

**ADVANTAGES:**

Emission class 4 per ČSN EN 303 – 5



Environmentally-friendly and comfortable heating



High efficiency of up to 86.3%



High-quality cast iron heat exchanger



Heating savings of up to 30%



The latest in boiler controls



Long boiler lifetime

**PANTHER P 20 – 35 kW**  
AUTOMATIC CAST IRON BOILER

FUEL: WOOD PELLETS

# ECOLOGY AND COMFORT



**The Czech PANTHER** boiler for solid fuel with automatic controls and minimal operating requirements provides environmentally-friendly and cost-cutting heating for houses, business premises and medium-large buildings, and is often used for heating water as well. The boiler burns wood pellets.

**ECOLOGY** - Combustion is controlled by an electronic unit, making the automatic boiler very environmentally-friendly. The boilers meet emission class 4 under EN 303-5 - the strictest values for emissions released from a boiler into the atmosphere. The maximum economy mode of combustion offers savings of up to 30% compared to ordinary solid fuel boilers. The boilers achieve efficiency levels of up to 86.3%.

**COMFORT** - Thanks to their efficiency and the 250 litre storage container, the boilers are easy to feed. The capacity of the storage container will ensure about 3 to 4 days of normal output. In summer mode, the fuel can provide hot water for up to 10 days. The boilers can be controlled by a room thermostat which switches off the central heating pump. The boilers need cleaning once every 3 weeks on average.

THE CAST-IRON BOILERS OFFER  
EFFICIENCY LEVELS OF **UP TO 86,3 %**

# BOILER REGULATION



**BOILER REGULATION** - The boilers are regulated using the latest SPARK units. The units use a Fuzzy Logic program which works to adjust boiler output so that the desired boiler temperature is maintained continuously. The units enable the regulation of 4 pumps and a mixing valve. They can be extended to cover up to 5 mixing valves and 8 pumps. Each mixing valve can be controlled by an external sensor and a room thermostat. The room thermostat fully regulates the boiler. The unit's display panel shows how much fuel is in the storage container. The SUMMER/WINTER mode can be selected at any time in the year. Separate menus are available for users and maintenance engineers. The boilers can also be controlled via the Internet using a sparkNET module.

**BOILER DESIGN** - The primary component of the boiler is the cast iron body. The element consists of a defined number of cast iron cells, which are mutually pressed into one another with inserts and secured with anchoring screws. The element always consists of front, back and middle cells. The main heat energy transfer from combustion products to heating water takes place in the boiler element. The top cleaning door and middle door are located on the front cell. The back cell then contains a smoke attachment for the combustion product exhaust into the chimney.

The complete cast iron body is then placed on a base. The base is a 5mm thick welded steel sheet metal. The ashtray door is on the front.

The square universal burners consist of a cast-iron furnace, air mixing chamber and feeder for combustion. The feeder screw runs along the entire length of the feeder right up to the furnace and is fitted with an opposing thread where it meets the furnace, forcing the material upwards as required. This gets rid of any sinter, which is forced out through the sides into the ashtray. Thanks to its extended shaft, the feeder is firmly anchored and makes no squeaking noises during operation. Thanks to the square shape and drawing in of air from four sides to the centre to encourage combustion, the burners achieve high combustion temperatures and efficiency levels even without the use of deflectors. The top part of the burner consists of two cast iron rings. The burners are placed in the base, on the left or right side.

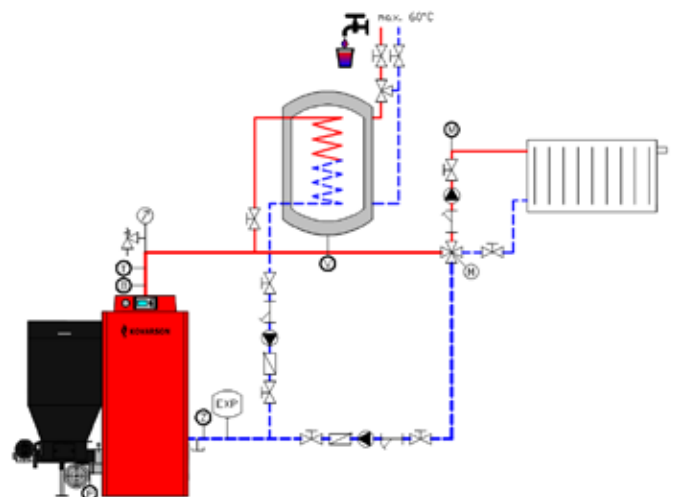
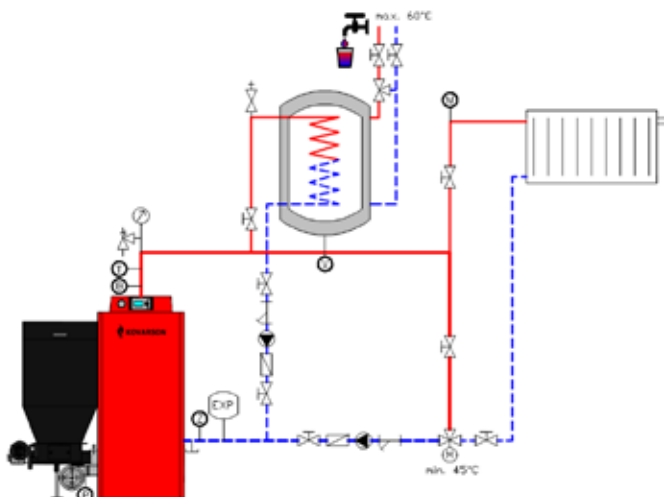


The upper feeding doors include a ceramic layer to improve combustion. The fan positioned on the burner flange beneath the fuel storage container blows primary air into the burner.

The fan speed is set electronically. The fuel storage container is located next to the boiler above the feeder screw.

The feeder is fitted with a wax plug for securing the system against back-burn.

**RECOMMENDED FOR INSTALLATION with a three-way valve or a four-way mixing valve.**

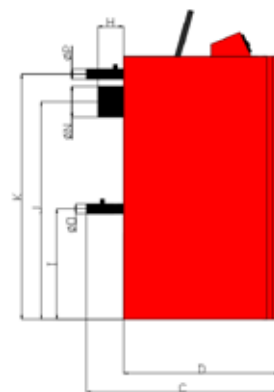
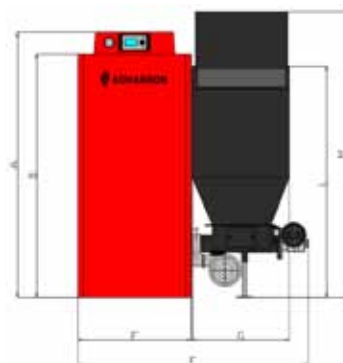




# KOVARSON

## CZECH PRODUCER OF BOILERS

Boiler type			PANTHER 20	PANTHER 25	PANTHER 30	PANTHER 35	
Nominal power output		kW	20	25	30	35	
Minimum power output		kW	7	8	10	12	
Efficiency		%	85,7	86	86,2	86,3	
Weight		kg	358	399	442	485	
Water volume capacity		l	36,2	40,9	45,6	50,3	
Chimney draft		Pa	20				
Dimensions of the tank filling hole		mm	440x300				
Boiler class per ČSN EN 303-5		-	4				
Heating areas of up to		m²	200	250	300	350	
Boiler dimensions	A	mm	1480		I	mm	580
	B	mm	1370		J	mm	1080
	C	mm	850-1090		K	mm	1250
	D	mm	720-960		L	mm	1350
	E	mm	1245		M	mm	1710
	F	mm	600		N	mm	158
	G	mm	500		O		2"
	H	mm	125		P		2"



### CONTACT



### CONTACT US

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