



Austrian pellet stove and boiler technology

Wood Energy 2003

Karl Heinz Lesch



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KWB

## Austrian Technology

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**CONTENT**

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## C.V. Karl Heinz Lesch



- 1987  
Degree in Technical Physics
- 1988 – 1990  
Enquete Commission of the  
German Parliament
- Since 1990  
Heading the Energy unit of  
the municipality of Graz
- Since 2001  
CONNESS Ltd.

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Energieversorger für morgen

## Motto



**Shoot for the moon,  
Even when You miss,  
You are among the  
Stars!**

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# CONNESS

The Implementation Company



- ESCO energy service company
- founded 2000
- 15 employees
- 50 reference projects in progress
- app. 5 M€ total project volume
- tasks
  - renewables
  - efficiency

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# KWB

Kraft und Wärme aus Biomasse



- **1984:** Prof. Raggam started developing wood chip boilers
- **1994:** founded KWB in Graz, 37 units of biomass boilers
- **1997:** headquarter from Graz to St. Margarethen/Raab.
- **2000:** second building, 1,050 boilers, 24 employees.
- **2001:** third building, 1,600 units, 50 employees
- **2002:** 2,000 units

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## Mission



- the economic health of our companies
- the satisfaction of our employees
- the satisfaction of our customers
- the social health of our society
- and the ecological health of our nature

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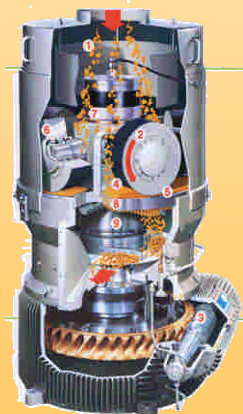
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## Pellets Production



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## Pellets Delivery



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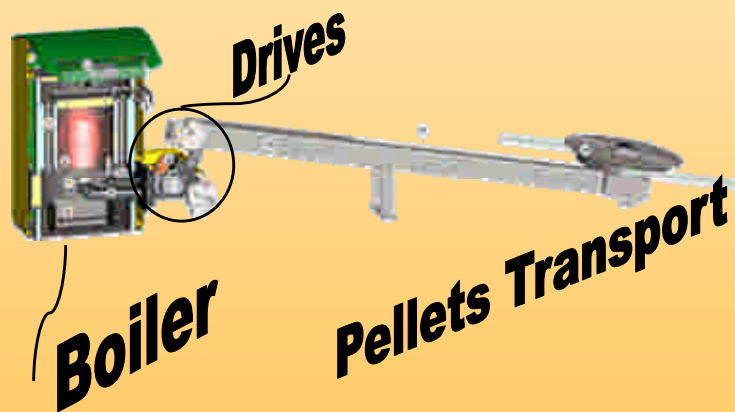
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## KWB Pellet Heating



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## Pellets Transport



- **19: Agitator**
- **25: Screw-Conveyor**

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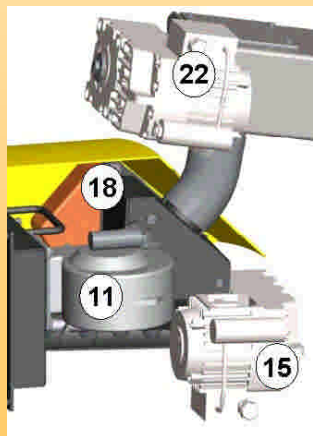


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## Drives



- **22: Drive for screw-conveyor and agitator**
- **15: Drive for pellet input and ash ablation**
- **11: fan for forced-air burner**
- **18: fire prevention shutter**

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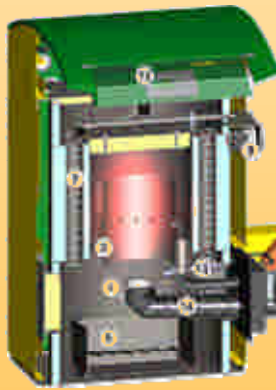


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## KWB Boiler



- 1: forced-air burner
- 2: post-combustion ring
- 6: ash bin
- 7: cleaning spring
- 9: cleaning spring drive
- 12: control unit
- 13: electric firing
- 14: screw conveyor

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## Pellet Burner



- preheated pellets
- restful glow stock

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## Air Control



**Optimising the burning process by two air control units:**

- **Primary Air**
- **Secondary Air**

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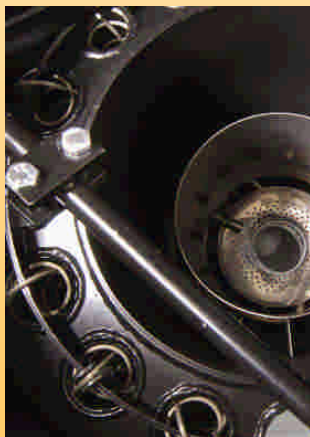
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Kraftwerk Bielefeld

## Heat Exchanger



**Advantages of the KWB heat exchanger**

- **very high efficiency**
- **automatical cleaning**

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## Boiler Control Unit



### Boiler and Heating Circuit Control

- ✓ Digital remote control unit
- ✓ easy to use (only 2 buttons!)
- ✓ modular concept
- ✓ 34 heating circuits

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## Remote Control Unit



- ✓ Digital remote control unit
- ✓ Day / Night / Program / Anti-freeze
- ✓ +/- 5°C
- ✓ easy to use

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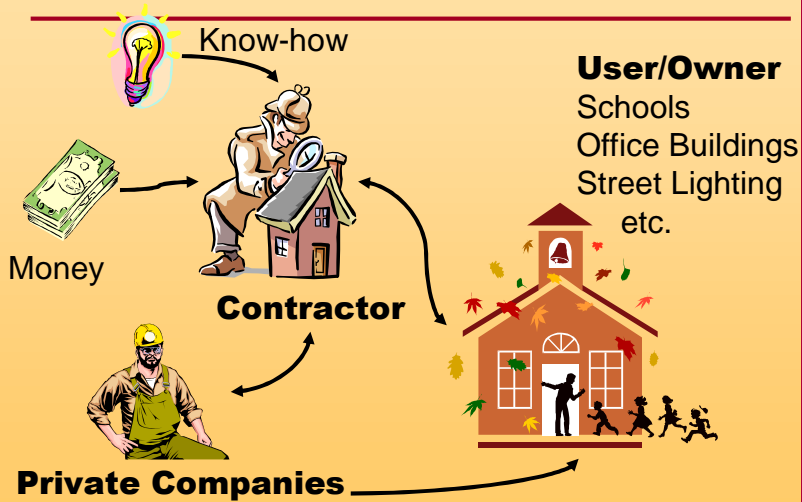
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## Contracting



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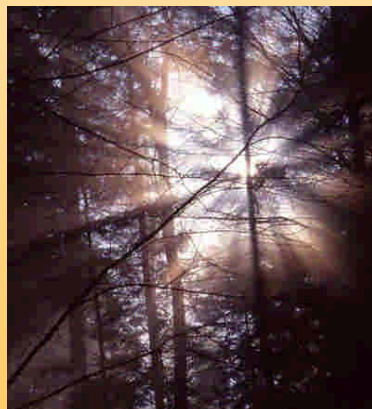
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## CleanHeat®



- Space Heating and Warm Water Supply
- Biomass Heating systems
- Solar Collectors

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## Thank You

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