

Technical Datasheet

Fuel Heater LKH 600W

Fuel heater for preheating in fuel systems

Subject to change without notice.



1 Funktions

The fuel heater can be used for preheating in fuel systems.

1.1 System connections

The fuel heater is equipped with quick-coupling connections in both the fuel inlet and the fuel outlet. The dimensions of these connections can be seen in the sketch from chapter 4.

1.2 Elektrischer Anschluss

The connection to the vehicle electrical system is made via a 4-pole plug according to DIN 72585 with the following assignment:

- Pin 1 Ub (+12 VDC ... +24 VDC; external fuse required, see remark in table chapter 2)
- Pin 2 GND
- Pin 3 Input (signal high (+12 VDC ... +24 VDC) when engine is running)
- Pin 4 Output (signal heater status (low side switch; maximum switchable power: 1 Watt). Use optional, not required for operation.

1.3 Heating

The fuel heater is installed upstream of the filter. The nominal heater power at 24 V can be 400 watts or 600 watts, depending on the version. At 12 V supply voltage, the nominal power is 100 watts or 150 watts.

1.4 Safety functions

Heating operation is enabled by a signal from the vehicle electronics, temperature control and monitoring is performed by the control logic integrated in the heater. Errors are indicated by "Low" at the diagnostic output during the self-test and prevent the heater from being switched on again.

Errors that are intercepted and reported:

- Short-circuit in heating element
- Interruption in heating element
- Error in high side switch of heating element (short circuit or interruption)
- Error in low side switch of heating element (short circuit or interruption)
- Too high temperature of the electronics

1.5 Installation and venting

The fuel heater operates independently of the installation position. Further measures for venting are not required.

1.6 Maintenance

The fuel heater is maintenance free.

1.7 Labeling

The fuel heater is clearly labelled and therefore tamper-proof. The marking is carried out by a RFID tag in the electronics area, which can also be read if the housing is dirty or overpainted. The position of the RFID tag can be seen in the sketch on page 4.

2 Technical data fuel heater

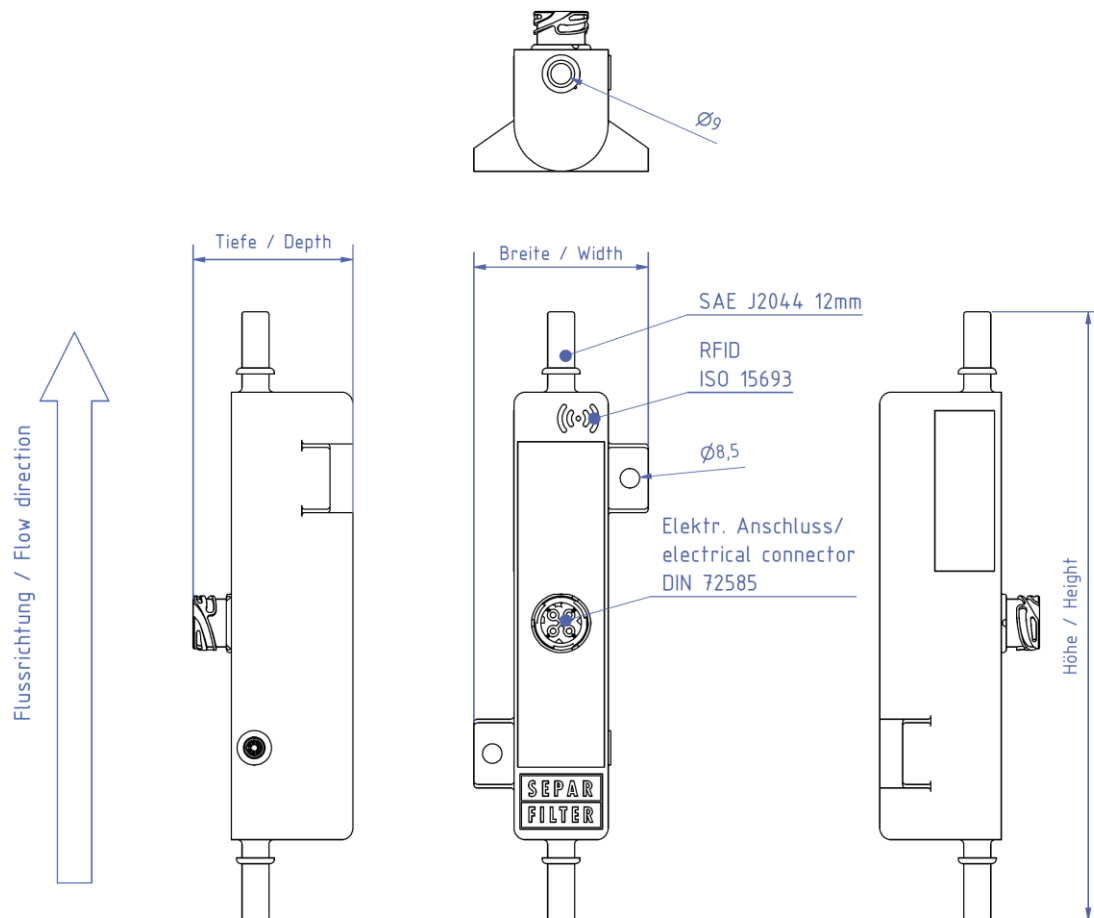
range of application	preheating of fuels		remark
permitted fuels	diesel fuels	flash point > 55 °C boiling point > 160 °C	Lösing document nr.: D10143.EN.XX XX = current revision
flow rate		max. 10 l/min	
supply voltage	nominal voltage	12 VDC to 24 VDC	
	max. voltage	36 VDC	
heating capacity	at 12 VDC	100 Watts or 150 Watts	External fuse: 22 A
	at 24 VDC	400 Watts or 600 Watts	External fuse: 45 A
switching ranges	switch-on range	< 3 °C	
temperature control	switch-off range	> 7 °C	
Abmessungen	width	approx. 80 mm	
	depth	approx. 70 mm	Without connector
	height	approx. 270 mm	Without quick coupling
required installation height	height		Depending on quick couplings used
weight		< 0,5 kg	Without connectors
housing material			Glass fibre reinforced PA
temperature ranges	operation	-20 °C ... +80 °C	
	storage	-20 °C ... +80 °C	
operating pressure range	permanent	-800 mbar ... 2000 mbar	
	short-term	< 2500 mbar	maximum 15 seconds
mounting		t. b. d.	
pipe connections		SAE J2044	2 x quick coupling 12 mm
labeling	RFID	ISO 15693	

3 Accessories

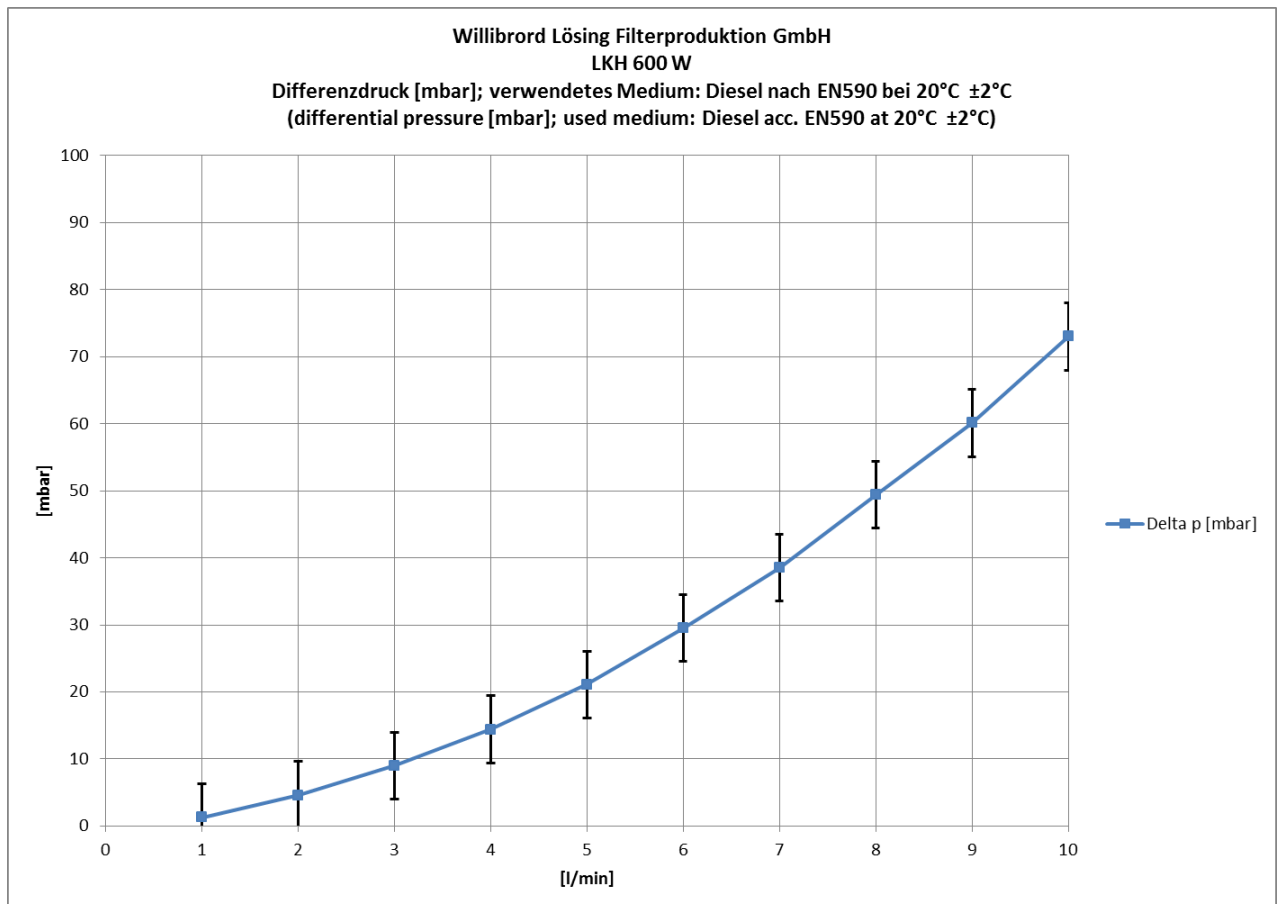
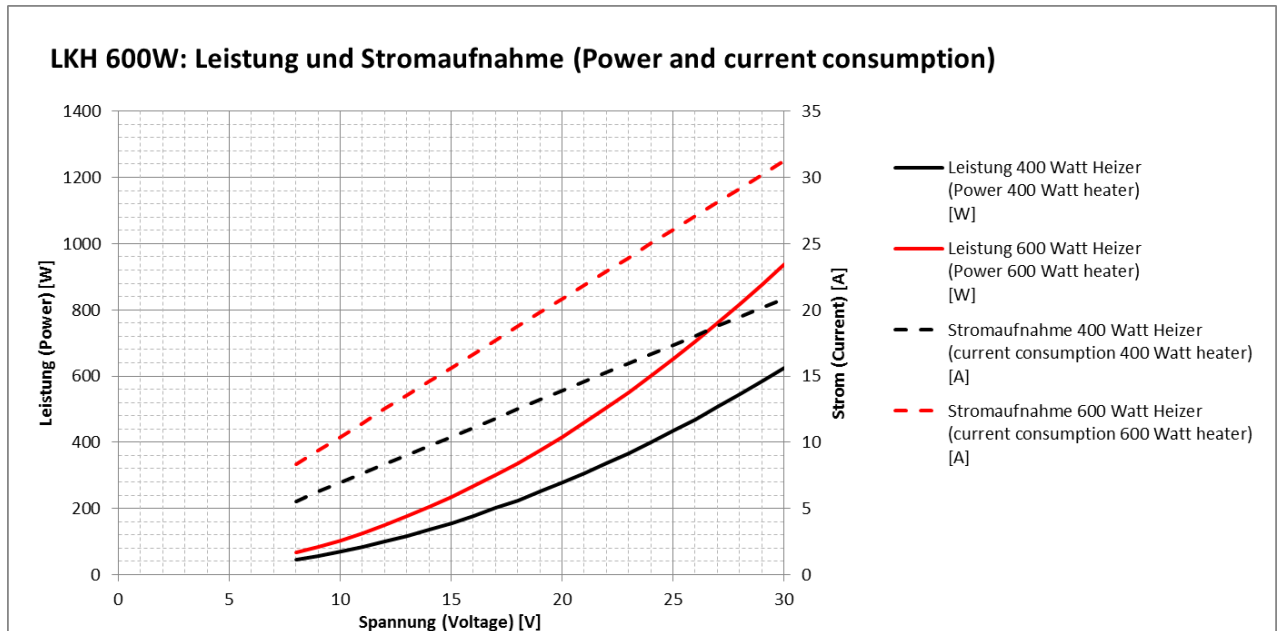
3.1 Quick coupling according to SAE J2044

Straight or angled quick couplings in accordance with SAE J2044 can be used for the hydraulic connections. So that the flow resistance is not unnecessarily increased, the internal diameter of the quick coupling should not be less than 9 mm.

4 Sketch fuel heater



5 Electrical and mechanical properties



6 Thermal performances in comparison

