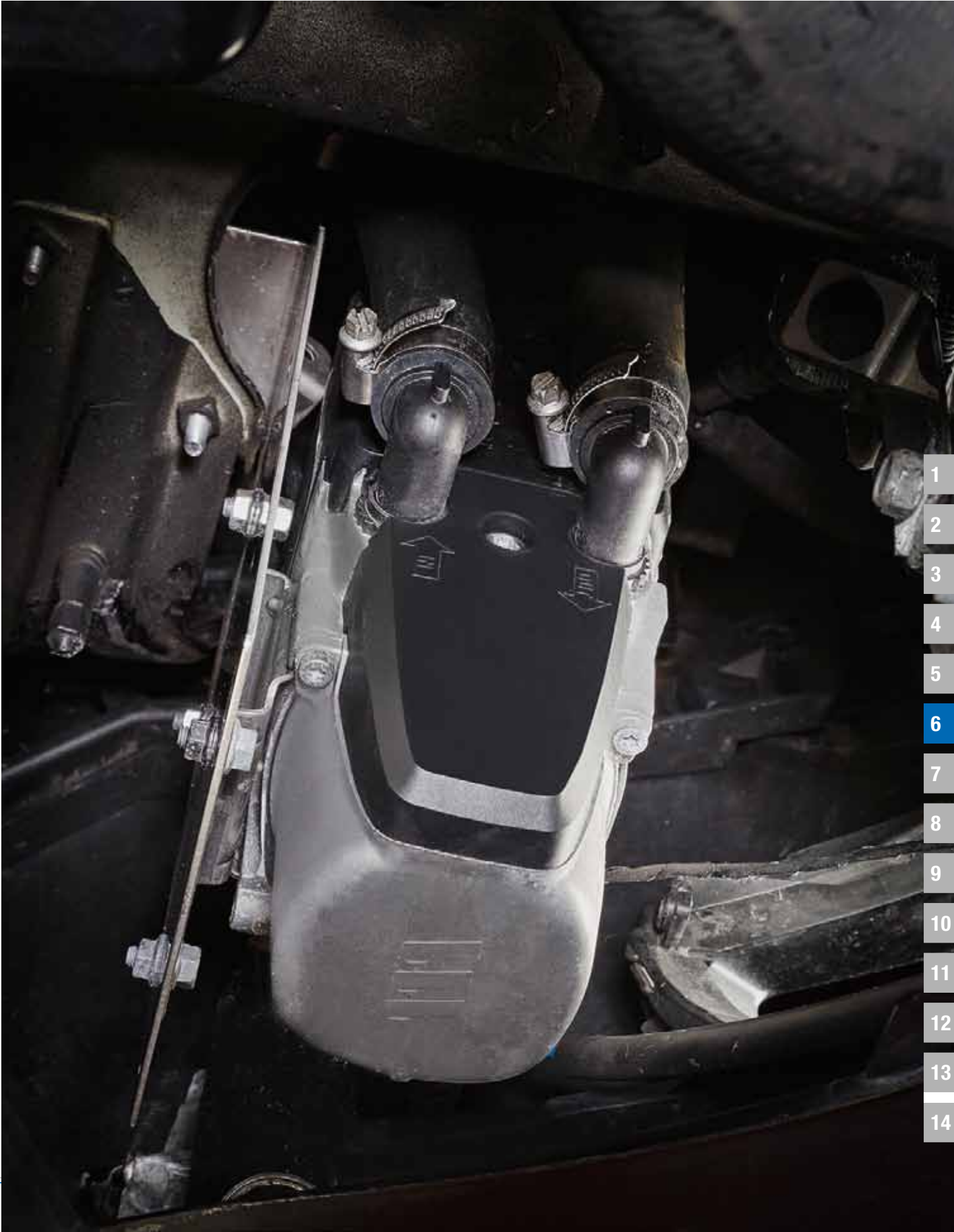
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6 | THE BENEFITS FOR END CUSTOMERS



CUSTOMER BENEFITS FOR CAR OWNERS:

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



CUSTOMER BENEFITS FOR MOTOR HOME OWNERS:

- The heater is supplied with fuel from the vehicle's fuel tank so the customer needn't worry about gas bottles and connections when traveling abroad.
- Eberspächter heaters feature low fuel and electricity consumption.
- The heating can be conveniently operated using presets, remote control or phone.
- Eberspächter fuel-operated heaters are now even quieter.
- Compared to competitor products, Eberspächter products permit space-saving installation underfloor or in the engine compartment in addition to interior installation.
- Heating is permitted worldwide even while – without additional components.
- The heater's design is particularly easy to service and maintain.

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CUSTOMER BENEFITS FOR SPECIAL-PURPOSE VEHICLE OWNERS:

- Lower operating costs due to high efficiency.
- Reliable starting even in low temperatures
- Comfortable temperatures in mobile workplaces and optimum temperature control for storage compartments.
- Eberspächer fuel-operated heaters are now even quieter.
- The heater is installed in the motor home interior. Space-saving underfloor installation or in the engine compartment is also possible.
- The heater's design is particularly easy to service and maintain.



CUSTOMER BENEFITS FOR BOAT OWNERS:

- Eberspächer heaters feature low fuel and electricity consumption.
- The heater provides exactly the climate you want in the cabin.
- You can operate your heater conveniently using the controller, presets or phone.
- Eberspächer fuel-operated heaters are now even quieter.
- You need not sacrifice any room in the cabin in order to install the heater as they can be housed in any space with good external ventilation, e.g. in the storage locker, the cockpit or other storage areas.
- The heater's design is particularly easy to service and maintain.
- It also provides hot water for your shower or general use



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7 | WATER-CONDUCTING PARTS

GENERAL INFORMATION:

- Install water pumps no higher than the heater and preferably lower.
- All water lines for heaters must always be below the engine's coolant level.
- When installing a water heater, always use water hoses approved for use with vehicles, otherwise there is a danger of parts of the hose becoming flattened or layers of the hose perishing, blocking the water circuit.
- Always secure water hoses with hose clips at connections.
- Always route water hoses so that they are not affected by moving parts and cannot be chafed. Pay particular attention to the heavy vibration caused by switching the engine on and off.
- Always use a large radius when routing water hoses to prevent kinking, and do not leave hoses hanging loose.
- Protect water hoses from intense heat or even contact with hot engine parts, e.g. the exhaust pipe.
- Always vent the whole water 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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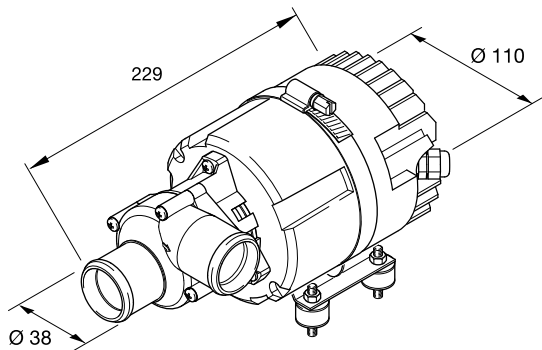
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7 | WATER-CONDUCTING PARTS

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

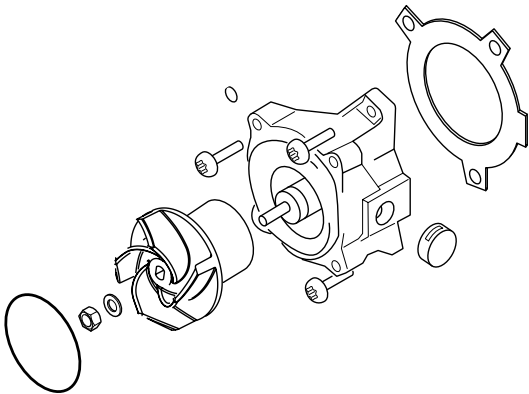


Airtronic	Airtronic M	Airtronic L	Air heater 8 L/V 7 S	Hydronic 4/5 kW	Hydronic M/M2	Hydronic L/L2	Order no.
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24 V

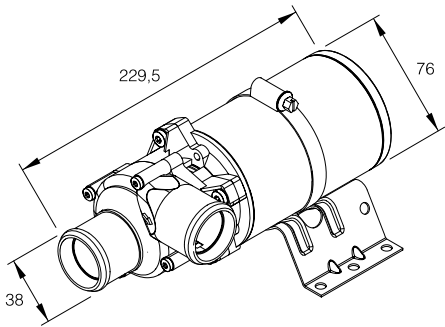
25 2488 25 00 00

Flowtronic 6000 SC spares kit



25 2488 99 25 10

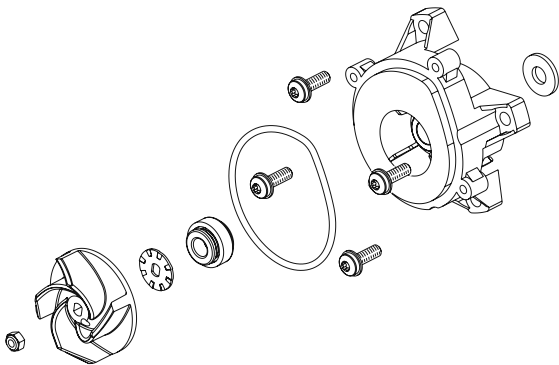
Flowtronic 5000 water pump
With mounting bracket, water flow rate 5,200 l / h at 0.2 bar



24 V

25 2488 26 00 00

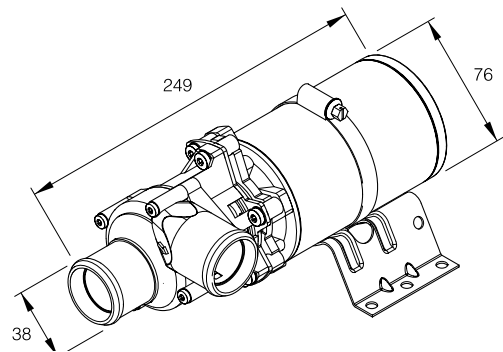
Flowtronic 5000 spares kit
For water pump 25 2488 26 00 00



25 2488 99 26 10

7 | WATER-CONDUCTING PARTS

Flowtronic 5000 S water pump
With magnetic coupling and mounting bracket
Water flow rate 5,200 l / h at 0.2 bar



24 V

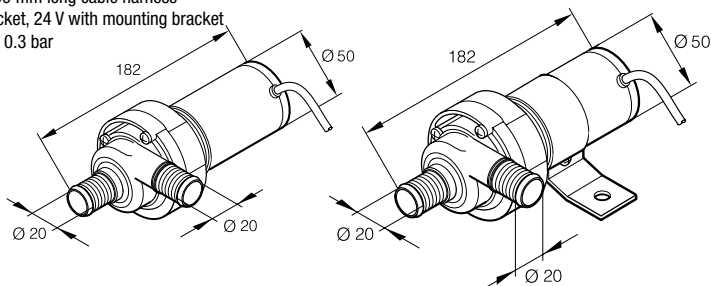
Airtronic	Airtronic M	Airtronic L	Air heater 8 L/V 7 S	Hydronic 4/5 kW	Hydronic M/M2	Hydronic L/L2	Order no.
							25 1818 30 00 00

							25 1815 25 01 00
							25 1928 80 02 00

							25 2275 25 00 00
							25 2218 25 00 00

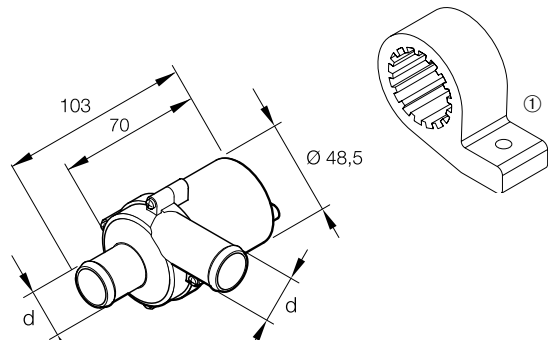
							25 2217 27 00 00
--	--	--	--	--	--	--	------------------

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



12 V without mounting bracket, cable harness without connector housing
24 V with mounting bracket installed, cable harness with flat connector housing

Flowtronic 800 S water pump
Water flow rate 820 l / h at 0.1 bar

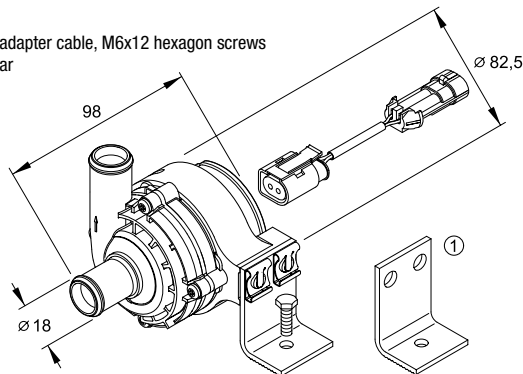


①
See page 127 for mounting bracket

~ = excluding Hydronic S3 Economy

12 V, d = 20 mm
24 V, d = 18 mm

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

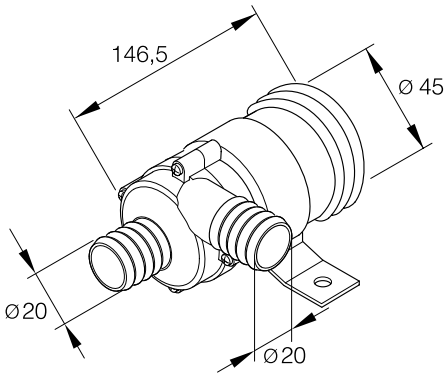


①
See page 127 for mounting bracket

12 V

7 | WATER-CONDUCTING PARTS

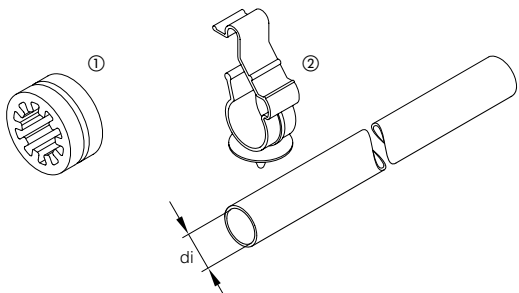
Water pump
with mounting bracket installed, adapter cable, M6x12 hexagon screws
Water flow rate 850 l / h at 0.1 bar



24 V

25 2009 25 00 00

Water hose



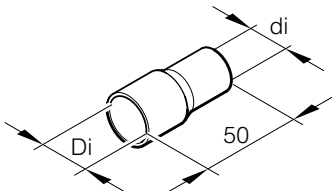
①
See page 127 for spacer ring

②
See page 126 for water hose fastening parts

~ = Check connection diameter

di = 15 mm, L = linear m
di = 18 mm, L = 1 m
di = 20 mm, L = 1 m
di = 38 mm, L = linear m

Reducer hose



~ = Check connection diameter

Di = 20 mm, di = 15 mm
Di = 20 mm, di = 18 mm
Di = 22 mm, di = 18 mm

A schematic diagram of a U-tube manometer. The diagram shows a U-shaped tube with two vertical legs. The left leg is labeled with a diameter d_i and a height L_3 . The right leg is labeled with a height L_2 . The horizontal distance between the two vertical legs is labeled L_1 . The bottom of the U-tube is rounded.

~ = Check connection diameter

A diagram of a rectangular frame structure. The frame is composed of four segments. The top horizontal segment has a length of 140. The right vertical segment has a height of 120. The bottom horizontal segment has a length of 100. The left vertical segment is labeled with the variable L . The frame is shown in a perspective view, with the segments meeting at right angles.

~ = Check connection diameter

Technical drawing of a U-shaped metal part. The drawing shows the part from a perspective view. The dimensions are as follows:

- Overall width: 120
- Overall height: 140
- Top horizontal segment height: 90
- Bottom horizontal segment height: 50
- Inner radius of the U-shape: 50
- Inner diameter of the hole: $\varnothing 50$

$$d_i = 20 \text{ mm}$$

Technical drawing of a bent pipe. The drawing shows a pipe bent at a 90-degree angle. The dimensions are labeled as follows: $L1$ is the length of the first straight section, $L2$ is the length of the second straight section, and d_i is the inner diameter of the pipe.

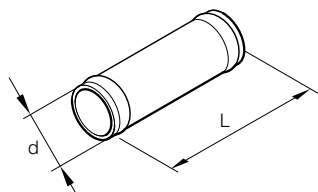
$d_i = 15 \text{ mm}, L1 = 100$
 $d_i = 15 \text{ mm}, L1 = 50$
 $d_i = 18 \text{ mm}, L1 = 100$

~ = Check connection diameter

[illegible]

7 | WATER-CONDUCTING PARTS

Connection pipe



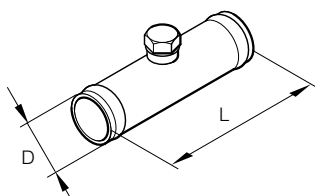
Brass, d = 15 mm, L = 55 mm
 Brass, d = 18 mm, L = 55 mm
 Plastic, d = 20 mm, L = 60 mm
 Brass, d = 22 mm, L = 55 mm
 Brass, d = 38 mm, L = 60 mm

~ = Check connection diameter

Airtronic	Airtronic M	Airtronic L	Air heater 8 L/N 7 S	Hydronic 4/5 kW	Hydronic M/M2	Hydronic L/L2	Order no.
				~	~		20 1533 88 00 03
					~		20 1528 88 00 03
				~			22 1000 10 01 03
				~	~		20 1645 89 00 07
							25 1214 89 00 21

Ventilation pipe

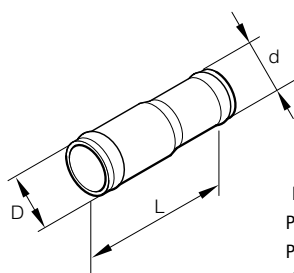
Brass



D = 18 mm, L = 65 mm

~ = Check connection diameter

Reducer

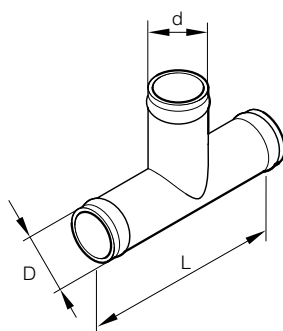


Brass, D = 18 mm, d = 15 mm, L = 60 mm
 Plastic, D = 20 mm, d = 15 mm, L = 60 mm
 Plastic, D = 20 mm, d = 18 mm, L = 60 mm
 Brass, D = 20 mm, d = 16 mm, L = 60 mm
 Brass, D = 22 mm, d = 15 mm, L = 60 mm
 Brass, D = 22 mm, d = 18 mm, L = 60 mm
 Brass, D = 22 mm, d = 20 mm, L = 60 mm

~ = Check connection diameter

T-piece

Brass

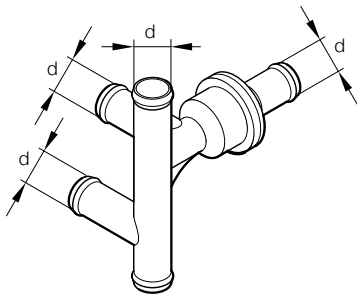


D = 18 mm, d = 15 mm, L = 60 mm
 D = 18 mm, d = 18 mm, L = 75 mm
 D = 20 mm, d = 18 mm, L = 75 mm
 D = 20 mm, d = 20 mm, L = 75 mm
 D = 38 mm, d = 38 mm, L = 120 mm

~ = Check connection diameter

7 | WATER-CONDUCTING PARTS

Combi valve with thermostat function
With five connections



* not suitable for Hydronic 2 Comfort

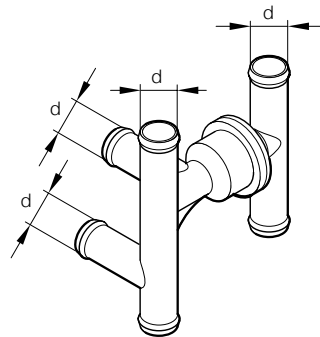
Also required: T-piece, page 79

* d = 20 mm



25 2014 80 72 00

Combi valve With thermostat function
With six connections



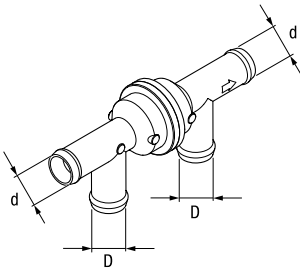
* not suitable for Hydronic 2 Comfort

* d = 20 mm



25 2014 80 62 00

Water check valve

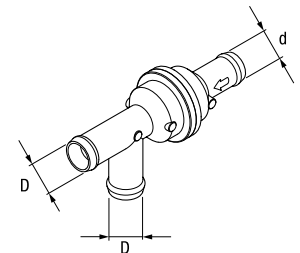


D = 20 mm, d = 18 mm
D = 20 mm, d = 20 mm



22 1000 10 11 00
22 1000 10 10 00

Water check valve



D = 20 mm, d = 18 mm
D = 20 mm, d = 20 mm

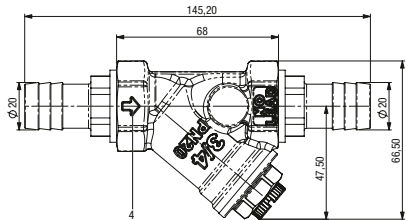


22 1000 10 12 00
22 1000 10 09 00

7 | WATER-CONDUCTING PARTS

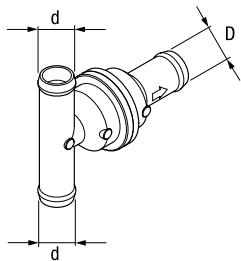
Water filter for Hydronic M
protects the water pump from soiling, thereby ensuring the heater's function.

Supplier:
Eberspächer AB
Kardenvägen 34
SE – 461 38 Trollhättan
Sweden
Phone: +46 8 6831-100
info-se@eberspaecher.com



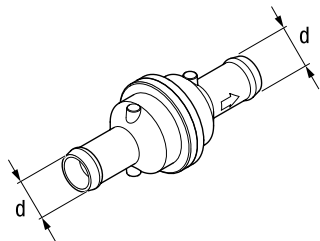
D = 20 mm, d = 18 mm

Water check valve



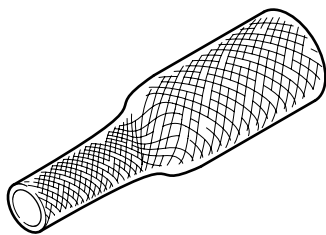
D = 20 mm, d = 18 mm
D = 20 mm, d = 20 mm

Water check valve



d = 18 mm
d = 20 mm

Heat-shrink fit hose
Anti-chafing protector for water hose

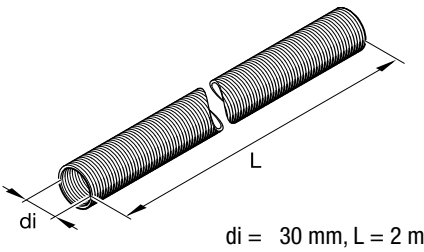


ø 40 mm / ø 20 mm

Airtronic	Airtronic M	Airtronic L	Air heater 8 L/N 7 S	Hydronic 4/5 kW	Hydronic M/M2	Hydronic L/L2	Order no.
							24 6003 1
							22 1000 10 13 00
							22 1000 10 07 00
							22 1000 10 14 00
							22 1000 10 08 00
							360 00 333

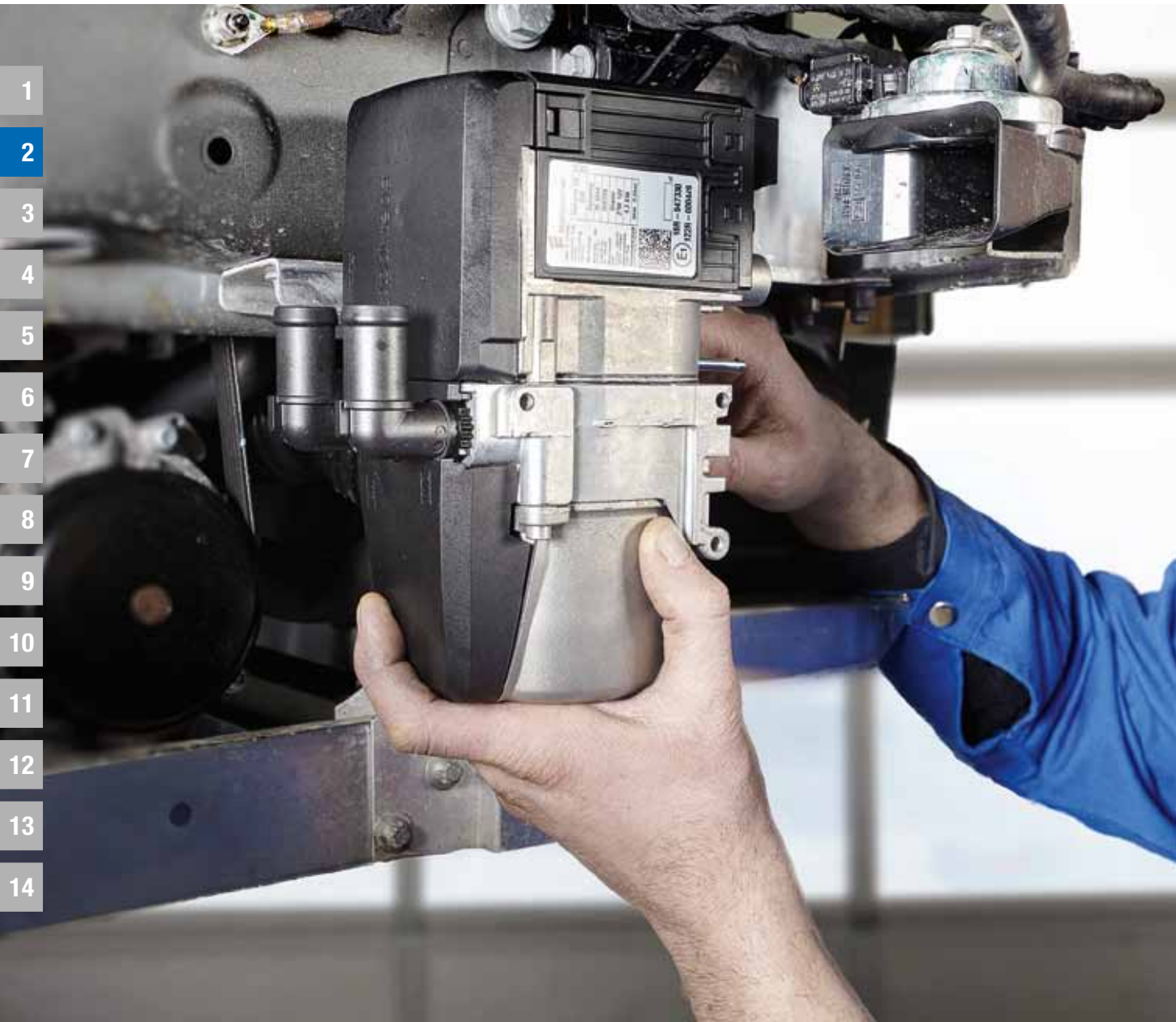
7 | WATER-CONDUCTING PARTS

Safety hose
Aluminum / paper / plastic temperature / anti-chafing protector
for water hoses with $\varnothing$ 18 mm and $\varnothing$ 20 mm



Airtronic	Airtronic M	Airtronic L	Air heater 8 L/V 7 S	Hydronic 4/5 kW	Hydronic M/M2	Hydronic L/L2	Order no.
							10 2114 25 02 00

■ unrestricted use ~ restricted use



8 | AIR-CONDUCTING PARTS

GENERAL INFORMATION:

- Heating-air throughput is at its highest in a heater if the airflow is unimpeded. Heating-air ducts reduce 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 inadmissible level, we have calculated a heater guide number for each heater and a line guide number for each air duct.
- The total of the line guide numbers of the heating-air ducts connected to the heater must not be greater than the heater guide number, as otherwise the air flow temperature would be inadmissibly 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 cross-section or two lines the same, routed in parallel
= 1 / 4 of the guide number.

Example:

Hose $\varnothing$ 60 mm

Cross-section A = 19.6 cm², guide number 1.0

Hose $\varnothing$ 75,

Cross-section 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).

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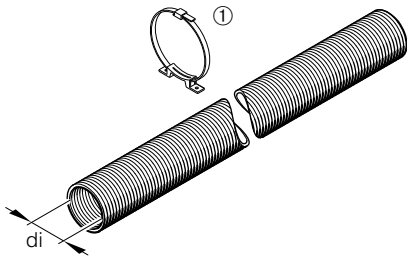
12

13

14

8 | AIR-CONDUCTING PARTS

1
Flexible hose (linear m)
Aluminum / paper / plastic, for heating-air ducting in interior



①
See page 126 for air hose clips
~ = Check connection diameter

di = 50 mm
di = 60 mm
di = 75 mm
di = 90 mm
di = 100 mm

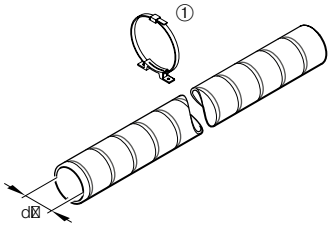
Airtronic	Airtronic M	Airtronic L	Air heater 8 L/V 7 S	Hydronic 4/5 kW	Hydronic M/M2	Hydronic L/L2	Order no.
~	~						10 2114 29 00 00
~	~				~		10 2114 31 00 00
~	~	~					10 2114 34 00 00
~	~	~	~				10 2114 37 00 00
~	~	~	~				10 2114 38 00 00

~	~						360 00 165
~	~	~					360 00 012
~	~	~	~				360 00 013
~	~	~	~				360 00 014

~	~						25 1226 89 15 00
~	~	~	~				25 1226 89 17 00
~	~	~	~				25 1226 89 56 00

~	~						330 00 072
---	---	--	--	--	--	--	------------

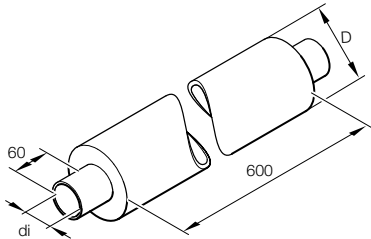
2
Flexible hose
Plastic hose with metal spiral, suitable for outside installation



①
See page 126 for air hose clips
~ = Check connection diameter

di = 60 mm, (1-meter pieces)
di = 75 mm, (linear m, max. 4 m long)
di = 90 mm, (linear m, max. 4 m long)
di = 100 mm, (linear m, max. 4 m long)

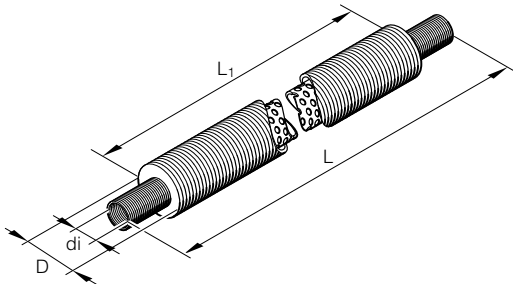
3
Silencer
Hot air, aluminum



~ = Check connection diameter

di = 75 mm, D = 120 mm
di = 90 mm, D = 140 mm
di = 100 mm, D = 150 mm

4
Intake silencer
Aluminum / paper / plastic heating-air intake



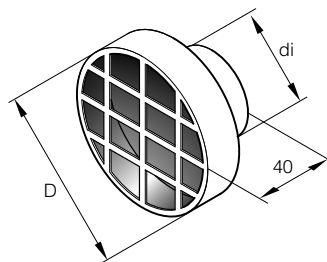
di = 75 mm, D = 110 mm, L = 600 mm, L1 = 300 mm

8 | AIR-CONDUCTING PARTS

5

Filter

Installation on air-intake side



di = 60 mm, D = 107 mm

~ = Check regularly for dirt and clean if required.
Ensure that the protected intake area is protected.

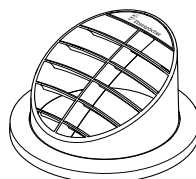
Airtronic	Airtronic M	Airtronic L	Air heater 8 L/N 7 S	Hydronic 4/5 kW	Hydronic M/M2	Hydronic L/L2	Order no.
-----------	-------------	-------------	----------------------	-----------------	---------------	---------------	-----------

~ 25 1688 89 05 00

10

Upright vent, 30°

Rotatable, see Item 16 for fitting



suitable for ø 50 / 60 mm fitting, black
suitable for ø 50 / 60 mm fitting, white
suitable for ø 75 / 90 mm fitting, black
suitable for ø 75 / 90 mm fitting, white

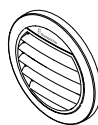
~ = Check connection diameter

22 1000 01 00 56
22 1000 01 00 57
22 1000 01 00 60
22 1000 01 00 61

11

Flat vent, 30°

Rotatable, see Item 16 for fitting



suitable for ø 50 / 60 mm fitting, black
suitable for ø 50 / 60 mm fitting, white
suitable for ø 75 / 90 mm fitting, black
suitable for ø 75 / 90 mm fitting, white

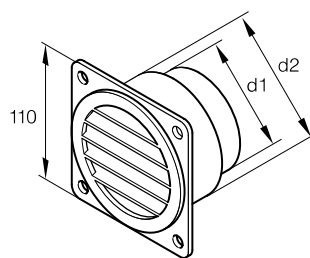
~ = Check connection diameter

22 1000 01 00 44
22 1000 01 00 45
22 1000 01 00 52
22 1000 01 00 53

11.1

Vent

Rotatable



d1 = 60 mm, d2 = 100 mm, black
* d1 = 60 mm, d2 = 100 mm, white

* with 4 stainless steel screws

~ = Check connection diameter

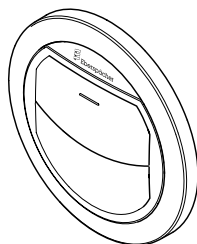
22 1000 01 07 00
22 1000 01 11 00

8 | AIR-CONDUCTING PARTS

12

Closable vent

Rotatable, see Item 16 for fitting



~ = Check connection diameter

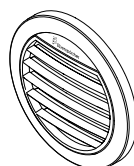
suitable for $\varnothing$ 50 / 60 mm fitting, black
 suitable for $\varnothing$ 50 / 60 mm fitting, white
 suitable for $\varnothing$ 75 / 90 mm fitting, black
 suitable for $\varnothing$ 75 / 90 mm fitting, white

Airtronic	Airtronic M	Airtronic L	Air heater 8 L/V 7 S	Hydronic 4/5 kW	Hydronic M/M2	Hydronic L/L2	Order no.
■	■	■	~				22 1000 01 00 72
■	■	■	~				22 1000 01 00 73
■	■	■	~				22 1000 01 00 76
■	■	■	~				22 1000 01 00 77

13

Flat vent, 0°

Rotatable, see Item 16 for fitting



~ = Check connection diameter

suitable for $\varnothing$ 50 / 60 mm fitting, black
 suitable for $\varnothing$ 50 / 60 mm fitting, white
 suitable for $\varnothing$ 75 / 90 mm fitting, black
 suitable for $\varnothing$ 75 / 90 mm fitting, white

■	■	■	~				22 1000 01 00 40
■	■	■	~				22 1000 01 00 41
■	■	■	~				22 1000 01 00 48
■	■	■	~				22 1000 01 00 49

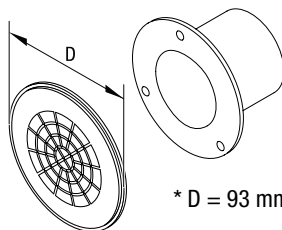
1

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13.1
Grille

* D = 93 mm, L = 75, d = 60 mm
 Nickel-plated

* D = 93 mm, L = 75, d = 60 mm
 Plastic

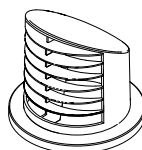
* suitable for Item 18

■							25 1226 89 05 00
■							22 1000 01 00 01

6

14
Upright vent, 90°

Rotatable, see Item 16 for fitting



~ = Check connection diameter

suitable for $\varnothing$ 50 / 60 mm fitting, black
 suitable for $\varnothing$ 50 / 60 mm fitting, white
 suitable for $\varnothing$ 75 / 90 mm fitting, black
 suitable for $\varnothing$ 75 / 90 mm fitting, white

■	■	■	~				22 1000 01 00 64
■	■	■	~				22 1000 01 00 65
■	■	■	~				22 1000 01 00 68
■	■	■	~				22 1000 01 00 69

10

11

12

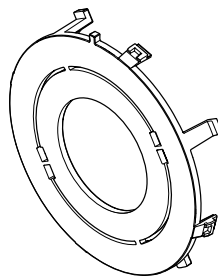
13

14

8 | AIR-CONDUCTING PARTS

15 Air control element

See page 40



* for fitting, Item 16, order no. 22 1000 01 00 35

** for fitting, Item 16, order no. 22 1000 01 00 36

*** for fitting, Item 16, order no. 22 1000 01 00 37

* Plastic, Ø 60 mm

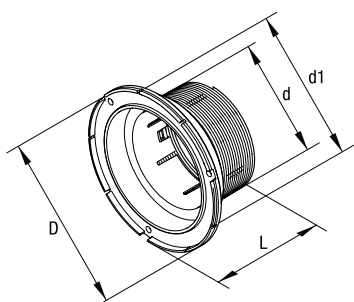
** Plastic, Ø 75 mm

*** Plastic, Ø 90 mm

Airtronic	Airtronic M	Airtronic L	Air heater 8 L/N 7 S	Hydronic 4/5 kW	Hydronic M/M2	Hydronic L/L2	Order no.
■	■	■	~				22 1000 01 00 79
■	■	■	~				22 1000 01 00 80
■	■	■	~				22 1000 01 00 81

16 Fitting

for vents, Items 10, 11, 12, 13 and 14



d1 = core drill bit diameter

~ = Check connection diameter

d = 50 mm, d1 = 67 mm, D = 89 mm, L = 39 mm, black

d = 60 mm, d1 = 67 mm, D = 89 mm, L = 40 mm, black

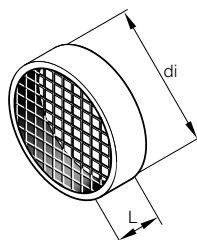
d = 75 mm, d1 = 92 mm, D = 115 mm, L = 42 mm, black

d = 90 mm, d1 = 92 mm, D = 115 mm, L = 40 mm, black

■	■	■	~				22 1000 01 00 34
■	■	■	~				22 1000 01 00 35
■	■	■	~				22 1000 01 00 36
■	■	■	~				22 1000 01 00 37

17

Grille, heater



* di = 60 mm, L = 20 mm

* di = 75 mm, L = 22 mm

di = 90 mm, L = 24 mm

di = 100 mm, L = 22 mm

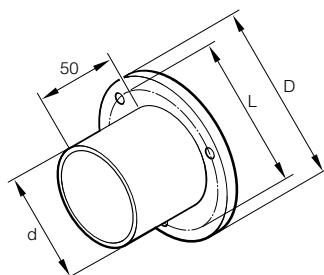
~ = Check connection diameter

■							25 1688 80 06 00
■	~	~					25 1552 05 01 00
	~	~	~				25 1729 80 00 01
			~				25 1226 89 44 00

18

Hose fitting

Suitable for grille, Item 13.1*



* D = 93 mm

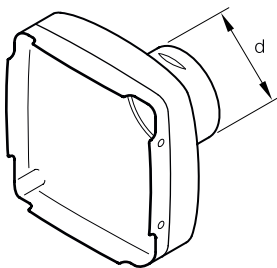
~ = Check connection diameter

d = 50 mm, D = 97 mm, L = 75

d = 60 mm, D = 97 mm, L = 75

~							20 1575 80 08 01
■	~						20 1577 89 06 01

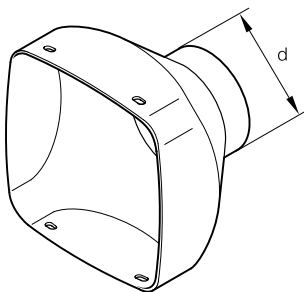
21
Scoop



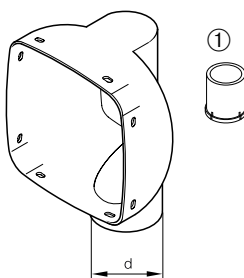
d = 60 mm
d = 75 mm
d = 75 mm
d = 90 mm

[illegible]

22
Scoop

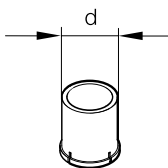

$$d = 90 \text{ mm}$$

30
Ball-shaped scoop


$$d = 90 \text{ mm}$$

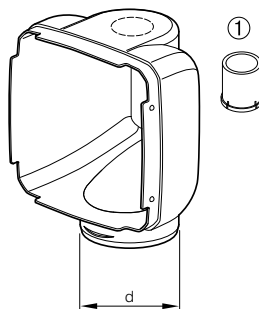
①
Connection fitting, see Item 31

31
Connection fitting
Ball-shaped scoop, Item 30 / 32



d = 25 mm
d = 50 mm

32
Ball-shaped scoop



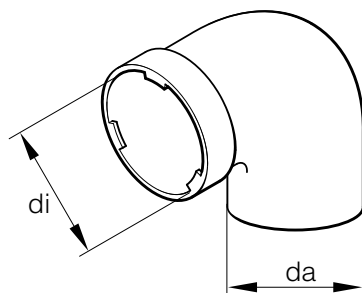
d = 60 mm
d = 75 mm
* d = 75 mm
* d = 90 mm

Caution! Make sure the line guide number is not too high

①
Connection fitting for Item 31

* Cannot be used with the Airtronic D4 Plus

8 | AIR-CONDUCTING PARTS

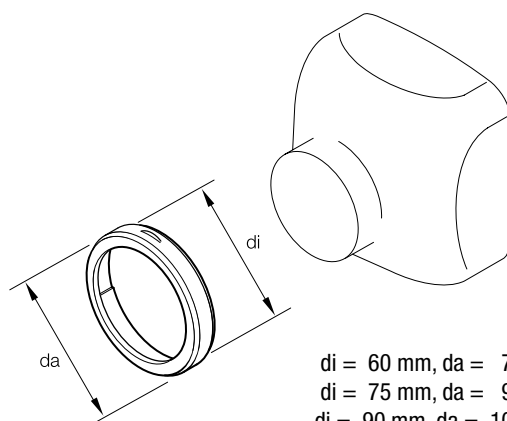
33
Pipe elbow, 90°

di = 60 mm, da = 60 mm
di = 75 mm, da = 75 mm

Airtronic	Airtronic M	Airtronic L	Air heater 8 L/N 7 S	Hydronic 4/5 kW	Hydronic M/M2	Hydronic L/L2	Order no.
							25 1688 89 00 01
							25 1482 89 00 05

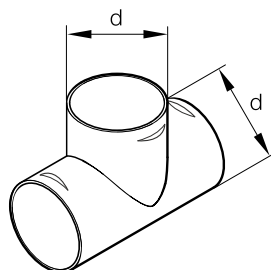
34
Ring

Protective grille (Item 17), di = 90 mm.
Can be used as an adapter – remove grille.



di = 60 mm, da = 75 mm
di = 75 mm, da = 90 mm
di = 90 mm, da = 100 mm

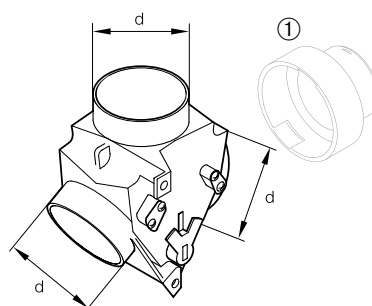
							22 1000 01 00 08
							25 1822 89 00 01
							20 1607 80 00 01

35
T-junction

Metal, d = 50 mm
Plastic, d = 60 mm
Plastic, d = 75 mm
Plastic, d = 90 mm
Metal, d = 100 mm

~ = Check connection diameter

							20 1575 89 18 00
							25 1688 89 00 02
							22 1000 01 00 27
							22 1000 01 00 26
							20 1667 89 03 00

40
Butterfly valve

①
Adapter, see Item 45

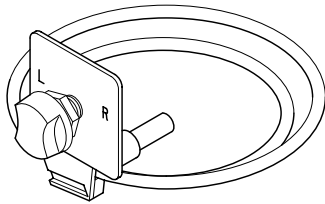
~ = Check connection diameter

d = 60 mm
d = 90 mm

							330 00 174
							330 00 175

8 | AIR-CONDUCTING PARTS

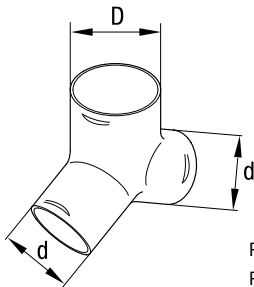
41
Control unit
For butterfly valve, Item 40, 2 m long



Airtronic	Airtronic M	Airtronic L	Air heater 8 L/V 7 S	Hydronic 4/5 kW	Hydronic M/M2	Hydronic L/L2	Order no.
-----------	-------------	-------------	----------------------	-----------------	---------------	---------------	-----------

							22 1000 01 03 00
--	--	--	--	--	--	--	------------------

42
Y-junction
Symmetrical

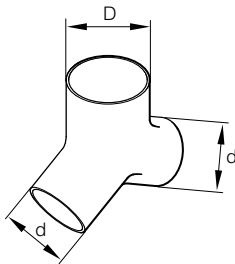


Plastic, D = 60 mm, d = 50 mm
Plastic, D = 75 mm, d = 60 mm
Plastic, D = 90 mm, d = 60 mm
22 1000 01 00 84

Plastic, D = 60 mm, d = 50 mm

							25 1688 89 00 03
							22 1000 01 00 82
							22 1000 01 00 83

42.1
Y-junction

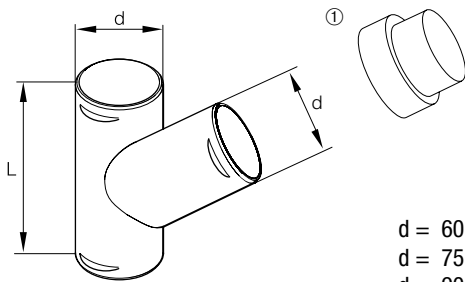


~ = Check connection diameter

Metal, D = 75 mm, d = 50 mm

							25 1482 80 08 00
--	--	--	--	--	--	--	------------------

43
Y-junction



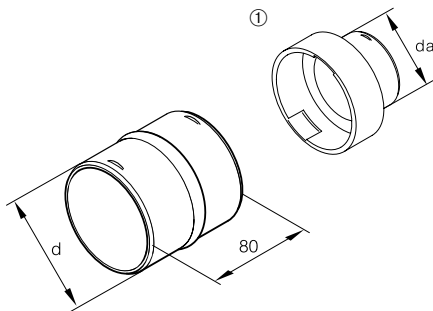
①
Adapter, see Item 45

~ = Check connection diameter

d = 60, L = 145 mm
d = 75, L = 175 mm
d = 90, L = 180 mm
d = 100, L = 230 mm

							25 1774 89 00 05
							25 1226 89 00 44
							22 1000 01 00 21
							25 1226 89 00 45

44
Hose connector fitting



①
Adapter, see Item 45

~ = Check connection diameter

d = 60 mm
d = 75 mm
d = 90 mm
d = 100 mm

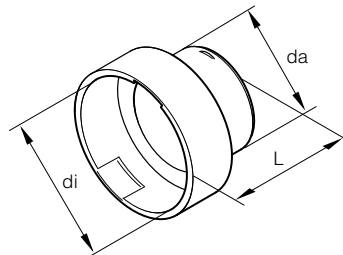
							22 1000 01 00 05
							22 1000 01 00 06
							22 1000 01 00 24
							22 1000 01 00 07

8 | AIR-CONDUCTING PARTS

45

Adapter

For Item 40, 43 and 44



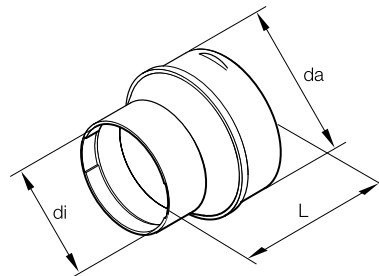
di = 75 mm, da = 50 mm, L = 50 mm
 di = 75 mm, da = 60 mm, L = 45 mm
 di = 90 mm, da = 75 mm, L = 45 mm
 di = 100 mm, da = 50 mm, L = 62 mm
 di = 100 mm, da = 60 mm, L = 57 mm
 di = 100 mm, da = 75 mm, L = 50 mm
 di = 100 mm, da = 90 mm, L = 42 mm

~ = Check connection diameter

	Airtronic	Airtronic M	Airtronic L	Air heater 8 L/V 7 S	Hydronic 4/5 kW	Hydronic M/M2	Hydronic L/L2	Order no.
?	?	?	?	?				25 1226 89 00 46
?	?	?	?	?				25 1226 89 00 50
?	?	?	?	?				22 1000 01 00 12
?	?	?	?	?				25 1226 89 00 48
?	?	?	?	?				25 1226 89 00 51
?	?	?	?	?				25 1226 89 00 47
?	?	?	?	?				25 1226 89 00 49

46

Adapter



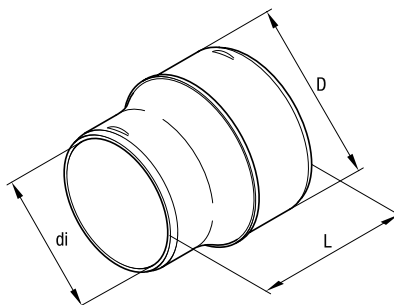
~ = Check connection diameter

$$d_i = 60 \text{ mm}, d_a = 75 \text{ mm}, L = 40.5 \text{ mm}$$

Number of people	Percentage
0	25
1	16
2	8
3	8
4	9
5	0
6	0
7	0
8	0
9	0
10	10

47

Adapter



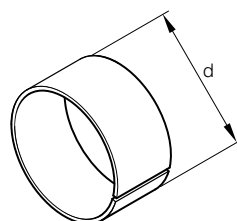
Plastic, $d_i = 75$ mm, $D = 90$ mm, $L = 54$ mm
Metal, $d_i = 90$ mm, $D = 100$ mm, $L = 46$ mm

~ = Check connection diameter

22 1000 01 00 85
20 1462 89 00 01

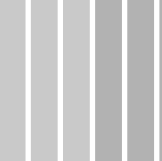
48

Sleeve / adapter



~ = Check connection diameter

$d = 90 \text{ mm} / 100 \text{ mm}$



20 1607 80 00 01

9 | FUEL-CONDUCTING PARTS

GENERAL INFORMATION:

- Protect fuel lines, filters and metering pumps from impermissible heat levels; do not install near control dampers and exhaust pipes.
- Take the rear axle suspension into account when installing fuel lines, fuel filters and metering pumps near the rear axle.
- When cutting fuel hoses and types, 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.

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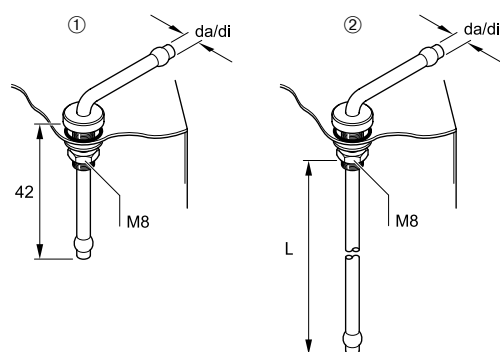
13

14

9 | FUEL-CONDUCTING PARTS

Tank connection

For cars with an inner tank pump

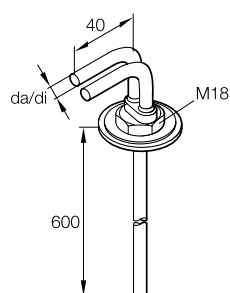


- ① $d_a = 4 \text{ mm}$, $d_i = 2 \text{ mm}$
② $d_a = 4 \text{ mm}$, $d_i = 2 \text{ mm}$, $L = 295 \text{ mm}$

Airtronic	Airtronic M	Airtronic L	Air heater 8 L/V 7 S	Hydronic 4/5 kW	Hydronic M/M2	Hydronic L/L2	Order no.
							22 1000 20 15 00 22 1000 20 16 00
							25 1226 89 40 00
							25 1226 89 50 00 25 1156 30 00 00
							22 1000 20 31 00
							22 1000 20 13 00

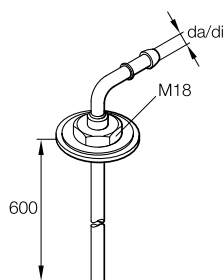
Tank connection with return

TANK CONNECTION WITH For commercial vehicles


$$d_a = 6 \text{ mm}, d_i = 4 \text{ mm}$$

Tank connection

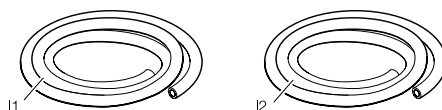
For commercial vehicles



da = 6 mm, di = 2 mm
da = 6 mm, di = 4 mm

Kit – fuel lines for E85

Only for Hydronic 2 – B5 S

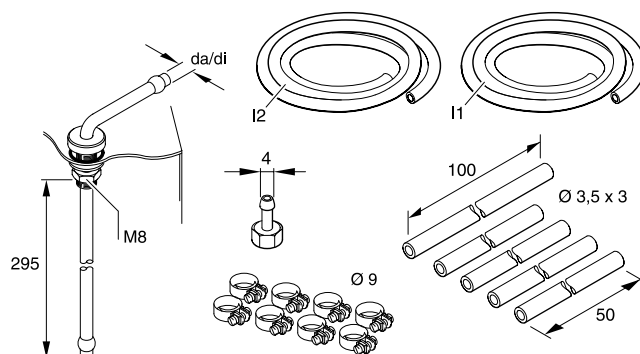


$I_1 = \varnothing 4 \times 1.25$ pipe; $L = 6$ m, black / $I_2 = \varnothing 4 \times 1$ pipe; $L = 2$ m, black

Tank connection kit

TANK CONNECTION KIT

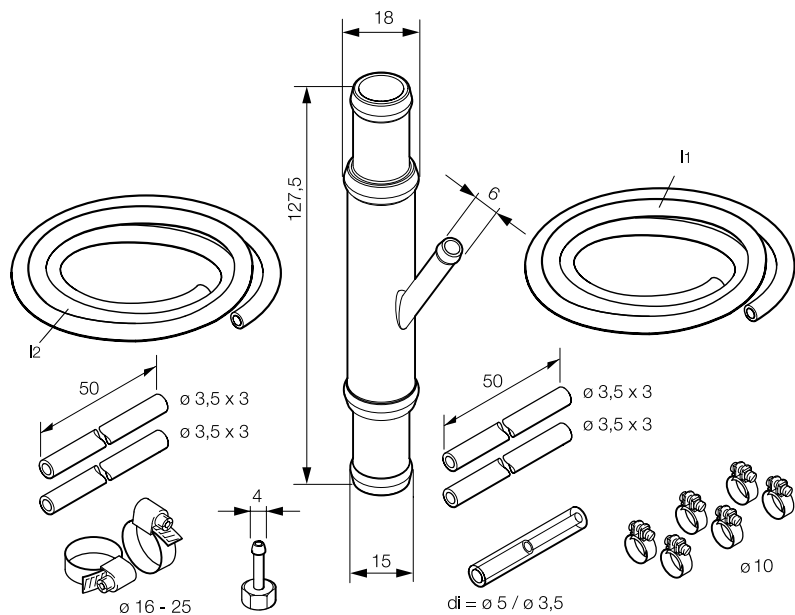
For cars with an inner tank pump



$l_1 = \varnothing 4 \times 1.25$ pipe; $L = 6$ m / $l_2 = \varnothing 4 \times 1$ pipe; $L = 6$ m / $d_a = 4$ mm, $d_i = 2$ mm

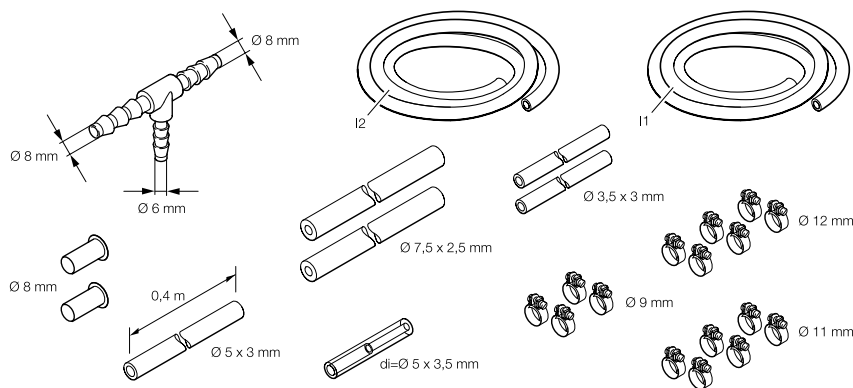
9 | FUEL-CONDUCTING PARTS

Fuel supply kit
For installation in the tank ventilation hose



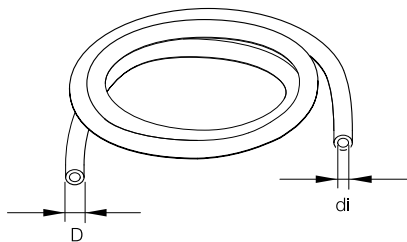
I1 = $\varnothing$ 4x1 steel pipe, L = 1 m / I2 = $\varnothing$ 4x1 plastic pipe, L = 2 m

Fuel supply kit
Tank extraction feed line



I1 = $\varnothing$ 4x1.25 pipe; L = 6 m / I2 = $\varnothing$ 6x1 pipe; L = 2 m

Fuel hose (linear m)
Rubber



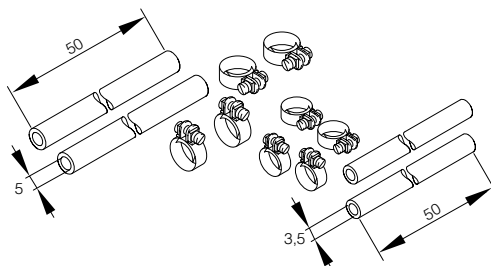
- di = 3.5 mm, D = 9.50 mm
- * di = 3.5 mm, D = 9.50 mm
- di = 5.0 mm, D = 11.0 mm
- * di = 5.0 mm, D = 11.0 mm
- * di = 7.5 mm, D = 13.5 mm
- * di = 9.0 mm, D = 15.0 mm

* PME-compatible

Airtronic	Airtronic M	Airtronic L	Air heater 8 L/V 7 S	Hydronic 4/5 kW	Hydronic M/M2	Hydronic L/L2	Order no.
							22 1000 20 06 00
							22 1000 20 17 00
							360 75 300
							360 75 400
							360 75 350
							360 75 401
							360 75 402
							360 75 404

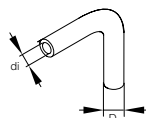
9 | FUEL-CONDUCTING PARTS

Fuel supply kit
For installing fuel line
in boat engine compartments



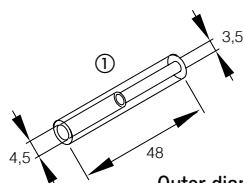
Fire-resistant hose according to DIN EN ISO 14859

Fuel hose 105° elbow
PME-compatible



$di = 3.5 \text{ mm}$, $D = 9.5 \text{ mm}$

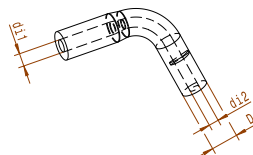
Hydronic S3 adapter



Outer diameter $D = 10$

~ = Check connection diameter

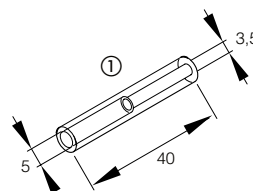
Hydronic S3 adapter elbow



$D = 9.5 \text{ mm}$, $di1 = 4.5 \text{ mm}$, $di2 = 3.5 \text{ mm}$

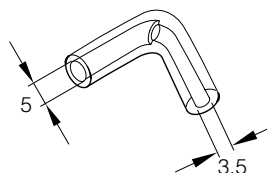
~ = Check connection diameter

Adapter



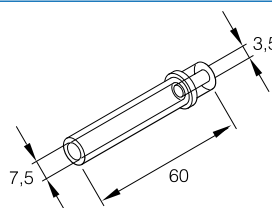
Outer diameter $D = 10$

Adapter 105° elbow
PME-compatible



Outer diameter $D = 10$

Adapter for fuel pipes



Outer diameter $D = 12$

Airtronic	Airtronic M	Airtronic L	Air heater 8 L/N 7 S	Hydronic 4/5 kW	Hydronic M/M2	Hydronic L/L2	Order no.
							22 1000 20 10 00
							25 1888 80 01 01
							22 1000 20 38 00
							22 1000 20 41 00
							25 1888 80 01 02
							25 2110 05 03 01
							22 1000 20 30 00

natural-colored, di = 1.5 mm , D = 4 mm		890 31 118
natural-colored, di = 2 mm , D = 4 mm		890 31 055
Ethanol resistant, di = 1.5 mm , D = 4 mm		890 31 139
Ethanol resistant, di = 2 mm , D = 4 mm		890 31 138
blue, di = 2 mm , D = 4 mm		890 31 054
black, di = 2 mm , D = 6 mm		890 31 125
blue, di = 4 mm , D = 6 mm		890 31 101

A 3D perspective diagram of a hollow shaft. The shaft is shown as a grey cylinder with a central hole. The outer diameter is labeled D and the inner diameter is labeled d_i . The shaft is oriented diagonally.

di = 5 mm, D = 11 mm 360 75 200

A diagram of a helical spring. The length of the spring is indicated as 355. The outer diameter is labeled D and the inner diameter is labeled d_i .

di = 10 mm, D = 13 mm  360 00 183

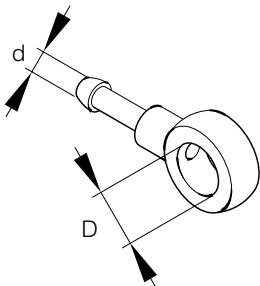
A diagram of a cylindrical lens. The lens is represented as a cylinder with a circular cross-section. The diameter of this cross-section is labeled as d_a . The lens is oriented diagonally. Two black triangular shapes are positioned at the ends of the cylinder, pointing outwards along its longitudinal axis.

da = 4 mm for 6x1 pipe		22 1000 20 01 00
da = 6 mm for 8x1 pipe		22 1000 20 02 00
da = 8 mm for 10x1 pipe		22 1000 20 03 00

25 1351 88 01 01

9 | FUEL-CONDUCTING PARTS

Ring fitting with hose connection



d = 5 mm, D = 8 mm

Airtronic	Airtronic M	Airtronic L	Air heater 8 L/V 7 S	Hydronic 4/5 kW	Hydronic M/M2	Hydronic L/L2	Order no.
							25 1352 88 00 05

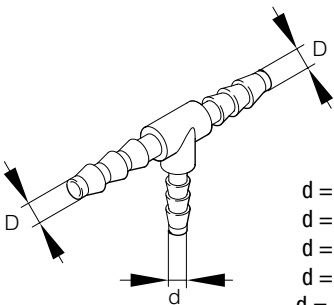
~	~	~	~	~	~	~	262 31 155
~	~	~	~	~	~	~	262 31 149
~	~	~	~	~	~	~	262 31 150
~	~	~	~	~	~	~	262 31 151
~	~	~	~	~	~	~	262 31 152
~	~	~	~	~	~	~	262 31 153

~	~	~	~	~	~	~	25 1156 20 00 09
---	---	---	---	---	---	---	------------------

							25 1226 89 00 37
--	--	--	--	--	--	--	------------------

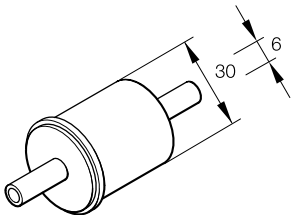
							244 31 060
							244 31 061

T-piece
Plastic



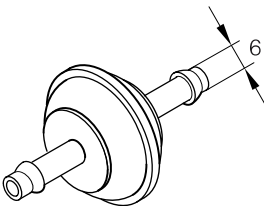
d = 4 mm, D = 8 mm
d = 5 mm, D = 5 mm
d = 6 mm, D = 6 mm
d = 6 mm, D = 8 mm
d = 6 mm, D = 10 mm
d = 6 mm, D = 12 mm

Fuel filter with paper insert
Plastic / installation in front of fuel circulation pump



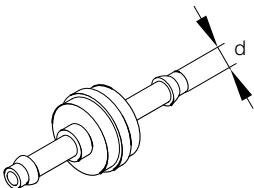
~ = check hose diameter

Fuel filter with metal strainer
Plastic / for metering pumps with cup strainer



~ = Important! Fuel filter suitable for use with fuel circulation pump only

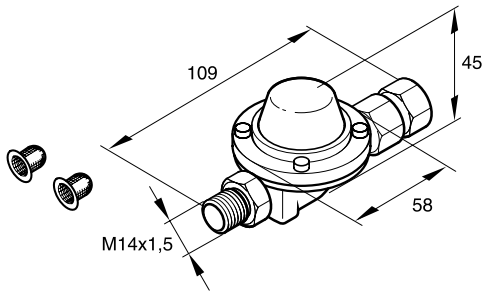
Check valve



d = 6 mm
d = 8 mm

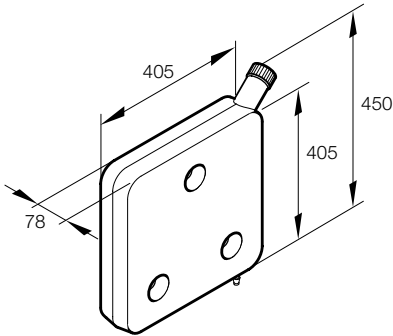
9 | FUEL-CONDUCTING PARTS

Pressure reducer
with cup strainer and hose fitting
Input pressure 0.2 – 4 bar
Control pressure min. 50 mbar, max. 150 mbar



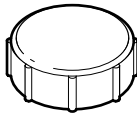
Airtronic	Airtronic M	Airtronic L	Air heater 8 L/V 7 S	Hydronic 4/5 kW	Hydronic M/M2	Hydronic L/L2	Order no.
							22 1000 20 08 00
~	~	~	~	~	~	~	22 1000 20 28 00
~	~	~	~	~	~	~	22 1000 20 22 00
~	~	~	~	~	~	~	22 1000 20 28 03
~	~	~	~	~	~	~	22 1000 20 28 04

Complete fuel tank, 10 l
Plastic

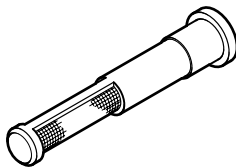


~ = Only suitable for diesel / bio-diesel (FAME) / heating oil

Complete fuel tank, 10 l – single part
Lid
Plastic



Complete fuel tank, 10 l – single part
Fuel strainer



Complete fuel tank, 10 l – single part
Seal



10 | ELECTRICAL PARTS / TESTING EQUIPMENT

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 (i.e. via an additional electrical connection or clear instruction that the battery main switch should be open when the heater is running with a flame).
- 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.

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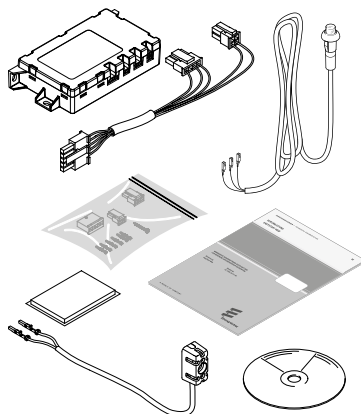
[illegible][illegible]

This exploded view diagram illustrates the components of the Intel NUC11PAHQ2. The central component is the motherboard, which features the Intel NUC logo and various ports. Surrounding the motherboard are several other components: a CPU, two RAM modules, a storage drive, a cooling fan, and a power button. The diagram shows how these components are assembled into the NUC chassis.

Number of Children	Percentage of Families
0	22
1	1000
2	34
3	13
4	00

10 | ELECTRICAL PARTS

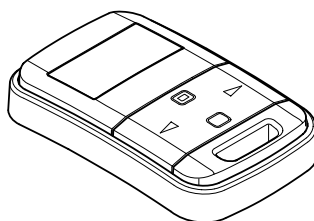
EasyStart Web
Web-based remote operation



12 V / 24 V

Airtronic	Airtronic M	Airtronic L	Air heater 8 L/V 7 S	Hydronic 4/5 kW	Hydronic M/M2	Hydronic L/L2	Order no.
							22 1000 34 51 00

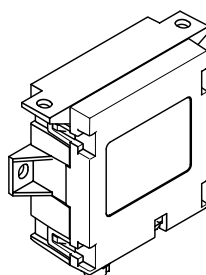
EasyStart Remote+ – single part
Mobile part



12 V / 24 V

~ 22 1000 34 18 00

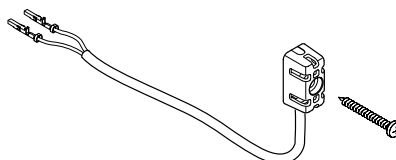
EasyStart Remote+ – single part
Fixed part



12 V / 24 V

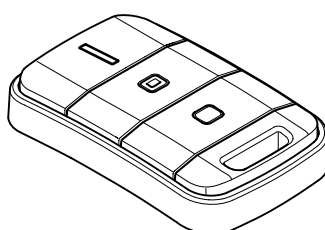
~ 22 1000 34 19 00

EasyStart Remote+ – single part
Sensor – interior temperature, display



~ 22 1000 34 22 00

EasyStart Remote – single part
Mobile part



12 V / 24 V

22 1000 34 24 00

Airtronic	
Airtronic M	
Airtronic L	
Air heater 8 L/V 7 S	
Hydronic 4/5 kW	
Hydronic M/M2	
Hydronic L/L2	
Order no.	

22 1000 34 25 00

22 1000 34 25 00

22 1000 34 18 01
22 1000 34 24 01

Response	Percentage
U.S. should take action	22
U.S. should not take action	100

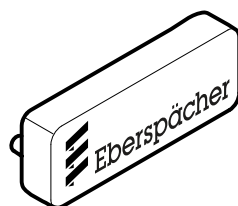
Government	Percentage
Current government	22
Previous government	100

The current government is responsible for the crisis

Government	Percentage
Current government	22
Previous government	100

10 | ELECTRICAL PARTS

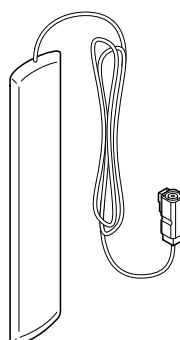
EasyStart Select – single part
Plugs



Airtronic	Airtronic M	Airtronic L	Air heater 8 L/N 7 S	Hydronic 4/5 kW	Hydronic M/M2	Hydronic L/L2	Order no.
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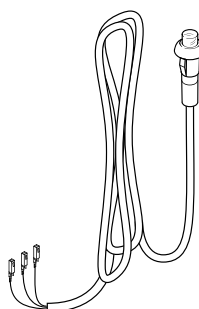
							22 1000 34 13 01
--	--	--	--	--	--	--	------------------

EasyStart Call – single part
Slide antenna



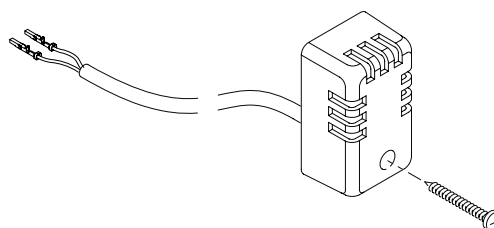
							22 1000 34 03 00
--	--	--	--	--	--	--	------------------

EasyStart Call – single part
Button



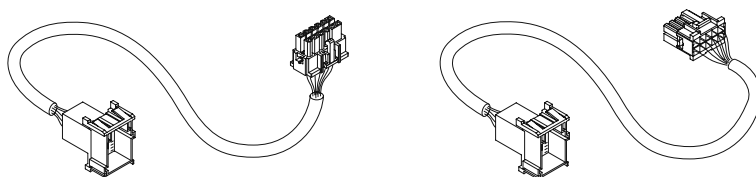
							22 1000 34 04 00
--	--	--	--	--	--	--	------------------

EasyStart Call – single part
Temperature sensor



							22 1000 34 09 00
--	--	--	--	--	--	--	------------------

EasyStart Call, EasyStart Remote+ / EasyStart Remote / EasyStart Timer – single part
Adapter cable

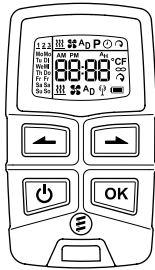


EasyStart Remote / EasyStart Remote+ / EasyStart Call (12-pin)
EasyStart Timer (10-pin)

							22 1000 34 08 00
							22 1000 34 45 00

10 | ELECTRICAL PARTS

EasyStart R+ – single part
Mobile part



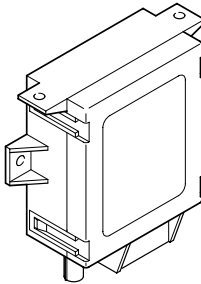
Spare part for 22 1000 32 80 00

12 V / 24 V

Airtronic	Airtronic M	Airtronic L	Air heater 8 L/V 7 S	Hydronic 4/5 kW	Hydronic M/M2	Hydronic L/L2	Order no.
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			~				22 1000 32 81 00
--	--	--	---	--	--	--	------------------

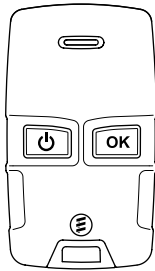
EasyStart R+ – single part
Fixed part



Spare part for 22 1000 32 80 00

			~				22 1000 32 82 00
--	--	--	---	--	--	--	------------------

1 EasyStart R – single part

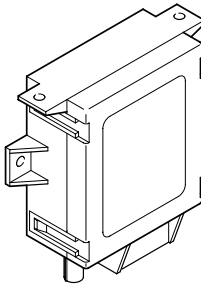


5 Spare part for 22 1000 32 85 00

12 V / 24 V

			~				22 1000 32 86 00
--	--	--	---	--	--	--	------------------

6 EasyStart R – single part
7 Fixed part



10 Spare part for 22 1000 32 85 00

			~				22 1000 32 87 00
--	--	--	---	--	--	--	------------------

12 EasyStart R+ / EasyStart R – single part
13 Cover for battery compartment

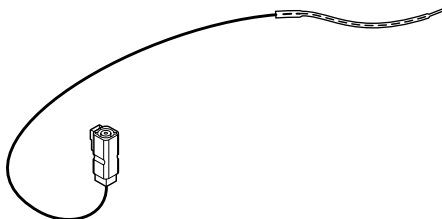


14 Spare part for 22 1000 32 80 00 and 22 1000 32 85 00

			~				22 1000 32 91 00
--	--	--	---	--	--	--	------------------

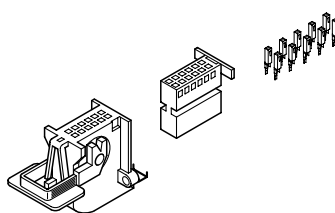
10 | ELECTRICAL PARTS

EasyStart R+ / EasyStart R – single part
Antenna



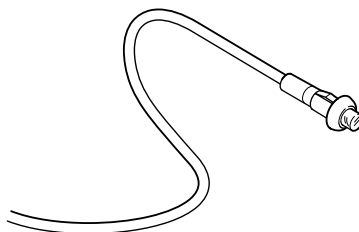
Spare part for 22 1000 32 80 00 and 22 1000 32 85 00

EasyStart R+ / EasyStart R – single part
Electrical connection parts



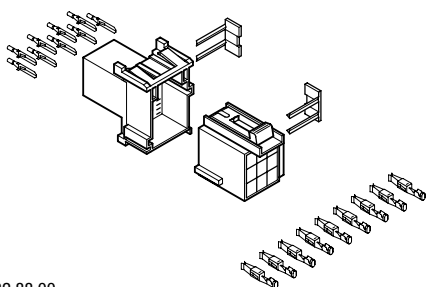
Spare part for 22 1000 32 80 00 and 22 1000 32 85 00

EasyStart R+ / EasyStart R / EasyStart T – single part
Button



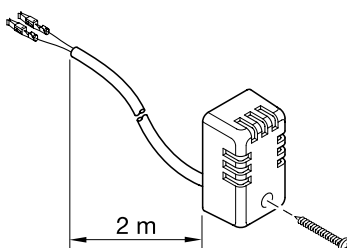
Spare part for 22 1000 32 80 00, 22 1000 32 85 00 and 22 1000 32 88 00

EasyStart R+ / EasyStart R / EasyStart T – single part
Electrical connection parts



Spare part for 22 1000 32 80 00, 22 1000 32 85 00 and 22 1000 32 88 00

EasyStart R+ / EasyStart T – single part
Sensor – interior temperature, display



Spare part for 22 1000 32 80 00 and 22 1000 32 88 00

Airtronic	Airtronic M	Airtronic L	Air heater 8 L/N 7 S	Hydronic 4/5 kW	Hydronic M/M2	Hydronic L/L2	Order no.
							22 1000 32 83 00
							22 1000 32 90 00
							22 1000 32 84 00
							22 1000 32 92 00
							22 1000 32 97 00

A line drawing showing a USB cable connected to a tablet. The cable is plugged into the bottom of the tablet and extends downwards, ending in a standard USB-A connector.

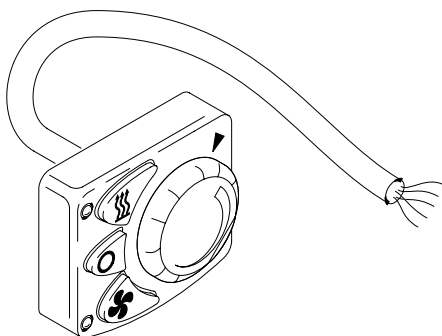
A line drawing showing a power cable. One end of the cable is connected to a rectangular power source, likely a power brick. The other end of the cable is a standard three-pronged AC power plug.

[illegible]

■ unrestricted use ~ restricted use

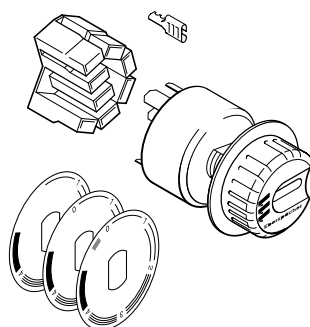
10 | ELECTRICAL PARTS

Mini-controller – single part



Airtronic	Airtronic M	Airtronic L	Air heater 8 L/V 7 S	Hydronic 4/5 kW	Hydronic M/M2	Hydronic L/L2	Order no.
							22 1000 32 07 00

Control unit



* with bushing connector housing and bushing connector

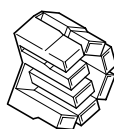
** without bushing connector housing and bushing connectors / only for air heater 8 L

~ = No ventilation, no diagnostic information.

* 12 V ~
 * 24 V ~
 ** 12 V ~
 ** 24 V ~

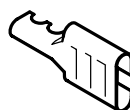
25 1895 71 00 00
 25 1896 71 00 00
 25 1767 71 00 00
 25 1768 71 00 00

Control unit – single part 7-pin bushing connector housing



							206 31 282
--	--	--	--	--	--	--	------------

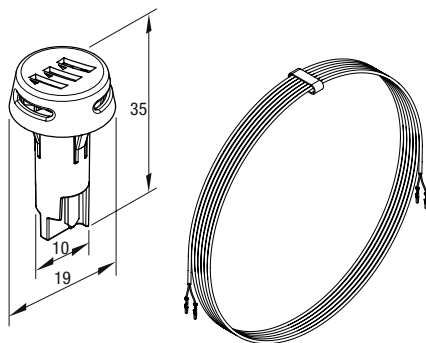
Control unit – single part Bushing connector



							206 36 151
--	--	--	--	--	--	--	------------

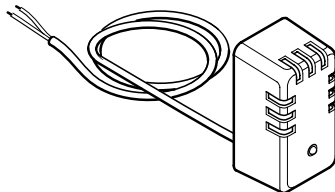
10 | ELECTRICAL PARTS

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



~ = Can be used with control unit

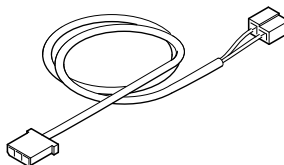
Exterior and interior temperature control sensor, surface installation
2 m cable harness



~ = Can be used with control unit

Cable harness / temperature sensor

For 25 1774 89 03 00



4 m, 2-pin

4 m, 3-pin

Additional heater installation kit

Only for Hydronic 2 in combination with EasyStart Remote+ / Remote / Timer

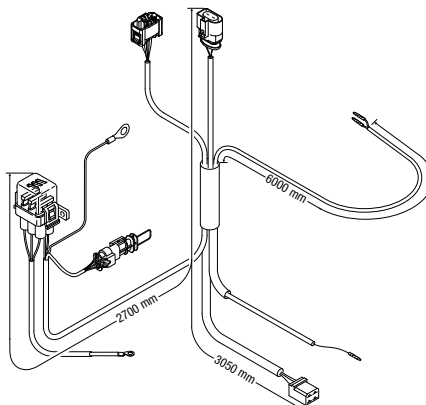
Thermostatic switch including connectors and fastenings

Switch-off point: 10°C

Switch-on point: 5°C

Hydronic S3 Economy cable harness
for recreational vehicles and boats

required for heating when using a mains
connection (230 V/50 Hz), e.g. in camping
or parking areas for mobile homes or in
marinas for boats

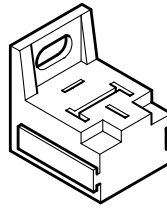


* available from 3rd quarter 2017

Airtronic	Airtronic M	Airtronic L	Air heater 8 L/V 7 S	Hydronic 4/5 kW	Hydronic M/M2	Hydronic L/L2	Order no.
			~				22 1000 35 21 00
			~				25 1774 89 03 00
			~				25 1688 89 09 00
			~				25 1482 89 40 00
				~			24 8532 00 00 00
				~			25 2652 82 11 00

10 | ELECTRICAL PARTS

Voltage divider for fan control – single part
Connector block

[illegible]

■ unrestricted use ~ restricted use

~	Airtronic	~	22 1000 32 74 00	Order no.
~	Airtronic M	~		
~	Airtronic L	~		
~	Air heater 8 L/W 7 S	~		
~	Hydronic 4/5 kW	~		
~	Hydronic M/M2	~		
~	Hydronic L/L2	~		
~		~	22 1000 31 06 00	
~		~	22 1000 5149 00	
~		~	203 00 097	
~		~	203 00 096	

12 V
24 V

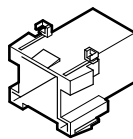
A technical line drawing of a 4-pin DIN connector assembly. The main component is a square block with four pins extending from its bottom. A side bracket with a circular hole is attached to the left side. To the right, four individual pins are shown separately. A screw is shown at the bottom left.

~ ~ ~ ~ ~ ~ ~ 22 1000 31 06 00

22 1000 5149 00

10 | ELECTRICAL PARTS

Flat connector housing / Junior Timer
For mini-timer 22 1000 30 14 00

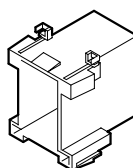


4-pin

Airtronic	Airtronic M	Airtronic L	Air heater 8 L/N 7 S	Hydronic 4/5 kW	Hydronic M/M2	Hydronic L/L2	Order no.
-----------	-------------	-------------	----------------------	-----------------	---------------	---------------	-----------

~	~	~	~	~	~	~	206 31 100
---	---	---	---	---	---	---	------------

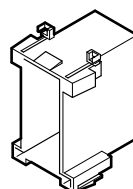
Flat connector housing / Junior Timer
For mini-timer 22 1000 32 35 00



6-pin

~	~	~	~	~	~	~	206 31 106
---	---	---	---	---	---	---	------------

Flat connector housing / Junior Timer



8-pin

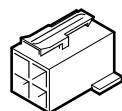
~	~	~	~	~	~	~	206 31 101
---	---	---	---	---	---	---	------------

Flat connector
For flat connector housing / Junior Timer

0.5² – 1.0²

~	~	~	~	~	~	~	206 36 018
---	---	---	---	---	---	---	------------

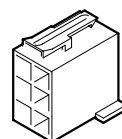
Bushing connector housing / Junior Timer
For mini-timer 22 1000 30 14 00



4-pin

~	~	~	~	~	~	~	206 31 296
---	---	---	---	---	---	---	------------

Bushing connector housing / Junior Timer
For mini-timer 22 1000 32 35 00

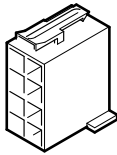


6-pin

~	~	~	~	~	~	~	206 31 297
---	---	---	---	---	---	---	------------

10 | ELECTRICAL PARTS

Bushing connector housing / Junior Timer

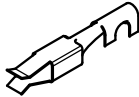


8-pin

Airtronic	Airtronic M	Airtronic L	Air heater 8 L/V 7 S	Hydronic 4/5 kW	Hydronic M/M2	Hydronic L/L2	Order no.
~	~	~	~	~	~	~	206 31 298
~	~	~	~	~	~	~	206 73 052
~	~	~	~	~	~	~	206 73 053
~	~	~	~	~	~	~	206 31 018
~	~	~	~	~	~	~	206 73 001
~	~	~	~	~	~	~	206 52 151
~	~	~	~	~	~	~	206 31 306
~	~	~	~	~	~	~	206 73 039
~	~	~	~	~	~	~	206 36 161
							22 1000 30 10 21

Bushing connector

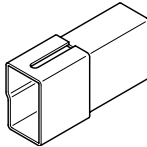
For bushing connector housing / Junior Timer



0.5² – 1.0²

1.0² – 2.5²

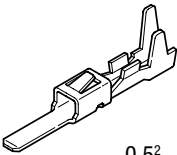
Flat connector housing AMP 2.8



2-pin

Flat connector

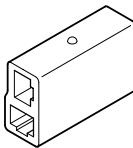
For flat connector housing AMP 2.8



0.5² – 1.0²

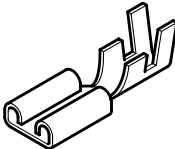
1.0² – 2.5²

Bushing connector housing AMP 2.8



Bushing connector

For bushing connector housing AMP 2.8

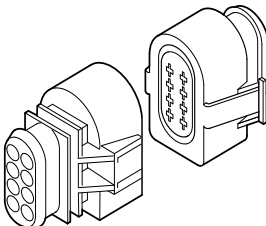


0.5² – 1.0²

1.0² – 2.5²

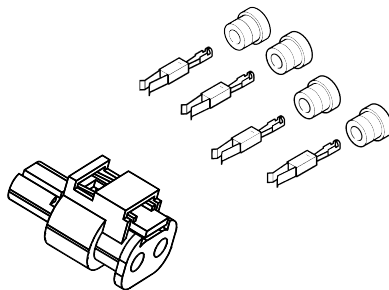
8-pin bushing connector housing kit

For the Hydronic, with contacts and seals



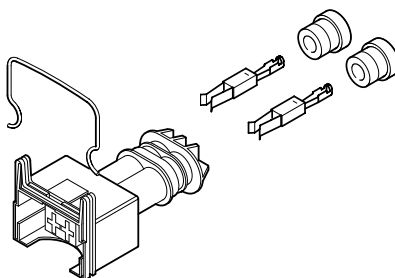
10 | ELECTRICAL PARTS / TESTING EQUIPMENT

Connector housing kit for Hydronic S3
for metering pump, with contacts and seals



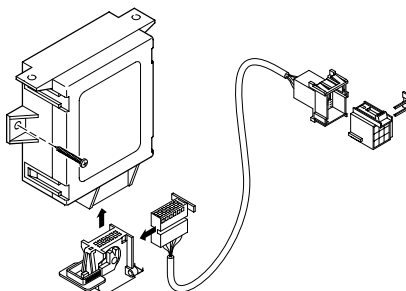
Airtronic	Airtronic M	Airtronic L	Air heater 8 L/N 7 S	Hydronic 4/5 kW	Hydronic M/M2	Hydronic L/L2	Order no.
				~			22 1000 35 25 00

Connector housing kit
For metering pump, with contacts and seals



							22 1000 31 87 00
--	--	--	--	--	--	--	------------------

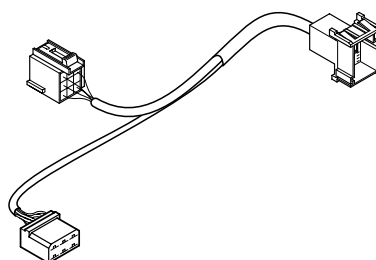
Altitude kit *
Air pressure sensor for heating mode at altitudes
up to 3,500 m above sea level



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

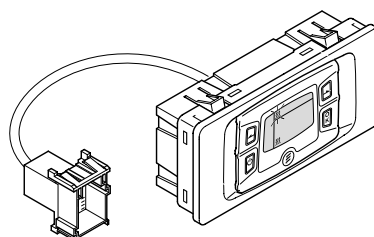
							22 1000 33 22 00
--	--	--	--	--	--	--	------------------

Adapter cable
For air pressure sensor diagnostics



							22 1000 33 31 00
--	--	--	--	--	--	--	------------------

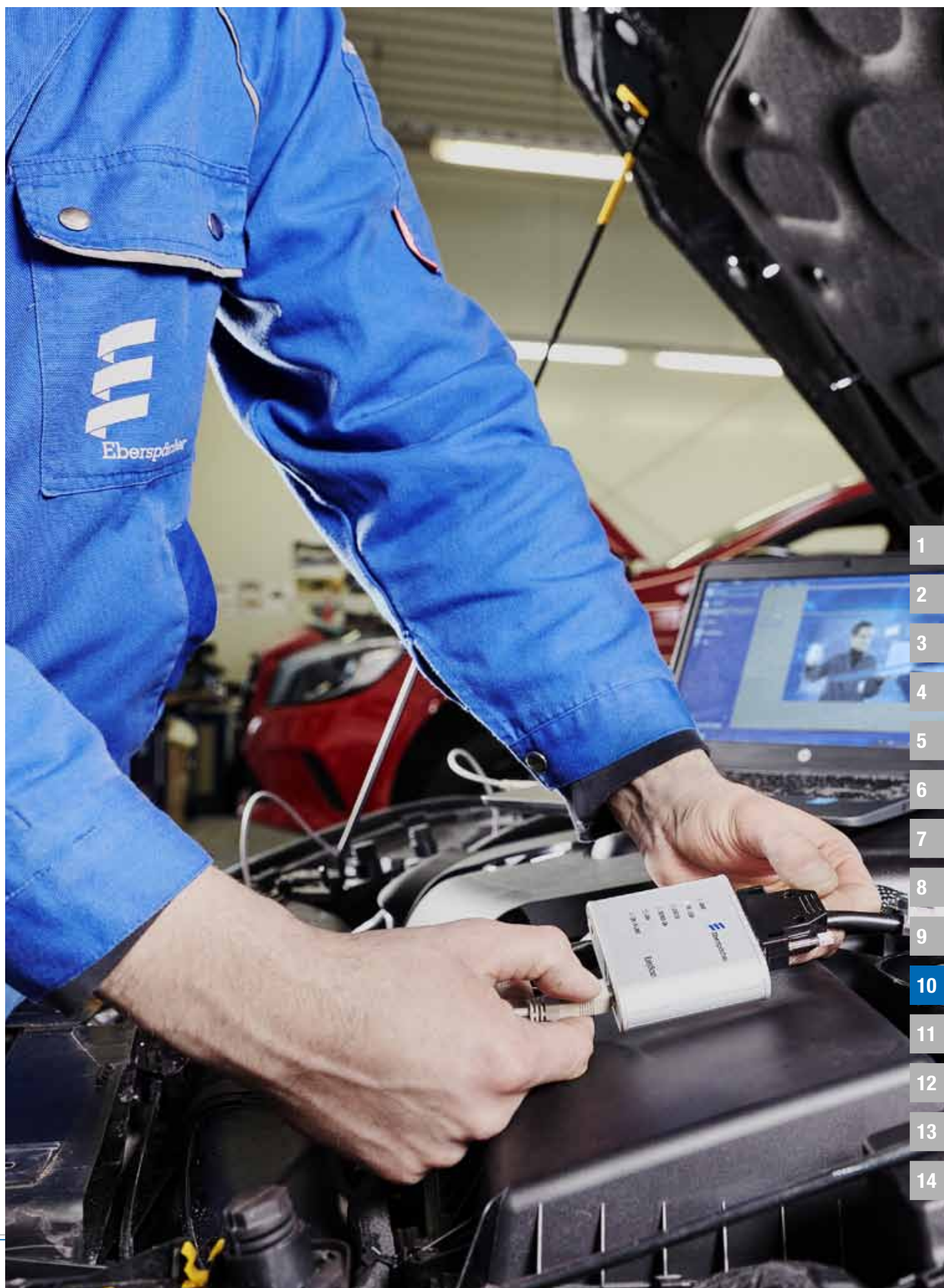
Diagnostic device



							22 1545 89 00 00
--	--	--	--	--	--	--	------------------

Technical drawing of the EasyPiccan camera module. The drawing shows the top and side views with dimensions: 82 mm (width), 69,1 mm (depth), and 20 mm (height). The top view features the EasyPiccan logo, a list of supported interfaces (UART, PC / USB, SPI/IO, I2C/SCL, CAN, and LIN / K-Line), and the EasyPiccan text. The side view shows the camera lens and a connector.

■ unrestricted use ~ restricted use



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11 | EXHAUST-CONDUCTING AND COMBUSTION-AIR-CONDUCTING PARTS

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 with a fall towards the tail 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.

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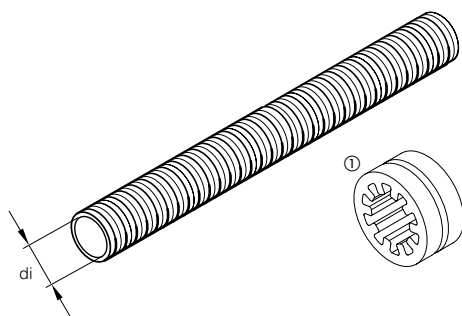
12

13

14

11 | EXHAUST-CONDUCTING AND COMBUSTION-AIR-CONDUCTING PARTS

Exhaust hose
Stainless steel (yard goods)



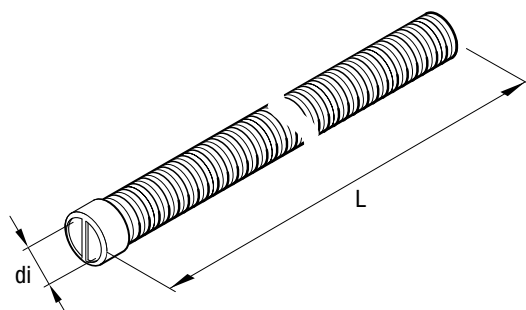
①
See page 127 for spacer ring

~ = In combination with exhaust pipe elbow 25 1226 89 46 00

di = 24 mm, 1-layer
di = 30 mm, 1-layer
di = 40 mm, 1-layer, 3,000 mm long
di = 42 mm, 1-layer

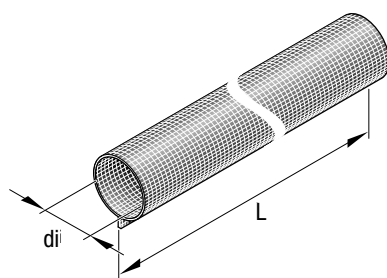
Airtronic	Airtronic M	Airtronic L	Air heater 8 L/N 7 S	Hydronic 4/5 kW	Hydronic M/M2	Hydronic L/L2	Order no.
							360 61 620
							360 61 621
			~				360 61 681
							360 61 690

Exhaust hose with end sleeve
1-layer stainless steel



di = 24 mm / L = 400 mm
di = 24 mm / L = 800 mm
di = 24 mm / L = 1,300 mm
di = 30 mm / L = 1,300 mm

Fiberglass hose
Heat protection



* Silicone coated

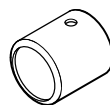
~ = Check diameter of exhaust line

* di = 28 mm, L = 500 mm
di = 30 mm, L = 300 mm
di = 30 mm, L = 150 mm
di = 40 mm, L = 60 mm
di = 70 mm, L = 1,200 mm

							22 1000 40 46 00
							22 1000 40 49 00
							22 1000 40 43 00
							22 1000 40 65 00
							360 00 363
							25 1676 80 00 01
							24 0151 00 00 05
							25 1894 80 04 01
						~	25 1445 05 03 04

11 | EXHAUST-CONDUCTING AND COMBUSTION-AIR-CONDUCTING PARTS

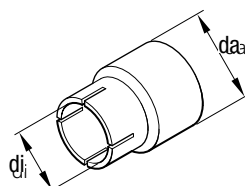
End sleeve for exhaust pipe



ø 30 mm
ø 42 mm

Airtronic	Airtronic M	Airtronic L	Air heater 8 L/V 7 S	Hydronic 4/5 kW	Hydronic M/M2	Hydronic L/L2	Order no.
							25 1785 80 02 00
							22 1000 40 02 00

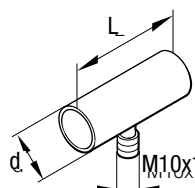
Adapter for exhaust hose



di = 24 mm, da = 30 mm

							25 1520 80 01 01
--	--	--	--	--	--	--	------------------

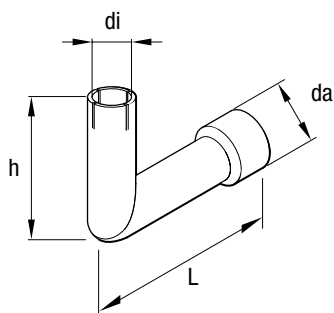
Adapter with condensate drainage



d = 24 mm, L = 65 mm
d = 30 mm, L = 60 mm

							22 1050 89 40 00
							25 1226 89 59 00

Exhaust pipe angle

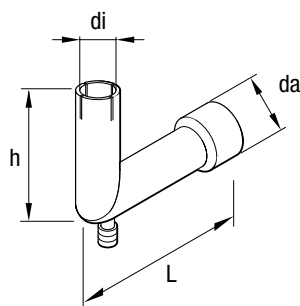


di = 24 mm, da = 30 mm, h = 50 mm / 80 mm

							25 1226 89 55 00
--	--	--	--	--	--	--	------------------

11 | EXHAUST-CONDUCTING AND COMBUSTION-AIR-CONDUCTING PARTS

M10 x 1 exhaust pipe elbow with drainage

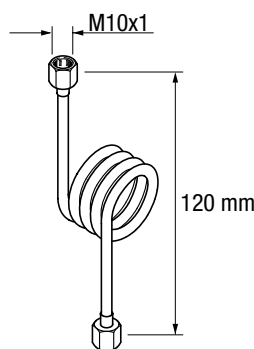


di = 24 mm, da = 24 mm, h = 50 mm, L = 110 mm
di = 24 mm, da = 30 mm, h = 50 mm, L = 80 mm

Airtronic	Airtronic M	Airtronic L	Air heater 8 L/V 7 S	Hydronic 4/5 kW	Hydronic M/M2	Hydronic L/L2	Order no.
-----------	-------------	-------------	----------------------	-----------------	---------------	---------------	-----------

							25 1226 89 45 00
							22 1050 89 39 00

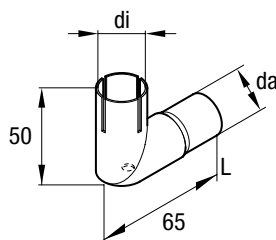
Condensate drain



~ = Only for use with parts that have condensate drainage

~	~	~	~	~	~	~	25 8547 16 02 00
---	---	---	---	---	---	---	------------------

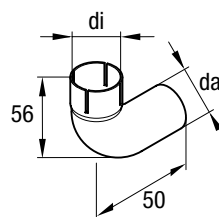
Exhaust pipe elbow



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

							24 0076 07 01 00
							24 0172 01 01 00

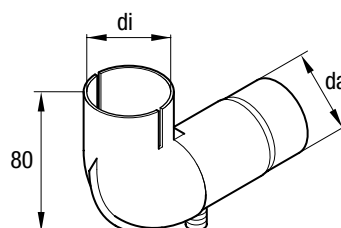
Exhaust pipe elbow



di = 24 mm, da = 24 mm

							25 2481 80 02 02
--	--	--	--	--	--	--	------------------

M10 x 1 exhaust pipe elbow with drainage

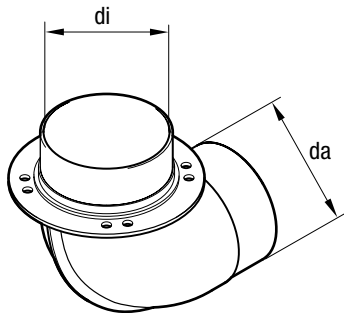


di = 42 mm, da = 40 mm

							25 1226 89 46 00
--	--	--	--	--	--	--	------------------

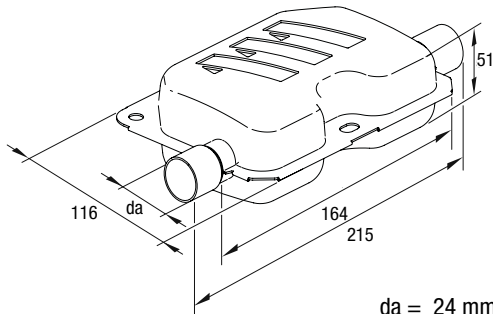
11 | EXHAUST-CONDUCTING AND COMBUSTION-AIR-CONDUCTING PARTS

Exhaust pipe elbow



di = 70 mm, da = 72 mm

Exhaust silencer

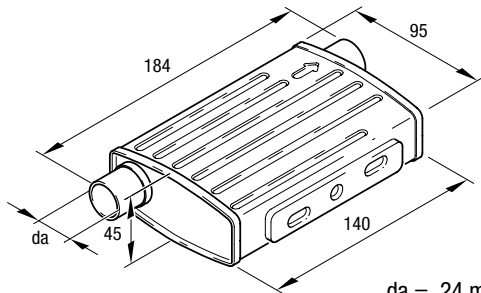


The exhaust silencer must not be installed in boat interiors.

See page 130 for exhaust silencer mounting bracket

da = 24 mm

Exhaust silencer

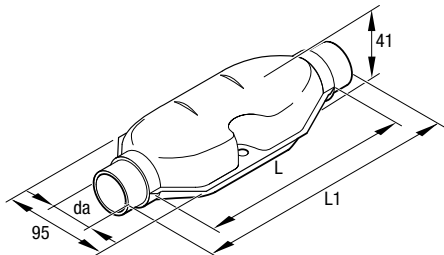


The exhaust silencer must not be installed in boat interiors.

See page 130 for exhaust silencer mounting bracket

da = 24 mm

Exhaust silencer

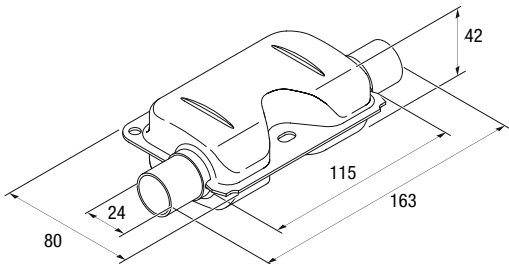


The exhaust silencer must not be installed in boat interiors.

See page 130 for exhaust silencer mounting bracket

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

Exhaust silencer



The exhaust silencer must not be installed in boat interiors.

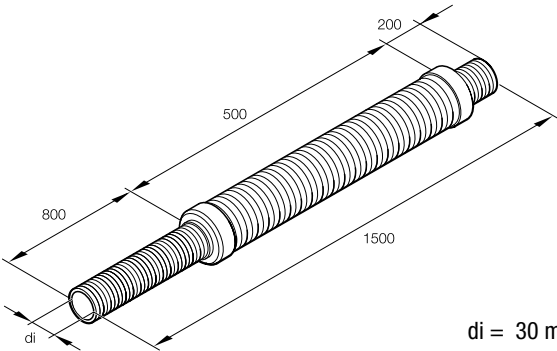
See page 130 for exhaust silencer mounting bracket

da = 24 mm

Airtronic	Airtronic M	Airtronic L	Air heater 8 L/V 7 S	Hydronic 4/5 kW	Hydronic M/M2	Hydronic L/L2	Order no.
							22 1000 40 03 00
							22 1000 40 21 00
							22 1000 40 19 00
							25 1806 80 01 00
							25 1864 81 01 00

11 | EXHAUST-CONDUCTING AND COMBUSTION-AIR-CONDUCTING PARTS

Exhaust silencer
Flexible stainless steel, for boats

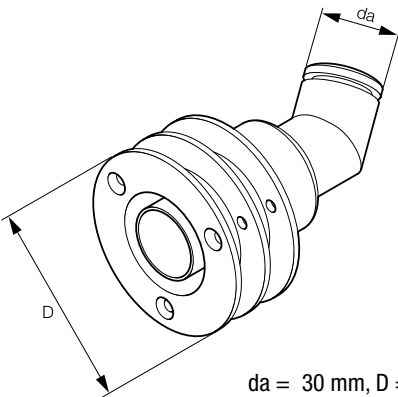


~ = Check connection diameter

di = 30 mm

Airtronic	Airtronic M	Airtronic L	Air heater 8 L/V 7 S	Hydronic 4/5 kW	Hydronic M/M2	Hydronic L/L2	Order no.
~	~	~	~				25 1226 89 58 00

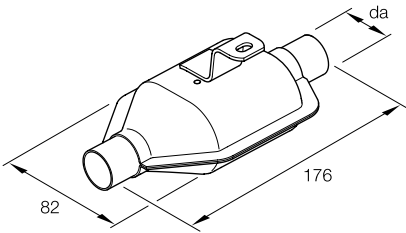
Hull fitting
Polished stainless steel



da = 30 mm, D = 90 mm

~	~	~	~				22 1050 89 43 00
---	---	---	---	--	--	--	------------------

oxidation catalyst,



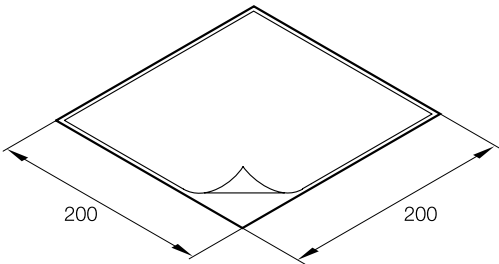
The exhaust silencer must not be installed in boat interiors.

Only for Airtronic diesel heaters; not suitable for use with PME (biodiesel).

da = 24 mm

							22 1000 40 17 00
--	--	--	--	--	--	--	------------------

Self-adhesive aluminum film
Heat protection film



							871 00 051
--	--	--	--	--	--	--	------------

A 3D perspective drawing of a cylindrical shell. A dimension line with arrows at both ends indicates the inner diameter, labeled $d_i = 20 \text{ mm}$.

Airtronic					Order no.	360 00 092 10 2114 21 00 00
Airtronic M						
Airtronic L						
Air heater 8 L/V 7 S						
Hydronic 4/5 kW						
Hydronic M/M2						
Hydronic L/L2						

Technical drawing of a threaded rod. The drawing shows a perspective view of a cylindrical rod with a threaded surface. The length of the rod is dimensioned as 760. The inner diameter is dimensioned as d_i .

360 00 179

A 3D perspective drawing of a cylindrical component. A dimension line with arrows at both ends is drawn parallel to the cylinder's axis, labeled with the symbol d_i to indicate its diameter.

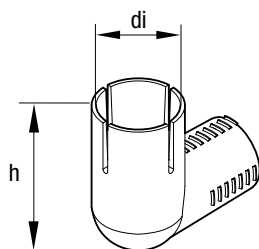
Age Group	Percentage of Respondents
18-24	25.16
25-34	18.88
35-44	8.01
45-54	2.12
55-64	0.25
65-74	1.72
75-84	9.89
85+	0.02

~	~	~					330 00 051
---	---	---	--	--	--	--	------------

A barcode with vertical bars of varying widths. The number 237 00 052 is printed below the bars.

11 | EXHAUST-CONDUCTING AND COMBUSTION-AIR-CONDUCTING PARTS

Elbow for combustion air
Plastic

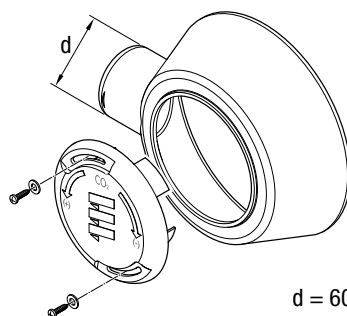


di = 20 mm, h = 45 mm
di = 25 mm, h = 50 mm

Airtronic	Airtronic M	Airtronic L	Air heater 8 L/N 7 S	Hydronic 4/5 kW	Hydronic M/M2	Hydronic L/L2	Order no.
-----------	-------------	-------------	----------------------	-----------------	---------------	---------------	-----------

22 1000 40 00 02
22 1000 40 00 01

Scoop with hose connection

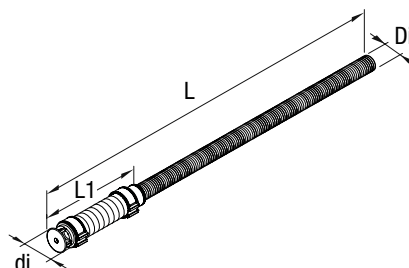


d = 60 mm

Flexible hose, see page 84

22 1000 40 06 00

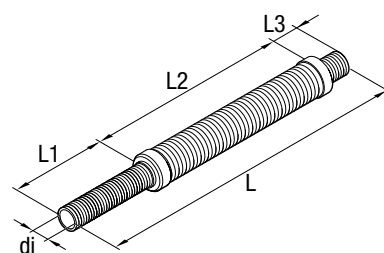
Silencer for combustion air
Flexible
For Hydronic S3, Hydronic 2 and Hydronic



Di = 20 mm, di = 38 mm, L1 = 180 mm, L = 780 mm

22 1000 40 00 13

Silencer for combustion air
Flexible



di = 20 mm, L1 = 100 mm, L2 = 160 mm, L3 = 100 mm, L = 360 mm
di = 25 mm, L1 = 135 mm, L2 = 405 mm, L3 = 25 mm, L = 565 mm
di = 25 mm, L1 = 100 mm, L2 = 555 mm, L3 = 30 mm, L = 685 mm

22 1000 40 00 08
20 1689 80 05 00
25 1945 80 13 00

12 | FASTENING PARTS

GENERAL INFORMATION:

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

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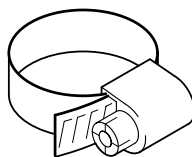
12

13

14

12 | FASTENING PARTS

Hose clip



	Airtronic	Airtronic M	Airtronic L	Air heater 8 L/N 7 S	Hydronic 4/5 kW	Hydronic M/M2	Hydronic L/L2	Order no.
ø 16 – ø 25 mm								10 2067 01 60 25
ø 20 – ø 32 mm								10 2067 02 00 32
ø 32 – ø 50 mm								10 2067 03 20 50
ø 40 – ø 47 mm				~				15 2090 17
ø 50 – ø 70 mm								10 2067 05 00 70
ø 70 – ø 90 mm		~	~					10 2067 07 00 90
ø 90 – ø 110 mm								10 2067 09 01 10

~ = Check connection diameter

Hose clip with lug



ø 9 – ø 10.5 mm								152 61 104
ø 21 – ø 24.0 mm							~	152 61 115

~ = Check connection diameter

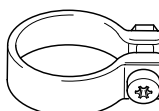
Hose clip



ø 7 mm	~	~	~	~	~	~		10 2068 00 70 78
ø 9 mm								10 2068 00 90 98
ø 10 mm								10 2068 01 00 98
ø 11 mm								10 2068 01 10 98
ø 12 mm								10 2068 01 20 98
ø 14 mm	~	~	~	~	~	~	~	10 2068 01 40 98

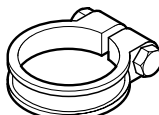
~ = Check connection diameter

Pipe clip for exhaust pipe



ø 26 – ø 28 mm								22 1000 51 44 00
ø 32 – ø 34 mm								22 1000 51 45 00

Pipe clip for exhaust pipe



ø 42 – ø 45 mm								152 09 004
ø 43 – ø 46 mm								152 09 005

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

Fuel, $\varnothing$ 34 mm
Water, $\varnothing$ 41 mm

Air hose fastening kit
Plastic, 3 per pack

Ø 60 – Ø 100 mm

Clip
Galvanized

Ø 28 mm
 Ø 41 mm
 Ø 50 mm
 Ø 65 mm

Do not use for flexible exhaust pipes!

Clip
Stainless steel

Ø 25 mm
 Ø 28 mm
 Ø 32 mm

Pipe clip with rubber inlay

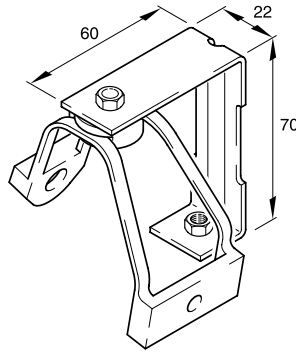
Ø 10 mm
 Ø 41 mm

Fastening clip
For water hoses, $\varnothing$ 15 mm – 20 mm

①
See page 130 for mounting bracket

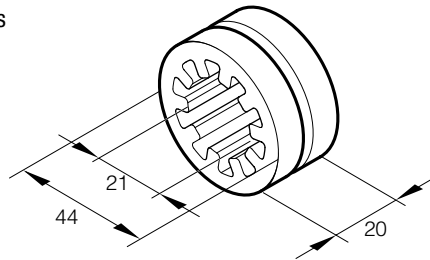
12 | FASTENING PARTS

Mounting bracket for metering pump
For use with boats and camping vehicles



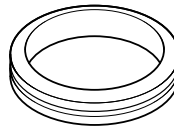
Airtronic	Airtronic M	Airtronic L	Air heater 8 L/N 7 S	Hydronic 4/5 kW	Hydronic M/M2	Hydronic L/L2	Order no.
							20 1634 80 06 00

Rubber spacer profile for exhaust line and water hoses
Silicone rubber, temperature resistant



							22 1000 50 10 02
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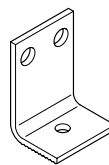
Gasket for exhaust pipe



di = 41 mm

							20 8542 11 00 02
--	--	--	--	--	--	--	------------------

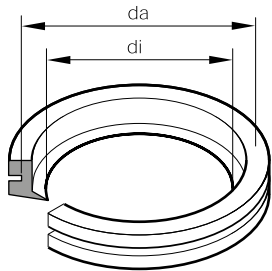
Mounting bracket for water pump
For use with water pump 25 2217 27 00 00
(see page 76)



							25 2217 27 01 00
--	--	--	--	--	--	--	------------------

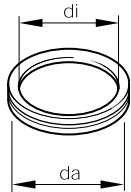
12 | FASTENING PARTS

Gasket for heating-air duct



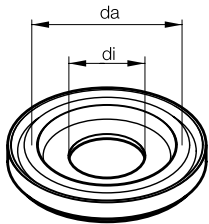
di = 72 – 85 mm, da = 100 mm

Rubber grommet



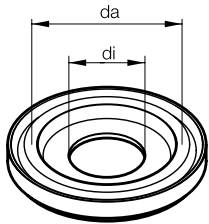
di = 4 – 10 mm, da = 16.5 mm

Grommet for combustion-air pipe



di = 25 – 30 mm, da = 41 mm

Grommet for exhaust pipe

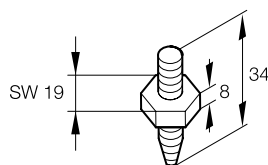


di = 23 – 30 mm, da = 41 mm
di = 38 – 45 mm, da = 60 mm

Airtronic	Airtronic M	Airtronic L	Air heater 8 L/V 7 S	Hydronic 4/5 kW	Hydronic M/M2	Hydronic L/L2	Order no.
							20 1280 04 00 01
							20 1280 09 01 03
							20 1282 20 00 01
							20 1549 65 00 02 20 1282 20 00 02

12 | FASTENING PARTS

Rubber-metal buffer

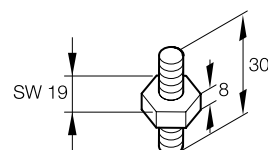


Airtronic	Airtronic M	Airtronic L	Air heater 8 L/V 7 S	Hydronic 4/5 kW	Hydronic M/M2	Hydronic L/L2	Order no.
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thread size M6 / ST 6.3 C x 15

20 1673 80 01 01

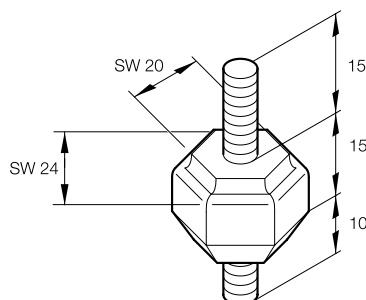
Rubber-metal buffer



thread size 2 x M6 x 11 mm

20 1185 00 00 01

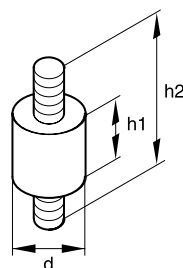
Rubber-metal buffer
Metal-reinforced



thread size M6 x 10 mm / M6 x 15 mm

22 1000 50 00 08

Rubber-metal buffer

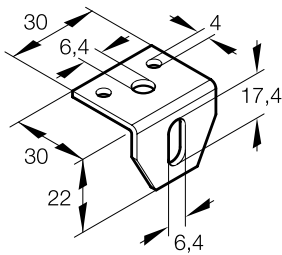


thread size 2 x M6 x 10, d = 20 mm, h1 = 15 mm, h2 = 35 mm
thread size 2 x M6 x 10, d = 20 mm, h1 = 25 mm, h2 = 45 mm
thread size 2 x M8 x 13, d = 30 mm, h1 = 15 mm, h2 = 41 mm

20 1607 65 00 02
20 1609 05 00 04
330 09 002

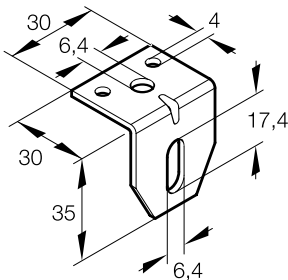
12 | FASTENING PARTS

Mounting bracket



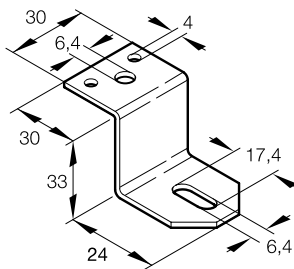
Airtronic	Airtronic M	Airtronic L	Air heater 8 L/V 7 S	Hydronic 4/5 kW	Hydronic M/M2	Hydronic L/L2	Order no.
							20 1348 03 00 02

Mounting bracket



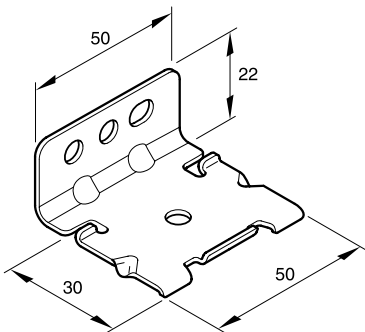
							20 1348 03 00 04
--	--	--	--	--	--	--	------------------

Mounting bracket



							20 1533 88 00 07
--	--	--	--	--	--	--	------------------

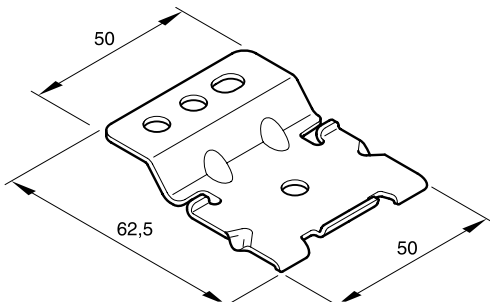
L-mounting bracket
For exhaust silencer 22 1000 40 19 00



See page 120 for exhaust silencer

							22 1000 51 34 00
--	--	--	--	--	--	--	------------------

Z-mounting bracket
For exhaust silencer 22 1000 40 19 00

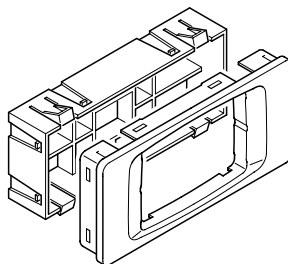


See page 120 for exhaust silencer

							22 1000 51 35 00
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12 | FASTENING PARTS

Mounting frame for EasyStart T

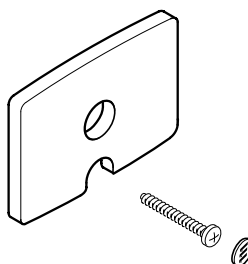


For use when replacing the modular timer with EasyStart T

Airtronic	Airtronic M	Airtronic L	Air heater 8 L/N 7 S	Hydronic 4/5 kW	Hydronic M/M2	Hydronic L/L2	Order no.
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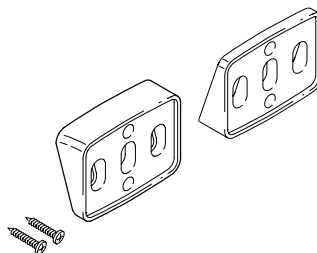
~ ~ ~ ~ ~ 22 1000 51 33 00

EasyStart T – single part Fastening parts



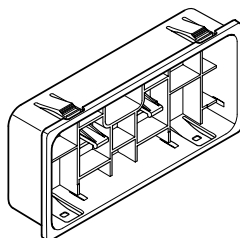
~ ~ ~ ~ ~ 22 1000 32 93 00

EasyStart T – single part Bracket For slanting, level or convex installation surfaces



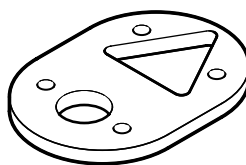
~ ~ ~ ~ ~ 22 1000 51 32 00

Trim for EasyStart Timer



~ ~ ~ ~ ~ 22 1000 51 41 00

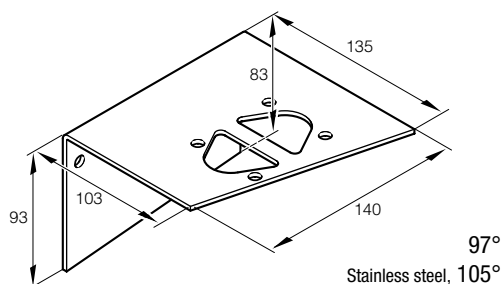
Spacer plate Rubber



6 mm thick

~ ~ ~ ~ ~ 25 1482 89 00 02

Unit mounting bracket

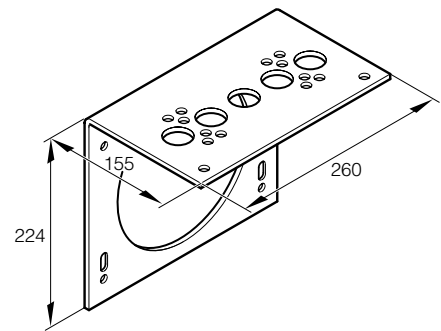


97°
Stainless steel, 105°

~ ~ ~ ~ ~ 20 1575 89 00 10
~ ~ ~ ~ ~ 22 1050 89 08 00

12 | FASTENING PARTS

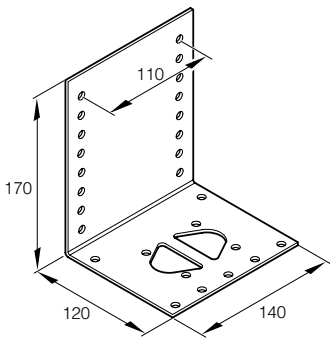
Unit mounting bracket



Airtronic	Airtronic M	Airtronic L	Air heater 8 L/V 7 S	Hydronic 4/5 kW	Hydronic M/M2	Hydronic L/L2	Order no.
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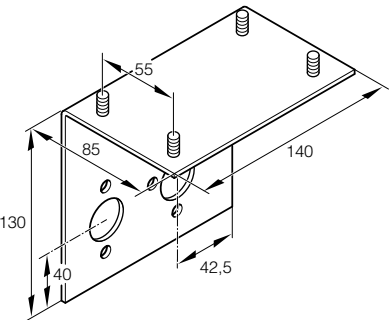
24 0076 00 00 01

Heater mounting bracket



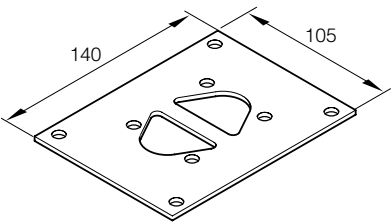
							25 1482 89 00 11
--	--	--	--	--	--	--	------------------

Unit mounting bracket



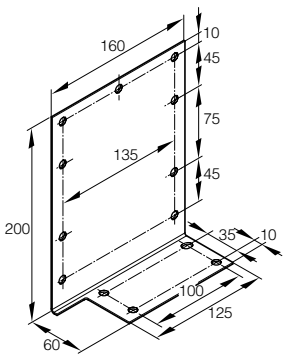
							20 1575 89 04 00
--	--	--	--	--	--	--	------------------

Fastening plate



							25 1482 89 00 13
--	--	--	--	--	--	--	------------------

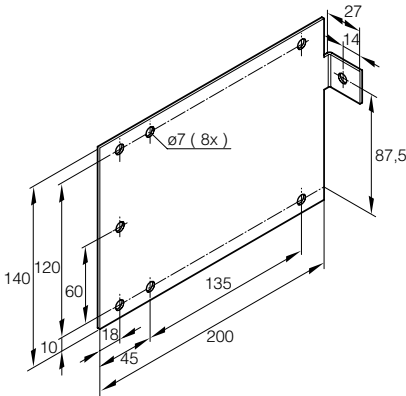
Mounting bracket



							22 1000 50 00 03
--	--	--	--	--	--	--	------------------

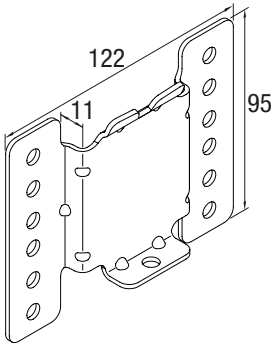
12 | FASTENING PARTS

Mounting bracket

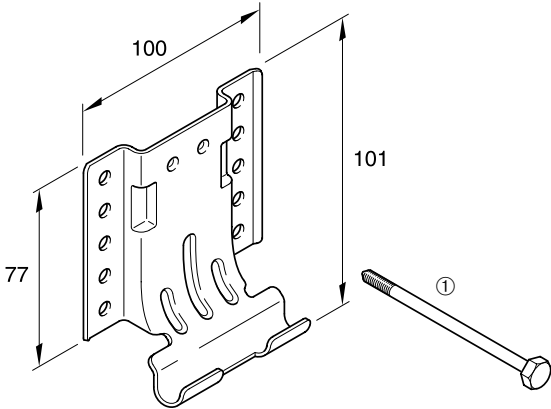


Airtronic	Airtronic M	Airtronic L	Air heater 8 L/N 7 S	Hydronic 4/5 kW	Hydronic M/M2	Hydronic L/L2	Order no.
							22 1000 50 00 06
							22 1000 51 42 00
							22 1000 51 36 00
							22 1000 51 37 00

Mounting bracket for Hydronic S3

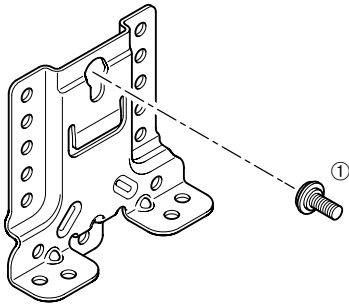


Mounting bracket for Hydronic



1
Also required:
M6x95 fastening screw, order no. 100 10 259

Mounting bracket for Hydronic 2



1
Special screw also required:
for Economy / Comfort 25 2526 80 01 01

13 | NAME PLATES / INFORMATION SIGNS

GENERAL INFORMATION:

Name plates

The name plate must be easily visible after installation. If necessary, a second (duplicate) name plate can be attached in a clearly visible place on the heater after installation or on one of the covers in front of the heater. A second plate is not required if the original can be seen by removing a cover without the aid of tools.

A second (duplicate) name plate can be sent on request (chargeable). To order this, complete the form below and fax it to the number given.

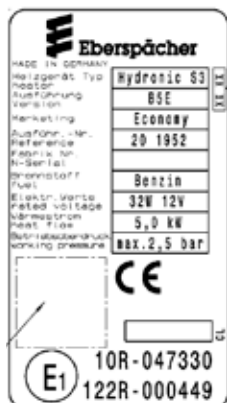
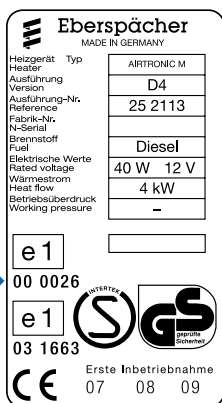
The duplicate name plate costs EUR 15.

Please note!

Name plates for heaters with a general design certification (German: ABG – Allgemeine Bauartgenehmigung) are identifiable by the wavy line which is its mark of conformity (~~~~).



Name plates for heaters with an EC type approval are identifiable by the official EC and EEC [e1] type approval mark.



13 | NAME PLATES / INFORMATION SIGNS

ORDER

2. NAME PLATE (DUPLICATE)

Copy this form, fill in the information from the original identification label and fax your order to:

+49 (0)711 939 1130

(Germany only)

Company

Contact

Street, building number

Zip code, town / city

VAT-no.

Phone

Fax

Email

Sender (please print in block letters)

Heater type

Version

Version number

Factory number

Mark of conformity

or

EC type approval

and

EMC type approval

Fuel

Electrical values

Heat flow

Operating pressure

1

2

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4

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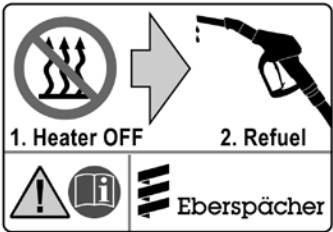
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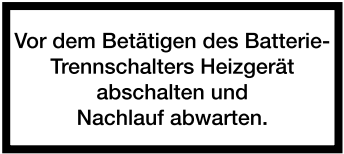
13 | NAME PLATES / INFORMATION SIGNS

Information sticker



Airtronic	Airtronic M	Airtronic L	Air heater 8 L/V 7 S	Hydronic 4/5 kW	Hydronic M/M2	Hydronic L/L2	Order no.
							25 2652 05 00 01
							25 1482 89 00 08

Information sticker



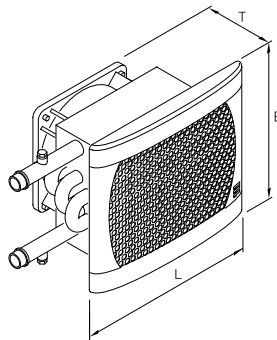
- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

14 | AUXILIARY PRODUCTS – CONVECTORS

Convectors and fan convectors with 2,000 – 10,000 W output.

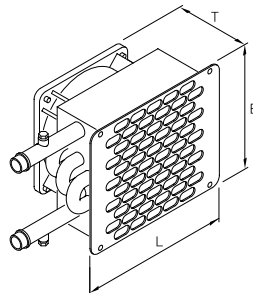
HELIOS 2000

Incl. on / off switch, airflow / h 125 m³, 2 kW

[illegible]

HELIOS 2000

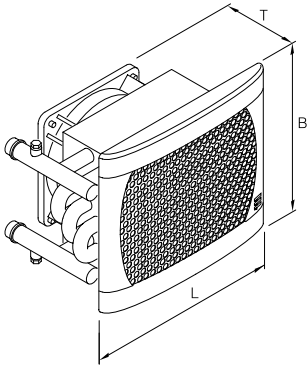
Noiseless, incl. on / off switch, airflow / h 125 m³, 2 kW



Aluminum grille	12 V	~	~	~	22 2282 10 41 26
L = 172, B = 129, T = 107	24 V	~	~	~	22 2282 10 42 26

14 | AUXILIARY PRODUCTS – CONVECTORS

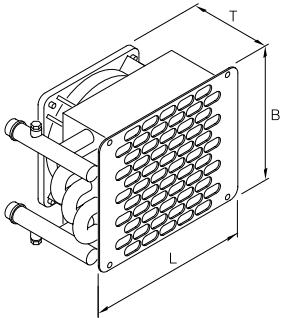
HELIOS 2000 PREMIUM
Incl. on / off switch, airflow / h 125 m³, 2 kW



Grille, black	12 V
L = 172, B = 129, T = 103.5	24 V
Grille, white	12 V
L = 172, B = 129, T = 103.5	24 V
Grille, gray	12 V
L = 172, B = 129, T = 103.5	24 V

Airtronic	Airtronic M	Airtronic L	Air heater 8 L/V 7 S	Hydronic 4/5 kW	Hydronic M/M2	Hydronic L/L2	Order no.
				~	~	~	22 2282 10 41 13
							22 2282 10 42 16
				~	~	~	22 2282 10 41 12
				~	~	~	22 2282 10 42 15
				~	~	~	22 2282 10 41 11
				~	~	~	22 2282 10 42 11

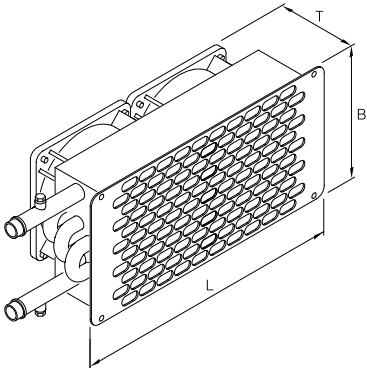
HELIOS 2000 PREMIUM
Incl. on / off switch, airflow / h 125 m³, 2 kW



Aluminum grille	12 V
L = 172, B = 129, T = 103.5	24 V

				~	~	~	22 2282 10 41 14
				~	~	~	22 2282 10 42 17

HELIOS 4000
Incl. on / off switch, airflow / h: 250 m³, 4 kW



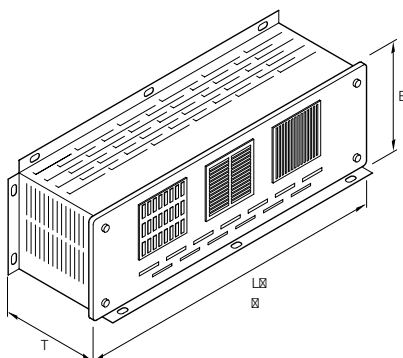
Aluminum grille	12 V
L = 320, B = 129, T = 104 mm	24 V

				~	~	~	22 2282 10 51 00
				~	~	~	22 2282 10 52 00

14 | AUXILIARY PRODUCTS – CONVECTORS

HELIOS 7000

With housing and on / off switch, airflow / h 500 m³, 4 kW



L = 580, B = 129, T = 140 mm

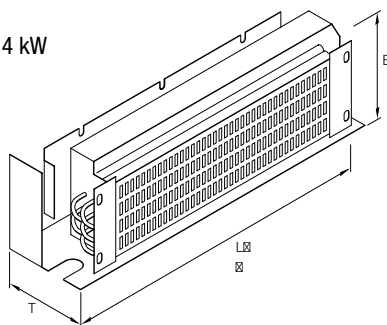
12 V
24 V

Order no.

22 2282 10 61 00
22 2282 10 62 00

HELIOS 7000

Without housing, with on / off switch, airflow / h 500 m³, 4 kW



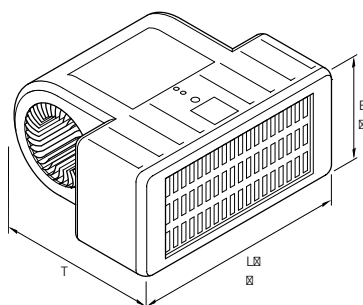
L = 580, B = 129, T = 124 mm

12 V
24 V

22 2282 10 61 03
22 2282 10 62 03

XEROS 4000

Airflow / h 200 m³, 4 kW



Standard
L = 273, B = 114, T = 207 mm

Plastic grille
L = 273, B = 114, T = 207 mm

Plastic grille, front and side
L = 273, B = 114, T = 207 mm

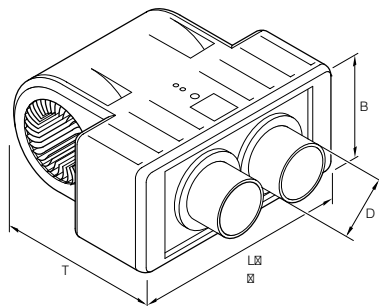
Marine stainless steel plate
L = 273, B = 114, T = 207 mm

Ø 14, L = 258, B = 115, T = 200 mm

12 V
24 V
12 V
24 V
12 V
24 V
12 V
24 V
12 V

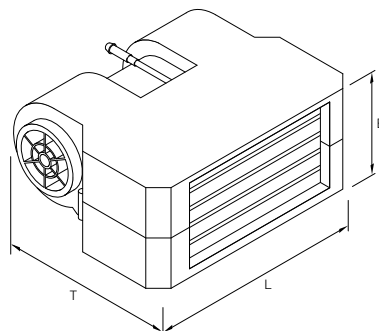
22 2282 11 01 00
22 2282 11 02 00
22 2282 11 01 10
22 2282 11 02 10
22 2282 11 01 11
22 2282 11 02 11
22 2282 11 01 31
22 2282 11 02 31
22 2282 11 01 02

with fittings, airflow / h: 200 m³, 4 kW



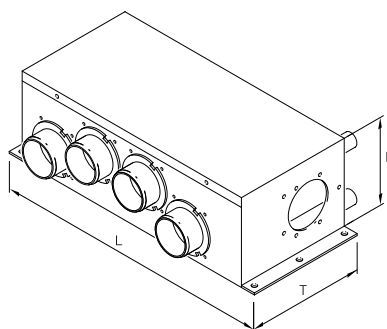
with 2 fittings, Ø 45 L = 273, B = 114, T = 207 mm	12 V	~	~	~	22 2282 11 01 66
	24 V	~	~	~	22 2282 11 02 66
with 2 fittings, Ø 50 L = 273, B = 114, T = 207 mm	12 V	~	~	~	22 2282 11 01 61
	24 V	~	~	~	22 2282 11 02 61
with 2 fittings, Ø 60 L = 273, B = 114, T = 207 mm	12 V	~	~	~	22 2282 11 01 63
	24 V	~	~	~	22 2282 11 02 63
with 2 fittings, Ø 75 L = 273, B = 114, T = 207 mm	12 V	~	~	~	22 2282 11 01 65
	24 V	~	~	~	22 2282 11 02 65
with rotatable and closable vents L = 273, B = 114, T = 207 mm	12 V	~	~	~	22 2282 11 01 53

Airflow / h: 440 m³, 8 kW



Standard	12 V					22 2282 11 21 00
L = 315, B = 130, T = 242 mm	24 V					22 2282 11 22 00
with plastic grilles	12 V					22 2282 11 21 03
L = 315, B = 130, T = 242 mm	24 V					22 2282 11 22 03
with 3 fittings ø 60	12 V					22 2282 11 21 01
L = 315, B = 130, T = 242 mm	24 V					22 2282 11 22 01
with 3 fittings ø 75	12 V					22 2282 11 21 02
L = 315, B = 130, T = 242 mm	24 V					22 2282 11 22 02
with 4 fittings ø 60	12 V					22 2282 11 21 04
L = 315, B = 130, T = 242 mm	24 V					22 2282 11 22 04

Airflow / h: 440 m³, 10 kW

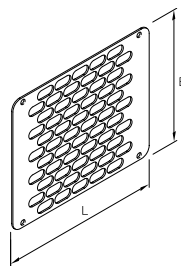


Marine stainless steel defroster	12 V	~	~	~	22 2282 11 31 00C
L = 442, B = 132, T = 225	24 V	~	~	~	22 2282 11 32 00C

14 | AUXILIARY PRODUCTS – CONVECTORS

Accessories

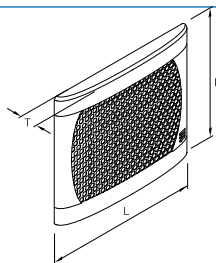
Grille for HELIOS 2000 convector



Aluminum
L = 170, B = 140

Stainless steel
L = 170, B = 140

Grille for HELIOS 2000 convector

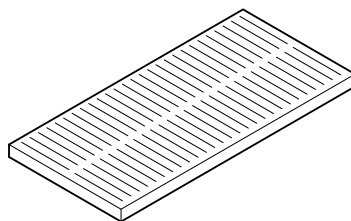


Plastic, black
L = 200, B = 170, T = 22

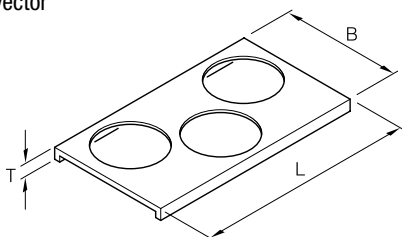
Plastic, white
L = 200, B = 170, T = 22

Plastic, gray
L = 200, B = 170, T = 22

Plastic grille for ZENITH 8000 convector



Plastic air diffuser with 3 fittings, for ZENITH 8000 convector

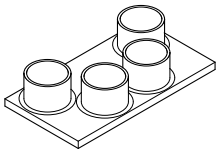


Ø 60 mm
L = 231, B = 131, T = 6

Airtronic	Airtronic M	Airtronic L	Air heater 8 L/V 7 S	Hydronic 4/5 kW	Hydronic M/M2	Hydronic L/L2	Order no.
				~	~	~	22 2134 08 60 00C
				~	~	~	22 2134 09 90 00B
				~	~	~	22 2134 10 10 01
				~	~	~	22 2134 10 10 02
				~	~	~	22 2134 10 10 00
				~	~	~	22 2145 73 50 00A
				~	~	~	22 2145 73 40 00A

14 | AUXILIARY PRODUCTS – CONVECTORS

Plastic air diffuser with 4 fittings, for ZENITH 8000 convector



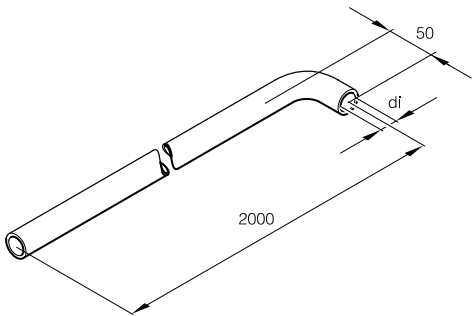
ø 60 mm

Fitting for air diffuser



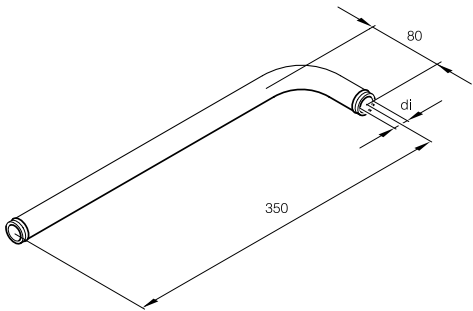
ø 50 mm
ø 60 mm
ø 75 mm

Water hose



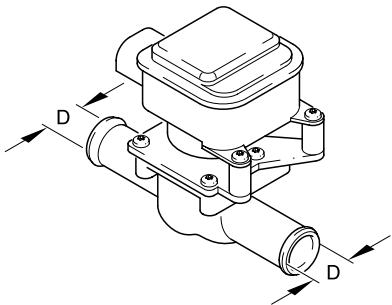
di = 18 mm

Pipe, aluminum



di = 18 mm

2-way motor control valve



D = 22 mm

Airtronic	Airtronic M	Airtronic L	Air heater 8 L/V 7 S	Hydronic 4/5 kW	Hydronic M/M2	Hydronic L/L2	Order no.
				~	~	~	22 2145 73 70 00
				~	~	~	22 2000 06 57 07
				~	~	~	22 2000 06 58 87
				~	~	~	22 2000 06 57 27
				~	~	~	22 2330 04 20 00
				~	~	~	22 2175 00 00 91
				~	~	~	22 2118 02 60 00

14 | AUXILIARY PRODUCTS – INDIVIDUAL DEVICES

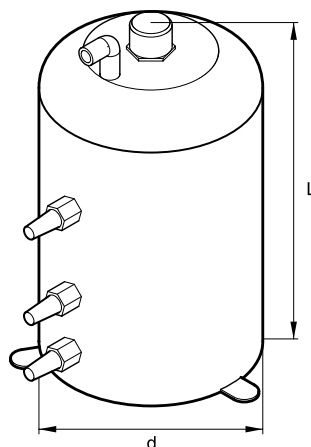
GENERAL INFORMATION ON THIRD-PARTY PRODUCTS:

Not all auxiliary products can be purchased direct from Eberspächer. Where applicable, these products must be ordered from the specified supplier.

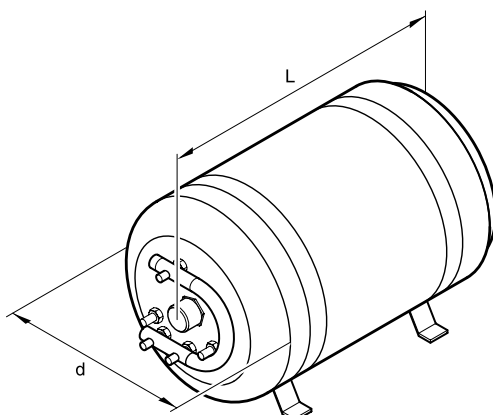
Warm water boiler

Supplier:

Eberspächer (UK) Ltd.
Headlands Business Park
Salisbury Road, Ringwood
Hampshire BH24 3PB, UK
Tel. +44 1425 480151
Fax. +44 1425 480152



10 l, upright, single coil
L = 390 mm, d = 250 mm



10 l, horizontal, single coil
L = 550 mm, d = 250 mm

22 l, horizontal, single coil *
L = 510 mm, d = 370 mm

22 l, horizontal, double coil *
L = 510 mm, d = 370 mm

30 l, horizontal, single coil *
L = 610 mm, d = 370 mm

30 l, horizontal, double coil *
L = 610 mm, d = 370 mm

40 l, horizontal, single coil *
L = 750 mm, d = 370 mm

40 l, horizontal, double coil *
L = 750 mm, d = 370 mm

55 l, horizontal, single coil *
L = 970 mm, d = 370 mm

55 l, horizontal, double coil *
L = 970 mm, d = 370 mm

75 l, horizontal, single coil *
L = 1130 mm, d = 400 mm

75 l, horizontal, double coil *
L = 1130 mm, d = 400 mm

All warm water boilers have an integrated 220 V – 240 V AC heating coil.

* Thermostatic mixing valve

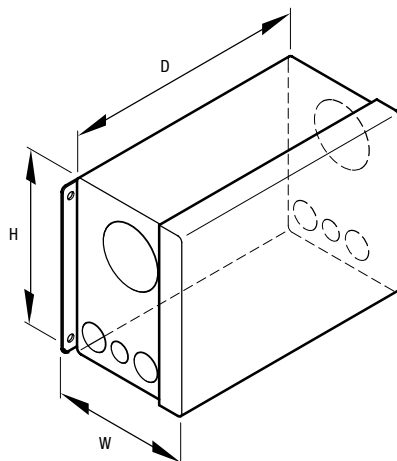
Airtronic	Airtronic M	Airtronic L	Air heater 8 L/V 7 S	Hydronic 4/5 kW	Hydronic M/M2	Hydronic L/L2	Order no.
				~	~	~	17700
				~	~	~	17722
				~	~	~	17794
				~	~	~	17795
				~	~	~	17796
				~	~	~	17797
				~	~	~	17798
				~	~	~	17799
				~	~	~	17800
				~	~	~	17801
				~	~	~	17802
				~	~	~	17803

14 | AUXILIARY PRODUCTS – INDIVIDUAL DEVICES

Stainless steel box for Airtronic D2 / D4

Supplier:

Kjöller Eberspächer Marine
Rovsinggade 82
Copenhagen N, DK – 2000, Denmark
Tel. +45 35 82 95 00
Fax. +45 35 82 50 95

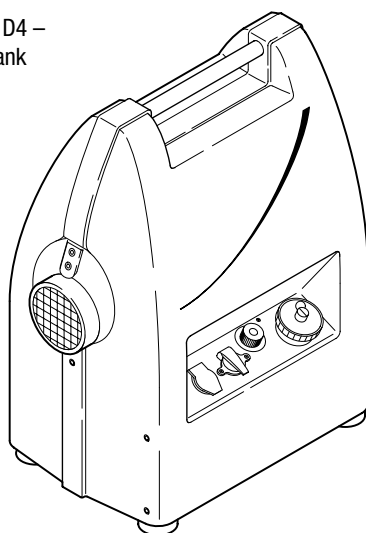


B = 147 mm, H = 212 mm, T = 295 mm
B = 172 mm, H = 240 mm, T = 360 mm

[illegible]

Polarn 4000

Portable, diesel-operated heater with Airtronic D4 – compact air heater with integrated 5 l diesel tank

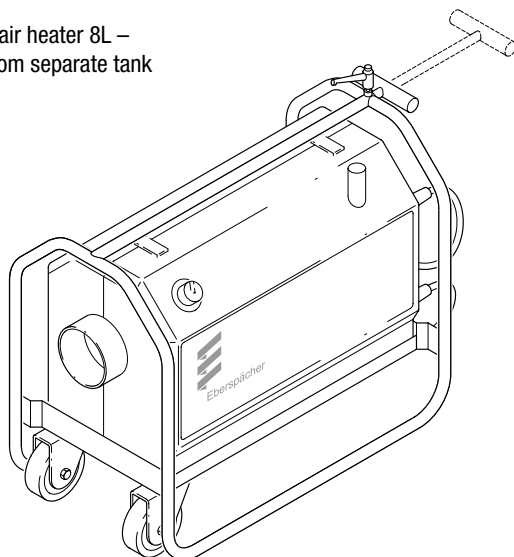


12 V / 220 V
12 V
24 V

```
24 9988 00 00 21
24 9988 00 00 10
24 9988 00 00 22
```

POLARN 8000

Portable, diesel-operated heater with air heater 8L – compact air heater with fuel supply from separate tank



12 V
24 V

```
24 9988 00 00 32
24 9988 00 00 33
```

14 | AUXILIARY PRODUCTS – INDIVIDUAL DEVICES

Marine kit – air heater

Product package:

- Control unit (mini-controller)
- Mounting bracket for heater
- Cable harness
- Combustion-air intake silencer
- Exhaust pipe angle
- Exhaust silencer
- Hull fitting
- Fuel tank extractor
- Fuel pipes
- Fuel hoses
- Temperature sensor
- Various mounting brackets
- Mounting accessories

To be ordered separately:

all air ducts for the planned heating-air ducting

Optional:

EasyStart Timer timer switch (see page 100)

Airtronic D2 – 12 V
Marine kit

Airtronic D4 – 12 V
Marine kit

Airtronic D5 – 12 V
Marine kit

Airtronic	Airtronic M	Airtronic L	Air heater 8 L/V 7 S	Hydronic 4/5 kW	Hydronic M/M2	Hydronic L/L2	Order no.
■							24 8997 00 00 00
	■						24 8998 00 00 00
		■					24 8999 00 00 00
				■			24 8992 00 00 00
				■			24 8991 00 00 00
					■		24 8993 00 00 00

Marine kit – water heater

Product package:

- Mounting bracket for heater
- Cable harness
- Combustion-air intake silencer
- Exhaust silencer
- Hull fitting
- Fuel tank extractor
- Fuel pipes
- Fuel hose
- Fastening parts
- Electrical parts
- Water hoses
- Connection parts
- Mounting accessories

To be ordered separately:

EasyStart Timer timer switch (see page 100)

Hydronic D 5 WS – 12 V
Marine kit

Hydronic D 5 WS – 24 V
Marine kit

Hydronic M / M-II – 12 / 24 V
Marine kit

MORE INFORMATION IS AVAILABLE FROM ANY OF OUR 5,000 SERVICE PARTNERS
WORLDWIDE.

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