

## **SOKRATHERM® GmbH Energie- und Waermetechnik**

### **Over 35 years of heat and power experience**

The medium-sized company SOKRATHERM was founded in 1977 by Dipl.-Ing. Hermann Meinhold in Hiddenhausen (north-western Germany) and is active in the energy and heat technology since then. SOKRATHERM is one of the leading producers of combined heat and power generation units (short: CHP or cogeneration units) which efficiently and eco-friendly produce heat and power.

In 1992, SOKRATHERM founded a subsidiary in Nordhausen (eastern Germany) on the site of the then existing "IFA-Motorenwerke" and erected an own production plant in Nordhausen in 1996. In the course of continuous expansion, the production and administration area was doubled in 2008 and enlarged by a third hall in 2012. The today 3.500 m<sup>2</sup> of space contain the CHP unit production with test sites and switchgear cabinet construction as well as the construction, purchasing, documentation and technical service departments equipped with latest information technology. In the head office Hiddenhausen, the administration, sales and project department are located. In recent years, sales offices in northern and southern Germany, representatives in Poland and Russia as well as partner companies in Ireland and Slovenia have joined. To date, SOKRATHERM engages roughly 100 employees of which are 10 apprentices. With the entry of Dipl.-Ing. Johannes Meinhold into management in 2014, the transition of the family enterprise to the next generation is initiated.

The focus and scope of its product range has extended from its beginnings with CHP units with 50 kW electric power to substantially more powerful CHP units: In 1993, the company has become the compact CHP unit market leader of the 100 kW class and presented a compact CHP of the 200 kW class for the first time on the EXPO 2000 world exhibition. After several innovation steps to reduce the CHP unit's dimensions and still increase its power capacity, the GG 402 CHP unit was introduced as the most compact CHP unit of the 400 kW class. Today, SOKRATHERM's most powerful CHP unit has 532 kW electric power and is the world's most compact CHP unit of the 500 kW class. The iPC CHP control system based on an industrial PC (introduced in 2011) allows for a fully automatic operation, a comprehensive internet based remote monitoring and a smooth integration into virtual power plants.

Due to high product quality and continuous innovation, SOKRATHERM compact CHP units enjoy an excellent reputation on the market. Since 2007 this is underlined by an ISO 9001 certified quality management system. Numerous reports in professional media about innovative CHP plants, awards like the first "Deutscher TGA Award 2014" for the Energiebunker Hamburg or the repeated election for "BHKW des Jahres" (CHP scheme of the year) by the German cogeneration association B.KWK in 2009 and 2014 confirm this as well as the satisfied customers of over 1300 CHP units. Internationally, compact SOKRATHERM cogeneration units provide not only in many European countries like Ireland, Netherlands, Belgium, Switzerland, Italy, France, Spain, Latvia, Ukraine, Poland, Slovenia, Bulgaria and Russia but also in south America (Chile) for a reliable, eco-friendly and profitable heat and power supply.

Among the customers of SOKRATHERM are energy supply companies, industry, hotels, BOO (Build-own-operate) companies and municipalities as operators of hospitals, elderly homes and swimming pools. They value the specific advantages of the SOKRATHERM compact CHP units:

- Excellent efficiency rate of up to 93% - 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 available. The switch cabinet already integrated in the CHP unit's sound absorbing case and the triple vibration damping, which often makes a costly baseplate obsolete, reduce the installation costs substantially.
- The outstanding sound insulation allows for an installation of the CHP units also in sound sensitive objects like hotels, hospitals and elderly homes.
- 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 serial parts from leading producers. For example, only original MAN gas engines are built into the CHP units to secure high quality and a long-run supply with spare parts.
- Best protection of the environment with catalyst and self-calibrating lambda control for the gas engine operation in the lowest emission range.

**The product range of SOKRATHERM contains:**

- Compact CHP units in the range 50 to 530 kW electric and 82 to 686 kW thermal power. The engines are powered by natural gas or the renewable fuels sewage gas and biogas.
- Installation of turnkey CHP schemes with one or more CHP units, boilers, buffer storage(s), master control and a total power of up to 2 MW.
- Special configurations e.g with emergency power option, "hot cooling" to power absorption chillers, steam generation or thermal oil heating.
- Sophisticated operation and maintenance concepts in which the operator can be integrated in economically sound ways.