



# Liquid Special Fuels

## Special fuels

<b>Fuel</b>	Liquid by-products e. g. animal, edible and Vegetable fat, glycerine, biodiesel
<b>Lower heating value (LHV)</b>	15 – 50 MJ/kg
<b>Auxiliary fuel</b>	Diesel oil, natural gas two-fuel operation possible
<b>Dual fuel operation</b>	Simultaneous firing possible

### Make a low-cost substitute fuel out of it!

Reduction of CO<sub>2</sub> emissions and increased prices for fossil fuels are only two reasons to look around for alternatives. Often you don't have to look far for a solution, i. e. industrial by-products generated during production. Burning industrial by-products with low emissions saves disposal costs and expensive fossil fuels. Thermal utilization of animal fats and vegetable oils as well as of fatty acid methyl ester (FAME – better known as “biodiesel”) is constantly optimized in industrial heat generation by means of plant and burner technology from SAACKE. Development of marketable solutions for thermal utilization of glycerine, a by-product of biodiesel production, represented a technical challenge.

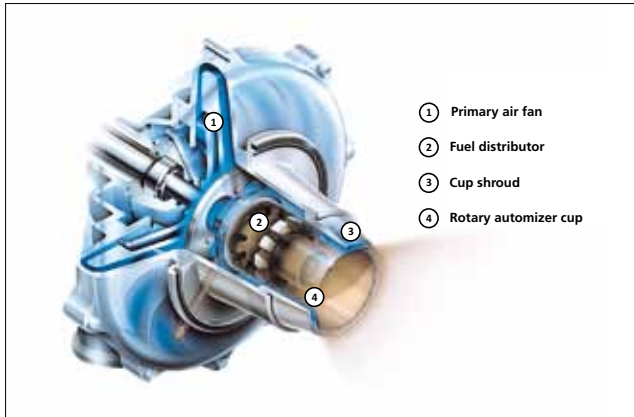
### The solution in detail

With the SAACKE SKV-SF (Special Fuel) burner you can utilize the energy from vegetable oils or mixtures of heating and vegetable oils, fatty acid methyl ester (FAME), rape methyl ester (RME), bioethanol and biomethanol as well as glycerine.

### Facts

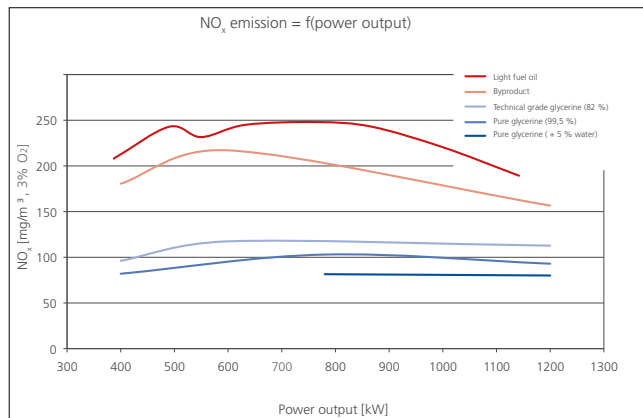
- Relatively low fuel pressure and relatively low fat temperature necessary
- Reliable igniting device
- Broad control range
- No tight cross-sections or nozzles
- Precise flame geometry
- Long life service due to corrosion resistant design

The SAACKE burner consists of a special version rotary cup atomizer burner of the proven SKV series. With this duoblock burner even mixed operation with two fuels is possible, and has already been implemented in a variety of cases.



Rotary cup atomiser principle

Emissions similar to those of light fuel oil are produced during the combustion of the above-mentioned fats and oils, both an environmentally friendly and economical solution.



NO<sub>x</sub> evaluation



SAACKE burner SKV-SF at animal carcass "TBA Walsdorf"

## Summary

By-products are burned in a low-cost and environmentally friendly manner while generating useful energy.

SAACKE looked into economical combustion of animal fats back at the beginning of the 1990s. In 1993 SAACKE launched operation of an animal fat combustion plant using a flame tube boiler in Bielefeld. After that SAACKE developed more than 100 plants for combustion of animal fats in liquid form, mainly in UK, Germany and other European countries. Experience on which you can build.

## Technical data

<b>Application</b>	Shell boiler, water tube boiler, thermal oil heater, hot gas generators
<b>Burner model</b>	SKVG-SF (based on SKVG-series)
<b>Burner output (max.)</b>	1 – 40 MW
<b>Fuels</b>	Animal, edible and vegetable fat, glycerine, biodiesel, liquide by- products (BPA a.s.o.)
<b>Lower heating value (LHV)</b>	15 – 50 MJ/kg
<b>Emission values</b>	NO <sub>x</sub> : 100 – 300 mg/m <sup>3</sup>
<b>Characteristics</b>	Dual fuel operation simultaneously also Long life service due to corrosion resistant design

For further information, please visit: [www.saacke.com](http://www.saacke.com)