

## COMMERCIAL INSTALLATION

### Beer Brewery, Cologne GG 198 SOKRATHERM CHP Unit

#### INSTALLATION COST:

€430,000 approx.

#### PROJECT:

The brewery intended to reduce its energy cost and CO<sub>2</sub> emissions by producing electricity, steam and heat directly on site. Before the installation of the CHP / steam generator plant, all electricity had been drawn from the mains and all heat been produced by two large steam boilers.

#### SOLUTION:

SOKRATHERM installed a turbocharged CHP unit of the 200 kW-class, a steam generator, bypass, condensing heat exchanger and mixture cooler in one heat station. Since the (non-steam) heat is used to raise the brewing water temperature from 15 to 85 °C all heat sources can be used and the total efficiency achieves 94,1 %. Also all electricity produced by the CHP unit is used on site because the scheme only runs when beer is brewed.

UNIT TYPE	GG 198 D SOKRATHERM CHP unit 200kW electric power & 306kW thermal power
FUEL TYPE	Natural Gas
FUEL SAVINGS	2,133 MWh / year
TOTAL EFFICIENCY	94.1% - Electric 37.2% & Thermal 56.9%
PAYBACK TIME	3 years
CO <sub>2</sub> SAVINGS	840 tonnes / year