

## **SOKRATHERM® GmbH & Co. KG Energie- und Wärmetechnik**

### **over 30 years of heat and power experience**

The cogeneration unit manufacturer SOKRATHERM is active in the field of energy saving and ecological generation of heat and power since its founding in Hiddenhausen (northern Germany) in 1977.

In 1992, SOKRATHERM founded a subsidiary in Nordhausen (eastern Germany) on the site of the then existing "IFA-Motorenwerke", erected an own production plant in 1996 and has doubled its production area in 2008. The today 2.500 m<sup>2</sup> of space contain the CHP (Combined heat and power generation) unit production with test sites and switchgear cabinet construction as well as the development, purchasing, documentation and technical service departments equipped with latest information technology. In Hiddenhausen, the administration, sales and project department are located. To date, the company engages around 50 employees of which 6 are apprentices.

The focus of its product range has extended from its beginnings in the 50 kW class to substantially more powerful CHP units: In 1993, the company has become the market leader of the 100 kW compact CHP unit class and presented the first 200 kW compact CHP unit on the EXPO 2000 fair. SOKRATHERM's currently most powerful cogeneration unit produces 402 kW of electric power and is with its small dimensions the most compact CHP unit of the 400 kW class.

The innovative SOKRATHERM compact CHP units have an excellent reputation on the market. Numerous awards like a "German gas industry price" or the nomination as an official project of the "EXPO Initiative OWL" as well as the installation in pilot and model plants (e.g. in E.ON Westfalen Weser's "Energieforum Innovation") confirm this as well as the satisfied customers of over 700 compact CHP units delivered Europe-wide.

Internationally, compact SOKRATHERM cogeneration units run not only in western European countries like Italy, France, Belgium, Holland or Switzerland but also in numerous eastern European countries like Ukraine, Poland, Romania and Russia.

#### **The product range of SOKRATHERM contains:**

- Compact CHP units with ca. 40 to 400 kW electric power. The gas engines are powered by natural gas and the renewable fuels sewage gas and biogas.
- Installation of turnkey CHP heating centers with one or more CHP units, boilers, buffer storage, master control and a total power of up to 1.600 kW<sub>el</sub>.
- Sophisticated operation and maintenance concepts in which the operator can be integrated in economically sound ways.

Our customers are mainly public utility companies, contractors, industrial plants, hotels and municipalities as operators of hospitals, homes for the elderly and swimming pools.

They especially value the specific advantages of the SOKRATHERM compact CHP units:

- Excellent efficiency rate of up to 91% - which helps them to get the most from the energy contained in the fuel and minimize the energy cost.
- Very compact design - which allows for a cost-effective installation with little space at hand. The switch cabinet already integrated in the CHP unit's sound absorbing case and the triple vibration damping, which makes without a special baseplate unnecessary, reduce the installation costs substantially.
- The outstanding sound insulation enables an installation of the CHP units also in sound-sensitive objects like hotels, hospitals and homes for the elderly.
- Comfortable, unattended operation with fully automatic switchgear with remote monitoring and control.
- Highest reliability and therefore low operation and maintenance costs due to carefully selected and adapted serial parts from leading producers like MAN (gas engines) and Viessmann (heat exchangers).
- Best protection of the environment with catalyst and self-calibrating lambda control. SOKRATHERM cogeneration units produce less than half of the emissions allowed by Germany's "TA Luft" directive and reduce CO2 emissions by up to 60% compared to separated heat and power generation.
- Additionally, the unit can be used as an emergency power aggregate when equipped for spare current operation.
- Adaption of the CHP unit for the co-operation with absorption chillers („Trigeneration“ of heat, power and cold) is possible.

In its 30th jubilee year 2007, SOKRATHERM emphasized its ambitious quality standard by ISO 9001:2000 certifying its quality management by the TÜV Thüringen and laid the cornerstone for further growth.

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