

Pressure flow heater, oil heated, DC

For mobile usage, independent from alternating voltage net, type BR...12/24 V.

The innovative burner technology of Theodor Henrichs GmbH permits an uncomplicated usage of commercial vehicles with 12V or 24V board tension.

Version 1

Our base is a 230 V burner with our approved components.

This is an entirely DC unit, as the flame control too is available in 12 V and 24 V version.

Additional motor for the oil pump is no longer required. The proven Delta pump will be used as a fuel pump. A DC ignition transformer, with high ignition performance, guarantees a safe ignition, even under unfavourable conditions.

Warning! You will need a little more space than for the previous version.

Upon request we will send you a survey or 3D data.

Version 2

We are still able to provide you with the previous version with voltage transformer and an additional pump motor, but we explicitly advice against that.

Outstanding features:

- No downtime losses because hot water is available in seconds.
- No preheat time.
- There is no need that hot water is transported through the pump:
The water is compressed before and will be heated then.
The durability of the pump can be extremely extended by that.
- Reduce investment costs.
- Reduce assembly costs.
- The efficiency can be multiplied by parallel connection of several boilers.
- High efficiency and low consumption of fuel
(equal efficiency compared to modern reservoir systems).
- EC-Type examination manufactured boiler.
- Easy maintainance.
- Biodiesel proofed (requires modifications).

Digital thermostat

A digital control is available for 24V for a surcharge. The PTC sensor responds much faster than the standard capillary tube sensor in a one- step system if the burner switches off, and activates the system again. This is an advantage if high and constant temperatures are required.



Mixing unit



Var. 1: DC fan motor with oil pump coupling



Störk digital thermostat
Surcharge MP10400972-2



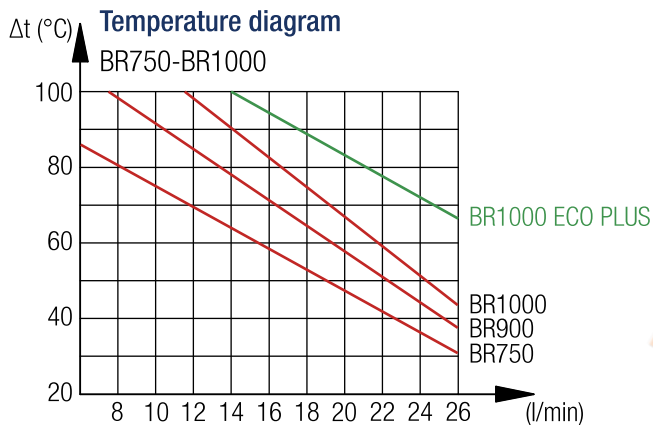
Mounting example

Preconditions:

- 12/24 V- data system with a sufficient dimensioned generator. (28A with 12V and 14A with 24V.
- Sufficient fresh water (tank or external filling station)
- Sufficient storage of heating oil.

Application areas:

- Removal of residues caused by chemical accidents (diesel, oil, grease and other chemicals)
- Rehabilitation of canals and pipes, disinfection, cleaning of garbage containers, cleaning of facades, concrete rehabilitation.



The diagram shows achievable water temperatures with 10 bar oil pressure. With pleasure we will assist you when calculating the individual requirement

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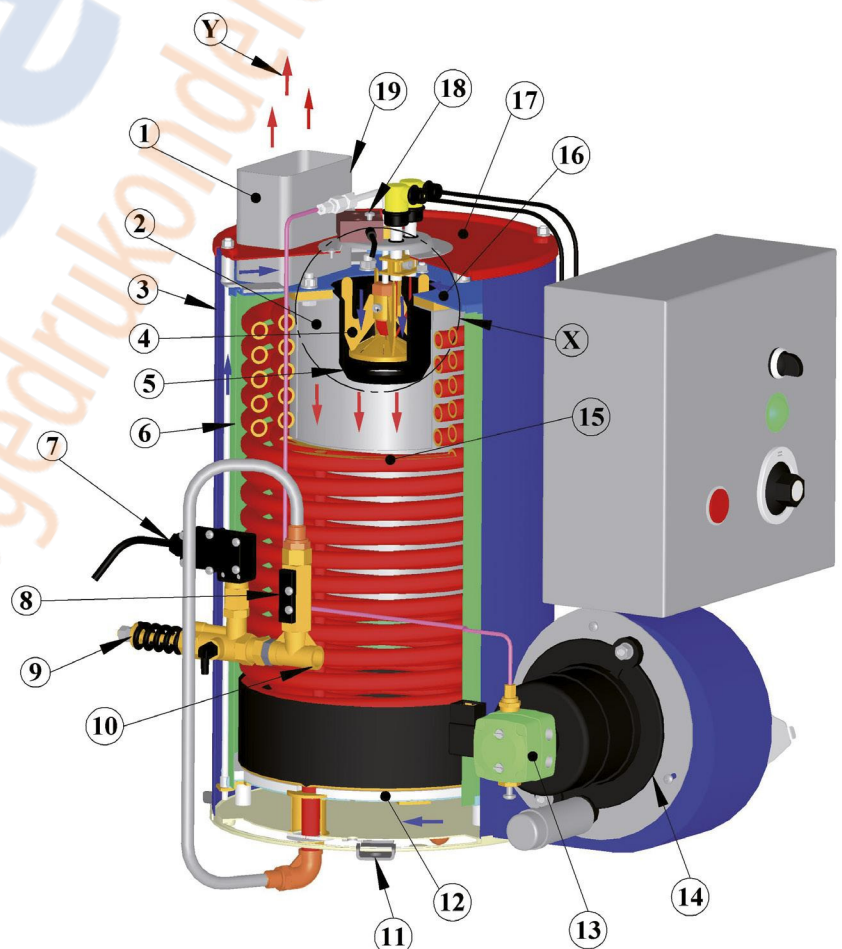
Please note our progressive development of the 12 V respectively 24 V burner, where a DC motor is used with direct connection to the oil pump.



Sectioning

Pressure flow heater, 12/24V, oil heated, type BR
Since 2017

P.	Description
1	Chimney
2	Boiler
3	Outer casing
4	Mixing unit
5	Flame tube
6	Inner casing
7	Pressure switch
8	Flow switch
9	Safety valve
10	Water inlet
11	Fastening shackle
12	Insulating plate (oxide ceramics)
13	Oilpump (obsolete for gas operated machine)
14	Fan motor
15	Heating coil
16	Inner lid
17	Outer lid
18	Photocell
19	Exhaust temperature limiter
Y	Blue arrow – fresh air, red arrow – exhaust gas

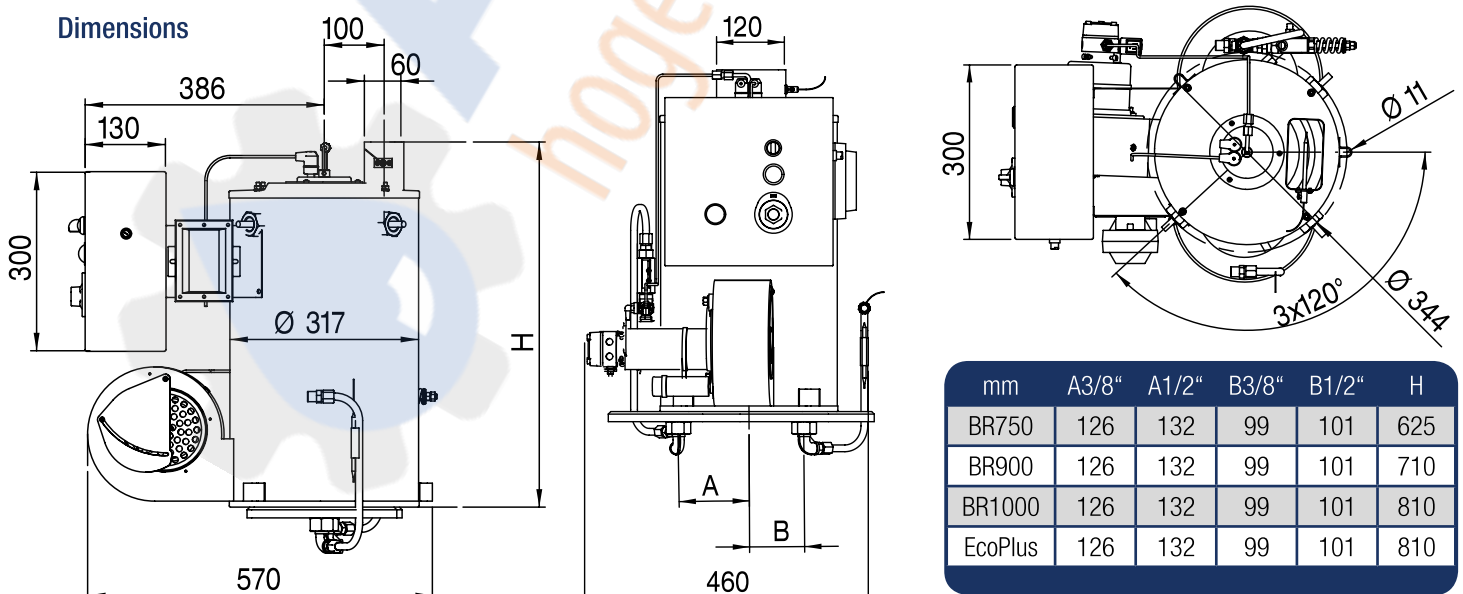


Technical Data

Type BR, oil heated, 12-24V DC

Description / Type	HZ*	Bar	BR750	BR900	BR1000	BR1000EcoPlus
Content, heating coil	3/8"	300	2,80 Ltr.	3,45 Ltr.	4,17 Ltr.	4,17 Ltr.
	3/8"	500	2,56 Ltr.	3,50 Ltr.	4,30 Ltr.	4,30 Ltr.
	3/8"	700	1,14 Ltr.	1,70 Ltr.	1,62 Ltr.	1,62 Ltr.
	1/2"	200	4,40 Ltr.	6,89 Ltr.	5,75 Ltr.	5,75 Ltr.
Allowed operating pressure [bar]	3/8"		300	300	300	300
	3/8"		500	500	500	500
	3/8"		700	700	700	700
	1/2"		200	200	200	200
Allowed operating temperature [°C]			95	95	95	95
Dimension l x w x h [mm] *			570x460x625	570x460x710	570x460x810	590x460x810
Weight [kg] *	3/8"	300	58,00	64,00	68,00	69,00
	3/8"	500	62,50	69,20	74,00	75,00
	3/8"	700	74,50	85,10	91,60	92,60
	1/2"	200	56,20	58,50	62,90	63,90
Tube length of heating coil [m]	3/8"		28	36	40	40
	1/2"		26	28	32	32
Tube- Ø of heating coil [mm]	3/8"	300	17,2	17,2	17,2	17,2
	3/8"	500	18,0	18,0	18,0	18,0
	3/8"	700	18,0	18,0	18,0	18,0
	1/2"	200	21,4	21,4	21,4	21,4
Operating voltage [V]			12/24V	12/24V	12/24V	12/24V
Total current consumption [Watt]			336	336	336	336
Nozzle [G/h]			1,5	1,5 oder 1,65	1,75	2,25
max. oil flow [l/h]			5,93 - 7,26	5,93 - 8,63	6,92 - 9,15	9,15 - 12,00
Effect. range of capacity [kW]			50-62	62-73	65-80	90-95
Efficiency of combustion [%]			>=91	>=91	>=91	>=91
Max. exhaust gas temperature [°C]			230	230	210	210
Flue gas loss [%]			<=9	<=9	<=9	<=9
Soot value according to Bacherach			0-1	0-1	0-1	0-1

*Dimensions and weights are without control system and safety device. Total weight for safety device and control: 9,6 kg



Gross price list, oil heated boiler, 12V or 24V, WITHOUT safety system

Equipped with: covers of zinc coated sheet steel AISI 304 available), furthermore the outer case is powder coated (AISI 304 available), 12V ignition transformer, 12V fan motor and 12V solenoid valve, WITHOUT switch box, control and safety equipment.

Boiler type	Operating press. [bar]	Nom. width	Steel heating coil ST		Stainless steel heating coil 1.4301	
			Item number		Item number	
BR750/200	200	1/2"	V11400016-12o.24V		V11400019-12o.24V	
BR750/300	300	3/8"	V11400001-12o.24V		V11400010-12o.24V	
BR750/500	500	3/8"	V11400002-12o.24V		V11400011-12o.24V	
BR750/700	700	3/8"	V11400003-12o.24V			
BR900/200	200	1/2"	V11400017-12o.24V		V11400020-12o.24V	
BR900/300	300	3/8"	V11400004-12o.24V		V11400012-12o.24V	
BR900/500	500	3/8"	V11400005-12o.24V		V11400013-12o.24V	
BR900/700	700	3/8"	V11400006-12o.24V			
BR1000/200	200	1/2"	V11400018-12o.24V		V11400021-12o.24V	
BR1000/300	300	3/8"	V11400007-12o.24V		V11400014-12o.24V	
BR1000/500	500	3/8"	V11400008-12o.24V		V11400015-12o.24V	

Gross price list, oil heated boiler, 12V or 24V, WITH safety system

Equipped with: 112V ignition transformer, 12V fan motor and 12V solenoid valve, adjustable thermostat, exhaust temperature limiter, flow switch, safety valve, pressure switch, flame control, 3m electric cable. Additional information see above.

Boiler type	Operating press. [bar]	Nom. width	Steel heating coil ST		Stainless steel heating coil 1.4301	
			Item number		Item number	
BR750/200	200	1/2"	V11400016S-12o.24V		V11400019S-12o.24V	
BR750/300	300	3/8"	V11400001S-12o.24V		V11400010S-12o.24V	
BR750/500	500	3/8"	V11400002S-12o.24V		V11400011S-12o.24V	
BR900/200	200	1/2"	V11400017S-12o.24V		V11400020S-12o.24V	
BR900/300	300	3/8"	V11400004S-12o.24V		V11400012S-12o.24V	
BR900/500	500	3/8"	V11400005S-12o.24V		V11400013S-12o.24V	
BR1000/200	200	1/2"	V11400018S-12o.24V		V11400021S-12o.24V	
BR1000/300	300	3/8"	V11400007S-12o.24V		V11400014S-12o.24V	
BR1000/500	500	3/8"	V11400008S-12o.24V		V11400015S-12o.24V	

Surcharges for specific equipment

The following surcharges have to be added to the basic version.

Description / Type	BR750		BR900		BR1000	
Inner casing stainless steel 1.4301	M10400031		M10400032		M10400033	
Outer casing stainless steel 1.4301	M11400001		M11400002		M11400003	
Diffusor (Tuningset)	B10400320		B10400320		B10400320	
Biodiesel version (oil pre-heater)	B10400326-1		B10400326-1		B10400326-1	
Low pressure version (press. switch, valve)	MP10400965		MP10400965		MP10400965	
24V Digital thermostat + PTC sensor	MP10400972-2		MP10400972-2		MP10400972-2	