

# MARINE HEATERS

## INFORMATION, TECHNOLOGY AND INSTALLATION EXAMPLES





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## GENERAL INSTALLATION INSTRUCTIONS

### IMPORTANT. PLEASE NOTE:

- The heater may only be put into operation when the air scoop has been fitted.
- Disconnect the battery before beginning any work.
- Before working on the heater, switch off the heater and let all hot components cool down.
- Adjustable hot air vents must always be positioned so as to ensure that hot air cannot be directed at living beings (people, animals) or temperature-sensitive objects (fixed and/or not loose).
- The convector of air heaters is subject to a great amount of thermal stress and must be replaced 10 years after the heater was first brought into operation. Furthermore, the installation date must be entered on the "Genuine spare part" plate that is supplied with the convector. The sign must then be affixed to the heater, next to the factory plate.
- The heater may only be installed and repaired (whether under warranty or not) by an Eberspächer service partner authorized by the manufacturer in accordance with the specifications in this documentation and in the Technical Description.
- Repairs by non-authorized third parties present a risk and are therefore not permitted; they will invalidate the type approval of the heater and for boats.
- Only genuine accessories and genuine spare parts may be used for installation and repair.

### THE FOLLOWING ACTIVITIES ARE NOT PERMITTED:

- Changes to heating-relevant components.
- The use of third-party parts not approved by Eberspächer Climate Control Systems GmbH & Co. KG.
- Non-compliance with statutory safety and/or function-relevant specifications contained in the installation instructions and in the operating instructions during installation and operation. This applies in particular to the electrical wiring, the fuel supply and the combustion air and exhaust systems.
- Only the control elements approved by Eberspächer Climate Control Systems GmbH & Co. KG may be used to operate the heater. The use of other control elements may cause malfunctions.
- Operating the heater in areas where combustible vapor or dust may be produced, e.g. near fuel stations, is not permitted.
- The heater installation space – if installed in a protective box or similar – is not a storage area and must be kept clear.



## INSTALLATION LOCATION:

You do not need to sacrifice any room in the cabin in order to install the heater as the heaters can be housed in any room with good external ventilation, e.g. in the storage locker, the cockpit or other storage areas. Make sure that stored goods are a sufficient distance away from the heater and the hot air hoses in order to protect them from thermal damage and to ensure that the heater and the hot air hoses are not damaged. If the ventilation permits, the heaters may also be installed in the engine compartment – however this only applies to inboard diesel engines, not petrol-driven boats.

All heaters are installed in normal position and parallel to the boat's longitudinal axis as a preference. If the heater is primarily operated when the boat is moored or in a motor boat, it may also be installed transverse to the boat's longitudinal axis. The aforementioned differences in operation must be taken into consideration.

- If the heater is installed in the engine compartment, fuel lines of metal or fire-resistant hoses (to DIN EN ISO 7840) must be used.
- Make sure that bilge water cannot enter the heater should the boat list.
- When installing the heater, make sure that there are no rigid connections to the hull of the boat. This will help to prevent structure-borne sound from being transmitted.
- Insulating or flammable objects should be stored at a minimum distance of 1 m from the heater. All specifications, especially the safety instructions in the Technical Description for this chapter, must be complied with. The Technical Description is supplied with each heater.

## COMBUSTION AIR SYSTEM:

The combustion air must be aspirated from a well-ventilated area with ambient pressure (not from occupied cabins). There are two options for routing the combustion air system. If relevant regulations exist as, for example, in Sweden, the combustion air must be

aspirated from outside the boat. A plastic hull fitting is available as an additional part for this purpose. Position the intake point so as to ensure that no exhaust gas from the heater/engine can be aspirated. Route the line downwards from the heater. If the line is not routed downwards, install a condensate opening at the lowest point. The combustion air hose must have a goose neck end. This allows ingress water to drain away. If relevant regulations do not exist the combustion air can also be aspirated from a storage area or the engine compartment.

If air is aspirated from the engine compartment, make sure that it is sufficiently well ventilated and that there is no change to the ambient pressure when the engine is being run (e.g. due to cooling fans).

## EXHAUST SYSTEM:

Route exhaust gas lines to the stern on yachts and to the side wall on motor boats. Insulate the exhaust system so that its surface temperature does not exceed 80 °C. In the cabin, the exhaust system may only be installed as a solid, stainless steel pipe. Outside of the cabin, a flexible, 2-layer stainless steel exhaust pipe can be used. Preferably, fit the exhaust line so that it is pointing downwards, so that condensate or splashwater can drain away immediately.

If the installation location is hard to access, an adapter with a condensate line and a cap at the lowest point can be inserted in the exhaust system. The flexible exhaust pipe must have a goose neck end to stop water from penetrating. We recommend the use of an exhaust silencer in all cases.

*The technical implementation suggestions presented in this marine catalog are purely examples. The individual situation must be taken into account in each case. Heater installation must comply with our technical specifications in the Technical Description of the relevant heater model.*

## SELECTION GUIDES

## EBERSPÄCHER AIRTRONIC – SELECTION GUIDE\*

Boat length (ft.)	13	16	19	22	26	29	32	36	39	42	45	49	52	55	59	62	65
Airtronic D2																	
Airtronic D3																	
Airtronic D4																	
Airtronic D4 Plus																	
Airtronic D5																	
D8 LC																	

■ Sailing yacht 
 ■ Motor boat

\* The size of the heater depends on the length of the boat, where it sails, the time of year and the volume of space to be heated.







## EBERSPÄCHER HYDRONIC – SELECTION GUIDE\*

Boat length (ft.)	19	22	26	29	32	36	39	42	45	49	52	55	59	62	65	68	72
Hydronic 2 Economy																	
Hydronic 5																	
Hydronic M8 Biodiesel																	
Hydronic M10																	
Hydronic M12																	
Hydronic L16																	
Hydronic L24/L30/L35																	

■ Sailing yacht 
 ■ Motor boat

\* The size of the heater depends on the length of the boat, where it sails, the time of year and the volume of space to be heated.

## CONTROL ELEMENTS

CONTROL ELEMENTS						
Model	Room temperature sensor	EasyStart Select Control unit	EasyStart timer Timer	EasyStart Remote Remote control	EasyStart Remote+ Remote control	EasyStart Call* Telephone Remote control
Heater model	Airtronic	Airtronic/Hydronic	Airtronic/Hydronic	Airtronic/Hydronic	Airtronic/Hydronic	Airtronic/Hydronic
Functions	<ul style="list-style-type: none"><li>▪ For use in fresh air mode</li></ul>	<ul style="list-style-type: none"><li>▪ Heating/ventilation on/off</li><li>▪ Required temperature can be set using arrow keys (left/right) (air heaters only)</li></ul>	<ul style="list-style-type: none"><li>▪ Heating/ventilation on/off</li><li>▪ Program/delete pre-select mode</li><li>▪ Long-press function for immediate heating</li><li>▪ A second heater/auxiliary device can be operated</li></ul> Additionally with Airtronic: <ul style="list-style-type: none"><li>▪ Required temperature can be set using arrow keys (left/right)</li></ul>	<ul style="list-style-type: none"><li>▪ Heating/ventilation on/off</li><li>▪ Operating time adjustable</li></ul> Additionally with Airtronic: <ul style="list-style-type: none"><li>▪ The default target value must be set additionally with a separate control element (EasyStart Timer)</li></ul>	<ul style="list-style-type: none"><li>▪ Heating/ventilation on/off</li><li>▪ Program/delete pre-select mode</li><li>▪ Long-press function for immediate heating</li><li>▪ A second heater/auxiliary device can be operated</li></ul> Additionally with Airtronic: <ul style="list-style-type: none"><li>▪ Required temperature can be set using arrow keys (left/right)</li></ul>	<ul style="list-style-type: none"><li>▪ Heating/ventilation on/off</li><li>▪ Operating time adjustable</li><li>▪ Status check</li></ul> Additionally with Airtronic: <ul style="list-style-type: none"><li>▪ Desired temperature can be set</li><li>▪ Program/delete pre-select mode</li></ul>
Timer programming	—	—	<ul style="list-style-type: none"><li>▪ 3 programming locations within 7 days</li><li>▪ Selection of individual days of the week or one of three time periods (Mon-Fri/Sat-Sun/Mon-Sun)</li></ul>	—	<ul style="list-style-type: none"><li>▪ 3 programming locations within 7 days</li><li>▪ Selection of individual days of the week or one of three time periods (Mon-Fri/Sat-Sun/Mon-Sun)</li></ul>	<ul style="list-style-type: none"><li>▪ 3 programming locations within 7 days</li><li>▪ Selection of individual days of the week or one of three time periods (Mon-Fri/Sat-Sun/Mon-Sun)</li></ul>
Timer programming: Automatic calculation of heating time	—	—	With Hydronic: Optionally with connection of temperature sensor	—	With Hydronic: Yes	—
Immediate start-up mode running time	—	With Airtronic: Continuous heating mode preset With Hydronic: 60 min. preset	10–120 min. adjustable Additionally with Airtronic: Continuous heating mode possible	Adjustable 10, 20, 30, 40, 50 or 60 min.	10–120 min. adjustable Additionally with Airtronic: Continuous heating mode possible	10–120 min. adjustable Additionally with Airtronic: Continuous heating mode possible
Pre-ventilation**	—	Yes	Yes	Yes	Yes	Yes
Display Interior temperature	—	With Airtronic: Yes	With Airtronic: Yes With Hydronic: Optional	—	Yes	Yes
Feedback	—	<ul style="list-style-type: none"><li>▪ Status: Heater</li><li>▪ Status: Connection to the heater</li></ul>	<ul style="list-style-type: none"><li>▪ Status: Heater</li><li>▪ Status: Connection to the heater</li></ul>	<ul style="list-style-type: none"><li>▪ Data transfer successful</li><li>▪ Status: Heater</li><li>▪ Status: Connection to the heater</li></ul>	<ul style="list-style-type: none"><li>▪ Data transfer successful</li><li>▪ Status: Heater</li><li>▪ Status: Connection to the heater</li></ul>	<ul style="list-style-type: none"><li>▪ Status: Heater and timer</li><li>▪ Feedback by voice output or text message</li><li>▪ Status: Connection to the heater</li></ul>
Range	—	—	—	Up to 1 km under optimum conditions	Up to 1 km under optimum conditions	Unlimited (given network coverage)
Display	—	LED ICON display, Lighting can be integrated with vehicle lighting circuit	Matrix display with LEDs, lighting can be integrated with vehicle lighting circuit	Two-tone LED	Matrix display with LEDs	Display via smartphone app

\* SIM card: 1.8-V or 3-V SIM card/pre-paid card from a network operator supporting the GSM 900/1800 (D-net, E-net) standard in Europe; use outside of country of purchase may incur roaming fees for EasyStart Call for outgoing or incoming text messages or incoming calls. Roaming fees may also be incurred near borders due to network overlap. Operation with Airtronic does not require a separate control element to define the temperature target value. EasyStart Call is not designed for use in conjunction with other control elements.

\*\* Depending on heater type

# AN INTRODUCTION TO AIR HEATERS

## GENERAL INFORMATION ON THE HOT AIR SYSTEM:

Hot air system components can also be mounted on the heater. Each component has a rating, and this reduces the hot air throughput. To enable you to check that the installation you have planned does not reduce the hot air throughput to an inadmissible level, we have calculated a device rating for each heater and a component rating for each hot air system component; see rating tables:

0 = no temperature increase,  
– = no component rating.

The sum total of component ratings of the hot air system components connected to the heater must not exceed the device rating, as otherwise the outlet air temperature would be excessively high and the overheating sensor would be triggered. If the sum total of component ratings exceeds the device rating, it can be reduced by selecting air system components with a larger diameter.

### RULE OF THUMB:

Double cross-section or 2 components routed in parallel  
= 1/4 of the rating.

Example:

Hose  $\varnothing$  60 mm,

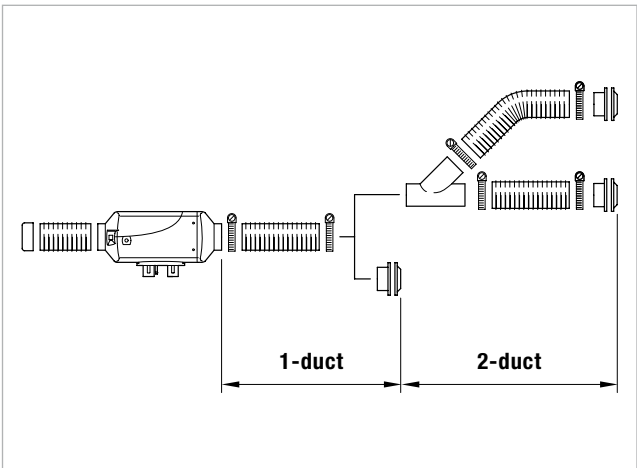
$A^* = 19.6 \text{ cm}^2$ , rating 1.0

Hose  $\varnothing$  75 mm,

$A^* = 44.2 \text{ cm}^2$ , rating 0.25

\*A = cross-sectional area

With smooth welded pipes, the component rating is only half of the flexible pipe with the same diameter (i.e. double pipe length).



### 1-duct means:

One hot air duct leads to or from the heater.

The component ratings under “1-duct” apply.

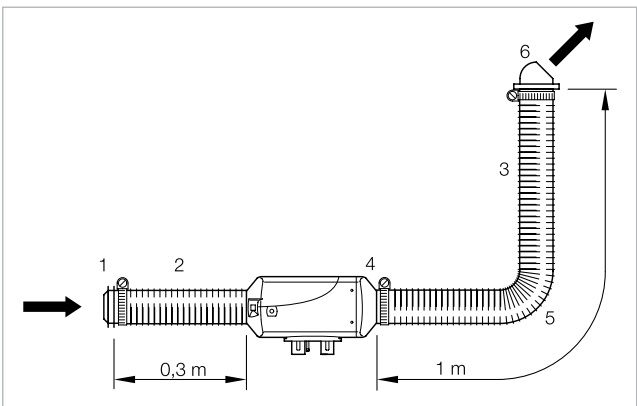
### 2-duct means:

After the heater, the hot air line divides into two ducts. Upstream of this branch, the component ratings specified under “1-duct” apply, from the branch onwards the component ratings under “2-duct” apply.

In a 2-duct hot air line, at least one duct must be non-closable.

When determining the sum total of component ratings, the closable section must not be included.

## EXAMPLE CALCULATION OF A HOT AIR SYSTEM: AIRTRONIC D2 – 60 MM HOSE DIAMETER, DEVICE RATING 6



NO.	DESCRIPTION	COMPONENT RATING
1	Protective grille & connection, $\varnothing$ 60 mm	1.7
2	Flexible pipe $\varnothing$ 60 mm, 0.3 m long	0.3
3	Flexible pipe $\varnothing$ 60 mm, 1 m long	1.0
4	Straight air scoop $\varnothing$ 60 mm	0
5	90° elbow, flexible pipe $\varnothing$ 60 mm	1.2
6	Rotating air vent	1.4
Sum total of component ratings		5.6

The sum total of component ratings = 5.6 does not exceed device rating 6; installation is compliant with regulations.



### 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.

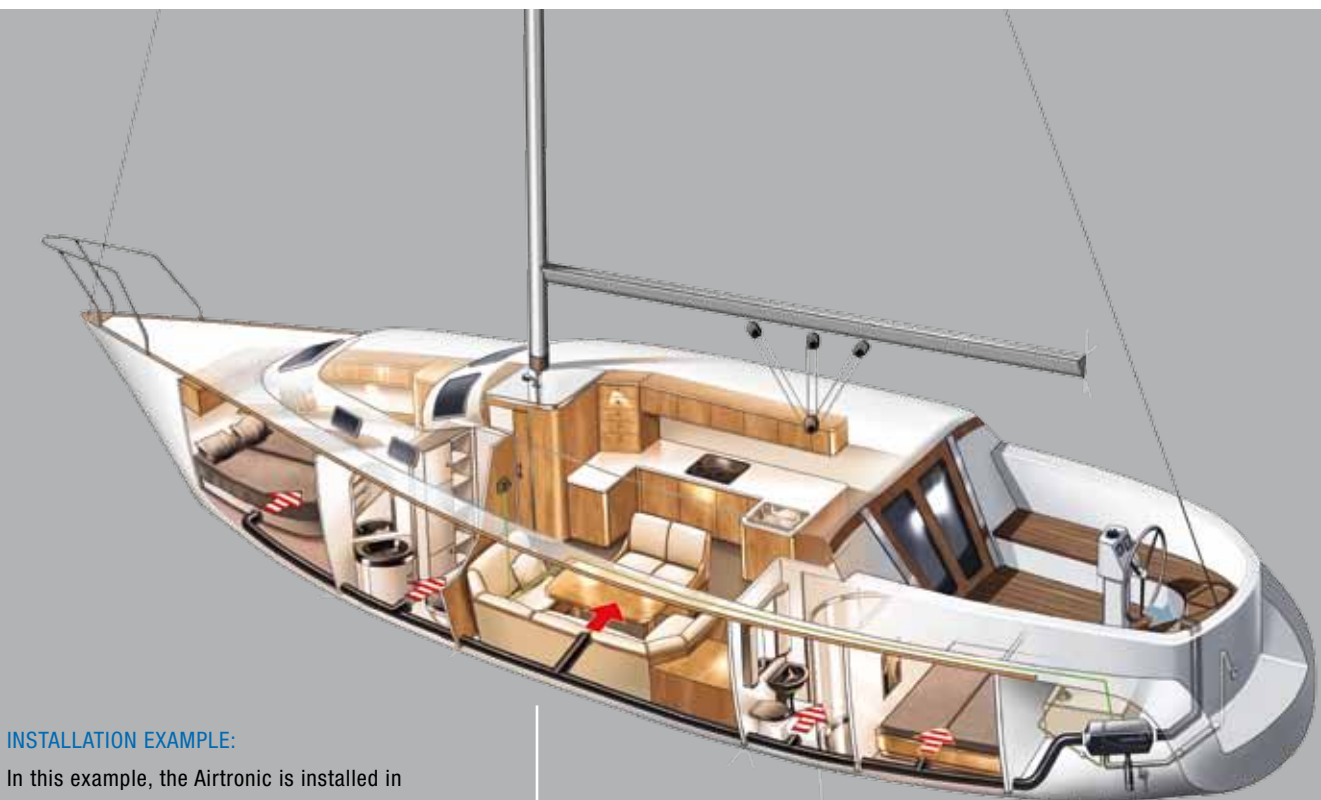
**NEW**



### WITH INNOVATIVE AIR CONTROL ELEMENTS:

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

**NEW**



### INSTALLATION EXAMPLE:

In this example, the Airtronic is installed in the port locker. Fresh air is aspirated from the storage locker, the hot air vents are distributed around the boat. The exhaust pipe exits above the waterline at the transom.

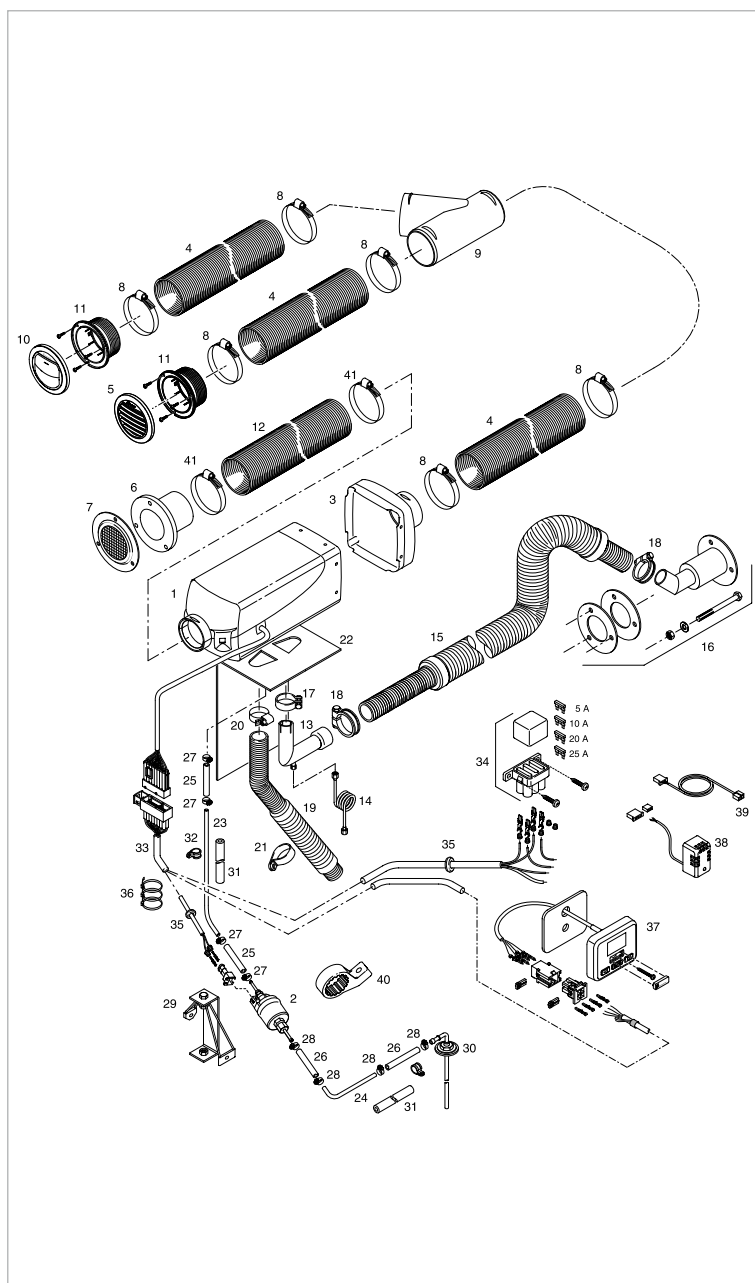
# AIRTRONIC D2

## TECHNICAL DATA



Diesel version		Airtronic D2
Voltage	V	12 / 24
Heating output	W	850 / 1,200 / 1,800 / 2,200
Air throughput	kg/h	40 / 60 / 90 / 105
Electricity consumption in operation	W	8 / 12 / 22 / 34
Fuel consumption	l/h	0.10 / 0.15 / 0.23 / 0.28
Dimensions L x W x H	mm	310 x 115 x 122
Weight	kg	2.7

## RECOMMENDED PARTS FOR INSTALLATION:



1	Airtronic D2 heater
2	Metering pump
3	Air scoop Ø 75 mm
4	Flexible pipe Ø 75 mm
5	Vent, flat 30° Ø 75 mm / 90 mm
6	Hose fitting Ø 60 mm
7	Grille
8	Hose clip Ø 70 mm – 90 mm (6 x)
9	Y-shaped branch piece Ø 75 mm
10	Vent, closable Ø 75 mm / 90 mm
11	Fitting Ø 75 mm
12	Flexible pipe Ø 60 mm
13	Exhaust pipe elbow with drainage Ø 24 mm / 30 mm
14	Condensate drain
15	Exhaust silencer
16	Hull fitting
17	Pipe clip
18	Pipe clip (2 x)
19	Silencer, combustion air
20	Hose clip Ø 20 mm / 32 mm
21	Hose clip Ø 50 mm
22	Holder, heater
23	Pipe Ø 4 mm x 1.25 mm
24	Pipe Ø 6 mm x 2 mm
25	Hose Ø 3.5 mm x 3 mm
26	Hose Ø 5 mm x 3 mm
27	Hose clip Ø 9 mm (4 x)
28	Hose clip Ø 11 mm (4 x)
29	Holder, metering pump
30	Tank connection
31	Foam rubber hose (soundproofing)
32	Pipe clip Ø 10 mm (2 x)
33	Lead harness
34	Fuse holder, triple
35	Grommet
36	Cable tape, 200 mm long (10 x)
37	EasyStart Select
38	Temperature sensor
39	Cable harness, temperature sensor
40	Rubber holder, metering pump
41	Hose clip Ø 50 mm – 70 mm (2 x)

## PRODUCT INFORMATION

### HEATER SCOPE OF DELIVERY:

- Airtronic D2 heater
- Metering pump

#### The following must be ordered in addition:

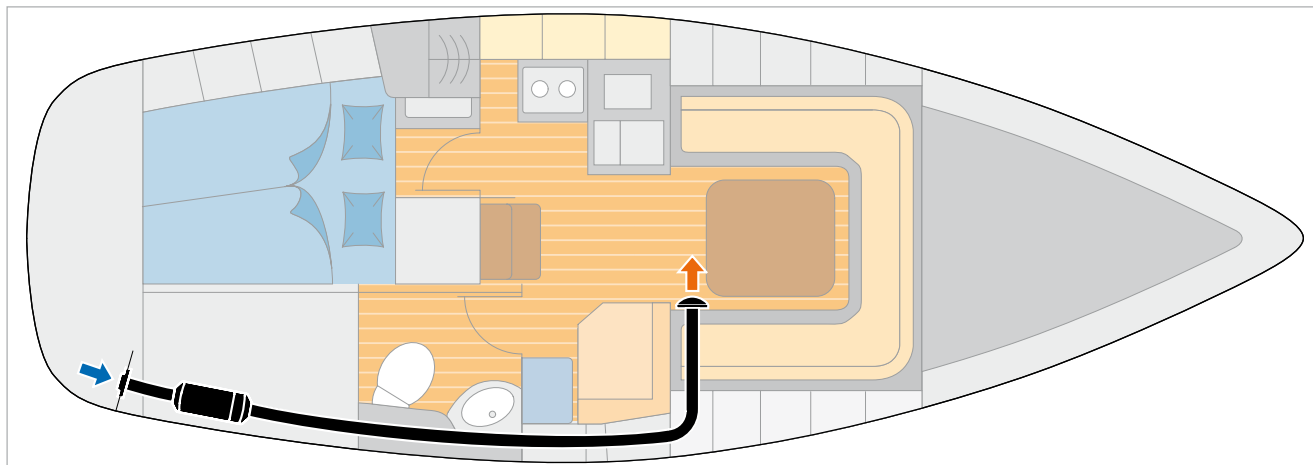
- Exhaust and combustion air systems
- Control element
- Fastening parts
- Fuel system parts
- Air system parts  $\varnothing$  60 mm /  $\varnothing$  75 mm
- Electrical parts

### MARINE KIT:

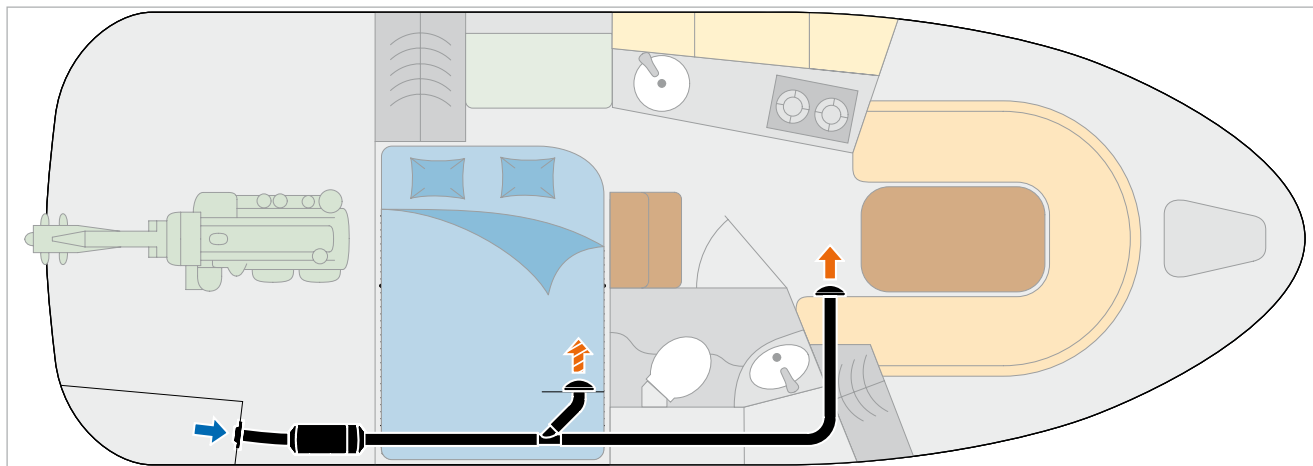
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*NOTE: You can find more detailed information on the Eberspächer service portal, [www.eberspacher-marine.de](http://www.eberspacher-marine.de), in the Marine brochure, in the product overview or the spare parts list.*

### INSTALLATION EXAMPLES:



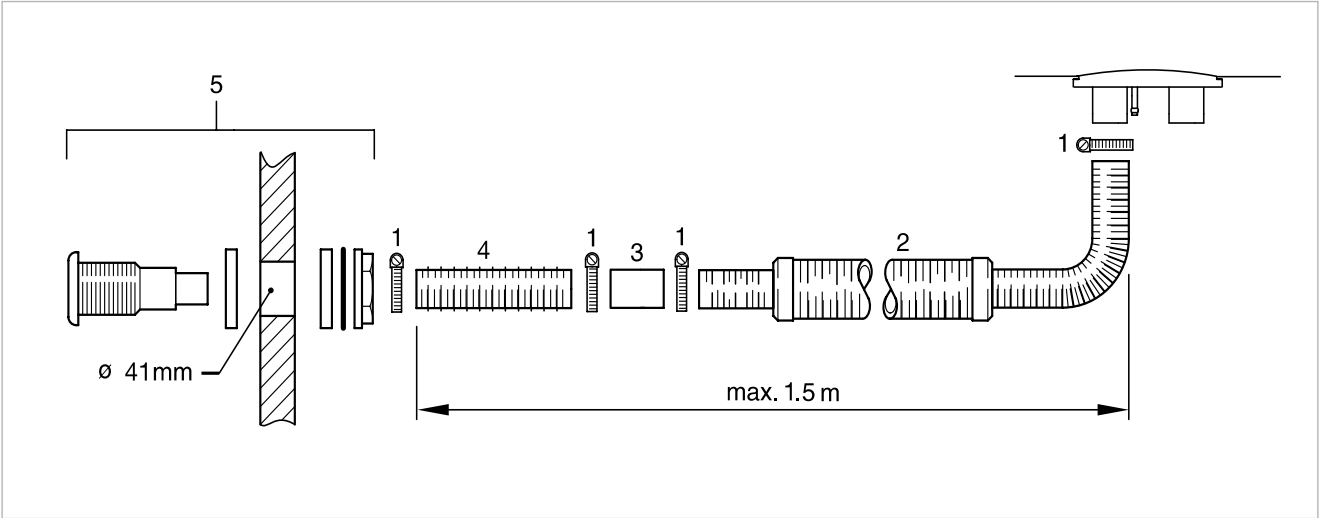
In yachts, the heater is usually installed in the storage locker. The combustion air is aspirated from the engine compartment and the exhaust gas is directed through the transom to the outside. Fresh air is always aspirated from the outside on boats. The aspirated air is heated via the heater's convactor and is fed to the salon and cabins or the pantry via a hose system.



In motor boats, ideally the heater is installed in the engine compartment. The combustion air is aspirated from the engine compartment and the exhaust gas is directed through the transom to the outside. Here, too, the fresh air is aspirated from the outside. The aspirated air is heated by the heater's convactor and is fed to the salon and cabins or pantry via a hose system.

# AIRTRONIC D2

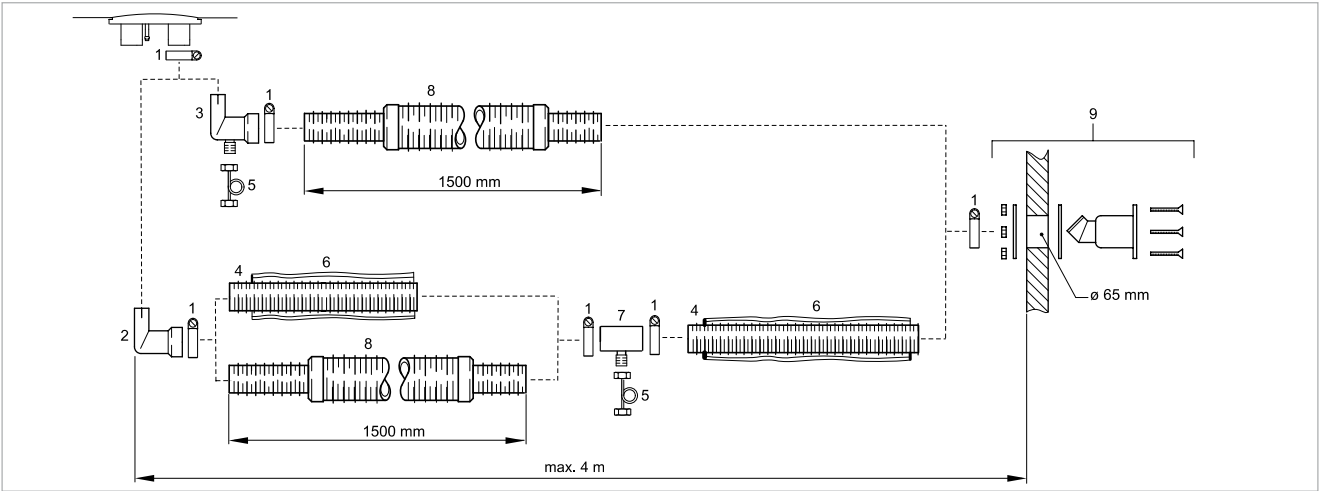
## EXAMPLE OF COMBUSTION AIR SYSTEM:



NO.	DESCRIPTION
1	Hose clip
2	Silencer for combustion air
3	Hose connecting tube Ø 25 mm

NO.	DESCRIPTION
4	Flexible pipe Ø 25 mm
5	Hull fitting for combustion air

## EXAMPLE OF EXHAUST SYSTEM:



NO.	DESCRIPTION
1	Pipe clip
2	Exhaust pipe elbow Ø 24 mm / 30 mm
3	Exhaust pipe elbow Ø 24 mm / 30 mm with drainage
4	Flexible spiral tube Ø 30 mm
5	Condensate drain

NO.	DESCRIPTION
6	Exhaust insulation
7	Adapter Ø 30 mm with drainage
8	Flexible exhaust silencer
9	Hull fitting



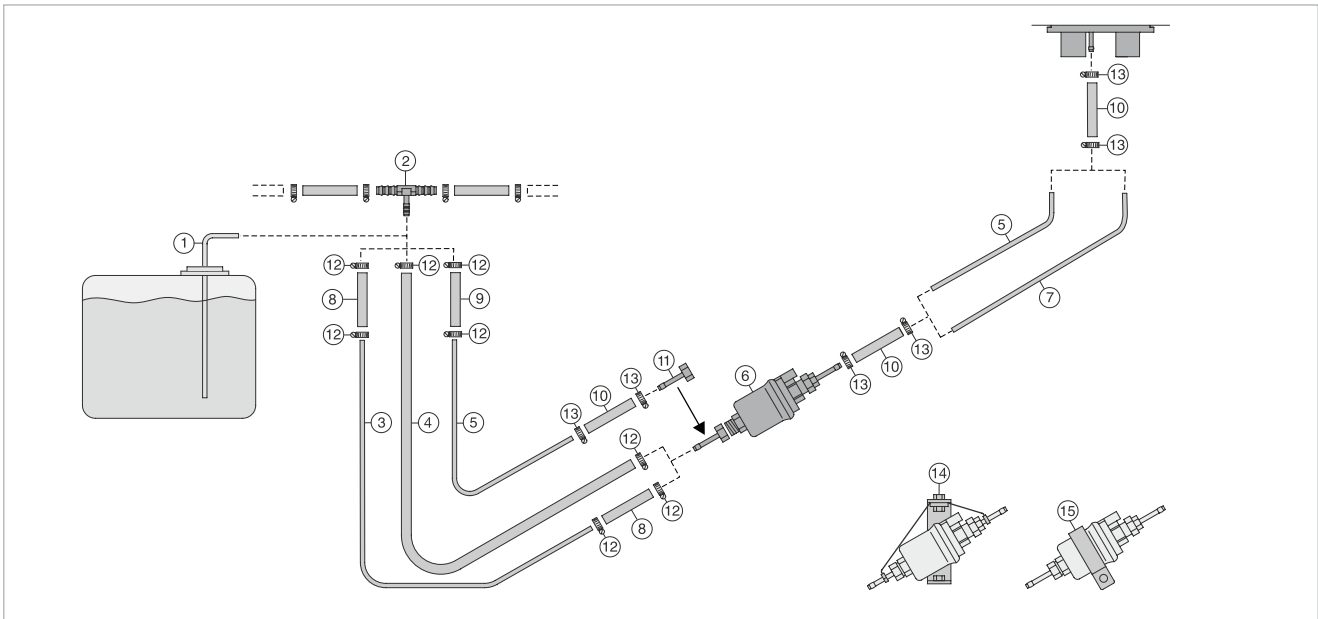
## PRODUCT INFORMATION

### FUEL SUPPLY:

In most cases, it is advisable to facilitate fuel extraction with a separate tank connection, integrated in the fuel tank (metal tank only). If a separate connection cannot be installed in the fuel tank, fuel is extracted by integrating a T-piece in the fuel flow pipe from the fuel tank to the engine.

### PLEASE NOTE:

- All specifications, especially the safety instructions in the Technical Description for this chapter, must be complied with. The Technical Description is supplied with each heater.
- If other parts are required for the fuel supply, please refer to the product overview or appropriate spare parts lists.
- Fuel hoses in engine compartments must be fire-resistant to DIN EN ISO 7840.



NO.	DESCRIPTION
1	Tank connection $\varnothing = 2$ mm
2	T-piece
3	Fuel pipe 6 mm x 2 mm ( $\varnothing = 2$ mm), plastic
4	Fuel hose 5 mm x 3 mm ( $\varnothing = 5$ mm)
5	Fuel pipe 4 mm x 1 mm ( $\varnothing = 2$ mm), plastic or metal
6	Metering pump
7	Fuel pipe 4 mm x 1.25 mm ( $\varnothing = 1.5$ mm), plastic
8	Fuel hose 5 mm x 3 mm ( $\varnothing = 5$ mm), approx. 50 mm long
9	Adapter 5 mm / 3.5 mm
10	Fuel hose 3.5 mm x 3 mm ( $\varnothing = 3.5$ mm), approx. 50 mm long
11	Fitting $\varnothing 4$ mm
12	Hose clip $\varnothing 11$ mm
13	Hose clip $\varnothing 9$ mm
14	Suspension for metering pump
15	Rubber holder for metering pump

### Fuel connection kit to DIN EN ISO 7840

Not illustrated

The fuel connection kit for boats contains:

2 fire-resistant hoses  $\varnothing = 3.5$  mm, approx. 50 mm long

2 fire-resistant hoses  $\varnothing = 5$  mm, approx. 50 mm long

4 hose clips  $\varnothing 12$  mm

4 hose clips  $\varnothing 14$  mm

### Length of lines

Intake line = max. 5 m

Pressure line = max. 6 m with intake line  $\varnothing = 2$  mm

Pressure line = max. 10 m with intake line  $\varnothing = 5$  mm

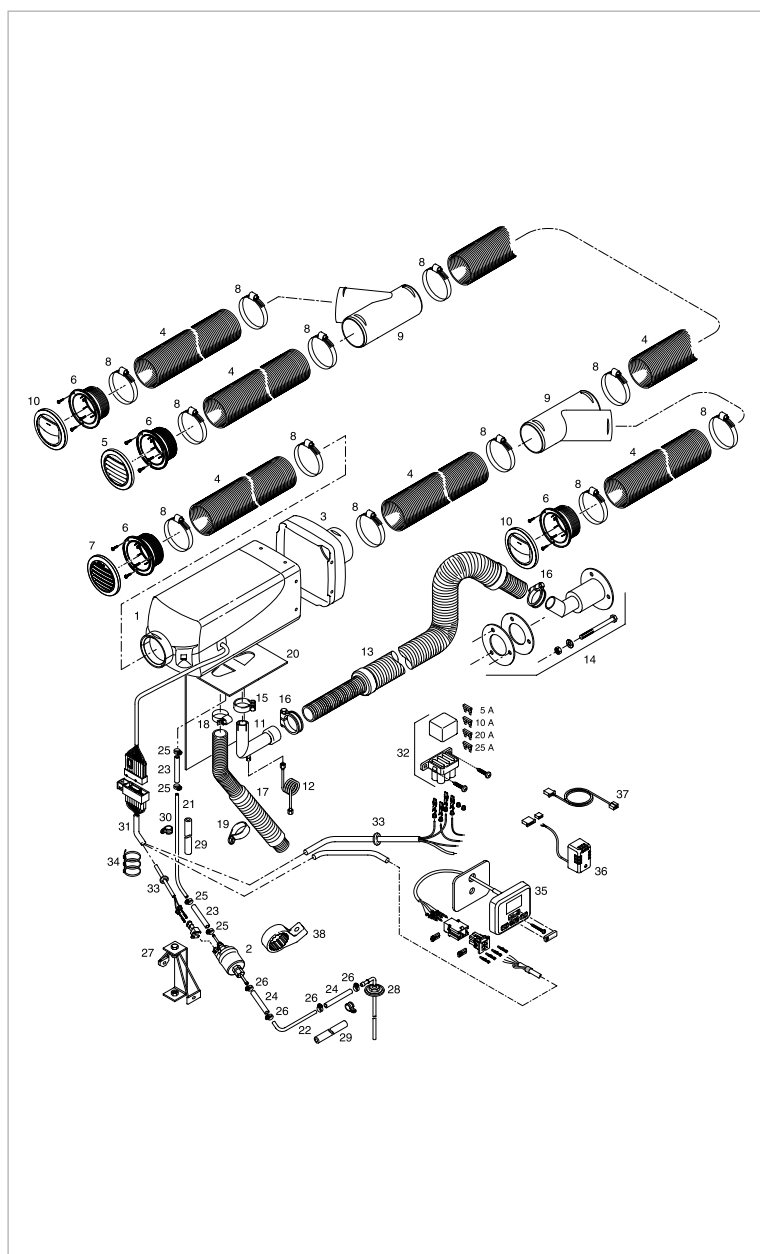
## AIRTRONIC D3

### TECHNICAL DATA



Diesel version		Airtronic D3
Voltage	V	12
Heating output	W	900 / 1,600 / 2,200 / 3,000
Air throughput	kg/h	60 / 90 / 120 / 150
Electricity consumption in operation	W	7 / 10 / 16 / 24
Fuel consumption	l/h	0.11 / 0.20 / 0.28 / 0.38
Dimensions L x W x H	mm	371 x 140 x 150
Weight	kg	4.5

### RECOMMENDED PARTS FOR INSTALLATION:



1	Airtronic D3 heater
2	Metering pump
3	Air scoop ø 75 mm
4	Flexible pipe ø 75 mm
5	Vent, flat 30° ø 75 mm / 90 mm
6	Fitting ø 75 mm
7	Vent, flat 0° ø 75 mm / 90 mm
8	Hose clip ø 70 mm – 90 mm (12 x)
9	Y-shaped branch piece ø 75 mm
10	Vent, closable ø 75 mm / 90 mm
11	Exhaust pipe elbow with drainage ø 24 mm / 30 mm
12	Condensate drain
13	Exhaust silencer
14	Hull fitting
15	Pipe clip
16	Pipe clip (2 x)
17	Silencer, combustion air
18	Hose clip ø 20 mm / 32 mm
19	Hose clip ø 50 mm
20	Holder, heater
21	Pipe ø 4 mm x 1.25 mm
22	Pipe ø 6 mm x 2 mm
23	Hose ø 3.5 mm x 3 mm
24	Hose ø 5 mm x 3 mm
25	Hose clip ø 9 mm (4 x)
26	Hose clip ø 11 mm (4 x)
27	Holder, metering pump
28	Tank connection
29	Foam rubber hose (2 x)
30	Pipe clip ø 10 mm (2 x)
31	Lead harness
32	Fuse holder, triple
33	Grommet
34	Cable tape, 200 mm long (10 x)
35	EasyStart Select
36	Temperature sensor
37	Cable harness, temperature sensor
38	Rubber holder, metering pump

## PRODUCT INFORMATION

### HEATER SCOPE OF DELIVERY:

- Airtronic D3 heater
- Metering pump

### The following must be ordered in addition:

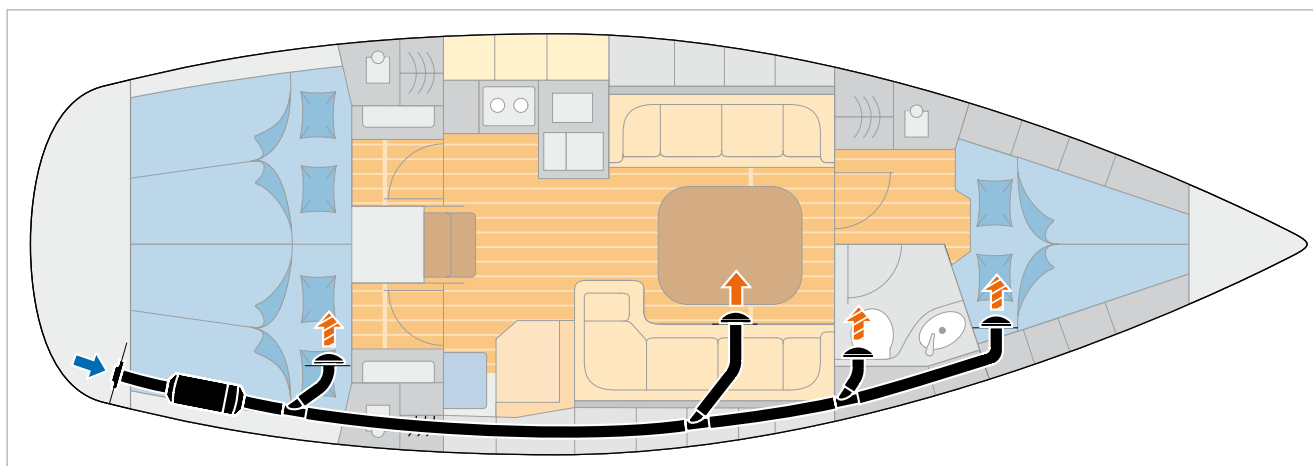
- Exhaust and combustion air systems
- Control element
- Fastening parts
- Fuel system parts
- Air system parts  $\varnothing$  75 mm /  $\varnothing$  90 mm
- Electrical parts

### MARINE KIT:

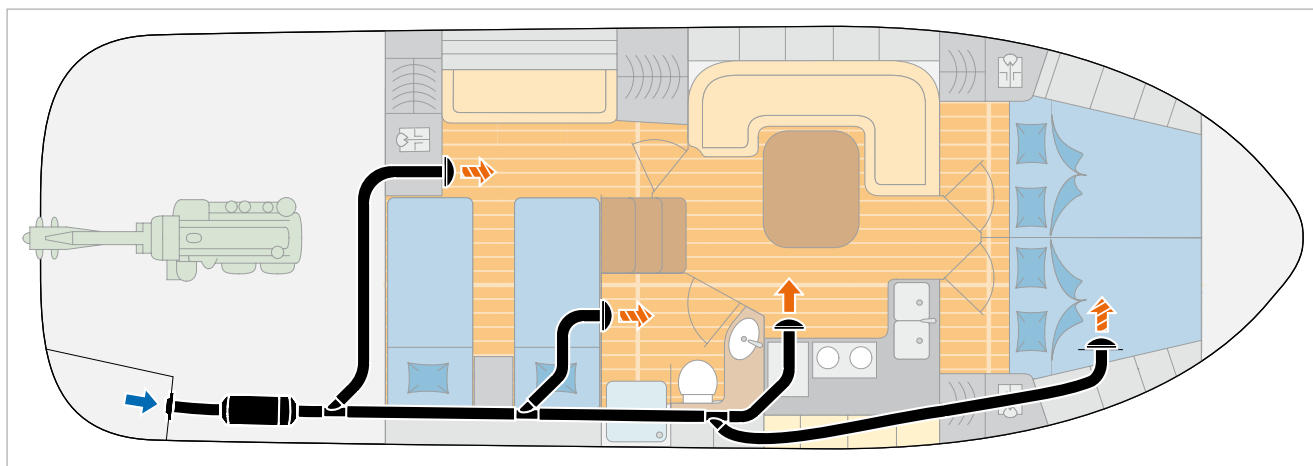
See page 30

*NOTE: You can find more detailed information on the Eberspächer service portal, [www.eberspacher-marine.de](http://www.eberspacher-marine.de), in the Marine brochure, in the product overview or the spare parts list.*

### INSTALLATION EXAMPLES:



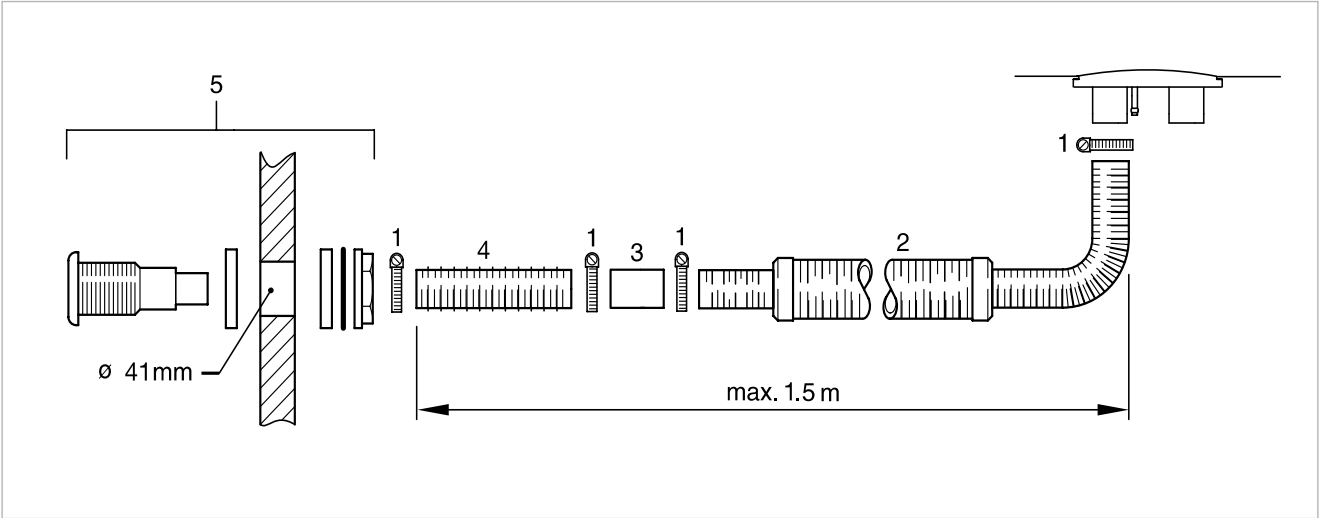
In yachts, the heater is usually installed in the storage locker. The combustion air is aspirated from the engine compartment and the exhaust gas is directed through the transom to the outside. Fresh air is always aspirated from the outside on boats. The aspirated air is heated via the heater's convactor and is fed to the salon and cabins or the pantry via a hose system.



In motor boats, ideally the heater is installed in the engine compartment. The combustion air is aspirated from the engine compartment and the exhaust gas is directed through the transom to the outside. Here, too, the fresh air is aspirated from the outside. The aspirated air is heated by the heater's convactor and fed to the salon and cabins or pantry via a hose system.

# AIRTRONIC D3

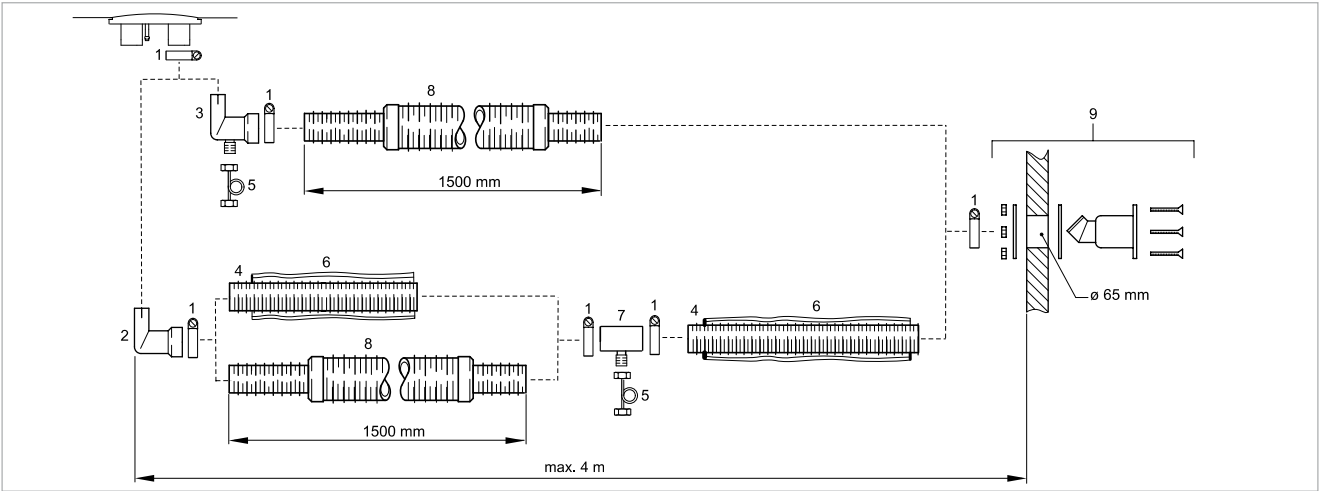
## EXAMPLE OF COMBUSTION AIR SYSTEM:



NO.	DESCRIPTION
1	Hose clip
2	Silencer for combustion air
3	Hose connecting tube ø 25 mm

NO.	DESCRIPTION
4	Flexible pipe ø 25 mm
5	Hull fitting for combustion air

## EXAMPLE OF EXHAUST SYSTEM:



NO.	DESCRIPTION
1	Pipe clip
2	Exhaust pipe elbow ø 24 mm / 30 mm
3	Exhaust pipe elbow ø 24 mm / 30 mm with drainage
4	Flexible spiral tube ø 30 mm
5	Condensate drain

NO.	DESCRIPTION
6	Exhaust insulation
7	Adapter ø 30 mm with drainage
8	Flexible exhaust silencer
9	Hull fitting



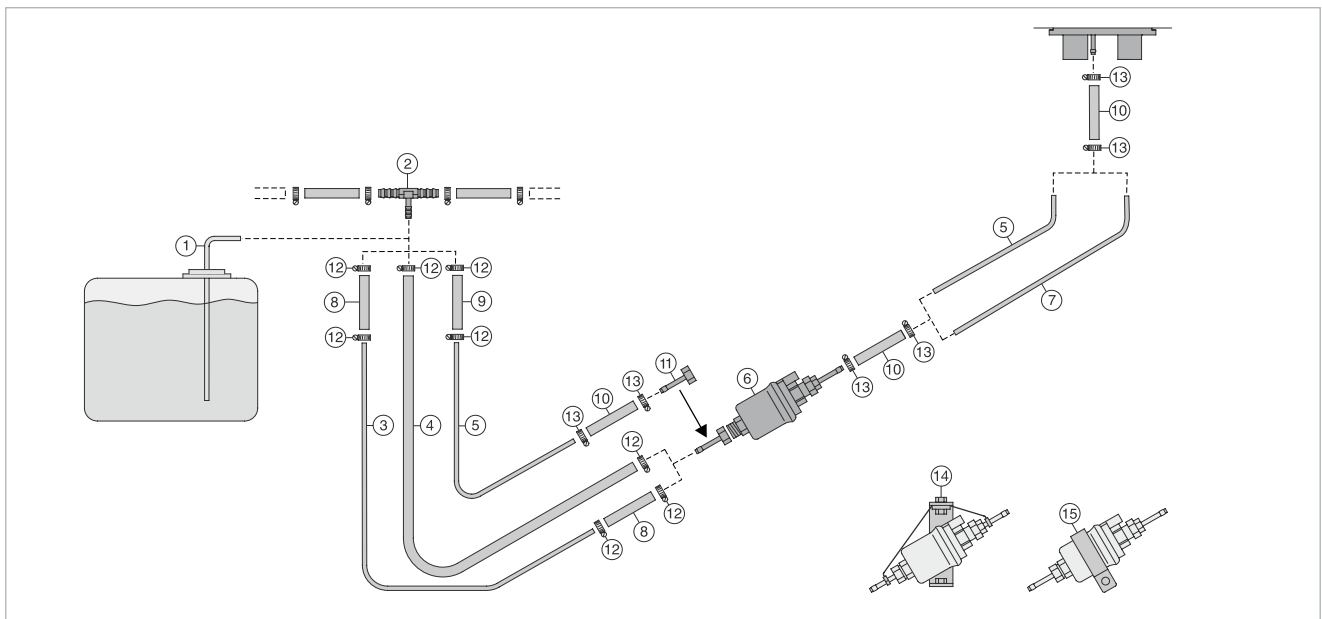
## PRODUCT INFORMATION

### FUEL SUPPLY:

In most cases, it is advisable to facilitate fuel extraction with a separate tank connection, integrated in the fuel tank (metal tank only). If a separate connection cannot be installed in the fuel tank, fuel is extracted by integrating a T-piece in the fuel flow pipe from the fuel tank to the engine.

### PLEASE NOTE:

- All specifications, especially the safety instructions in the Technical Description for this chapter, must be complied with. The Technical Description is supplied with each heater.
- If other parts are required for the fuel supply, please refer to the product overview or the appropriate spare parts lists.
- Fuel hoses in engine compartments must be fire-resistant to DIN EN ISO 7840.



NO.	DESCRIPTION
1	Tank connection $\varnothing = 2$ mm
2	T-piece
3	Fuel pipe 6 mm x 2 mm ( $\varnothing = 2$ mm), plastic
4	Fuel hose 5 mm x 3 mm ( $\varnothing = 5$ mm)
5	Fuel pipe 4 mm x 1 mm ( $\varnothing = 2$ mm), plastic or metal
6	Metering pump
7	Fuel pipe 4 mm x 1.25 mm ( $\varnothing = 1.5$ mm), plastic
8	Fuel hose 5 mm x 3 mm ( $\varnothing = 5$ mm), approx. 50 mm long
9	Adapter, 5 mm / 3.5 mm
10	Fuel hose 3.5 mm x 3 mm ( $\varnothing = 3.5$ mm), approx. 50 mm long
11	Fitting $\varnothing 4$ mm
12	Hose clip $\varnothing 11$ mm
13	Hose clip $\varnothing 9$ mm
14	Suspension for metering pump
15	Rubber holder for metering pump

### Fuel connection kit to DIN EN ISO 7840

Not illustrated

The fuel connection kit for boats contains:

2 fire-resistant hoses  $\varnothing = 3.5$  mm, approx. 50 mm long

2 fire-resistant hoses  $\varnothing = 5$  mm, approx. 50 mm long

4 hose clips  $\varnothing 12$  mm

4 hose clips  $\varnothing 14$  mm

### Length of lines

Intake line = max. 5 m

Pressure line = max. 6 m with intake line  $\varnothing = 2$  mm

Pressure line = max. 10 m with intake line  $\varnothing = 5$  mm

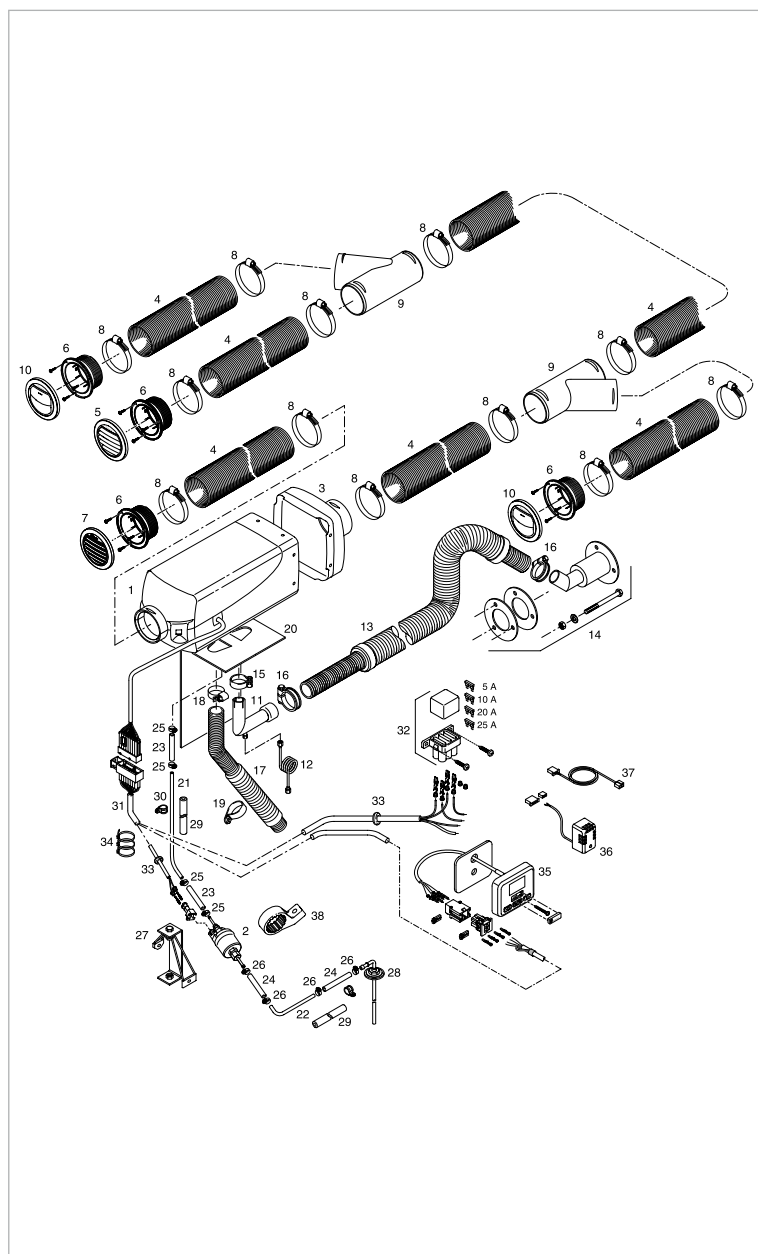
# AIRTRONIC D4 / D4 PLUS

## TECHNICAL DATA



Diesel version		Airtronic D4	Airtronic D4 Plus
Voltage	V	12 / 24	12 / 24
Heating output	W	900 / 2,000 / 3,000 / 4,000	900 / 2,000 / 3,000 / 4,000
Air throughput	kg/h	60 / 110 / 150 / 185	55 / 100 / 140 / 175
Electricity consumption in operation	W	7 / 13 / 24 / 40	7 / 16 / 30 / 55
Fuel consumption	l/h	0.11 / 0.25 / 0.38 / 0.51	0.11 / 0.25 / 0.38 / 0.51
Dimensions L x W x H	mm	371 x 140 x 150	371 x 140 x 150
Weight	kg	4.5	4.5

## RECOMMENDED PARTS FOR INSTALLATION:



1	Airtronic D4 / D4 Plus heater
2	Metering pump
3	Air scoop ø 75 mm
4	Flexible pipe ø 75 mm
5	Vent, flat 30° ø 75 mm / 90 mm
6	Fitting ø 75 mm
7	Vent, flat 30° ø 75 mm / 90 mm
8	Hose clip ø 70 mm – 90 mm (12 x)
9	Y-shaped branch piece ø 75 mm
10	Vent, closable ø 75 mm / 90 mm
11	Exhaust pipe elbow with drainage ø 24 mm / 30 mm
12	Condensate drain
13	Exhaust silencer
14	Hull fitting
15	Pipe clip
16	Pipe clip (2 x)
17	Silencer, combustion air
18	Hose clip ø 20 mm / 32 mm
19	Hose clip ø 50 mm
20	Holder, heater
21	Pipe ø 4 mm x 1.25 mm
22	Pipe ø 6 mm x 2 mm
23	Hose ø 3.5 mm x 3 mm
24	Hose ø 5 mm x 3 mm
25	Hose clip ø 9 mm (4 x)
26	Hose clip ø 11 mm (4 x)
27	Holder, metering pump
28	Tank connection
29	Foam rubber hose (2 x)
30	Pipe clip ø 10 mm (2 x)
31	Lead harness
32	Fuse holder, triple
33	Grommet
34	Cable tape, 200 mm long (10 x)
35	EasyStart Select
36	Temperature sensor
37	Cable harness, temperature sensor
38	Rubber holder, metering pump

## PRODUCT INFORMATION

### HEATER SCOPE OF DELIVERY:

- Airtronic D4 / D4 Plus heater
- Metering pump

### The following must be ordered in addition:

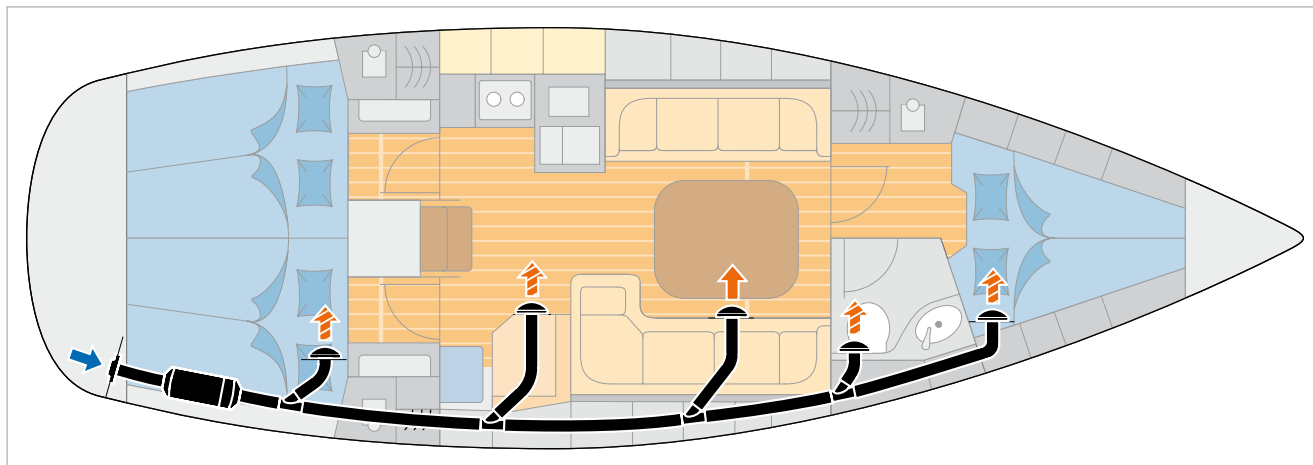
- Exhaust and combustion air system parts
- Control element
- Fastening parts
- Fuel system parts
- Air system parts  $\varnothing$  75 mm /  $\varnothing$  90 mm
- Electrical parts

### MARINE KIT:

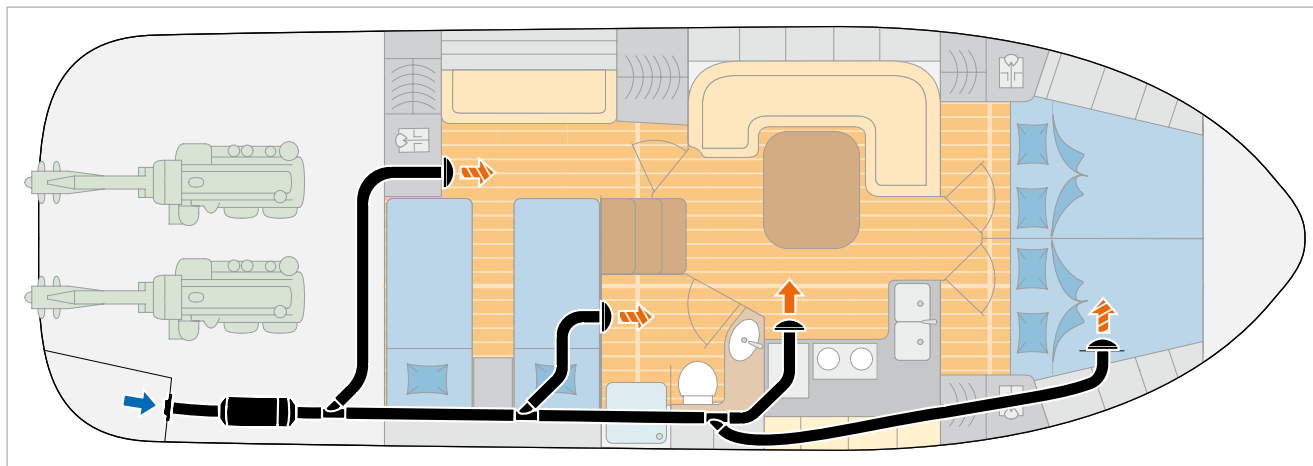
See page 30

*NOTE: You can find more detailed information on the Eberspächer service portal, [www.eberspacher-marine.de](http://www.eberspacher-marine.de), in the Marine brochure, in the product overview or the spare parts list.*

### INSTALLATION EXAMPLES:



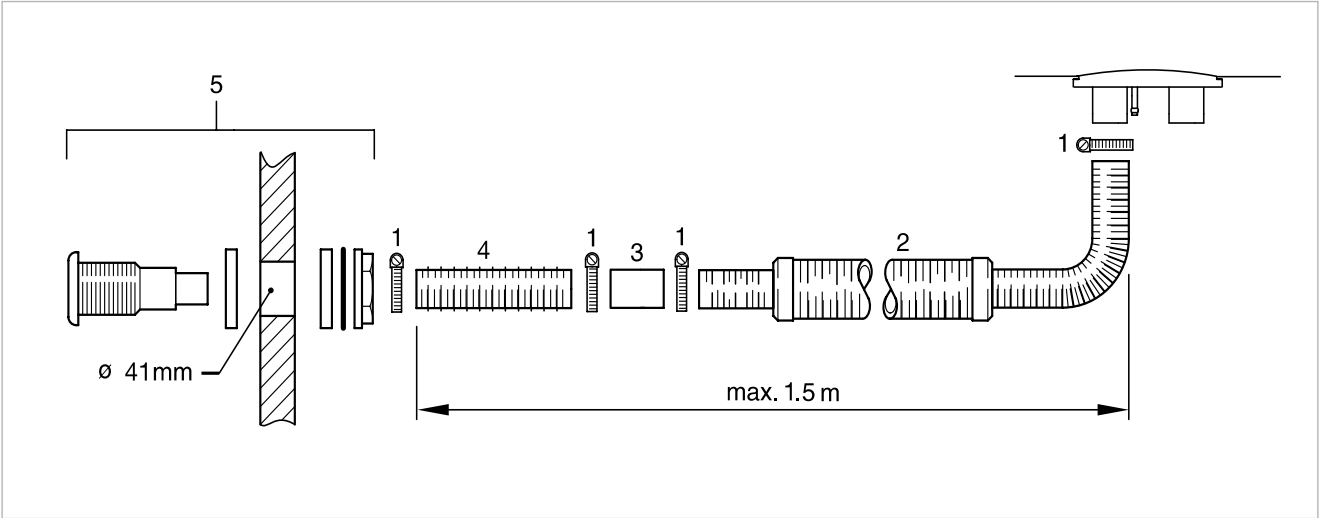
In yachts, the heater is usually installed in the storage locker. The combustion air is aspirated from the engine compartment and the exhaust gas is directed through the transom to the outside. Fresh air is always aspirated from the outside on boats. The aspirated air is heated via the heater's convactor and is fed to the salon and cabins or the pantry via a hose system.



In motor boats, ideally the heater is installed in the engine compartment. The combustion air is aspirated from the engine compartment and the exhaust gas is directed through the transom to the outside. Here, too, the fresh air is aspirated from the outside. The aspirated air is heated by the heater's convactor and is fed to the salon and cabins or pantry via a hose system.

# AIRTRONIC D4 / D4 PLUS

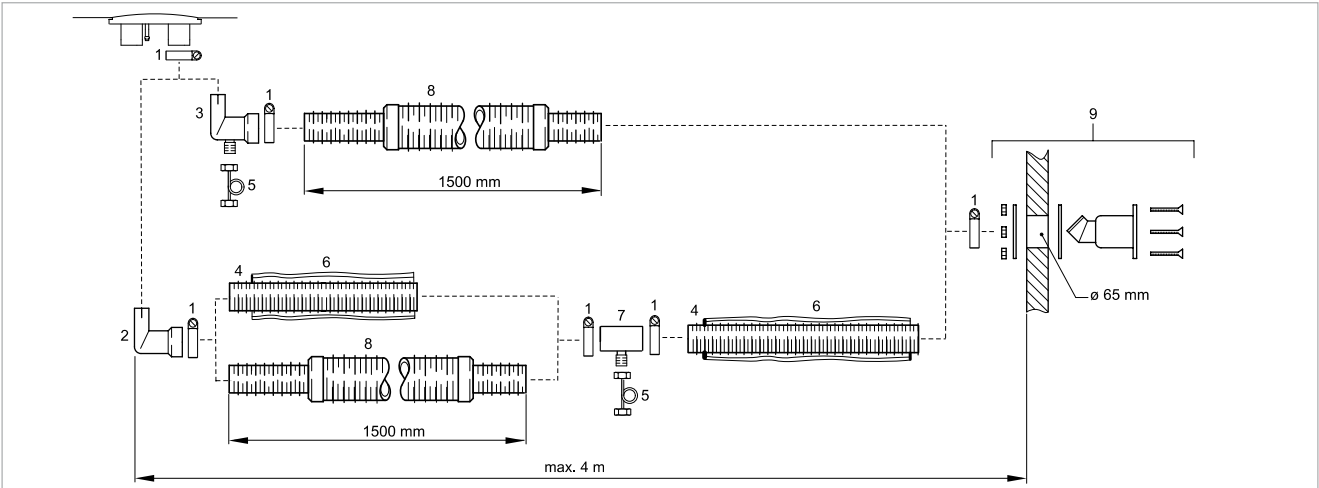
## EXAMPLE OF COMBUSTION AIR SYSTEM:



NO.	DESCRIPTION
1	Hose clip
2	Silencer for combustion air
3	Hose connecting tube ø 25 mm

NO.	DESCRIPTION
4	Flexible pipe ø 25 mm
5	Hull fitting for combustion air

## EXAMPLE OF EXHAUST SYSTEM:



NO.	DESCRIPTION
1	Pipe clip
2	Exhaust pipe elbow ø 24 mm / 30 mm
3	Exhaust pipe elbow ø 24 mm / 30 mm with drainage
4	Flexible spiral tube ø 30 mm
5	Condensate drain

NO.	DESCRIPTION
6	Exhaust insulation
7	Adapter ø 30 mm with drainage
8	Flexible exhaust silencer
9	Hull fitting



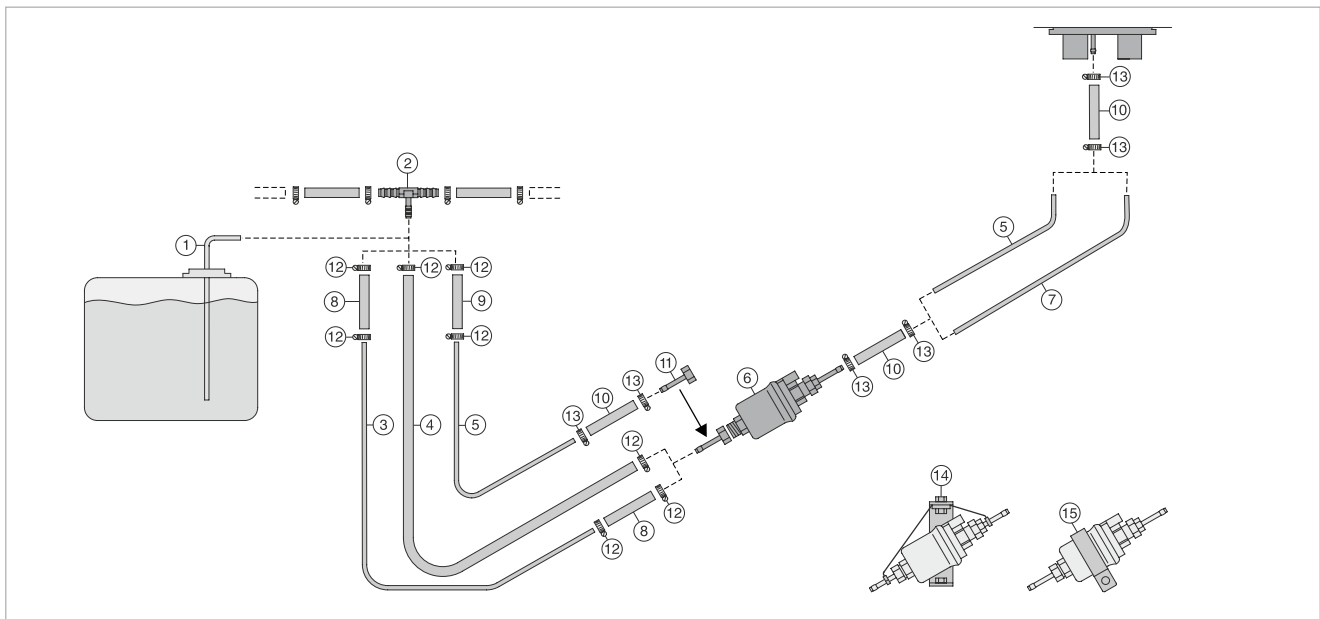
## PRODUCT INFORMATION

### FUEL SUPPLY:

In most cases, it is advisable to facilitate fuel extraction with a separate tank connection, integrated in the fuel tank (metal tank only). If a separate connection cannot be installed in the fuel tank, fuel is extracted by integrating a T-piece in the fuel flow pipe from the fuel tank to the engine.

### PLEASE NOTE:

- All specifications, especially the safety instructions in the Technical Description for this chapter, must be complied with. The Technical Description is supplied with each heater.
- If other parts are required for the fuel supply, please refer to the product overview or the appropriate spare parts lists.
- Fuel hoses in engine compartments must be fire-resistant to DIN EN ISO 7840.



NO.	DESCRIPTION
1	Tank connection $\varnothing = 2$ mm
2	T-piece
3	Fuel pipe 6 mm x 2 mm ( $\varnothing = 2$ mm), plastic
4	Fuel hose 5 mm x 3 mm ( $\varnothing = 5$ mm)
5	Fuel pipe 4 mm x 1 mm ( $\varnothing = 2$ mm), plastic or metal
6	Metering pump
7	Fuel pipe 4 mm x 1.25 mm ( $\varnothing = 1.5$ mm), plastic
8	Fuel hose 5 mm x 3 mm ( $\varnothing = 5$ mm), approx. 50 mm long
9	Adapter, 5 mm / 3.5 mm
10	Fuel hose 3.5 mm x 3 mm ( $\varnothing = 3.5$ mm), approx. 50 mm long
11	Fitting $\varnothing 4$ mm
12	Hose clip $\varnothing 11$ mm
13	Hose clip $\varnothing 9$ mm
14	Suspension for metering pump
15	Rubber holder for metering pump

### Fuel connection kit to DIN EN ISO 7840

Not illustrated

The fuel connection kit for boats contains:

2 fire-resistant hoses  $\varnothing = 3.5$  mm, approx. 50 mm long

2 fire-resistant hoses  $\varnothing = 5$  mm, approx. 50 mm long

4 hose clips  $\varnothing 12$  mm

4 hose clips  $\varnothing 14$  mm

### Length of lines

Intake line = max. 5 m

Pressure line = max. 6 m with intake line  $\varnothing = 2$  mm

Pressure line = max. 10 m with intake line  $\varnothing = 5$  mm

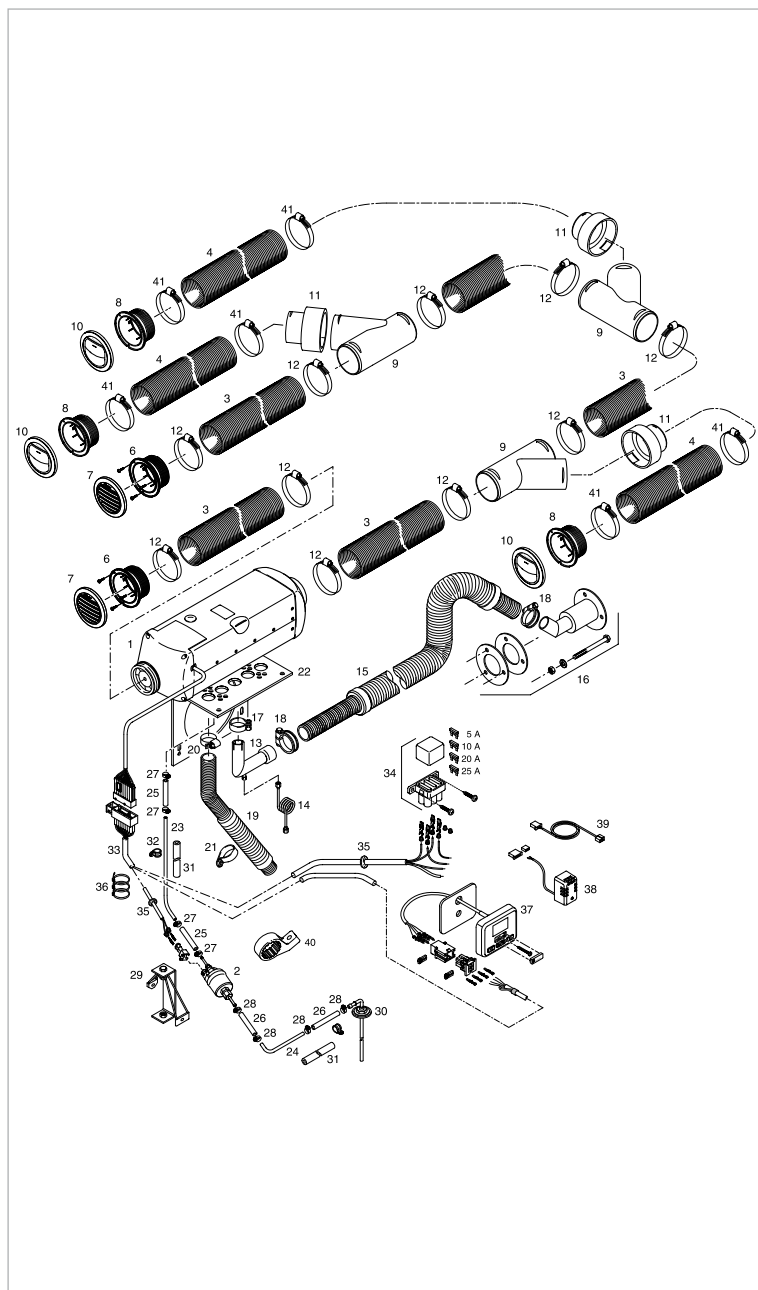
## AIRTRONIC D5

### TECHNICAL DATA

Diesel version		Airtronic D5
Voltage	V	12 / 24
Heating output	W	1,600 / 2,700 / 4,800 / 5,500
Air throughput	kg/h	155 / 190 / 275 / 280
Electricity consumption in operation	W	25 / 35 / 80 / 85
Fuel consumption	l/h	0.20 / 0.34 / 0.58 / 0.66
Dimensions L x W x H	mm	530 x 170 x 185
Weight	kg	9.3



### RECOMMENDED PARTS FOR INSTALLATION:



1	Airtronic D5 heater
2	Metering pump
3	Flexible pipe ø 90 mm
4	Flexible pipe ø 75 mm
5	Vent, flat 30° ø 75 mm / 90 mm
6	Fitting ø 90 mm
7	Vent, flat 0° ø 75 mm / 90 mm
8	Fitting ø 75 mm
9	Y-shaped branch piece ø 90 mm
10	Vent, closable ø 75 mm / 90 mm
11	Adapter
12	Hose clip ø 90 mm – 110 mm (10 x)
13	Exhaust pipe elbow with drainage ø 24 mm / 30 mm
14	Condensate drain
15	Exhaust silencer
16	Hull fitting
17	Pipe clip
18	Pipe clip (2 x)
19	Silencer, combustion air
20	Hose clip ø 20 mm / 32 mm
21	Hose clip ø 50 mm
22	Holder, heater
23	Pipe ø 4 mm x 1.25 mm
24	Pipe ø 6 mm x 2 mm
25	Hose ø 3.5 mm x 3 mm
26	Hose ø 5 mm x 3 mm
27	Hose clip ø 9 mm (4 x)
28	Hose clip ø 11 mm (4 x)
29	Holder, metering pump
30	Tank connection
31	Foam rubber hose
32	Pipe clip ø 10 mm (2 x)
33	Lead harness
34	Fuse holder, triple
35	Grommet
36	Cable tape, 200 mm long (10 x)
37	EasyStart Select
38	Temperature sensor
39	Cable harness, temperature sensor
40	Rubber holder, metering pump
41	Hose clip ø 70 mm – 90 mm (6 x)

## PRODUCT INFORMATION

### HEATER SCOPE OF DELIVERY:

- Airtronic D5 heater
- Metering pump

### The following must be ordered in addition:

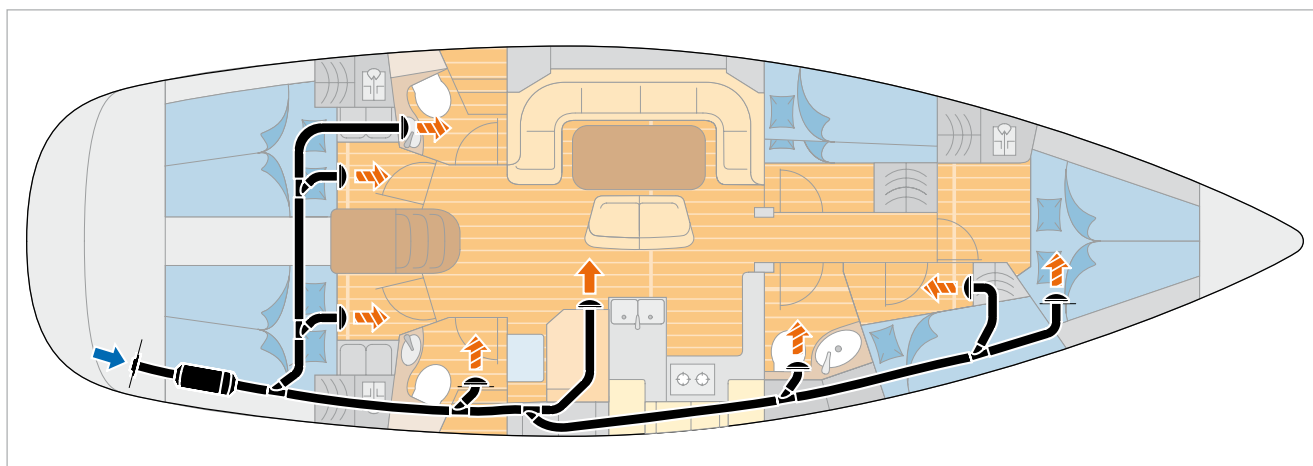
- Exhaust and combustion air system parts
- Control element
- Fastening parts
- Fuel system parts
- Air system parts  $\varnothing$  90 mm /  $\varnothing$  100 mm
- Electrical parts

### MARINE KIT:

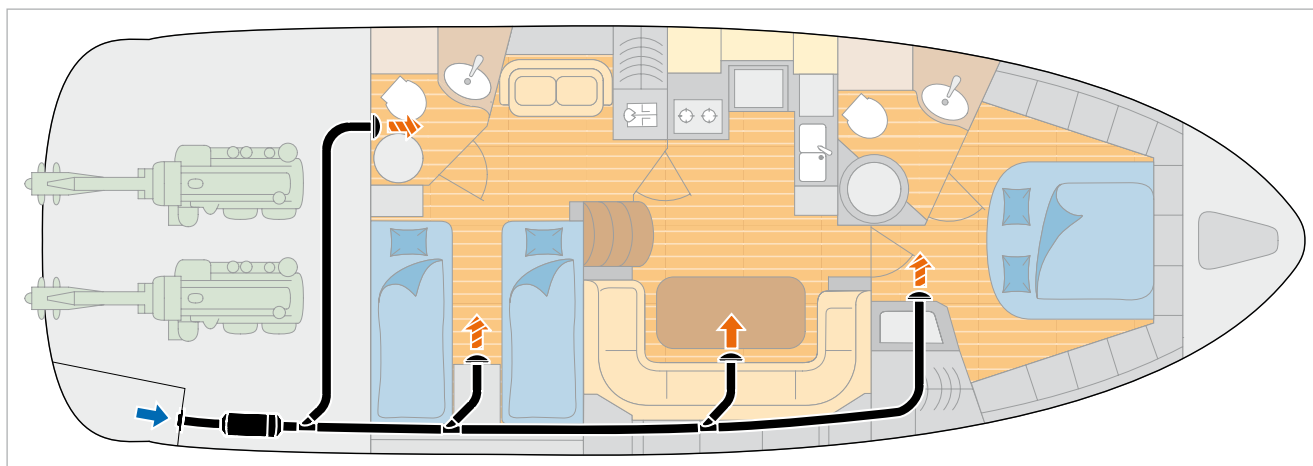
See page 30

*NOTE: You can find more detailed information on the Eberspächer service portal, [www.eberspacher-marine.de](http://www.eberspacher-marine.de), in the Marine brochure, in the product overview or the spare parts list.*

### INSTALLATION EXAMPLES:



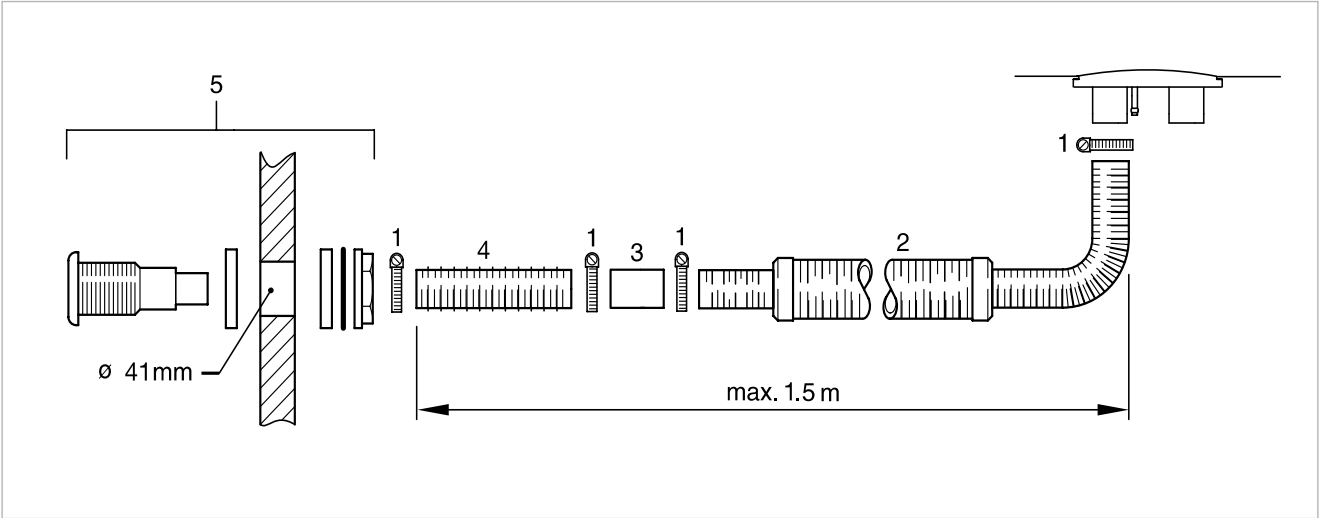
In yachts, the heater is usually installed in the storage locker. The combustion air is aspirated from the engine compartment and the exhaust gas is directed through the transom to the outside. Fresh air is always aspirated from the outside on boats. The aspirated air is heated via the heater's convactor and is fed to the salon and cabins or the pantry via a hose system.



In motor boats, ideally the heater is installed in the engine compartment. The combustion air is aspirated from the engine compartment and the exhaust gas is directed through the transom to the outside. Here, too, the fresh air is aspirated from the outside. The aspirated air is heated by the heater's convactor and is fed to the salon and cabins or pantry via a hose system.

# AIRTRONIC D5

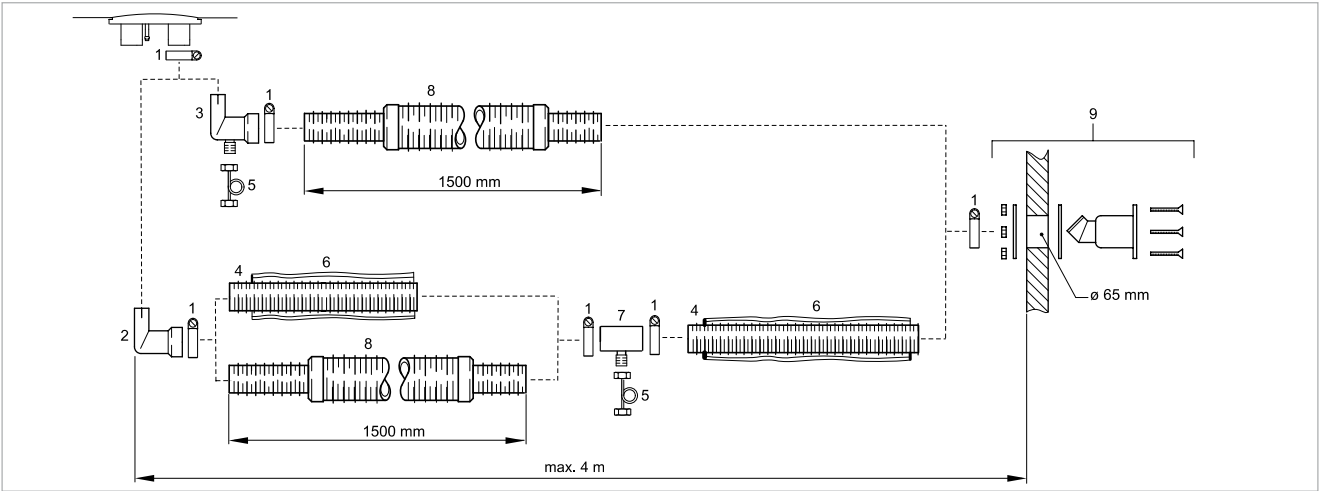
## EXAMPLE OF COMBUSTION AIR SYSTEM:



NO.	DESCRIPTION
1	Hose clip
2	Silencer for combustion air
3	Hose connecting tube ø 25 mm

NO.	DESCRIPTION
4	Flexible pipe ø 25 mm
5	Hull fitting for combustion air

## EXAMPLE OF EXHAUST SYSTEM:



NO.	DESCRIPTION
1	Pipe clip
2	Exhaust pipe elbow ø 24 mm / 30 mm
3	Exhaust pipe elbow ø 24 mm / 30 mm with drainage
4	Flexible spiral tube ø 30 mm
5	Condensate drain

NO.	DESCRIPTION
6	Exhaust insulation
7	Adapter ø 30 mm with drainage
8	Flexible exhaust silencer
9	Hull fitting



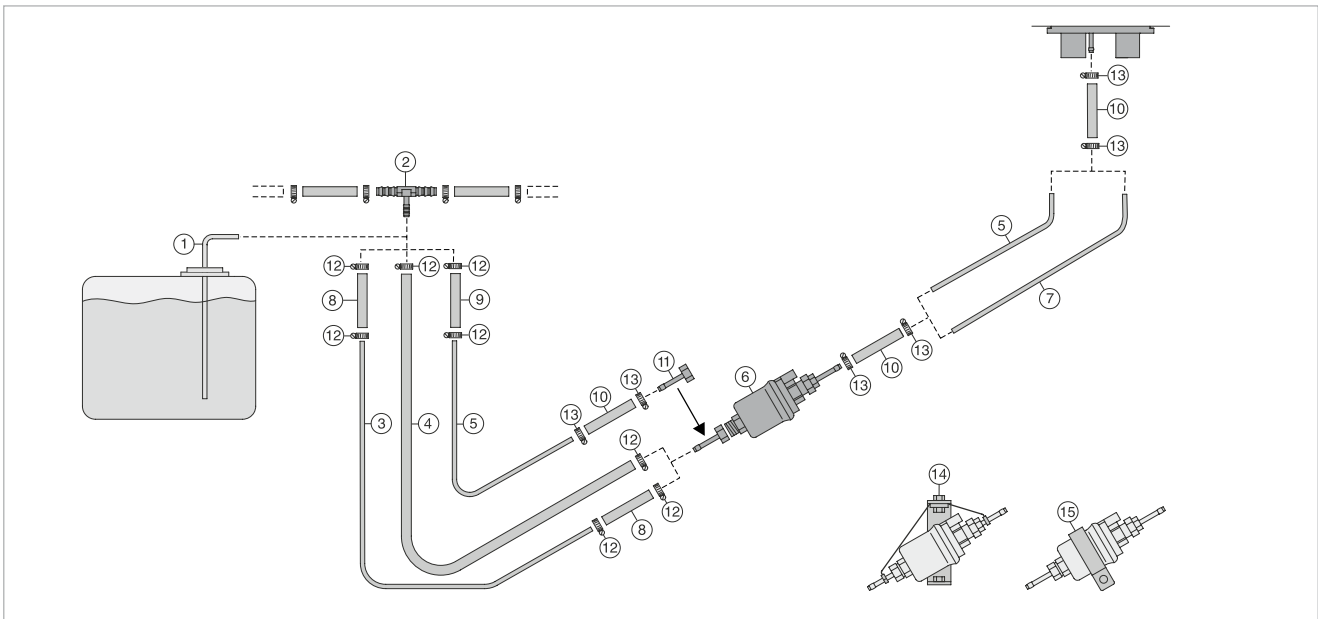
## PRODUCT INFORMATION

### FUEL SUPPLY:

In most cases, it is advisable to facilitate fuel extraction with a separate tank connection, integrated in the fuel tank (metal tank only). If a separate connection cannot be installed in the fuel tank, fuel is extracted by integrating a T-piece in the fuel flow pipe from the fuel tank to the engine.

### PLEASE NOTE:

- All specifications, especially the safety instructions in the Technical Description for this chapter, must be complied with. The Technical Description is supplied with each heater.
- If other parts are required for the fuel supply, please refer to the product overview or the appropriate spare parts lists.
- Fuel hoses in engine compartments must be fire-resistant to DIN EN ISO 7840.



NO.	DESCRIPTION
1	Tank connection $\varnothing = 2$ mm
2	T-piece
3	Fuel pipe 6 mm x 2 mm ( $\varnothing = 2$ mm), plastic
4	Fuel hose 5 mm x 3 ( $\varnothing = 5$ mm)
5	Fuel pipe 4 mm x 1 mm ( $\varnothing = 2$ mm), plastic or metal
6	Metering pump
7	Fuel pipe 4 mm x 1.25 mm ( $\varnothing = 1.5$ mm), plastic
8	Fuel hose 5 mm x 3 mm ( $\varnothing = 5$ mm), approx. 50 mm long
9	Adapter, 5 mm / 3.5 mm
10	Fuel hose 3.5 mm x 3 mm ( $\varnothing = 3.5$ mm), approx. 50 mm long
11	Fitting $\varnothing 4$ mm
12	Hose clip $\varnothing 11$ mm
13	Hose clip $\varnothing 9$ mm
14	Suspension for metering pump
15	Rubber holder for metering pump

### Fuel connection kit to DIN EN ISO 7840

Not illustrated

Fuel connection kit for boats contains:

2 fire-resistant hoses  $\varnothing = 3.5$  mm, approx. 50 mm long

2 fire-resistant hoses  $\varnothing = 5$  mm, approx. 50 mm long

4 hose clips  $\varnothing 12$  mm

4 hose clips  $\varnothing 14$  mm

### Length of lines

Intake line = max. 5 m

Pressure line = max. 6 m with intake line  $\varnothing = 2$  mm

Pressure line = max. 10 m with intake line  $\varnothing = 5$  mm

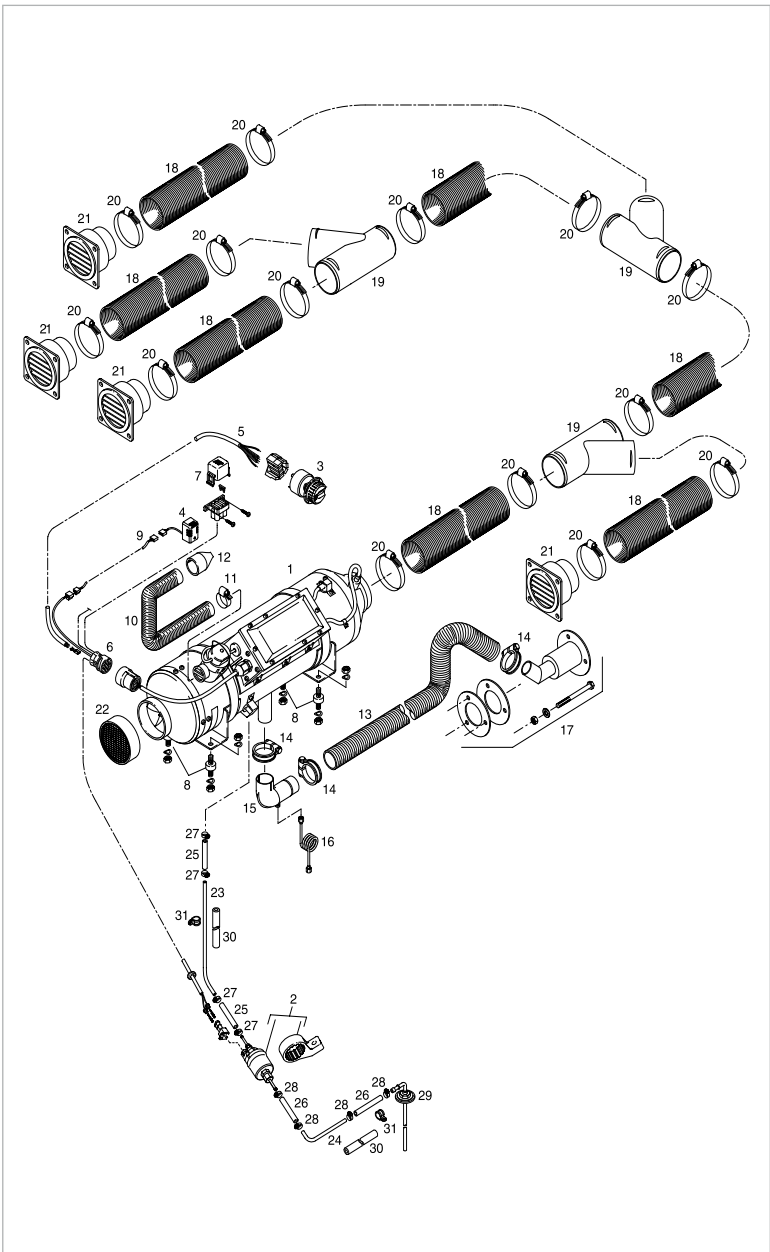
# D8 LC AIR HEATER

## TECHNICAL DATA

Diesel version		D8 LC
Voltage	V	12 / 24
Heating output	W	3,500 / 8,000
Air throughput	kg/h	310 / 310
Electricity consumption in operation	W	115 / 115
Fuel consumption	l/h	0.4 / 1.05
Dimensions L x W x H	mm	653 x 260 x 250
Weight	kg	14



## RECOMMENDED PARTS FOR INSTALLATION:



1	D8 LC heater
2	Metering pump and holder
3	Control unit
4	Temperature sensor, external
5	Cable harness with connection parts
6	Bushing connector housing with connection parts
7	Fuse holder
8	Rubber-metal buffer (4 x)
9	Cable harness for temperature sensor
10	Combustion air hose
11	Hose clip $\varnothing$ 32 mm / 50 mm
12	End sleeve
13	Flexible exhaust pipe $\varnothing$ 40 mm
14	Pipe clip (3 x)
15	Exhaust pipe elbow with drainage
16	Condensate drain
17	Hull fitting
18	Flexible pipe $\varnothing$ 100 mm
19	Y-shaped branch piece $\varnothing$ 100 mm
20	Hose clip $\varnothing$ 90 mm – 110 mm (14 x)
21	Air vent $\varnothing$ 100 mm (4 x)
22	Grille
23	Pipe $\varnothing$ 4 mm x 1 mm
24	Pipe $\varnothing$ 6 mm x 2, 1.5 m long
25	Hose $\varnothing$ 3.5 mm x 3 m
26	Hose $\varnothing$ 5 mm x 3 m
27	Hose clip $\varnothing$ 9 mm (4 x)
28	Hose clip $\varnothing$ 11 mm (4 x)
29	Tank connection
30	Foam rubber hose (2 x)
31	Pipe clip $\varnothing$ 10 mm (2 x)

## PRODUCT INFORMATION

### HEATER SCOPE OF DELIVERY:

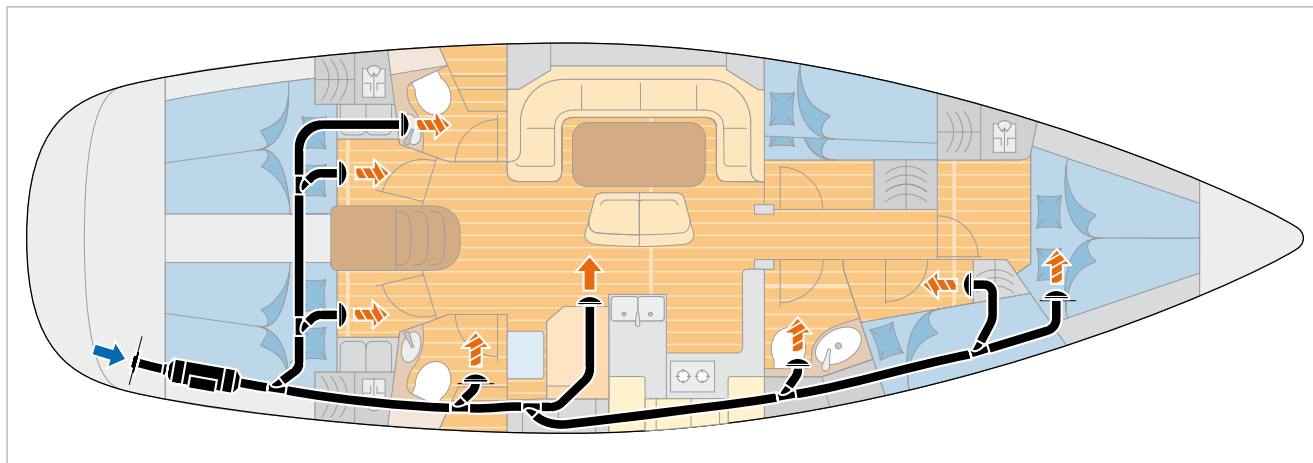
- D8 LC heater

#### The following must be ordered in addition:

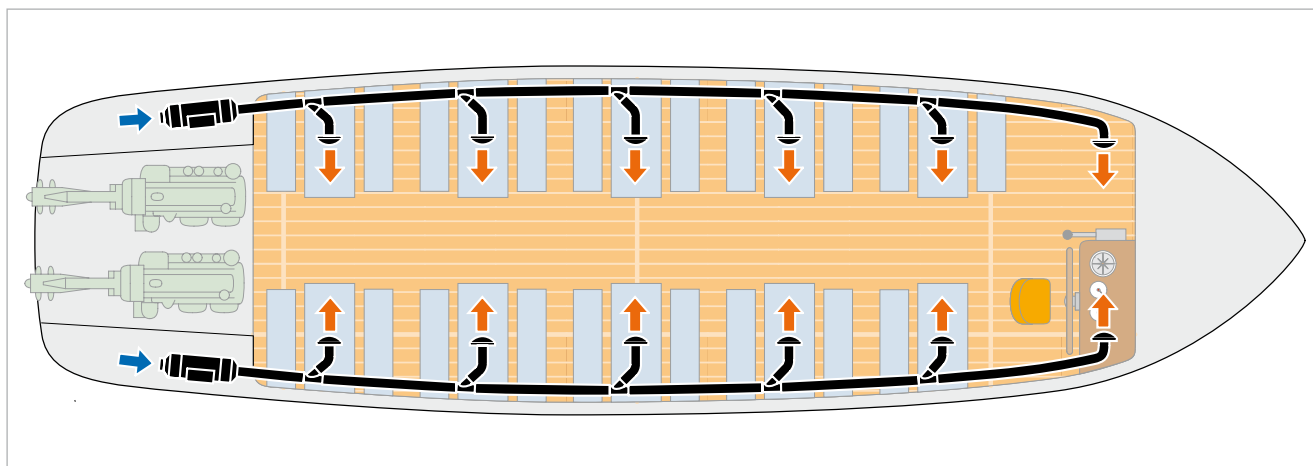
- Exhaust and combustion air system parts
- Control element
- Fuel system parts
- Air system parts  $\varnothing$  90 mm /  $\varnothing$  100 mm
- Electrical parts

*NOTE: You can find more detailed information on the Eberspächer service portal, [www.eberspacher-marine.de](http://www.eberspacher-marine.de), in the Marine brochure, in the product overview or the spare parts list.*

### INSTALLATION EXAMPLES:



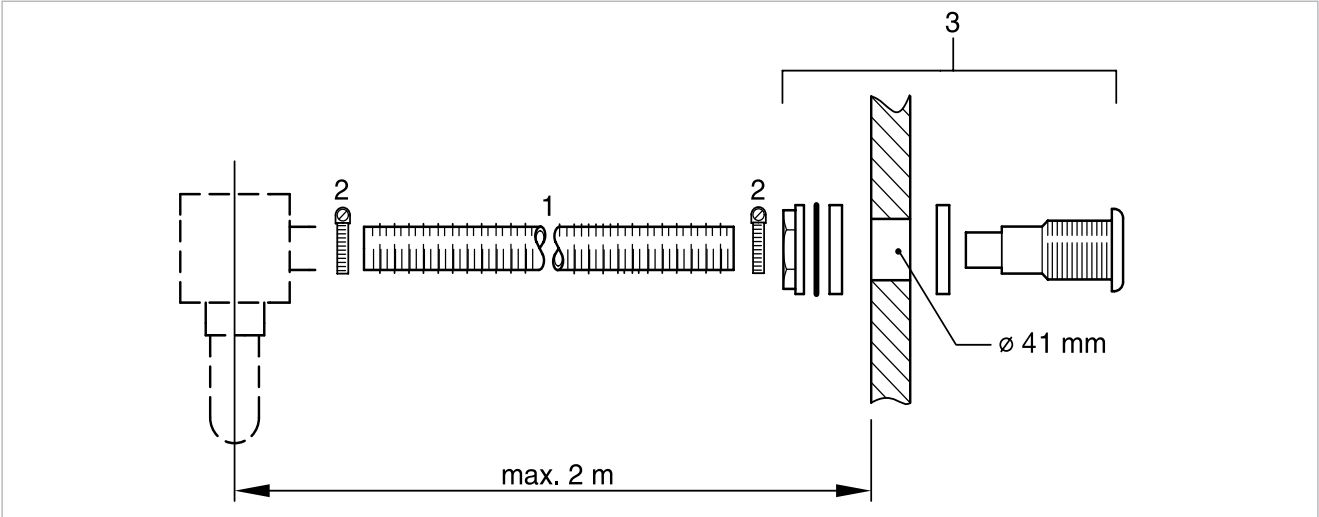
In yachts, the heater is usually installed in the storage locker. The combustion air is aspirated from the engine compartment and the exhaust gas is directed through the transom to the outside. Fresh air is always aspirated from the outside on boats. The aspirated air is heated via the heater's convector and is fed to the salon and cabins or the pantry via a hose system.



In motor boats, ideally the heater is installed in the engine compartment. The combustion air is aspirated from the engine compartment and the exhaust gas is directed through the transom to the outside. Here, too, the fresh air is aspirated from the outside. The aspirated air is heated by the heater's convector and is fed to the salon and cabins or pantry via a hose system.

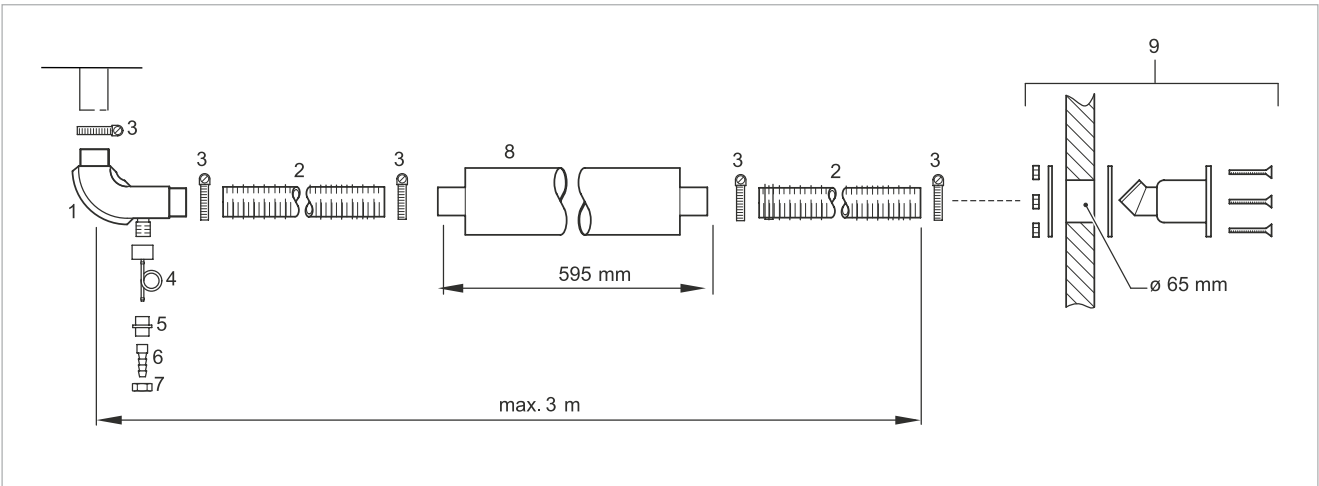
## D8 LC AIR HEATER

### EXAMPLE OF COMBUSTION AIR SYSTEM:



NO.	DESCRIPTION
1	Flexible pipe $\varnothing$ 30 mm
2	Hose clip
3	Hull fitting for combustion air

### EXAMPLE OF EXHAUST SYSTEM:



NO.	DESCRIPTION
1	Exhaust elbow $\varnothing$ 42 mm / 40 mm with drainage
2	Flexible spiral tube $\varnothing$ 40 mm
3	Pipe clip
4	Condensate drainage
5	Fitting

NO.	DESCRIPTION
6	Hose nipple
7	Union nut
8	Flexible exhaust silencer
9	Hull fitting

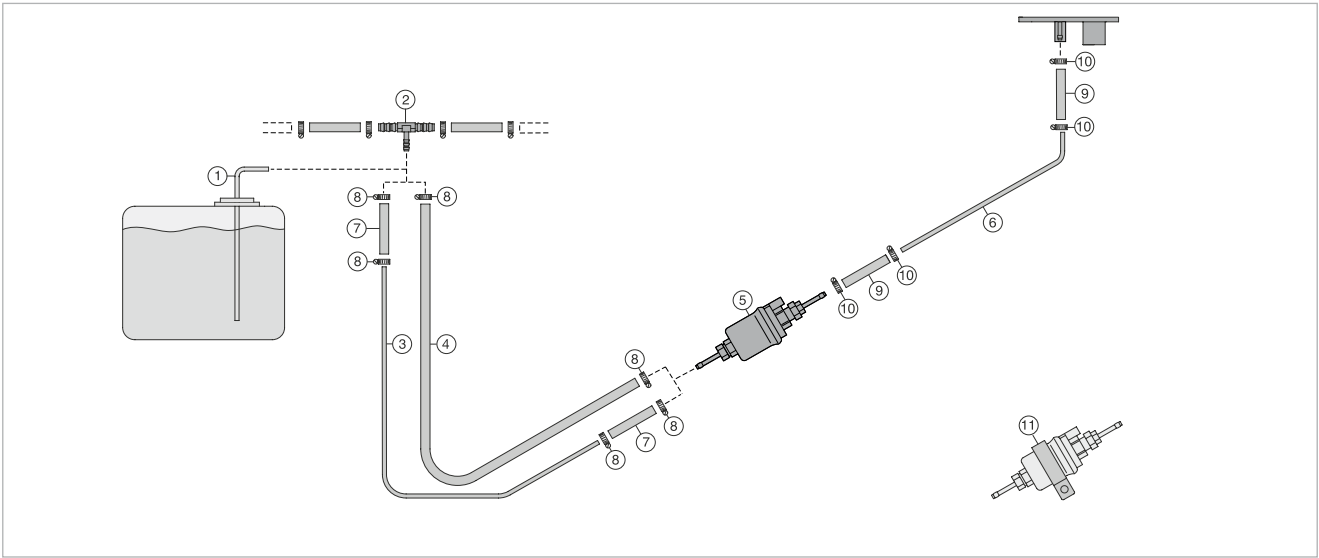
# PRODUCT INFORMATION

## FUEL SUPPLY:

In most cases, it is advisable to facilitate fuel extraction with a separate tank connection, integrated in the fuel tank (metal tank only). If a separate connection cannot be installed in the fuel tank, fuel is extracted by integrating a T-piece in the fuel flow pipe from the fuel tank to the engine.

## PLEASE NOTE:

- All specifications, especially the safety instructions in the Technical Description for this chapter, must be complied with. The Technical Description is supplied with each heater.
- If other parts are required for the fuel supply, please refer to the product overview or the appropriate spare parts lists.
- Fuel hoses in engine compartments must be fire-resistant to DIN EN ISO 7840.



NO.	DESCRIPTION
1	Tank connection $\varnothing = 4\text{ mm}$
2	T-piece
3	Fuel pipe 6 mm x 1 mm ( $\varnothing = 4\text{ mm}$ ), plastic or metal, available from specialist stores
4	Fuel hose 5 mm x 3 mm ( $\varnothing = 5\text{ mm}$ )
5	Metering pump
6	Fuel pipe 4 mm x 1 mm ( $\varnothing = 2\text{ mm}$ ), plastic or metal
7	Fuel hose 5 mm x 3 mm ( $\varnothing = 5\text{ mm}$ ), approx. 50 mm long
8	Hose clip $\varnothing 11\text{ mm}$
9	Fuel hose 3.5 mm x 3 mm ( $\varnothing = 3.5\text{ mm}$ ), approx. 50 mm long
10	Hose clip $\varnothing 9\text{ mm}$
11	Rubber holder for metering pump

Fuel connection kit to DIN EN ISO 7840	
Not illustrated	The fuel connection kit for boats contains:
	2 fire-resistant hoses $\varnothing = 3.5\text{ mm}$ , approx. 50 mm long
	2 fire-resistant hoses $\varnothing = 5\text{ mm}$ , approx. 50 mm long
	4 hose clips $\varnothing 12\text{ mm}$
	4 hose clips $\varnothing 14\text{ mm}$
Length of lines	
	Intake line = max. 2 m
	Pressure line = max. 6 m

## MARINE KIT FOR AIR HEATERS



NO.	DESCRIPTION
1	Holder, heater (stainless steel)
2	Elbow for exhaust pipe
3	Exhaust silencer
4	Hull fitting
5	Combustion air silencer
6	Fastening parts
7	Lead harness, 10 m length
8	Connecting parts, fuel
9	Fastening parts, exhaust system
10	Fuel tank extractor
11	Holder, metering pump
12	Fixing bracket
13	Fuel hose
14	Fuel pipe
15	Room temperature sensor
16	Fastening parts, air system
17	EasyStart Timer*
18	EasyStart Select*

\* A choice of EasyStart Select or EasyStart Timer control elements is available with specific marine kits for each model

Item	Voltage
Marine kit for Airtronic D2	12 / 24 V
Marine kit for Airtronic D4 Plus	12 / 24 V
Marine kit for Airtronic D5	12 / 24 V

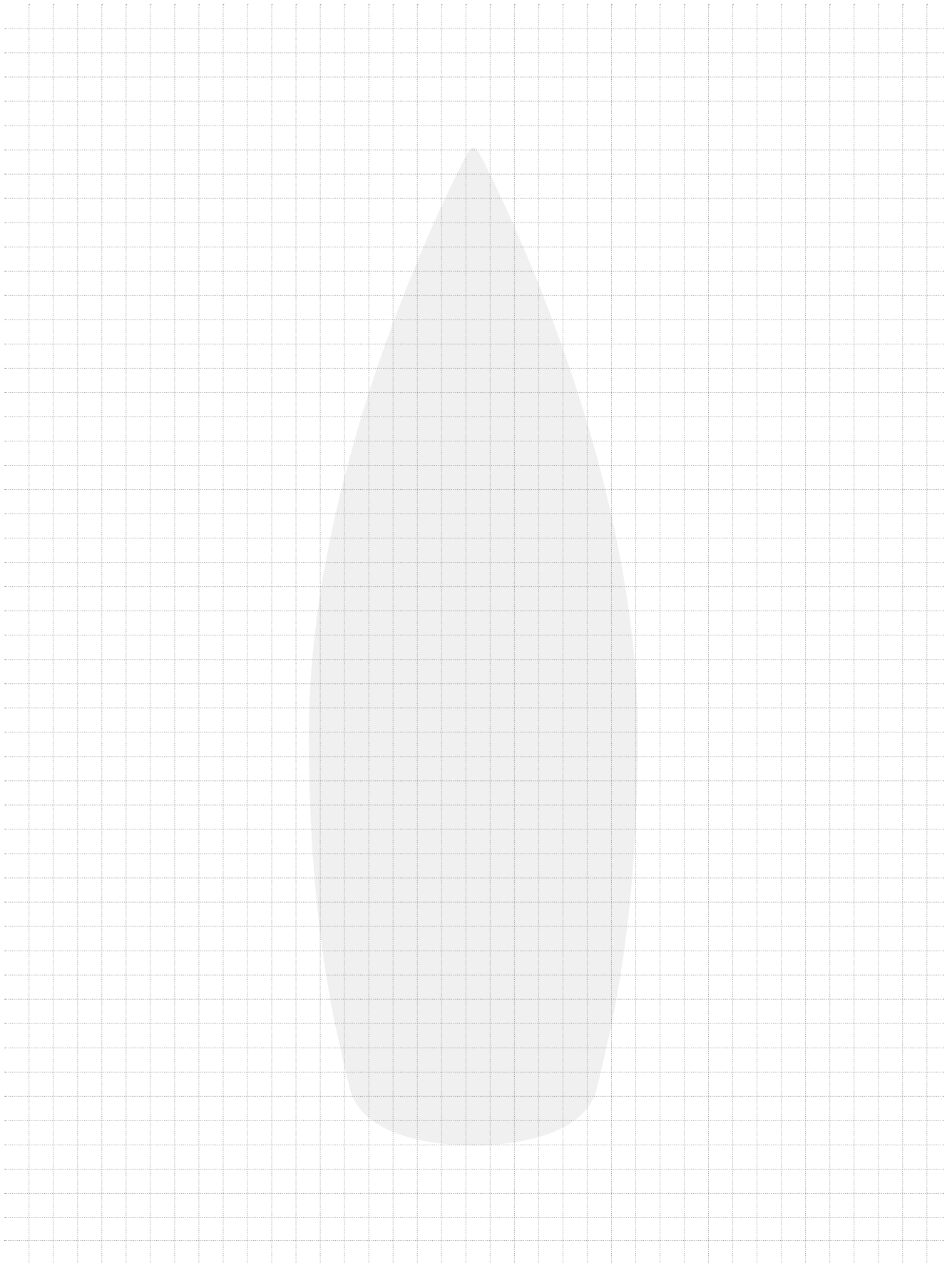
Airtronic D4 is designed for hot air distribution with a  $\varnothing$  of 90 mm.  
Airtronic D4 Plus is designed for hot air distribution with a  $\varnothing$  of 75 mm.

**PLEASE NOTE:**  
Each installation is different, especially as far as the hot air distribution is concerned. Therefore, the marine kits do not contain any parts required for this.

NOTE: You can find more detailed information on the Eberspächer service portal, [www.eberspacher-marine.de](http://www.eberspacher-marine.de), in the Marine brochure, in the product overview or the spare parts list.



## NOTES



## AN INTRODUCTION TO WATER HEATERS

Every skipper would love to equip his boat with a heating system. The more often and longer the boat is used, the more facts speak in favor of a water heater system.

### ADVANTAGES:

- Uniform heating output, infinitely variable control, low noise levels.
- Can be combined with an existing water circuit – if the engine has dual-circuit cooling. In this case, heat from the engine can be used for heating and, conversely, the engine can be preheated.
- Tap water can be heated.
- Heat is transported through pipes with significantly smaller diameters than for air.
- Level of comfort comparable to central heating.

### THE BEST INSTALLATION LOCATION:

In most cases, water heaters are installed in the engine compartment. The boiler is also situated there. Furthermore, the required safety equipment (pressure expansion tank, safety valve, pressure gage, float vent, draining/filling tap) can also be housed here.

Certain important points must be clarified before a water heater is installed:

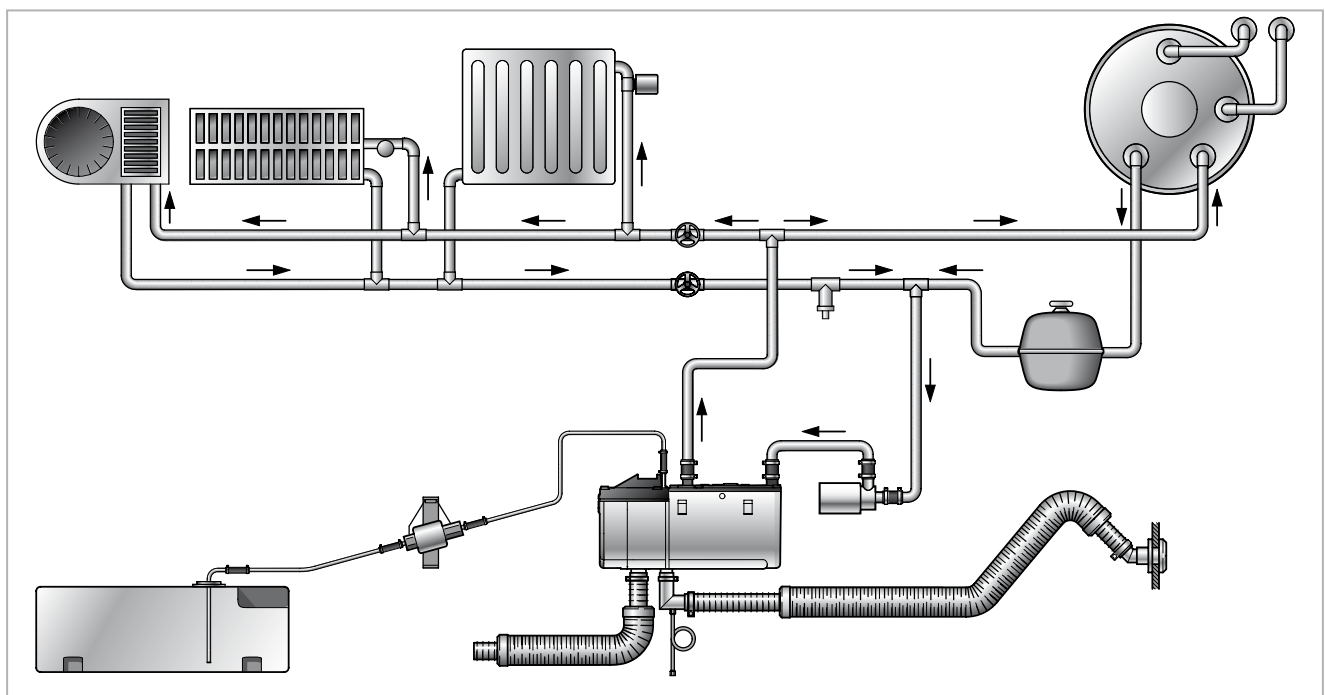
- Required heat? The size of the heater is chosen based on this.
- Basic plan of the water circuit: How are the heater, boiler, radiator and, if applicable, the engine, connected to the pipe system?

- Selection and dimensions of radiators.
- Dimensions of the pipe system: is the water pump output sufficient? CAN THE ENGINE BE INTEGRATED IN THE WATER CIRCUIT? (Only possible with dual-circuit cooling.)

There are various options for connecting the boiler and radiators: The simplest option is operating the boiler and radiators in parallel, as shown in the diagram. The water flows from the heater to the T-piece. It then divides and flows to the boiler and the radiators. It is collected in the return line and flows back to the heater = dual branch system (feed line and return line). The large control range of the heaters is particularly efficient. If only the boiler is to be heated, the heaters work on "low" and then switch to "high" when the radiators take up more heat. As the boiler pipe is always open, the minimum circulation volume is always guaranteed, even if the radiator valves cut the volume back significantly due to a low heat requirement.

Boilers used for sports boats take up 1 to 2 kW of the heating output. For this reason, it is not possible to use the entire heater output to heat the boiler alone.

### WATER CIRCUIT:



### SELECTION AND DIMENSIONS OF RADIATORS:

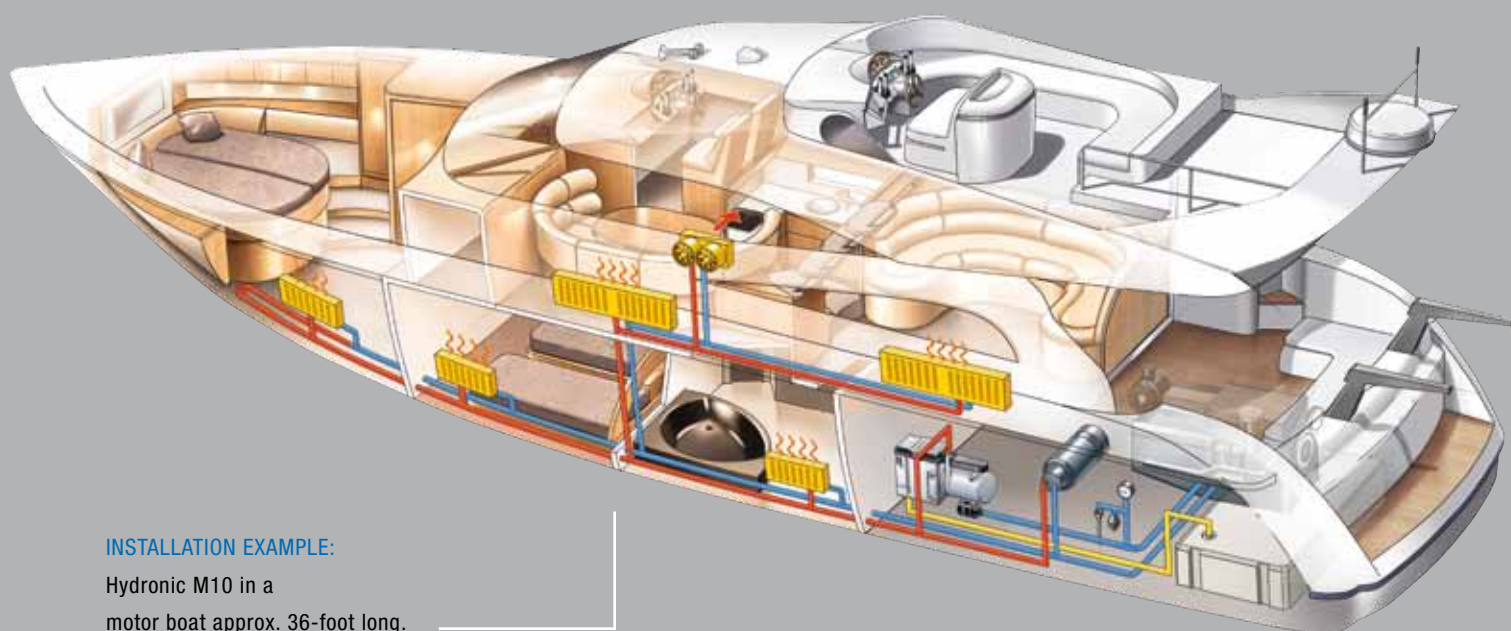
The space available must always be taken into consideration, not only when retrofitting. Practically speaking, only panel-type radiators and convectors come into question. Material: Stainless steel, aluminum or non-ferrous metal. Technical documentation on radiators is available from specialist heating stores. If at all possible, a radiator with a fan should be installed. It takes up the least space and heats up the room quickly. This is especially important at the helm in order to stop the windows from frosting/misting.

### CAN THE ENGINE BE INTEGRATED IN THE WATER CIRCUIT?

The heating system allows the engine to be integrated in the heating circuit, so that the engine heat can be used for heating, and for preheating the engine with the heating system. This is not possible with a single-circuit cooling system, where seawater flows directly through the engine. With the dual-circuit cooling system, the engine's cooling ducts are part of a closed cooling system, in which coolant with corrosion proofing circulates. The cold seawater in the outer circuit is fed to a convector. Here, the water cools the inner circuit. The seawater is then returned to the sea and therefore never comes into direct contact with the engine's cooling ducts or the heating circuit.

### MORE IMPORTANT INFORMATION:

- **Preventing corrosion** – Oxygen in the heating system presents a high risk. It causes corrosion, especially if different materials are combined, e.g. steel or aluminum radiators and copper pipes. The system should therefore be bled carefully. However, this would all be to no effect if the system is drained before each winter and then filled with fresh water again before the new season starts. Therefore, leave the water in the heating system and add anti-freeze, even if your boat is not used all year round (see general installation instructions for the heaters).
- **Thermal expansion** – Pipes expand when heated. They must therefore not be fixed rigidly and they must be able to move at the fastening points (clip with rubber pad). Furthermore, expansion elbows have been provided to prevent excessive thermal stress.
- **General** – Instructions on installation, the exhaust system, combustion air system, fuel, supply, electrical wiring and operation are included in the installation instructions supplied with every heater.



### INSTALLATION EXAMPLE:

Hydronic M10 in a motor boat approx. 36-foot long.

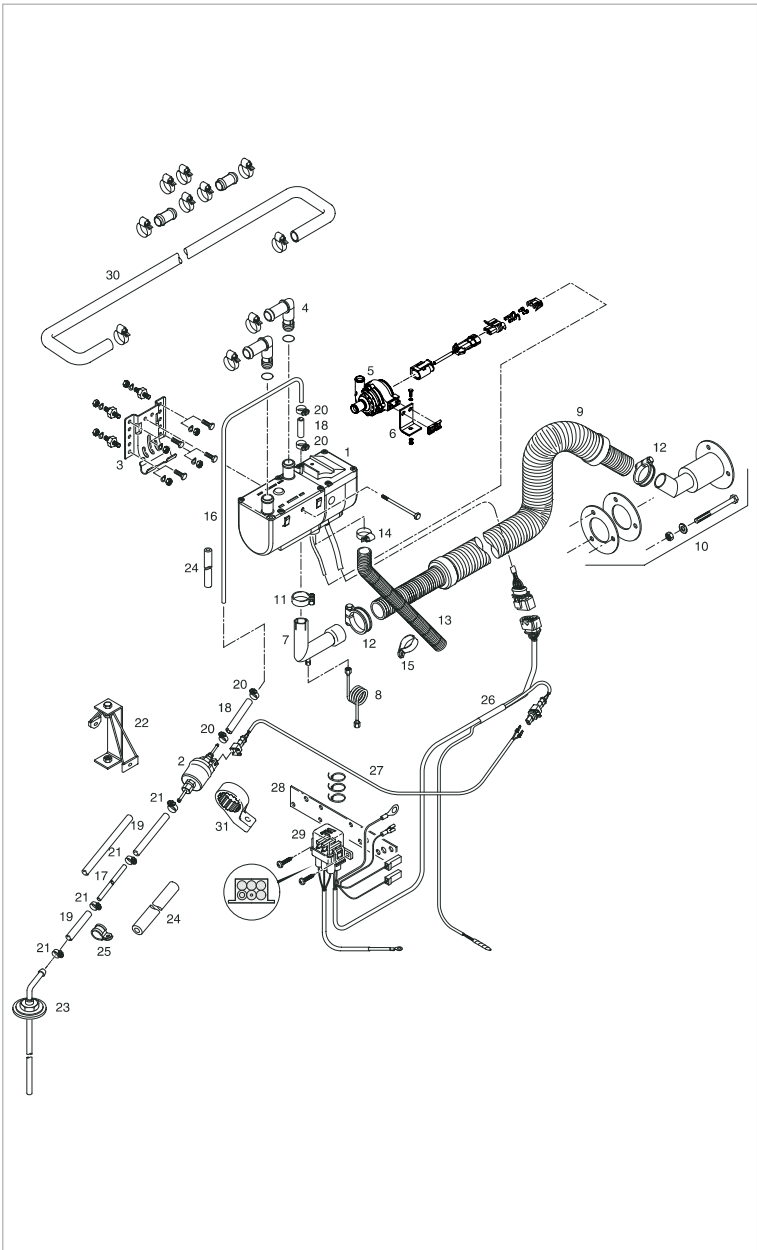
# HYDRONIC

## TECHNICAL DATA



Diesel version		Hydronic D 5W S	
Voltage	V	12	24
Heating output	W	2,400 / 5,000	2,400 / 5,000
Minimum water throughput	l/h	250	250
Electricity consumption in operation	W	10 / 37	10 / 37
Fuel consumption	l/h	0.27 / 0.62	0.27 / 0.62
Dimensions L x W x H	mm	220 x 86 x 101.5	220 x 86 x 101.5
Weight	kg	2.3	2.3

## RECOMMENDED PARTS FOR INSTALLATION:



1	Hydronic D 5W S heater
2	Metering pump
3	Heater holder
4	Water pipe sockets, angled
5	Water pump
6	Holder for water pump
7	Exhaust pipe elbow with drainage ø 24 mm / 30 mm
8	Condensate drain
9	Exhaust silencer
10	Hull fitting
11	Pipe clip
12	Pipe clip (2 x)
13	Combustion air silencer
14	Hose clip ø 20 mm / 32 mm
15	Hose clip ø 20 mm
16	Pipe 4 mm x 1.25 mm
17	Pipe 6 mm x 2 mm
18	Hose 3.5 mm x 3 mm
19	Hose 5 mm x 3 mm
20	Hose clip ø 9 mm (4 x)
21	Hose clip ø 11 mm (4 x)
22	Holder, metering pump
23	Tank connection
24	Foam rubber hose
25	Pipe clip ø 10 mm
26	Lead harness
27	Cable bar, metering pump
28	Bracket for fuse holder
29	Fuse holder, triple
30	Water hose
31	Rubber holder, metering pump

## PRODUCT INFORMATION

### HEATER SCOPE OF DELIVERY:

- Hydronic D 5W S heater
- Metering pump
- Water pump
- Holder for water pump
- Adapter cable

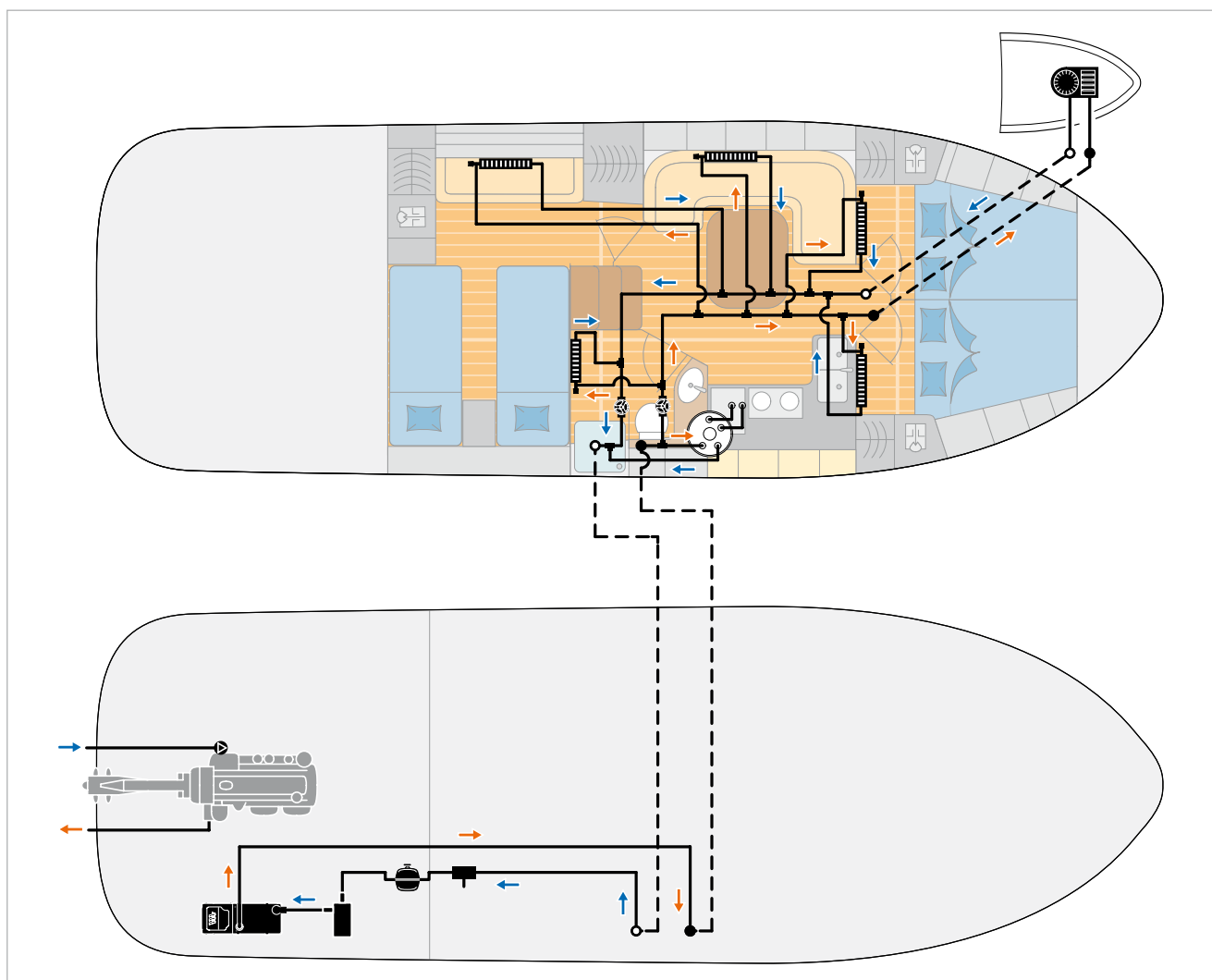
### The following must be ordered in addition:

- Exhaust and combustion air system parts
- Control element
- Fastening parts
- Fuel system parts
- Electrical components
- Water system parts

**MARINE KIT:** See page 50

*NOTE: You can find more detailed information on the Eberspächer service portal, [www.eberspacher-marine.de](http://www.eberspacher-marine.de), in the Marine brochure, in the product overview or the spare parts list.*

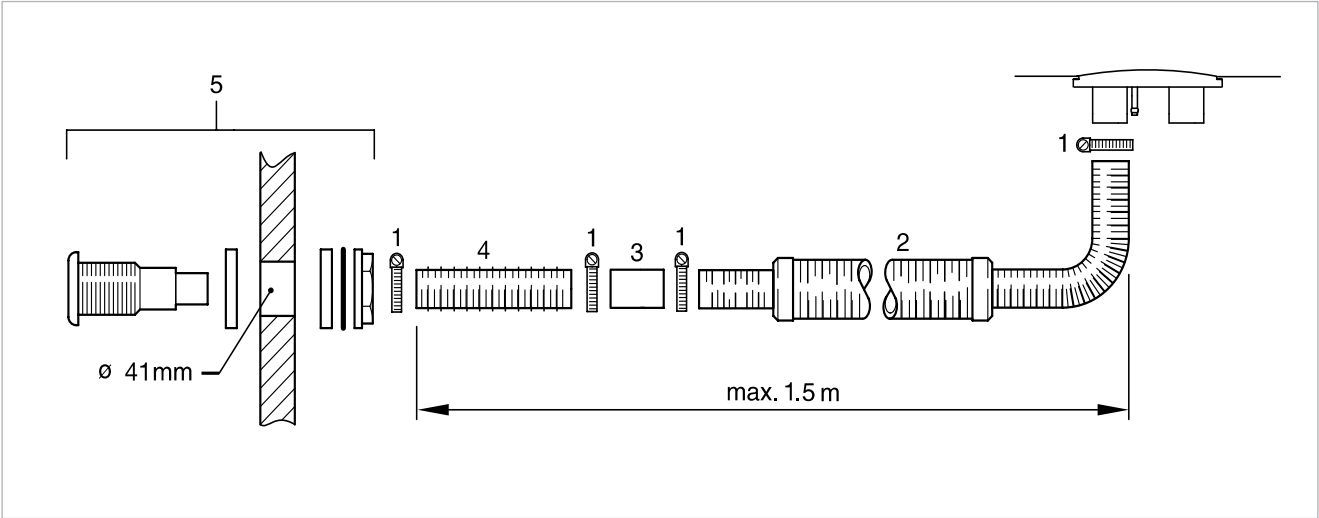
### INSTALLATION EXAMPLES:



In motor boats, ideally the heater is installed in the engine compartment. The combustion air is aspirated from the engine compartment and the exhaust gas is directed outside via a hull fitting. The cold water is pumped by a water pump through the heater's convector. The heated water flows through a pipe system, and the various rooms are heated by convectors, radiators and panel radiators. A connected boiler can supply water for the shower and pantry.

# HYDRONIC

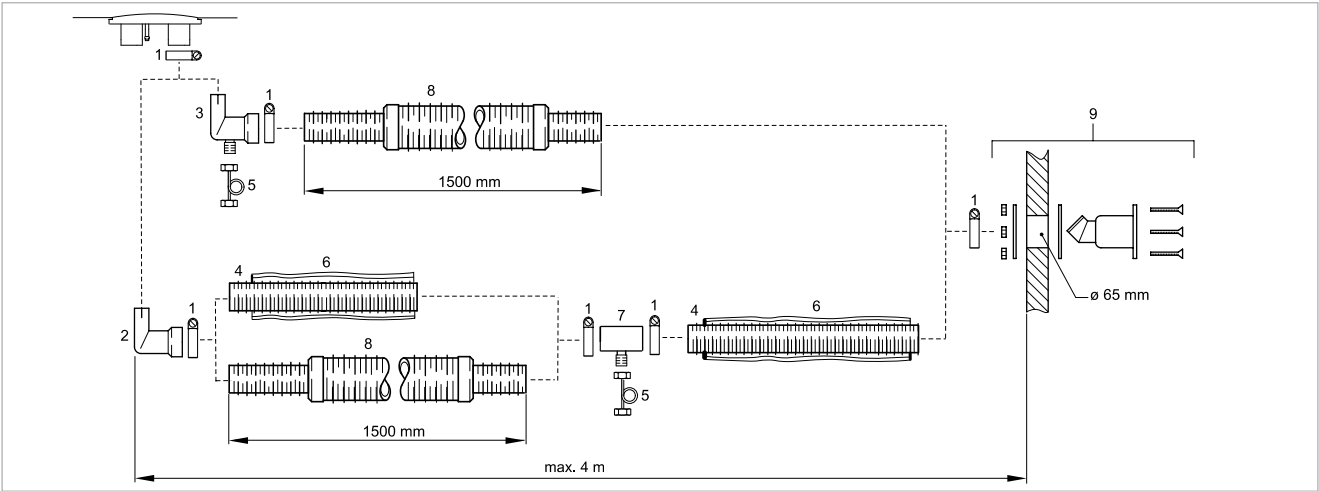
## EXAMPLE OF COMBUSTION AIR SYSTEM:



NO.	DESCRIPTION
1	Hose clip
2	Silencer for combustion air
3	Hose connecting tube Ø 25 mm

NO.	DESCRIPTION
4	Flexible pipe Ø 25 mm
5	Hull fitting for combustion air

## EXAMPLE OF EXHAUST SYSTEM:



NO.	DESCRIPTION
1	Pipe clip
2	Exhaust pipe elbow Ø 24 mm / 30 mm
3	Exhaust pipe elbow Ø 24 mm / 30 mm with drainage
4	Flexible spiral tube Ø 30 mm
5	Condensate drain

NO.	DESCRIPTION
6	Exhaust insulation
7	Adapter Ø 30 mm with drainage
8	Flexible exhaust silencer
9	Hull fitting



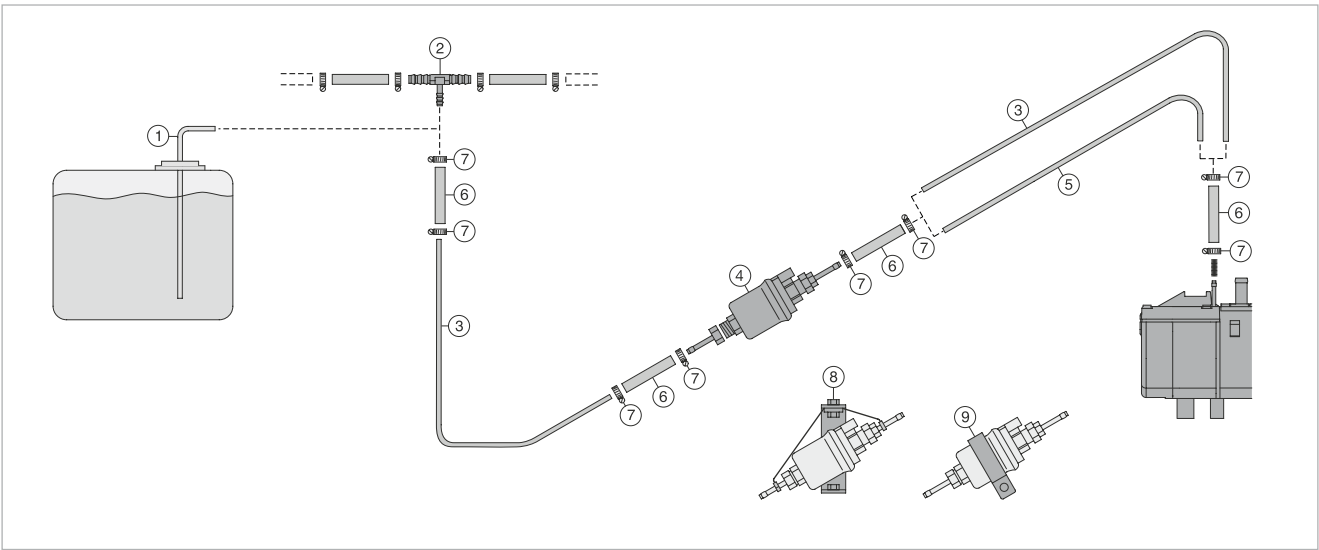
# PRODUCT INFORMATION

## FUEL SUPPLY:

In most cases, it is advisable to facilitate fuel extraction with a separate tank connection, integrated in the fuel tank (metal tank only). If a separate connection cannot be installed in the fuel tank, fuel is extracted by integrating a T-piece in the fuel flow pipe from the fuel tank to the engine.

## PLEASE NOTE:

- All specifications, especially the safety instructions in the Technical Description for this chapter, must be complied with. The Technical Description is supplied with each heater.
- If other parts are required for the fuel supply, please refer to the product overview or the appropriate spare parts lists.
- Fuel hoses in engine compartments must be fire-resistant to DIN EN ISO 7840.



NO.	DESCRIPTION
1	Tank connection $\varnothing = 2 \text{ mm}$
2	T-piece
3	Fuel pipe 4 mm x 1 mm ( $\varnothing = 2 \text{ mm}$ ), plastic or metal
4	Metering pump
5	Fuel pipe 4 mm x 1.25 mm ( $\varnothing = 1.5 \text{ mm}$ ), plastic
6	Fuel hose 3.5 mm x 3 mm ( $\varnothing = 3 \text{ mm}$ ), approx. 50 mm long
7	Hose clip $\varnothing 9 \text{ mm}$
8	Suspension for metering pump
9	Rubber holder for metering pump

Fuel connection kit to DIN EN ISO 7840	
Not illustrated	The fuel connection kit for boats contains:
	2 fire-resistant hoses $\varnothing = 3.5 \text{ mm}$ , approx. 50 mm long
	2 fire-resistant hoses $\varnothing = 5 \text{ mm}$ , approx. 50 mm long
	4 hose clips $\varnothing 12 \text{ mm}$
	4 hose clips $\varnothing 14 \text{ mm}$
Length of lines	
	Intake line = max. 2 m
	Pressure line = max. 6 m

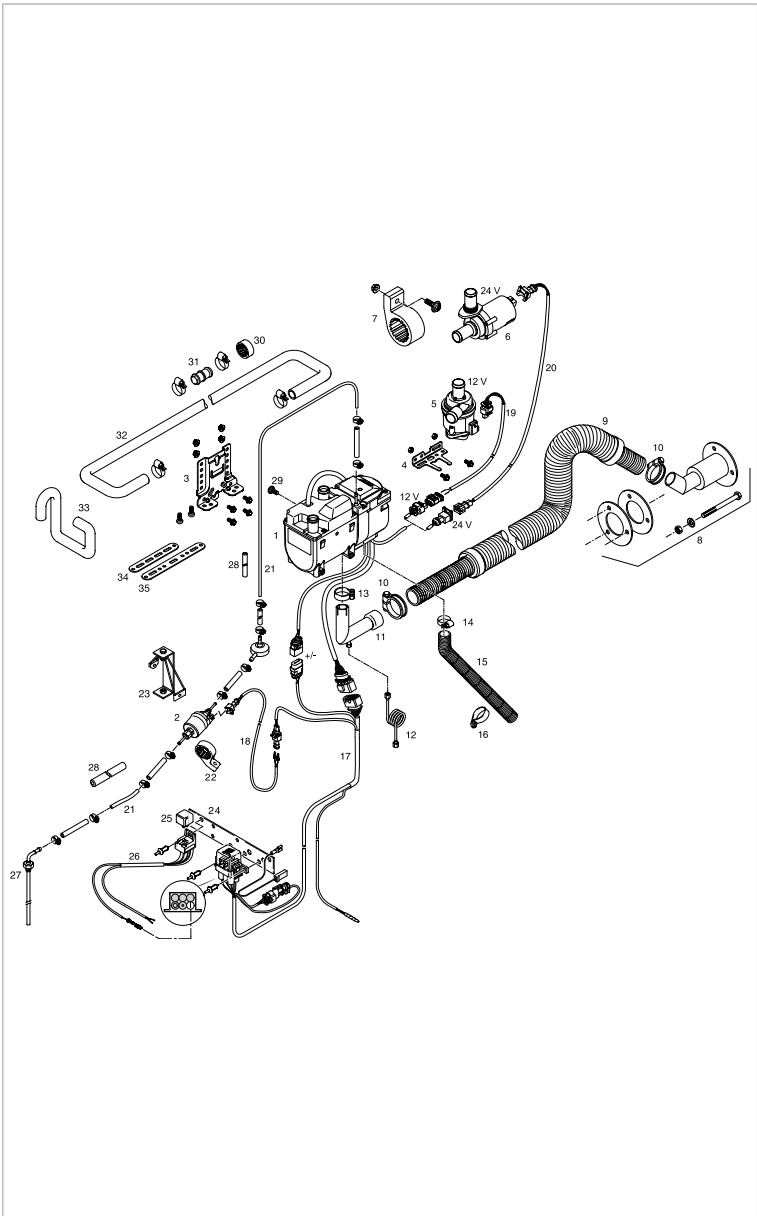
# HYDRONIC 2



## TECHNICAL DATA

Diesel version		Hydronic 2 Economy
Voltage	V	12
Heating output	W	2,100 / 5,000 / 5,200
Minimum water throughput	l/h	250
Electricity consumption in operation	W	12 / 37 / 40
Fuel consumption	l/h	0.26 / 0.61 / 0.64
Dimensions L x W x H	mm	214 x 86 x 139
Weight	kg	2.4

## RECOMMENDED PARTS FOR INSTALLATION:



1	Hydronic 2 Economy heater
2	Metering pump
3	Heater bracket
4	Bracket for 12 V water pump
5	12 V water pump
6	24 V water pump
7	Bracket for 24 V water pump
8	Hull fitting
9	Exhaust silencer
10	Pipe clip
11	Exhaust pipe elbow $\varnothing$ 24 mm / 30 mm
12	Condensate drain
13	Pipe clip
14	Hose clip
15	Combustion air silencer
16	Hose clip $\varnothing$ 2 mm
17	Lead harness
18	Lead harness, metering pump
19	Lead harness for WP 12 V
20	Lead harness for WP 24 V
21	Fuel pipe
22	Bracket, metering pump
23	Bracket, metering pump (installing into a boat/camper van)
24	Bracket for fuse holder
25	Fan relay
26	Lead harness, fan
27	Fuel tank extractor
28	Foam rubber hose
29	Screw, M6 x 17, self-tapping
30	Spacer
31	Connector, water hose
32	Water hose
33	All-purpose water hose
34	Perforated tape, short
35	Perforated tape, long

## PRODUCT INFORMATION

### HEATER SCOPE OF DELIVERY:

#### Hydronic 2 Economy heater

- Metering pump
- Water pump

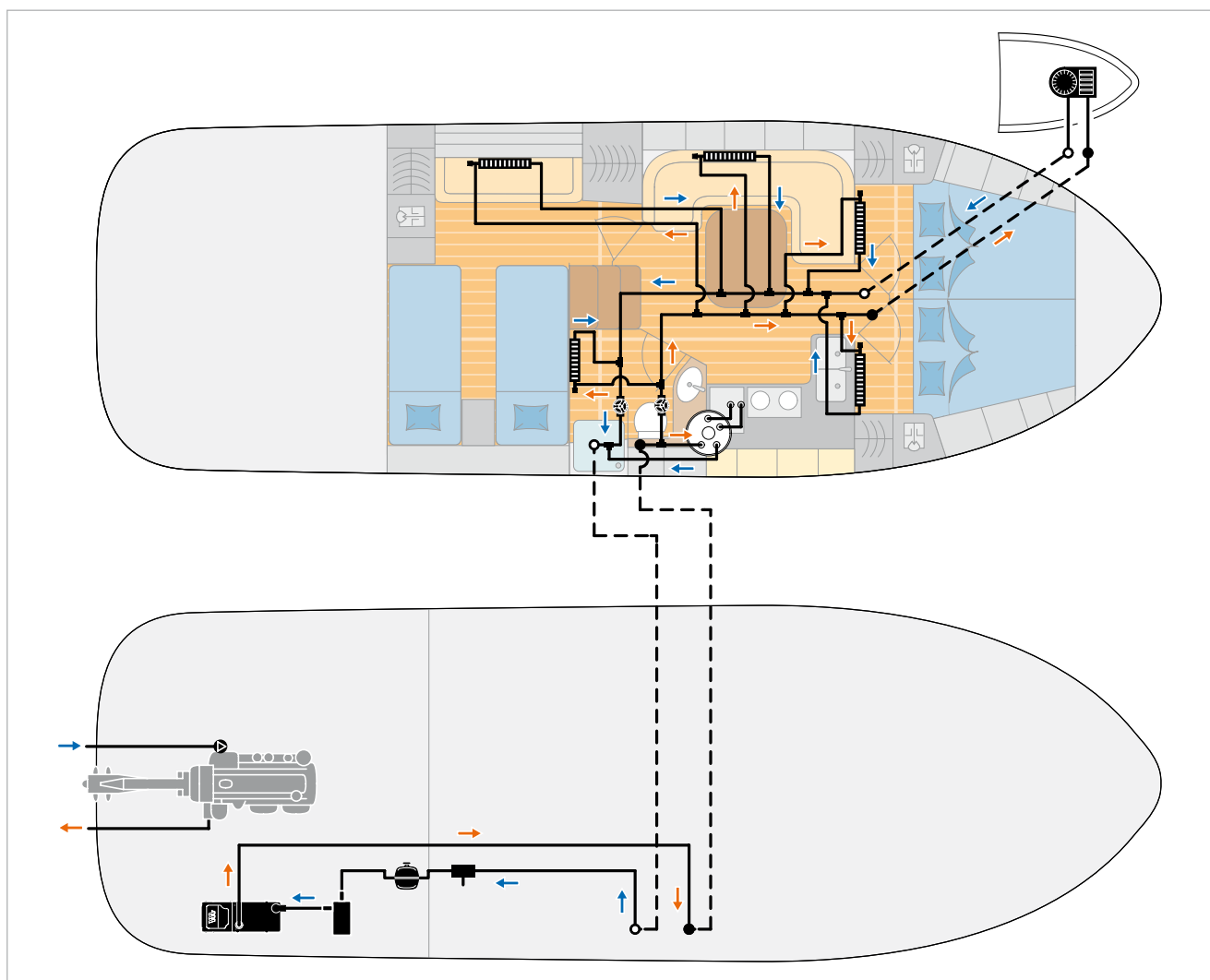
#### The following must be ordered in addition:

- Exhaust and combustion air system parts
- Control element
- Fastening parts
- Fuel system parts
- Electrical components
- Water system parts

**MARINE KIT:** See page 50

*NOTE: You can find more detailed information on the Eberspächer service portal, [www.eberspacher-marine.de](http://www.eberspacher-marine.de), in the Marine brochure, in the product overview or the spare parts list.*

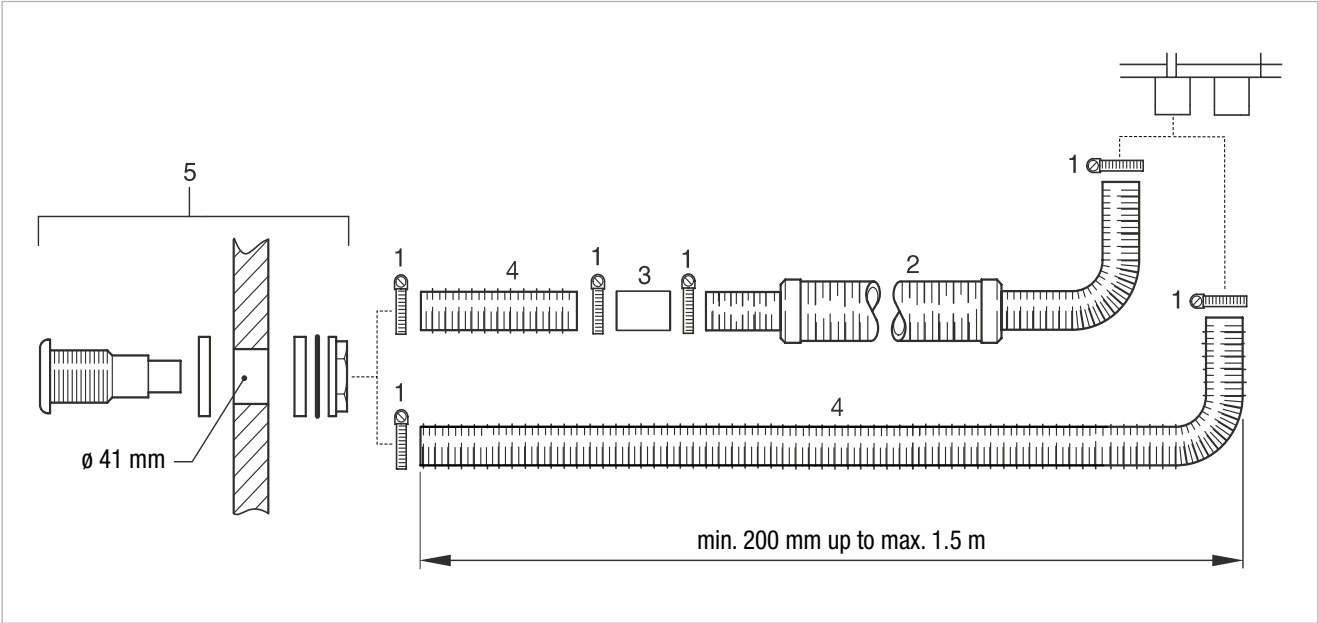
### INSTALLATION EXAMPLES:



In motor boats, ideally the heater is installed in the engine compartment. The combustion air is aspirated from the engine compartment and the exhaust gas is directed outside via a hull fitting. The cold water is pumped by a water pump through the heater's convector. The heated water flows through a pipe system, and the various rooms are heated by convectors, radiators and panel radiators. A connected boiler can supply water for the shower and pantry.

## HYDRONIC 2

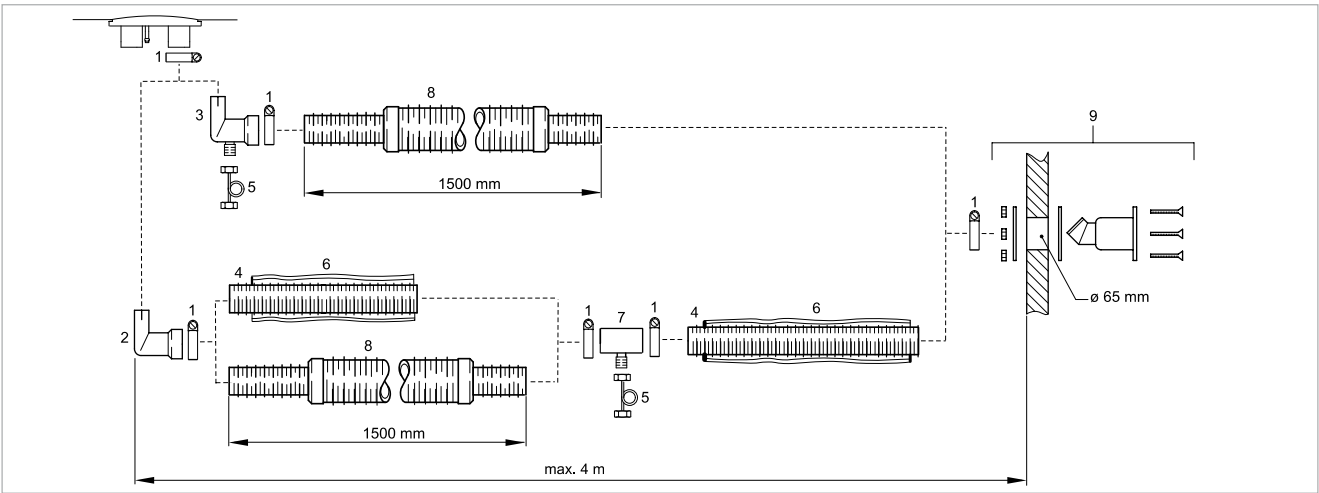
### EXAMPLE OF COMBUSTION AIR SYSTEM:



NO.	DESCRIPTION
1	Hose clip
2	Silencer for combustion air
3	Hose connecting tube ø 25 mm

NO.	DESCRIPTION
4	Flexible pipe ø 25 mm
5	Hull fitting for combustion air

### EXAMPLE OF EXHAUST SYSTEM:



NO.	DESCRIPTION
1	Pipe clip
2	Exhaust pipe elbow ø 24 mm / 30 mm
3	Exhaust pipe elbow ø 24 mm / 30 mm with drainage
4	Flexible spiral tube ø 30 mm
5	Condensate drain

NO.	DESCRIPTION
6	Exhaust insulation
7	Adapter ø 30 mm with drainage
8	Flexible exhaust silencer
9	Hull fitting

# PRODUCT INFORMATION

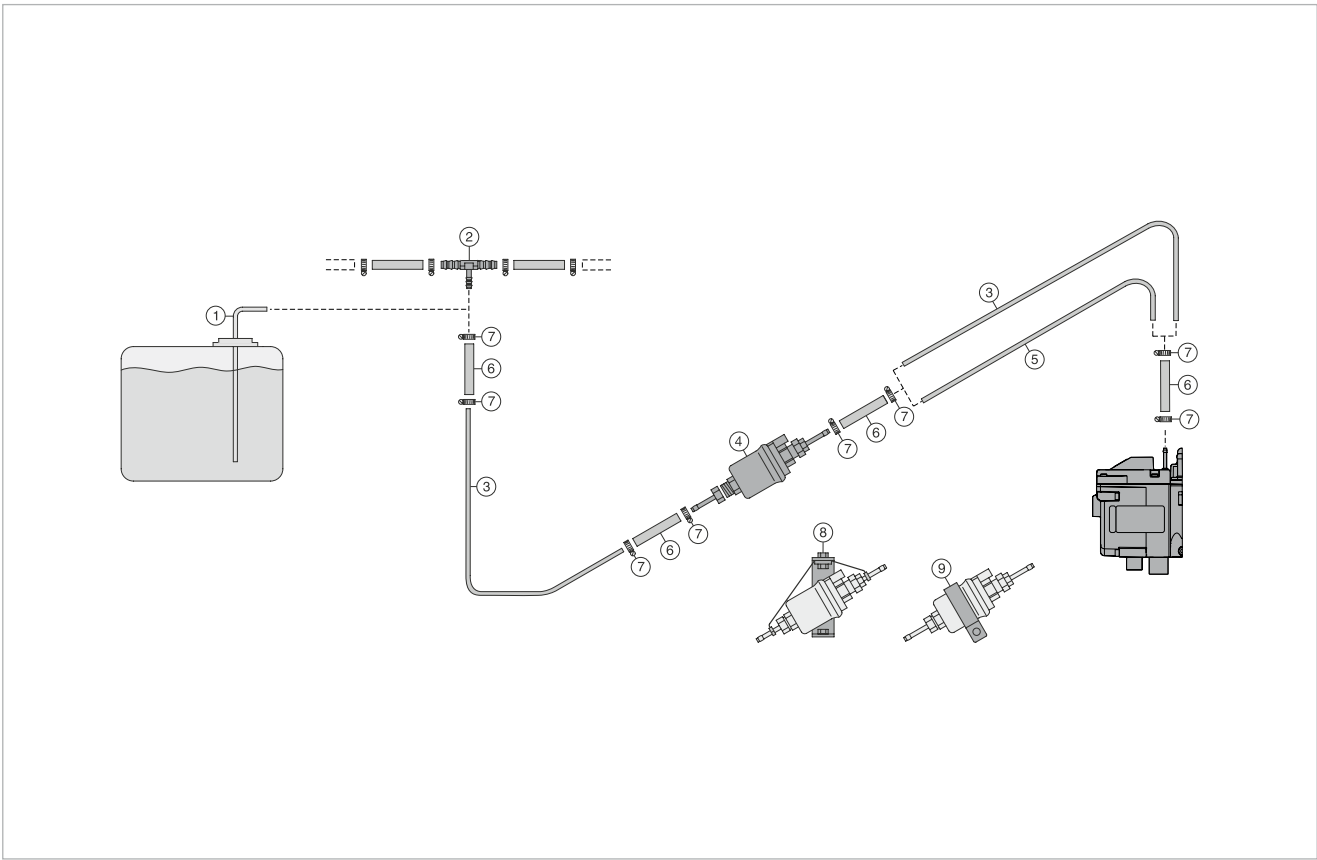
## FUEL SUPPLY:

In most cases, it is advisable to facilitate fuel extraction with a separate tank connection, integrated in the fuel tank (metal tank only). If a separate connection cannot be installed in the fuel tank, fuel is extracted by integrating a T-piece in the fuel flow pipe from the fuel tank to the engine.

## PLEASE NOTE:

- All specifications, especially the safety instructions in the Technical Description for this chapter, must be complied with. The Technical Description is supplied with each heater.
- If other parts are required for the fuel supply, please refer to the product overview or the appropriate spare parts lists.
- Fuel hoses in engine compartments must be fire-resistant to DIN EN ISO 7840.

## HYDRONIC 2 ECONOMY:



NO.	DESCRIPTION
1	Tank connection $\varnothing = 2\text{ mm}$
2	T-piece
3	Fuel pipe 4 mm x 1 mm ( $\varnothing = 2\text{ mm}$ ), plastic or metal
4	Metering pump
5	Fuel pipe 4 mm x 1.25 mm ( $\varnothing = 1.5\text{ mm}$ ), plastic
6	Fuel hose 3.5 mm x 3 mm ( $\varnothing = 3.5\text{ mm}$ ), approx. 50 mm long
7	Hose clip $\varnothing 9\text{ mm}$
8	Suspension for metering pump
9	Rubber holder for metering pump
10	Pulsation damper

Fuel connection kit to DIN EN ISO 7840	
Not illustrated	The fuel connection kit for boats contains:
	2 fire-resistant hoses $\varnothing = 3.5\text{ mm}$ , approx. 50 mm long
	2 fire-resistant hoses $\varnothing = 5\text{ mm}$ , approx. 50 mm long
	4 hose clips $\varnothing 12\text{ mm}$
	4 hose clips $\varnothing 14\text{ mm}$
Length of lines	
	Intake line = max. 2 m
	Pressure line = min. 1 m to max. 6 m

## HYDRONIC M8 / M10 / M12

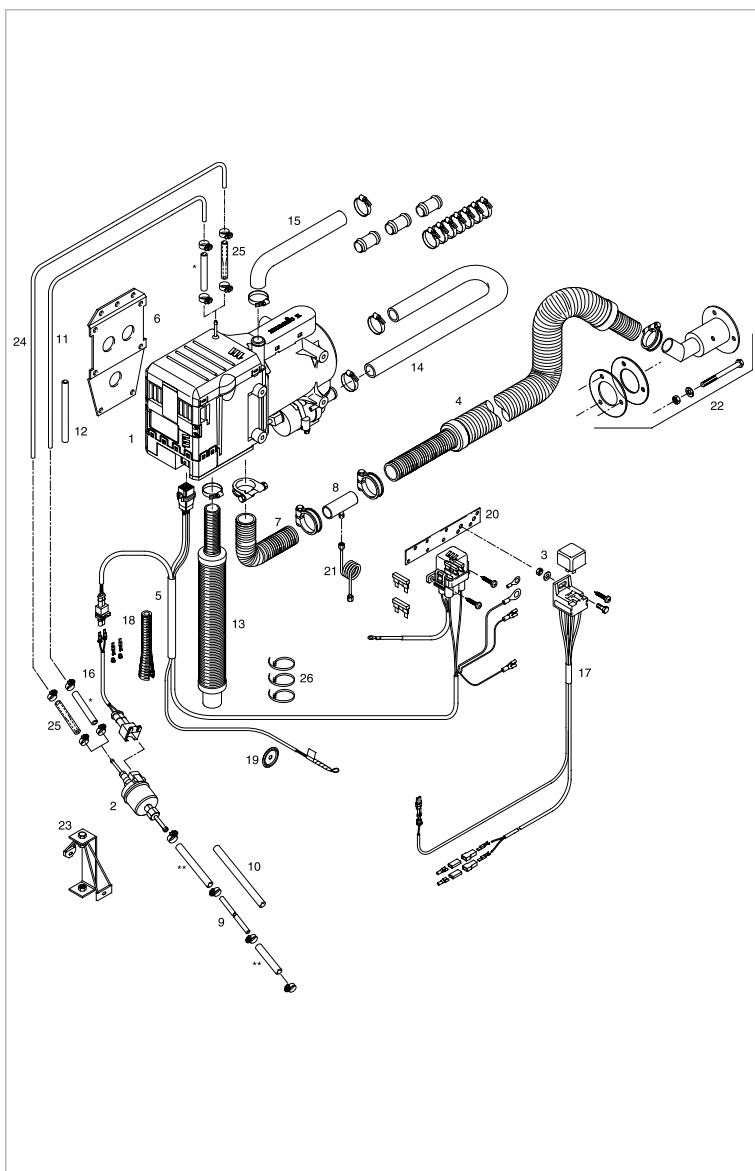


## TECHNICAL DATA

Diesel version		Hydronic M8*	Hydronic M10	Hydronic M12
Voltage	V	12 / 24	12 / 24	12 / 24
Control/heat settings		low medium high power	low medium high power	low medium 1 medium 2 medium 3 high power
Heating output	W	1,500 / 3,500 / 5,000 / 8,000	1,500 / 3,500 / 8,000 / 9,500	1,200 / 1,500 / 3,500 / 5,000 / 9,000 / 12,000
Minimum water throughput	l/h	500	500	500
Electricity consumption in operation	W	35 / 39 / 46 / 55	35 / 39 / 60 / 86	34 / 35 / 39 / 46 / 86 / 132
Fuel consumption	l/h	0.18 / 0.40 / 0.65 / 0.90	0.18 / 0.40 / 0.90 / 1.20	0.15 / 0.18 / 0.40 / 0.65 / 1.20 / 1.50
Dimensions L x W x H	mm	331 x 138 x 221	331 x 138 x 221	331 x 138 x 221
Weight	kg	6.2	6.2	6.2

\* 20 % biodiesel compatibility to FAME DIN EN 14214

### RECOMMENDED PARTS FOR INSTALLATION:



1	Hydronic M8 / M10 / M12
2	Metering pump
3	Relay 12 V / 24 V
4	Exhaust silencer
5	Lead harness, heater
6	Bracket, heater
7	Exhaust hose ø 30 mm
8	Adapter with condensate drain ø 30 mm
9	Fuel pipe ø 6 mm x 1 mm
10	Hose ø 5 mm x 3 mm
11	Fuel pipe ø 4 mm x 1 mm
12	Hose ø 3.5 mm x 3 mm
13	Intake silencer for combustion air
14	Water hose
15	Water hose
16	Lead harness, metering pump
17	Lead harness, fan
18	Protective corrugated pipe, inner ø 10 mm
19	Cable grommet
20	Fuse and relay holder
21	Condensate drain
22	Hull fitting ø 30 mm
23	Suspension, metering pump
24	Fuel pipe ø 6 mm x 1, L = 6 m (PME)
25	Adapter ø 3.5 mm / 5 mm (2 x)
26	Cable ties (10 x)



## PRODUCT INFORMATION

### HEATER SCOPE OF DELIVERY:

#### Hydronic M8 heater

- Metering pump
- Pipe  $\varnothing$  6 mm x 1 mm, length 6 m
- Adapter  $\varnothing$  3.5 mm / 5 mm (2 x)
- Hose clips  $\varnothing$  10 mm (4 x)
- Water pump

#### Hydronic M10 / M12 heater

- Metering pump
- Water pump

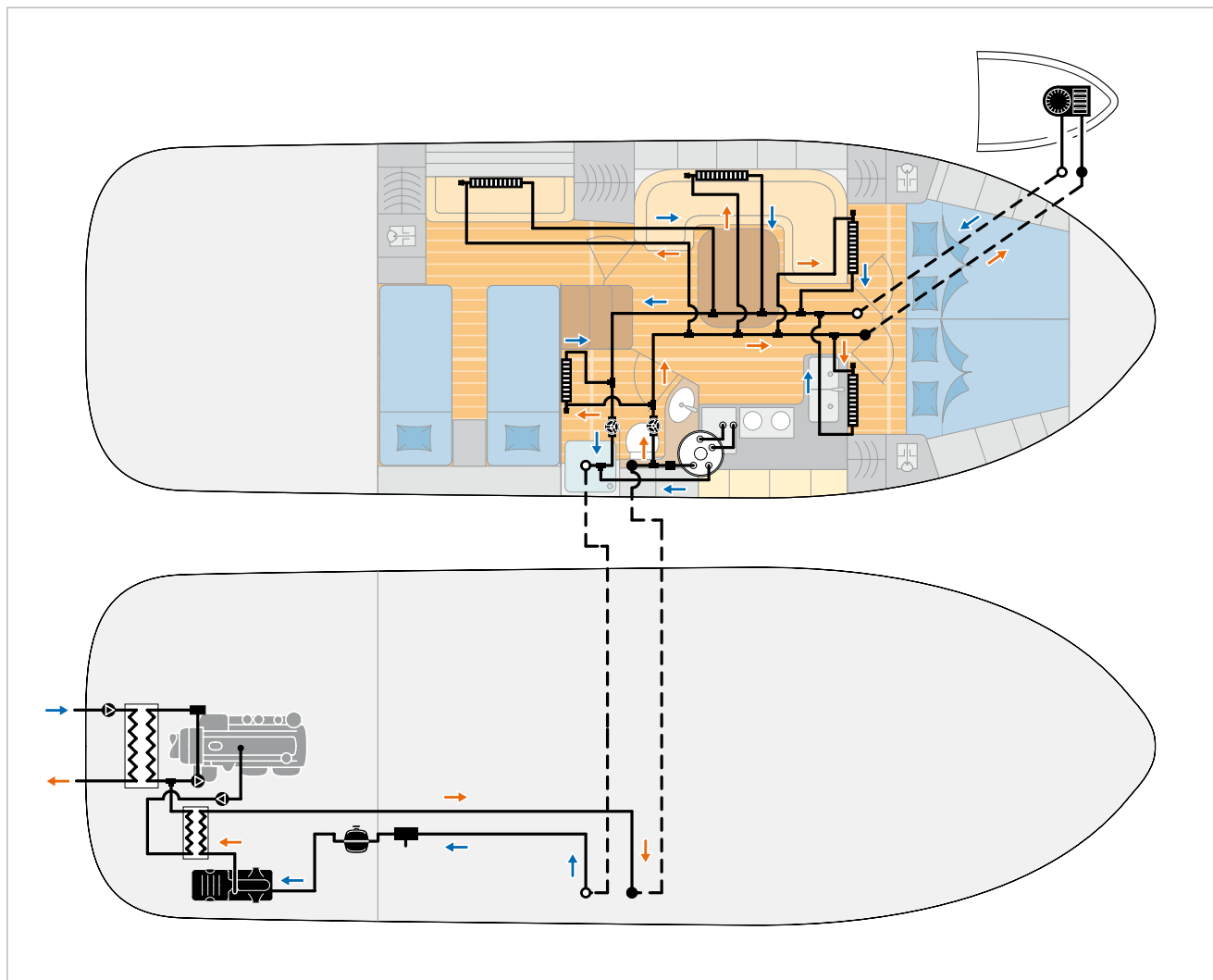
### The following must be ordered in addition:

- Exhaust and combustion air system parts
- Control element
- Fastening parts
- Fuel system parts
- Electrical components
- Water system parts

**MARINE KIT:** See page 50

*NOTE: You can find more detailed information on the Eberspächer service portal, [www.eberspacher-marine.de](http://www.eberspacher-marine.de), in the Marine brochure, in the product overview or the spare parts list.*

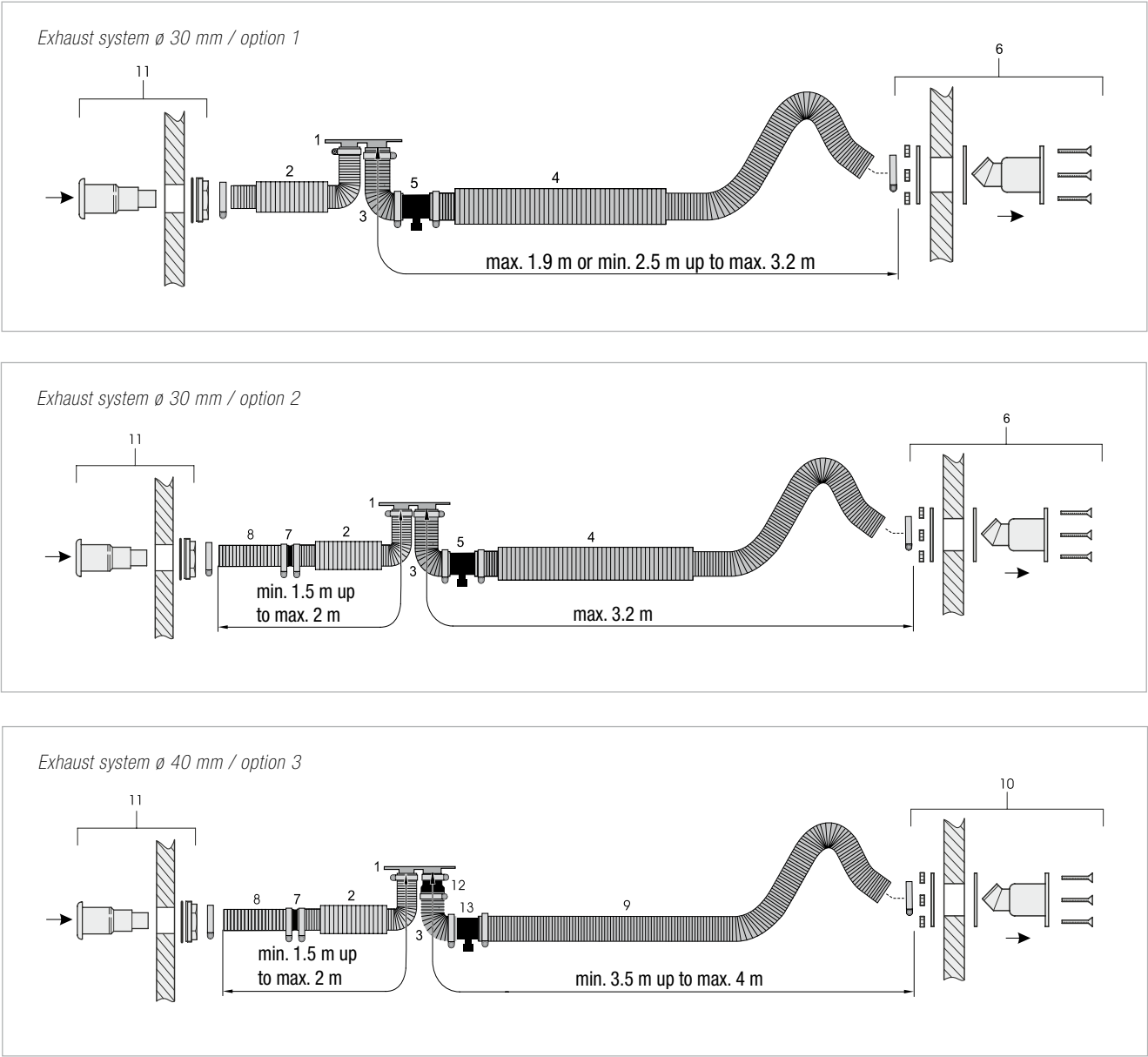
### INSTALLATION EXAMPLES:



In motor boats, ideally the heater is installed in the engine compartment. The combustion air is aspirated from the engine compartment and the exhaust gas is directed outside via a hull fitting. The cold water is pumped by a water pump through the heater's convector. The heated water flows through a pipe system, and the various rooms are heated by convectors, radiators and panel radiators. A connected boiler can supply water for the shower and pantry.

# HYDRONIC M8 / M10 / M12

## PERMITTED COMBUSTION AIR AND EXHAUST PIPE LENGTHS FOR INSTALLATION IN SHIPS AND BOATS:



NO.	DESCRIPTION
1	Heater flange
2	Intake silencer, L = 685 mm
3	Flexible exhaust pipe
4	Exhaust silencer
5	Adapter $\varnothing$ 30 mm with condensate drain, L = 1,500 mm
6	Hull fitting $\varnothing$ 30 mm
7	Connector

NO.	DESCRIPTION
8	Flexible pipe
9	Flexible exhaust pipe
10	Hull fitting for exhaust gas $\varnothing$ 40 mm
11	Hull fitting for combustion air
12*	Connection pipe $\varnothing$ 40 mm with condensate drain
13*	Adapter $\varnothing$ 30 mm / 40 mm

\* Items 12 and 13 must be manufactured in-house.

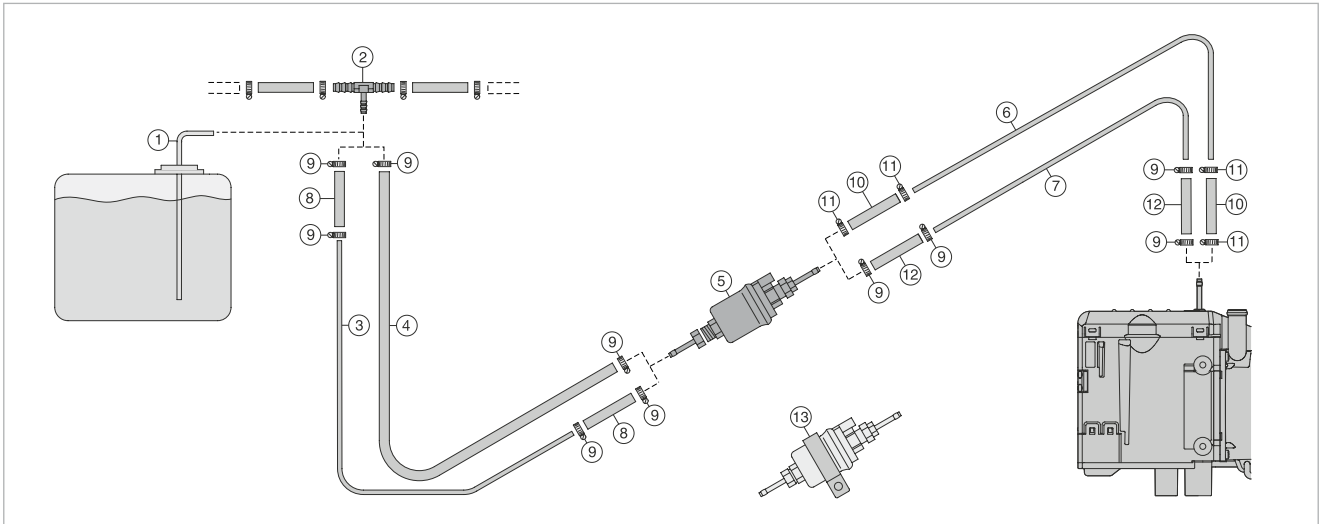
## PRODUCT INFORMATION

### FUEL SUPPLY:

In most cases, it is advisable to facilitate fuel extraction with a separate tank connection, integrated in the fuel tank (metal tank only). If a separate connection cannot be installed in the fuel tank, fuel is extracted by integrating a T-piece in the fuel flow pipe from the fuel tank to the engine.

### PLEASE NOTE:

- All specifications, especially the safety instructions in the Technical Description for this chapter, must be complied with. The Technical Description is supplied with each heater.
- If other parts are required for the fuel supply, please refer to the product overview or the appropriate spare parts lists.
- Fuel hoses in engine compartments must be fire-resistant to DIN EN ISO 7840.



NO.	DESCRIPTION
1	Tank connection $\varnothing = 4$ mm
2	T-piece
3	Fuel pipe 6 mm x 1 mm ( $\varnothing = 4$ mm), plastic or metal
4	Fuel hose 5 mm x 3 mm ( $\varnothing = 5$ mm)
5	Metering pump
6	Fuel pipe 4 mm x 1 mm ( $\varnothing = 2$ mm), plastic or metal
7*	Fuel pipe 6 mm x 1 mm ( $\varnothing = 4$ mm), plastic (blue) or metal
8	Fuel hose 5 mm x 3 mm ( $\varnothing = 5$ mm), approx. 50 mm long
9	Hose clip $\varnothing 11$ mm
10	Fuel hose 3.5 mm x 3 mm ( $\varnothing = 3.5$ mm), approx. 50 mm long
11	Hose clip $\varnothing 9$ mm
12*	Adapter 3.5 mm / 5 mm
13	Rubber holder for the metering pump

\* Only required with Hydronic M8 biodiesel and if running with FAME

### Fuel connection kit to DIN EN ISO 7840

Not illustrated

The fuel connection kit for boats contains:

2 fire-resistant hoses  $\varnothing = 3.5$  mm, approx. 50 mm long

2 fire-resistant hoses  $\varnothing = 5$  mm, approx. 50 mm long

4 hose clips  $\varnothing 12$  mm

4 hose clips  $\varnothing 14$  mm

### Length of lines

Intake line = max. 2 m

Pressure line = min. 1.5 m to max. 6 m

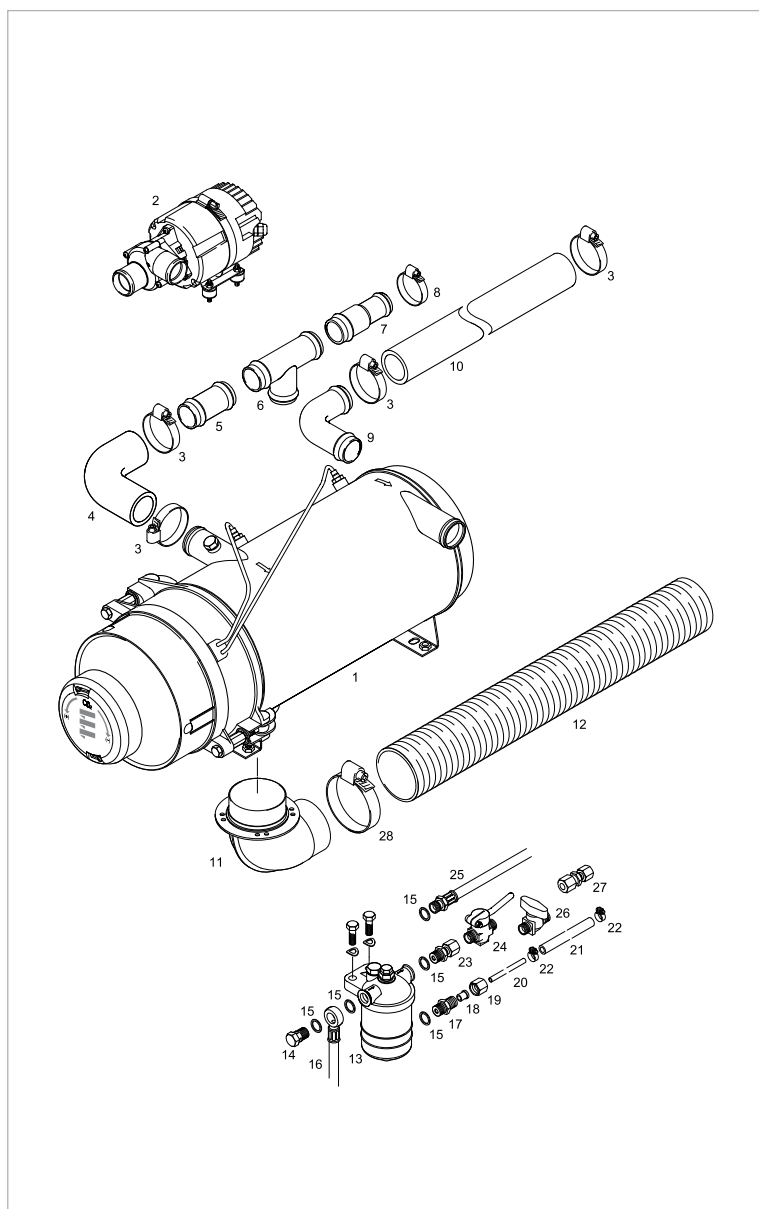
## HYDRONIC L16 / L24 / L30 / L35

## TECHNICAL DATA



Diesel version		Hydronic L16	Hydronic L24	Hydronic L30	Hydronic L35
Voltage	V	24	24	24	24
Heating output	W	16,000	24,000	30,000	35,000
Minimum water throughput	l/h	1,400	2,000	2,600	3,000
Electricity consumption in operation	W	60	80	105	120
Fuel consumption	l/h	2	2.9	3.65	4.2
Dimensions L x W x H	mm	600 x 220 x 222	600 x 220 x 222	600 x 220 x 222	600 x 220 x 222
Weight	kg	18	18	18	18

## RECOMMENDED PARTS FOR INSTALLATION:



1	Heater
2	Flowtronic water pump
3	Hose clip ø 40 mm – 47 mm
4	Hose elbow ø 38 mm
5	Connection pipe ø 38 mm
6	T-pipe section ø 38 mm – 38 mm – 38 mm
7	Reducer ø 38 mm / 28 mm
8	Hose clip ø 32 mm – 39 mm
9	Water hose ø 38 mm
10	Water hose ø 38 mm
11	Exhaust pipe elbow ø 70 mm
12*	Flexible or rigid exhaust pipe ø 70 mm
13	Fuel filter
14	Hollow screw M14 x 1.5 mm
15	Sealing ring
16	Fuel intake line with ring hose nipple A14 x 18 mm
17	Threaded connection M14 x 1.5 mm
18	Spherical liner
19	Union nut M14 x 1.5 mm
20*	Fuel pipe ø 6 mm x 1 (Cu)
21	Fuel hose ø 5 mm x 3 mm
22	Hose clip ø 11 mm
23	Threaded connection M14 x 1.5 mm
24	Ball valve M14 x 1.5 mm
25	Fuel return line
26	Fast-closing valve
27	Reducer connector ø 8 mm / ø 6 mm
28*	Hose clip

\* Items 12, 20 and 28 must be purchased from a specialist store.

## PRODUCT INFORMATION

### HEATER SCOPE OF DELIVERY:

- Hydronic L16 – L35 heaters

#### The following must be ordered in addition:

- Exhaust and combustion air system parts
- Control element
- Fastening parts
- Fuel system parts
- Water system parts
- Water pump

**Selecting the right water pump:** The heater must achieve the minimum water throughput as per the Technical Description.

#### EBERSPÄCHER WATER PUMPS



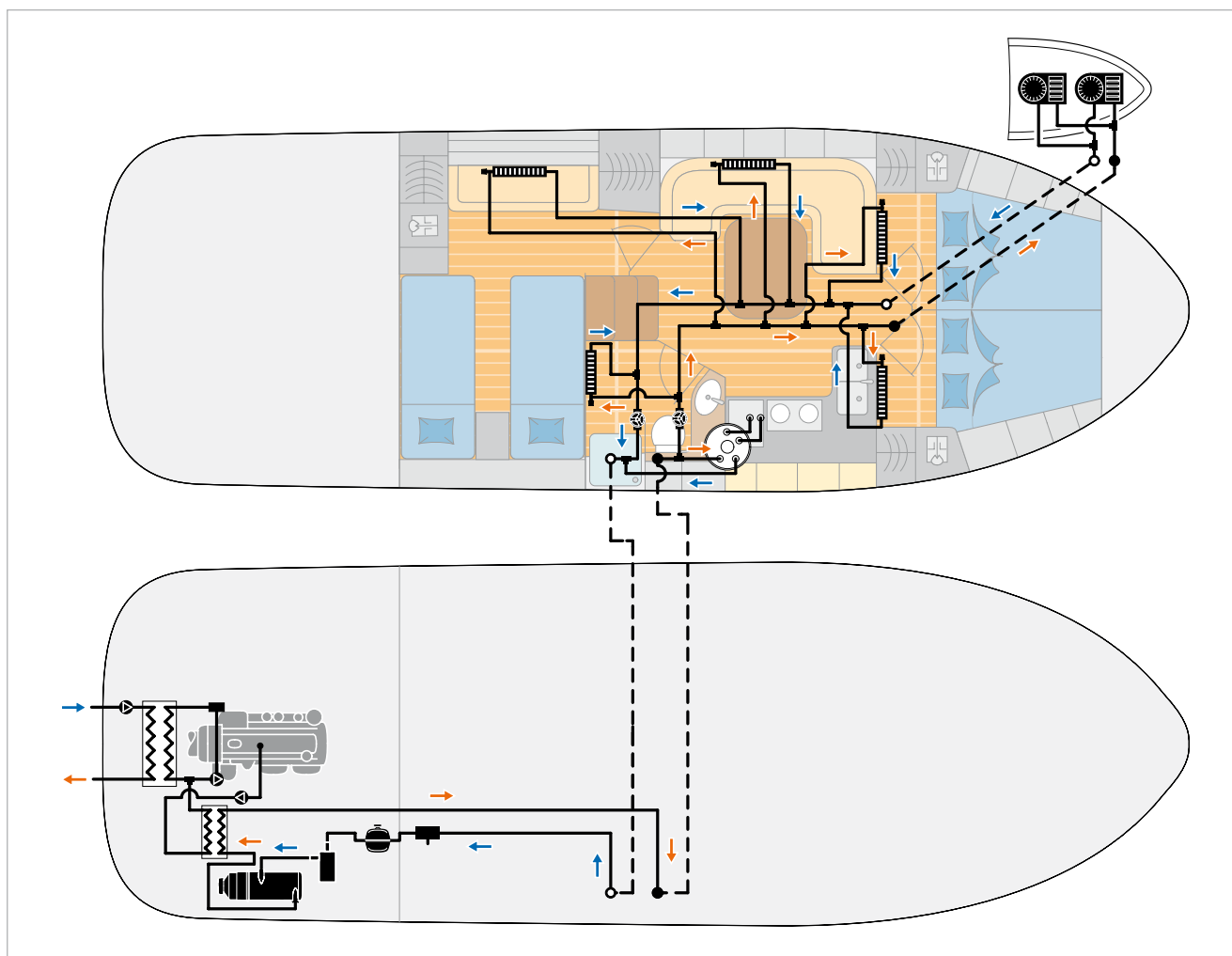
		Flowtronic 5000 / Flowtronic 5000 S*	Flowtronic 6000 SC**
Voltage	V	24	24
Electricity consumption in operation	W	104	210
Dimensions LxWxH	mm	229x99x76	229x115x110
Delivery rate (pump)	l/h	5,200 at 0.2 bar	6,000 at 0.4 bar

\* With magnetic coupling

\*\* With magnetic coupling and electronic commutation

*NOTE: You can find more detailed information on the Eberspächer service portal, [www.eberspacher-marine.de](http://www.eberspacher-marine.de), in the Marine brochure, in the product overview or the spare parts list.*

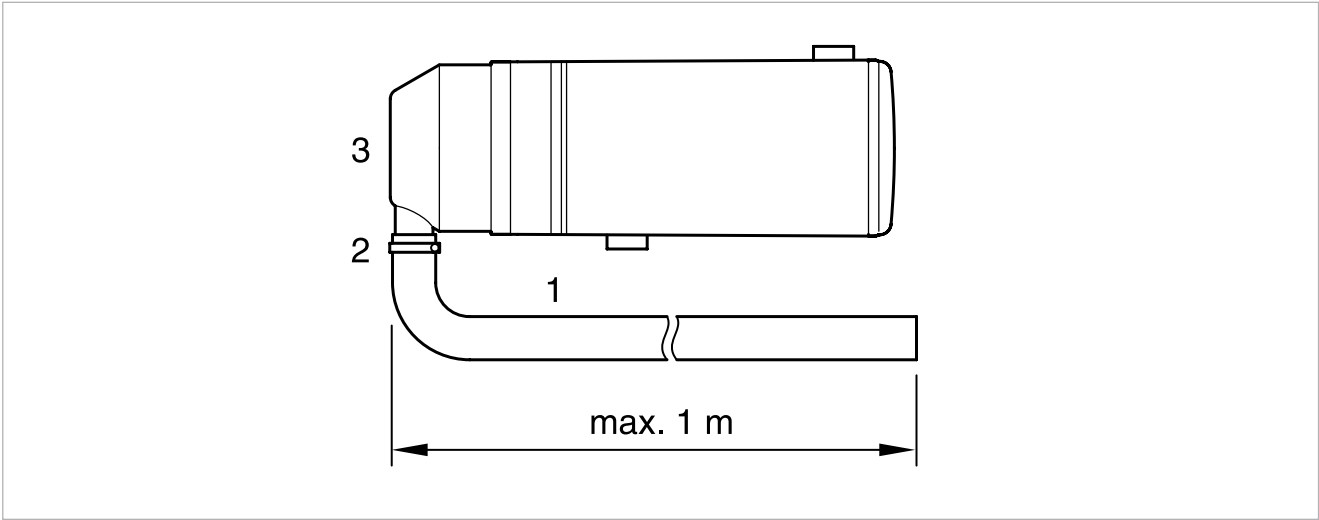
### INSTALLATION EXAMPLES:



In motor boats, ideally the heater is installed in the engine compartment. The combustion air is aspirated from the engine compartment and the exhaust gas is directed outside via a hull fitting. The cold water is pumped by a water pump through the heater's convector. The heated water flows through a pipe system, and the various rooms are heated by convectors, radiators and panel radiators. A connected boiler can supply water for the shower and pantry. The engine can also be integrated by means of a water/water convector. This way, engine heat can be used for heating the boat and a boiler while sailing.

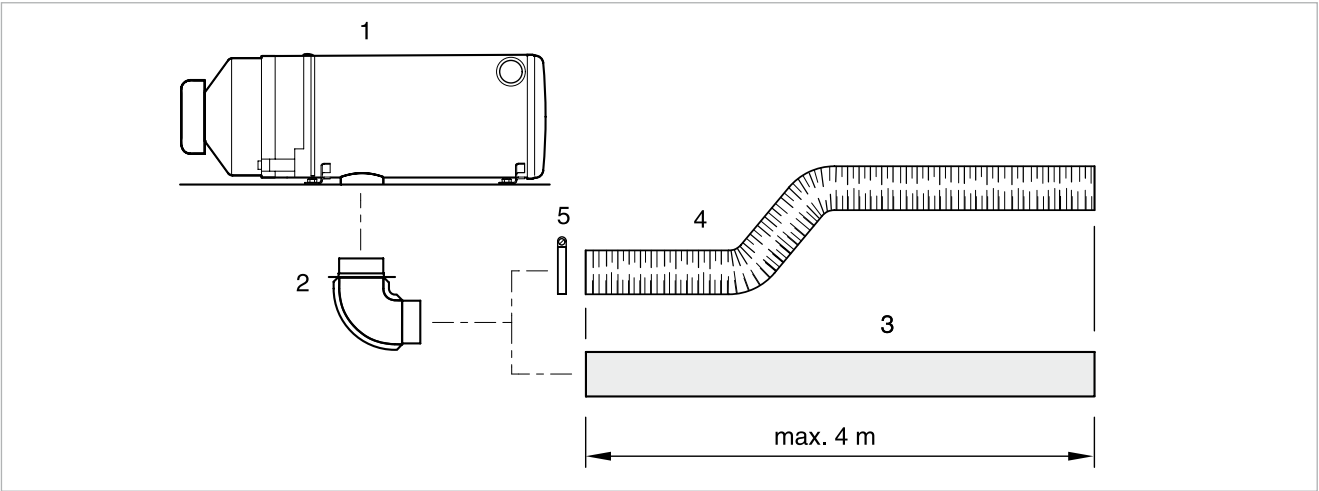
## HYDRONIC L16 / L24 / L30 / L35

### EXAMPLE OF COMBUSTION AIR SYSTEM:



NO.	DESCRIPTION
1	Flexible hose for combustion air ø 60 mm
2	Hose clip ø 50 mm – 70 mm
3	Air scoop for combustion air

### EXAMPLE OF EXHAUST SYSTEM:



NO.	DESCRIPTION
1	Heater
2	Exhaust pipe elbow
3	Exhaust pipe
4	Flexible exhaust pipe
5	Pipe clip

#### PLEASE NOTE:

Items 3 – 5 must be purchased from a specialist store.



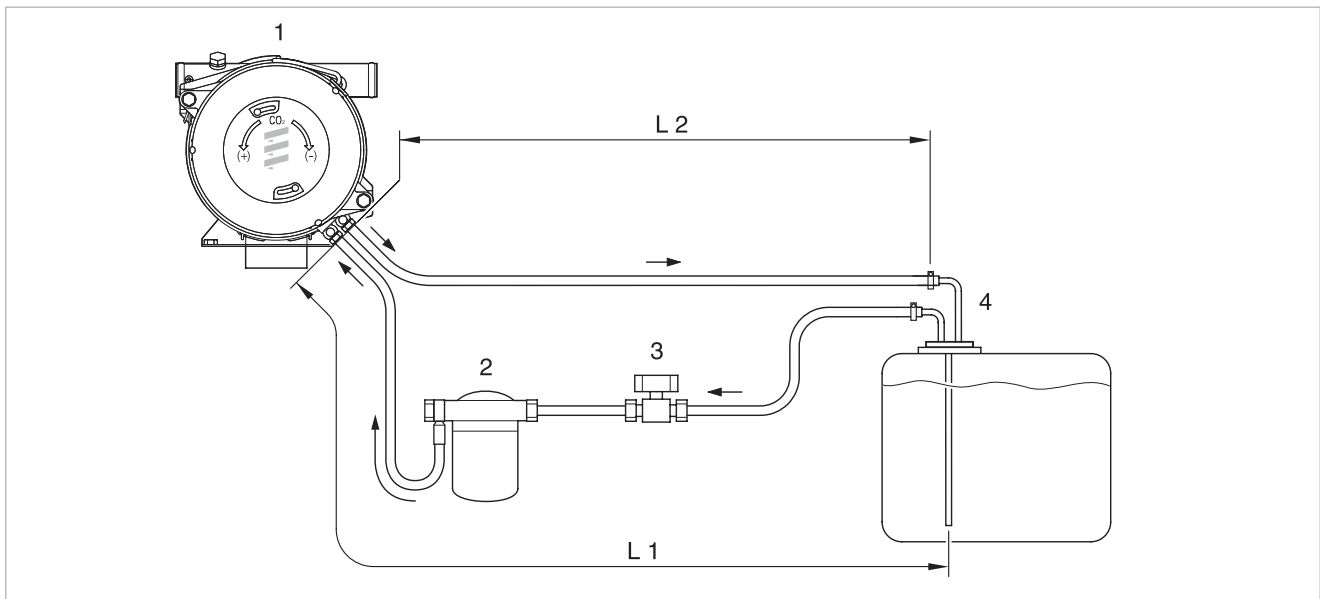
## PRODUCT INFORMATION

### FUEL SUPPLY:

In most cases, it is advisable to facilitate fuel extraction with a separate tank connection, integrated in the fuel tank (metal tank only). If a separate connection cannot be installed in the fuel tank, fuel is extracted by integrating a T-piece in the fuel flow pipe from the fuel tank to the engine.

### PLEASE NOTE:

- All specifications, especially the safety instructions in the Technical Description for this chapter, must be complied with. The Technical Description is supplied with each heater.
- If other parts are required for the fuel supply, please refer to the product overview or the appropriate spare parts lists,
- Fuel hoses in engine compartments must be fire-resistant to DIN EN ISO 7840.



NO.	DESCRIPTION
1	Heater
2	Fuel filter
3	Fast-closing valve
4	Fuel tank extractor
L1	25 m with suction height $\leq 1.5$ m
L1	15 m with suction height 1.5 m to max. 4.0 m
L2	Max. 18 m
Not illustrated	Fuel hoses, inner Min. $\varnothing$ 5 mm Max. $\varnothing$ 6 mm

# MARINE KIT FOR WATER HEATERS

## MARINE KIT FOR HYDRONIC M8 / M10 / M12:



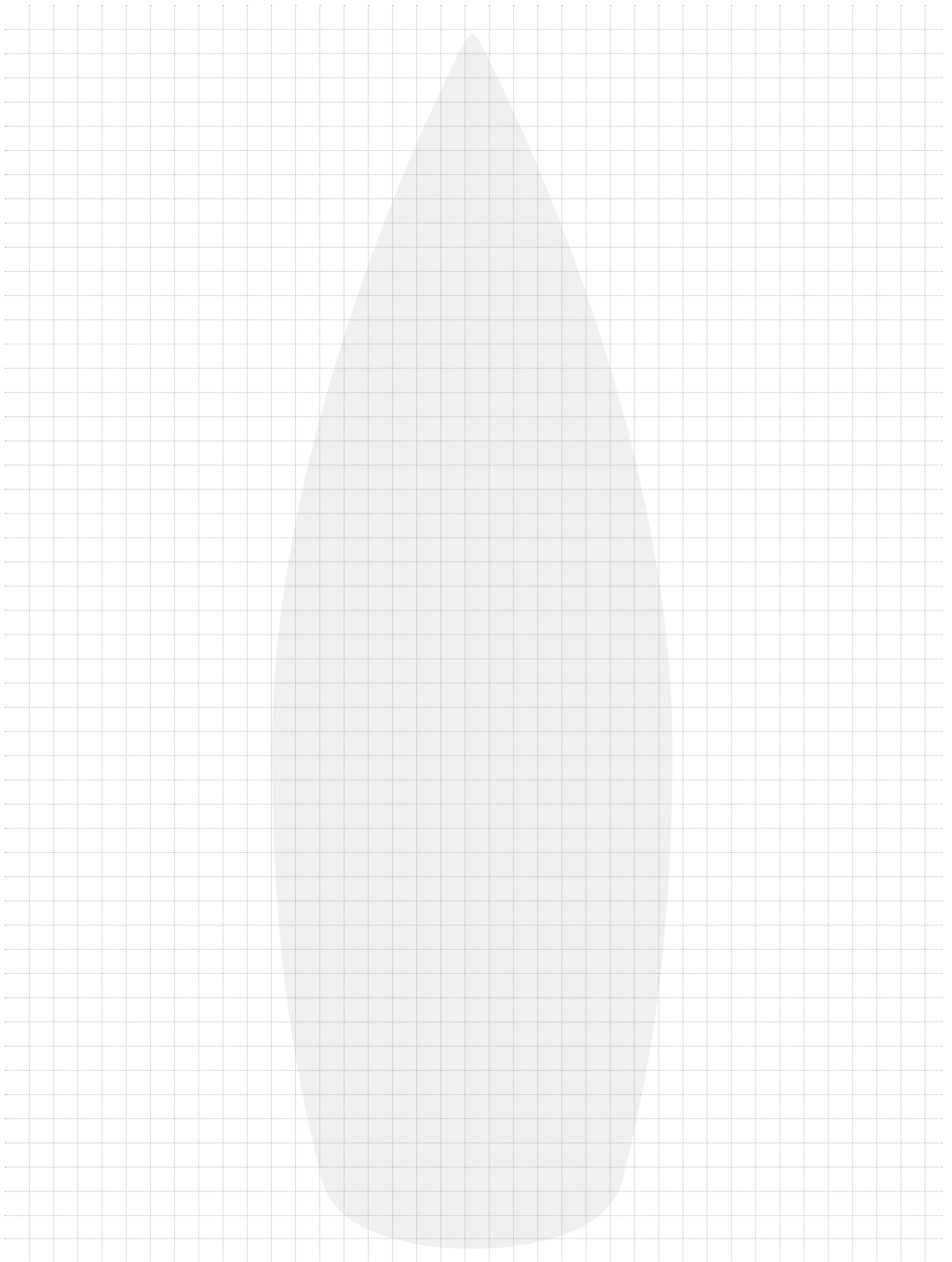
NO.	DESCRIPTION
1	Holder for heater (stainless steel)
2	Lead harness
3	Combustion air silencer
4	Exhaust silencer
5	Hull fitting
6	Fuel tank extractor
7	Fuel pipes
8	Fuel hose
9	Fastening parts
10	Electrical parts
11	Water hoses and guide parts
12	Assembly parts

Item	Voltage
Marine kit for Hydronic D5 WS	12 V
Marine kit for Hydronic D5 WS	24 V
Marine kit for Hydronic 2 Economy	12 V
Marine kit for Hydronic M	12 / 24 V

**PLEASE NOTE:**  
Each installation is different, especially as far as the hot air distribution is concerned. Therefore, the marine kits do not contain any parts required for this.

*NOTE: You can find more detailed information on the Eberspächer service portal, [www.eberspacher-marine.de](http://www.eberspacher-marine.de), in the Marine brochure, in the product overview or the spare parts list.*

## NOTES



THE COMPREHENSIVE EBERSPÄCHER PRODUCT RANGE ALSO INCLUDES HEATING SYSTEMS FOR PASSENGER CARS, BUSES AND MOTOR HOMES.

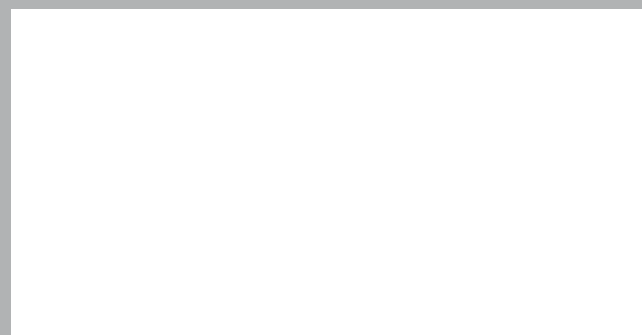
MORE INFORMATION IS AVAILABLE FROM ANY OF OUR 5,000 SERVICE PARTNERS WORLDWIDE.

#### GERMANY

Eberspächer Heizung  
Vertriebs-GmbH & Co. KG  
Wilhelmstrasse 47  
17358 Torgelow  
Hotline: 0800 1234300  
Fax hotline: 01805 262624  
vk-heiz@eberspaecher.com  
www.eberspaecher.com

#### AUSTRIA

Eberspächer GmbH  
IZ NÖ-Süd2  
Hondastrasse 2, Obj. M47  
2351 Wiener Neudorf  
Phone: 02236 677144-0  
Fax: 02236 677144-42  
office-at@eberspaecher.com  
www.eberspaecher.at



Eberspächer Climate Control Systems GmbH & Co. KG  
Eberspächerstrasse 24  
73730 Esslingen  
GERMANY  
Phone: +49 711 939-00  
Fax: +49 711 939-0634  
info@eberspaecher.com  
www.eberspaecher.com

