## **BENEKOV R SERIES**

#### AUTOMATIC BOILERS FOR PELLET FUEL AND NON-STANDARD BIOMASS

#### **FUEL**











#### THE MOST COMFORTABLE AUTOMATIC BOILERS FOR BIOMASS FROM BENEKOV

Benekov R Series boilers are among the best European automatic boilers made for burning wooden pellets and various types of non-standard biomass, such as olive pits, peat pellets or energetic grains. In the R Series, a lambda probe designed specifically for heating detached houses and large areas is included as standard. A cascade of four R100 boilers makes it possible to heat large industrial or administration buildings. To maximize operational comfort, automatic ignition and automatic exchanger cleaning are included as standard.

### A PATENT-PROTECTED BURNER DESIGNED FOR BURNING PELLETS WITH HIGH LEVEL OF CAKING.

#### BOILER CONTROL USING THE INTERNET.

- A lambda probe, automatic ignition, automatic cleaning of the exchanger, exhaust of combustion products, turnstile and turnstile drive are included as standard.
- The control unit can save up to 15 % on fuel expenses thanks to equithermal regulation and modulation of the combustion processes.
- The burner design allows very simple maintenance and service.

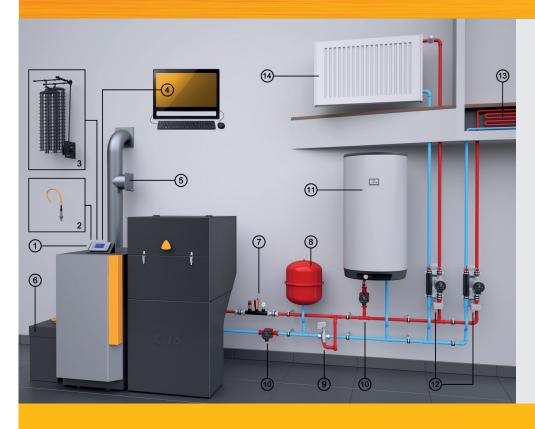
AUTOMATIC IGNITION AND EXCHANGER CLEANING AS STANDARD.

#### SIEMENS CONTROL UNIT WITH A LAMBDA PROBE.

- The feeder design with opposite threading significantly eliminates issues connected with combustion of fuels, which easily crumble in the feeders.
- It is also possible to use a rotary grate for combustion of the fuels with high level of caking. For the R100 model, this grate is included as standard.

BASIC TECHNICAL PARAMETERS		R 16	R 26	R 51	R 100
Rated power	kW	19	25	49	99
Fuel bin capacity	dm³	250	250	430	500
Efficiency	%	< 93	< 92	< 94	< 89
Electrical consumption	W	42	38	69	483
Boiler dimensions ( $w \times d \times h$ )	mm	1163 × 1108 × 1499	1163 × 1108 × 1499	1448 × 1493 × 1719	1751 × 1922 × 2017
Weight	kg	375	445	735	1350

# ENERGY-SAVING BOILER ROOM BENEKOV PERFECTION OF TECHNOLOGY



- (1) Siemens Climatix control unit
- (2) Lambda probe
- (3) Automatic cleaning of the exchanger
- (4) Remote access using the internet
- (5) Chimney damper
- (6) Ash removal
- (7) Safety kit
- (8) Expansion container
- (9) Siemens three-way mixing valve
- (10) Grundfoss ALPHA2 pump
- (11) Boiler
- (12) Siemens hydraulic mixing kit
- (13) Underfloor heating
- (14) Radiators

The BENEKOV Energy-saving boiler room is a concept defining a complex heating system solution which is projected to minimize the cost of three items:

- Minimal fuel consumption thanks to modulating control of the combustion process,
- operational electricity consumption of the boiler using the appliances with minimal consumption,
- time for boiler operation and maintenance and the whole heating system.

The Siemens control unit with equithermal regulation along with the modulating control of the combustion process saves up to 15 % on fuel expenses. The electric appliances controlled by a 0–10 V signal lower electricity consumption for the boiler operation to minimum.

#### IT IS POSSIBLE TO EQUIP BENEKOV BOILERS WITH THESE ITEMS:

## ASH REMOVAL AND AUTOMATIC CLEANING OF THE HEAT EXCHANGER

This device minimizes the necessary operational time of the boiler.

#### LAMBDA PROBE

The lambda probe allows optimization of the combustion process. The probe also affects the oxygen amount in the combustion products. This device is very useful when burning non-homogenous biomass.

#### SIEMENS SPATIAL DEVICE

Spatial devices offer better control of the heating system when compared with ordinary room thermostats. Precise signal transfer between the control unit and heating circuits significantly increases the efficiency of the whole heating system.

