

Application Spotlight

Fuel consumption measurement
in gas turbine power plants

WEAR-FREE, PRECISE MEASUREMENT AND CONTROL OF FUEL CONSUMPTION

Technical Data

Medium:	DFO / Fuel Oil / Diesel / Kerosene
Temperature:	approx. +20 °C up to +40 °C [+68 °F up to +104 °F]
Pressure:	100 bar (g) [1,450 psi]
Measuring range:	400 - 2,000 l/min
Viscosity at 20 °C:	3 - 15 cp
Density at 20 °C:	0.84 - 0.87 kg/l

Application

The strongly fluctuating energy demand in some regions poses challenges for electrical energy suppliers worldwide. Gas turbine power plants have to respond flexibly to energy peaks. The result is frequent, rapid startups and shutdowns. This is a challenging task that must be managed in an energy-efficient and cost-saving manner. The lifetime of the gas turbine must not be affected.

The most important criterion for the performance of power plants is their efficiency factor. Precise measurement and control of fuel consumption is indispensable. In addition to the use of a wide variety of fuels, this also enables the efficiency to be calculated and the complete gas turbine power plant to be controlled.

Solution

The basic prerequisite for consumption measurement is precise and durable flow meters that can detect different fuels with maximum accuracy. Various power plant operators rely on HM F series flange turbines from KEM with a VTC local display as flexible evaluation unit. Thanks to a DakkS calibration at different viscosities, different fuels are taken into account.

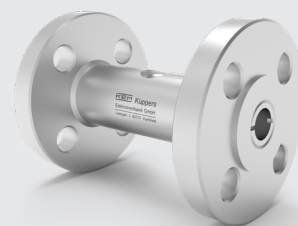
Advantages

- Many years of experience in consumption measurement
- High measuring accuracy due to electronic linearisation
- Can be used for different media and viscosities
- No wetted weld seams and weld seam tests
- High-quality materials
- Wear-free design with extremely long service life
- Low pressure drop and flexible flange sizes (easy system integration)



Certificates:

- Pressure Equipment Directive 97/23/EC, 2014/68/EU
- HP0 - Certification
- Explosion protection according to 2014/34/EU
- CSA/UL - Certification
- Accreditation according to ISO 17025



Turbine Flow Meter
with Flange Connections
(HM F Series)