

## Data sheet

### BRUNNER Pelletheizung (BRUNNER pellet heating) BPH 4/15 and BPH 4/17



#### Product performance description

- Variable, adaptable power range from 4 kW to 17 kW for optimal adaptation to the required heat demand;
- floor space required just 0,53 m<sup>2</sup>;
- automatic and quick ignition by high-performance heating element;
- Runtime-dependent automatic heat exchanger cleaning;
- minimal power consumption and lowest standby losses;
- Device design easy to operate and clean;
- large ash box with lid;
- and much more

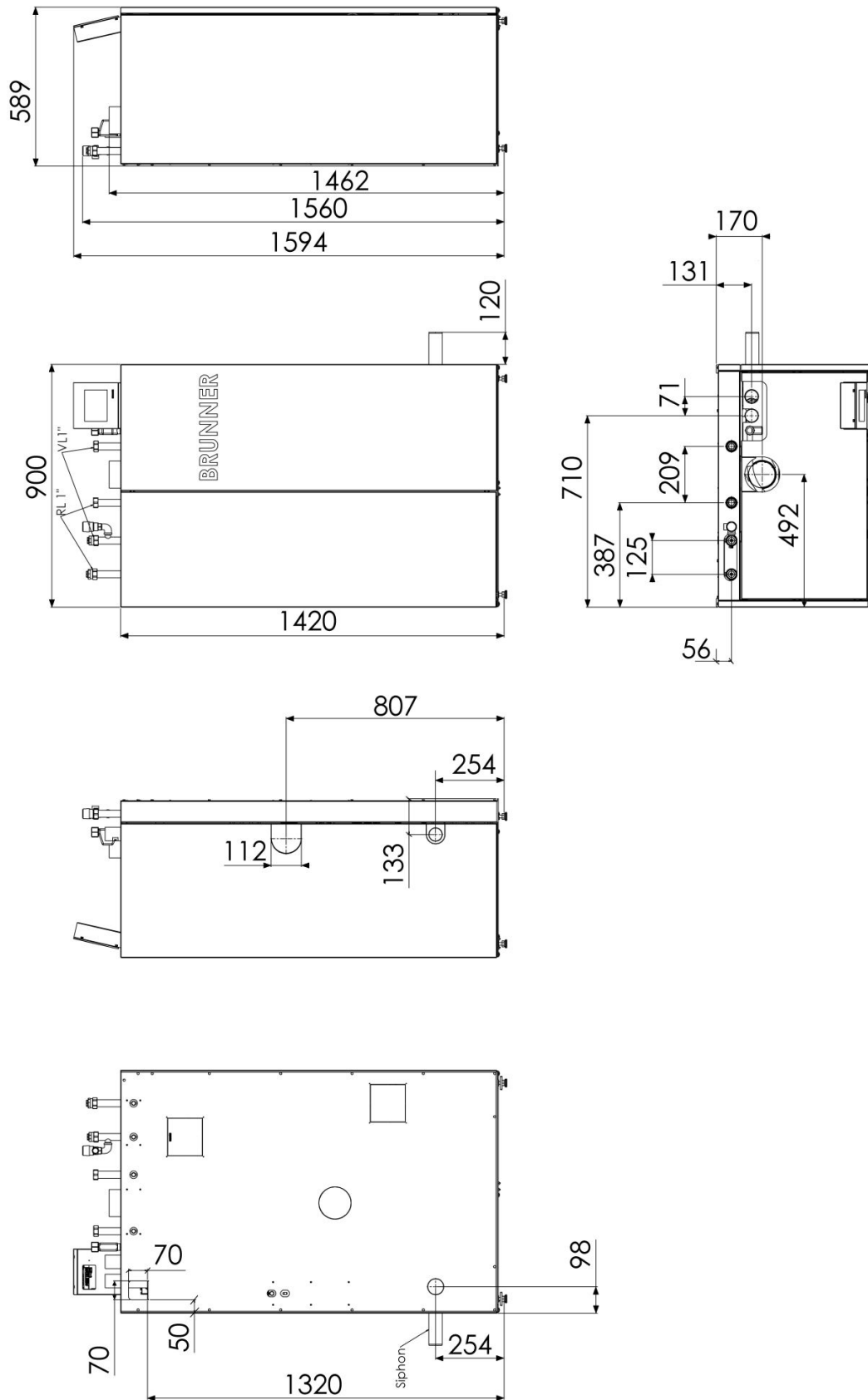
#### Highest operational safety

- detailed safety concept through the boiler control; continuous monitoring and control of all operating states, their notice on the display, as well as automatic archiving of both operating data and all messages;
- simple control with the modern touch display, which can be installed not only in the boiler room, but also in the living room;
- assured compliance with the required limit values of the 1st BImSchV level 2;
- and much more

#### Special product features

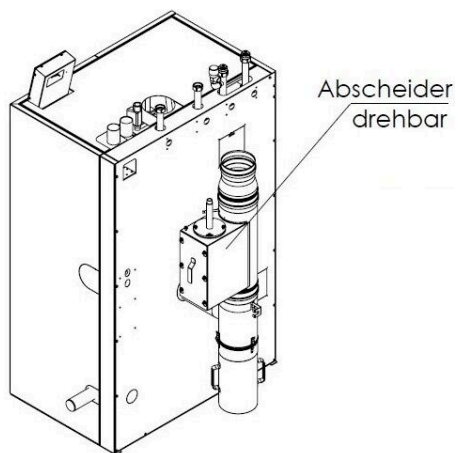
- simple control with the modern touch display, which can be installed not only in the boiler room, but also in the living room;
- Automatic ignition: only occurs when there is an actual heat request;
- Simple execution of the exhaust gas test by the chimney sweep;
- in combination with the BRUNNER heating center: perfect coordination of all heat generators, heat consumers and storage, as well as mobile control via smartphone, tablet, PC at [www.my-brunner.de](http://www.my-brunner.de);
- and much more

# 1 Dimension sheet BPH

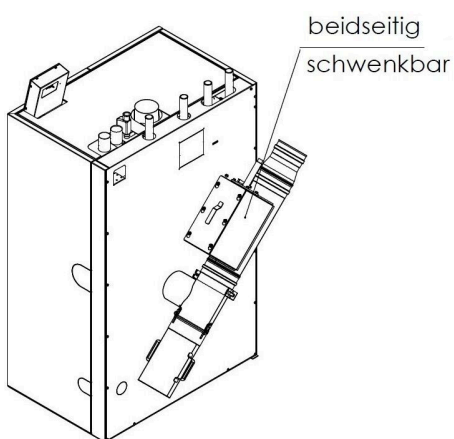
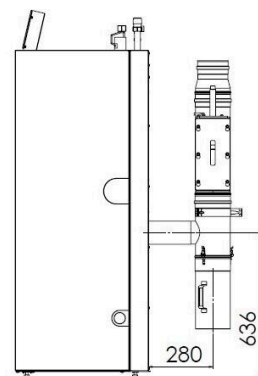
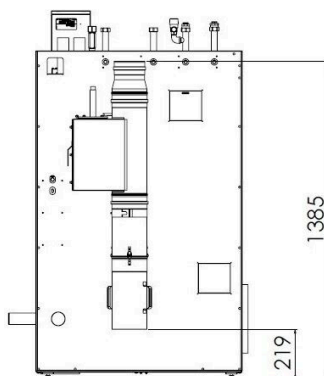


## 1.1 BPH separator (UE10160)

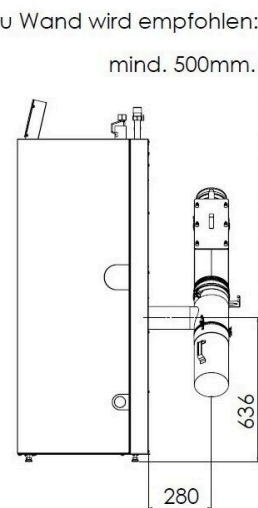
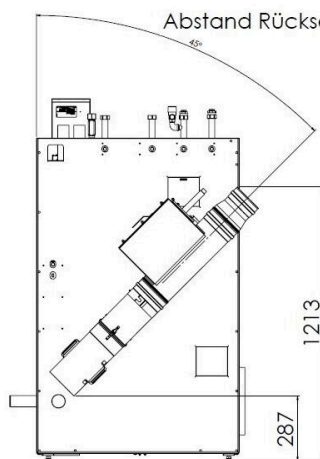
Separator with BPH 4/15:



Abstand Rückseite zu Wand wird empfohlen:  
mind. 500mm.



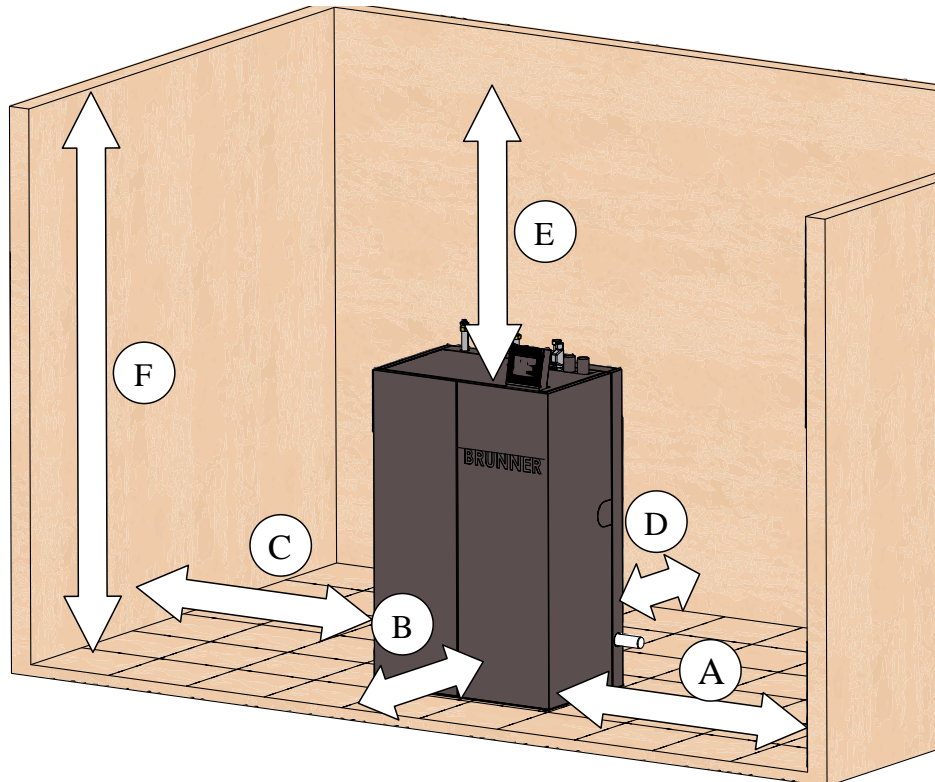
Abstand Rückseite zu Wand wird empfohlen:  
mind. 500mm.



## 2 Minimum clearances

It is necessary to adhere to the minimum clearances when setting up the boiler in order to ensure accessibility for maintenance and service work on the boiler.

Exhaust systems must be easily accessible for the chimney sweep for measuring, checking and cleaning work. A suitable stand area should therefore be planned.



A	500 mm	Maintenance side
B	600 mm	Operating side
C	50 mm	Side for direct attachment of optional weekly tanks (+600mm) and / or hot water storage tank (+644mm)
D	50 mm	Wall clearance
E	430 mm	Maintenance (removal of heat exchanger-cleaning)
F	1850 mm	Resulting room height

### Distances to fuel stores

The Model Firing Ordinance (MFeuV) is decisive for the minimum distances between fireplaces and flue systems to combustible components or fuel stores.

#### Distances to fuel stores conform §12 (3):

If fireplaces are set up in the rooms in accordance with Paragraph 2 No. 2 to 4, these must:

- be outside the required collecting areas for leaking fuel and
- have a distance of at least 1 m from containers for heating oil or diesel fuel.

A distance of 0.1 m is sufficient if it has been proven that the surface temperature of the fireplace does not exceed 40 ° C.

### 3 Technical data

Parameter	UM	BPH 4/15	BPH 4/17
Operational mode		heat value, noncondensing	heating value, condensing
Heat output range	kW	4 - 15	4 - 17
Boiler efficiency (Nominal heat output)	%	91,9	105,5
Boiler class (EN 303-5/2012)		5	5
Operating pressure	bar	3	3
<b>Dimensions</b>			
Dimension boiler with sheeting (w x d x h)	mm	900 x 589 x 1594	900 x 589 x 1594
Mounting dimension boiler-body (w x d x h)	mm	890 x 580 x 1420	890 x 580 x 1420
Mounting weight boiler-body	kg	195	195
Total weight	kg	285	285
Pellet weight in the day container	kg	32	32
Ash-tank drawdown	per year	3 - 4	3 - 4
Duration of burning (at nominal load)	h	6,5	6,5
Recomanded buffer storage volume, min.	liter	750	750
<b>Data on water connections</b>			
Boiler water content	liter	38	38
Connector flow/return Ø	DN (Zoll)	IG 25 (1")	IG 25 (1")
Size MAG (expansion vessel)	liter	18	18
Boiler flow temperature, max.	°C	75	75
Boiler return temperature, min.	°C	35	25
Height flow	mm	1560	1560
Height return	mm	1560	1560
Water-side resistance $\Delta T=10K$	mbar	16,6	16,6
Height floor drain / condensate drain	mm	254	254
Connection of heat exchanger flushing	Zoll	IG 3/4"	IG 3/4"
Line dimension up to BHZ / buffer tank	DN (Zoll)	25 (1") / 25 (1")	25 (1") / 25 (1")
<b>Data for chimney calculation (DIN EN 13884-1)</b>			
Exit gas temperature nominal capacity	°C	125	53
Exit gas temperature part load	°C	120	53
Flue gas mass flow nominal capacity	kg/h (g/s)	36,0 (10)	28,8 (8,0)
Flue gas mass flow part load	kg/h (g/s)	10,8 (3,0)	14,4 (4,0)

Parameter	UM	BPH 4/15	BPH 4/17
Height exhaust pipe connection	mm	1462	1462
Exhaust pipe connection Ø	mm	100	100
Necessary delivery pressure	Pa	3	-
Available delivery pressure	Pa	-	6
Combustion air connection set Ø	mm	110	110
Height of combustion air connection (break-through in cladding)	mm	807	807
Content CO <sub>2</sub>	%	11,3	14,5

**Note on exhaust gas routing**

At **BPH 4/17**, the connection line must be at least 50 Pa overpressure-tight.

In the case of room air-independent operation, the connection line must generally be at least 50 Pa overpressure-tight. We recommend our connecting line system.

Chimney design: suitable for calorific value - solid fuels - moisture-resistant - N1 or P1 (depending on the chimney calculation).

When renovating, we recommend our SET chimney renovation or a chimney design according to W3G N1 or P1.

**Note on combustion air routing for room air-independent installation**

The BPH has been tested for room air-independent operation in accordance with installation types **FC<sub>42x</sub>** and **FC<sub>52x</sub>**.

The use of the “external supply air accessory pack”, item no. PH003060 is required for this type of installation!

Electric connection	UM	BPH 4/15	BPH 4/17
Power supply	VAC, A, Hz	230, 16, 50	230, 16, 50
Power input at nominal load	W	60	60
Standby	W	12	12

**Emission parameters**

	U.M.	BPH 4/15	BPH 4/17
<b>Emissions according to the requirements for Germany-1.BImSchV; at 13%O<sub>2</sub></b>			
CO at nominal heat output	mg/m <sup>3</sup>	2	16
CO at part load	mg/m <sup>3</sup>	8	16
Dust at nominal heat output	mg/m <sup>3</sup>	10	6
Dust at part load	mg/m <sup>3</sup>	2	4
OGC at nominal heat output	mg/m <sup>3</sup>	0	0
OGC at part load	mg/m <sup>3</sup>	1	0
NOx at nominal heat output	mg/m <sup>3</sup>	73	64
NOx at part load	mg/m <sup>3</sup>	52	50

	U.M.	BPH 4/15	BPH 4/17
<b>Emissions according to the requirements for Switzerland -LRV; at 13%O<sub>2</sub></b>			
CO at nominal heat output	mg/m <sup>3</sup>	2	16
CO at part load	mg/m <sup>3</sup>	8	16
Dust at nominal heat output	mg/m <sup>3</sup>	10	6
Dust at part load	mg/m <sup>3</sup>	2	4
OGC at nominal heat output	mg/m <sup>3</sup>	0	0
OGC at part load	mg/m <sup>3</sup>	1	0
NOx at nominal heat output	mg/m <sup>3</sup>	73	64
NOx at part load	mg/m <sup>3</sup>	52	50
<b>Emissions according to the requirements for Austria-Art.15a; at 13%O<sub>2</sub></b>			
CO at nominal heat output	mg/MJ	1	11
CO at part load	mg/MJ	5	11
Dust at nominal heat output	mg/MJ	6	4
Dust at part load	mg/MJ	2	3
OGC at nominal heat output	mg/MJ	0	0
OGC at part load	mg/MJ	0	0
NOx at nominal heat output	mg/MJ	48	42
NOx at part load	mg/MJ	34	33

### Specific parameters

	U.M.	BPH 4/15	BPH 4/17
<b>For calculating the generator expenditure figures according to EnEV or DIN V 4701-10</b>			
Efficiency in static operation		0,92	1,06
Efficiency in the basic cycle GZ		0,84	0,96
Useful heat given off by the heat generator during a basic cycle	kWh	9,21	10,49
Power share heating circuit		1	1
Max. usage performance in operation Q <sub>nmax</sub>	kW	15	17
Average usage performance in operation Q <sub>Nm</sub>	kW	13,5	15,3
Temperature hysteresis	K	20	20
Auxiliary energy demand basic cycle Q <sub>HE</sub> , GZ	kWh	0,037	0,037
Mean electrical power consumption in stat. operation	W	60	60

	U.M.	BPH 4/15	BPH 4/17
<b>To calculate the generator expenditure figures according to EnEV or DIN 18599</b>			
Standby loss at an average boiler temperature of 70 °C		0,017	0,009
Load on which the heat generator test is based (= part load)		0,27	0,24
Boiler temperature in the test case at nominal load	°C	75,0	50,0
Boiler temperature in the test case at part load	°C	75,0	50,0
Electrical power consumption when the boiler is in operation	kW	0,06	0,060
Electrical power consumption of the boiler at part load	kW	0,012	0,012
Boiler efficiency at nominal output (calorific value related)		0,851	0,977
Boiler efficiency at partial load (calorific value related)		0,880	0,938

<b>Information according to the Delegated Regulation (EU) 2015/1187</b>		BPH 4/15	BPH 4/17
Energy efficiency class		A+	A++
Annual use efficiency of space heater	%	81,3	88,3
CO	mg/m <sup>3</sup>	10	23
Dust	mg/m <sup>3</sup>	5	8
OGC	mg/m <sup>3</sup>	1	0
NOx	mg/m <sup>3</sup>	75	88

<b>Information according to (EU) 2015/1189</b>		BPH 4/15	BPH 4/17
Heating mode		automatically	automatically
Recommended buffer volume	liter	750	750
Calorific value boiler		no	yes
Solid fuel boiler with cogeneration		no	no
Combination heater		no	no
Exclusive fuel		Pure wood pellets according to EN 17225-2, class A1	Pure wood pellets according to EN 17225-2, class A1
Other suitable fuels		no	no
Usable heat output at nominal heat output (P <sub>n</sub> )	kW	15,0	17,0
Useful heat output at 30 % of nominal heat output (P <sub>p</sub> )	kW	4,5	5,1
Fuel efficiency at nominal heat output (η <sub>n</sub> )	%	85,1	97,7
Fuel efficiency at 30% of nominal heat output (η <sub>p</sub> )	%	88,0	93,8



Information according to (EU) 2015/1189		BPH 4/15	BPH 4/17
Auxiliary power consumption at nominal heat output ( $e_{l_{max}}$ )	kW	0,060	0,060
Auxiliary power consumption at 30% of nominal heat output ( $e_{l_{min}}$ )	kW	0,038	0,038
Auxiliary power consumption in standby mode ( $P_{SB}$ )	kW	0,012	0,012
Annual space heating emissions (based on 10% O <sub>2</sub> , dry flue gas, 0°C, 1013 mbar)			
PM	mg/m <sup>3</sup>	5	6
OGC	mg/m <sup>3</sup>	1	0
CO	mg/m <sup>3</sup>	10	22
NOx	mg/m <sup>3</sup>	75	69

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