

## Rotameters and Biodiesel Production

**Industry:** Biodiesel Production  
**Product:** Rotameter Flow Meters

### Introduction

With the increased interest in green energy and renewable fuel sources, Biodiesel has emerged as a viable alternative to standard petroleum based diesel and home heating oil. It has zero CO<sub>2</sub> emissions and can be created from waste vegetable oil or rendered animal fat. The number of Biodiesel processing plants has grown to over 2500 in the US alone

Because of the relatively simple process to create Biodiesel, processing plants, whether they are an upstart company working in a basement or a garage producing a couple of hundred gallons a year or a multi conglomerate corporation that can produce several thousand gallons a month. The process is generally same, typically it consists of heating the oil, filtering, chemical injections, moving the oil around to various vessels, allowing the solids to settle, a final filtration and storage,

### Application

A start up production plant was looking for an accurate, cost competitive, multiplication flow meter that could be used at several points of their the Biodiesel manufacture process

1. Monitor the flow of fuel gas and air to heaters used to heat the oil.
2. Monitor oil flow through the filter process
3. Monitor the flow and correctly meter chemical additives that are needed for the refinement process.

### Solution

Because of their versatility and price competitiveness Yokogawa's Rotameters were chosen to be the solution to this customer's needs.

### Biodiesel Plant Locator

To assist you in locating these Biodiesel opportunities in your area, below are links that list all the Biodiesel plants in the United States.

<http://www.biodieselmagazine.com/plants/listplants/USA/>

<http://www.biodiesel.org/production/plants/plants-listing>



One Man Operation



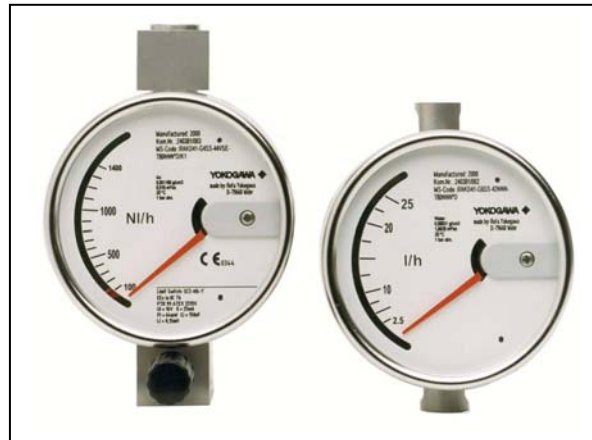
Large Scale operation

## Featured Products

**Used to monitor Fuel gas and Air to heaters heating oil**

### RAKD

- All wetted parts and indicator housing made of stainless steel
- Light, guided floats resulting in low pressure loss and stable float movement
- Easy to read display
- Process reliability because all RAKD's with electric transmitter are also equipped with mechanical indicator
- Available with pressure controller
- Large selection for low flow applications
- Reliable, durable and versatile



**Used to Monitor Oil flow through filter process**

### RAMC

- Durable and reliable flowmeter
- Easy to install with low maintenance
- 4-20 ma and pulse output
- Suitable for continuous operation
- LCD Display
- Totalizer
- Can be used on Liquids or Gases
- Local indicator without additional power supply
- Cost effective



**Use to monitor flow and meter chemical additives needed for the refining process**

### RAGL

- Direct measurement and indication
- No external power needed
- Suited for gases and liquids
- Precise measurement at very low flow ranges
- Lots of different variations
- Visual evaluation of measured substance possible
- Well approved instrument
- Quick and uncomplicated handling
- Very cost effective

