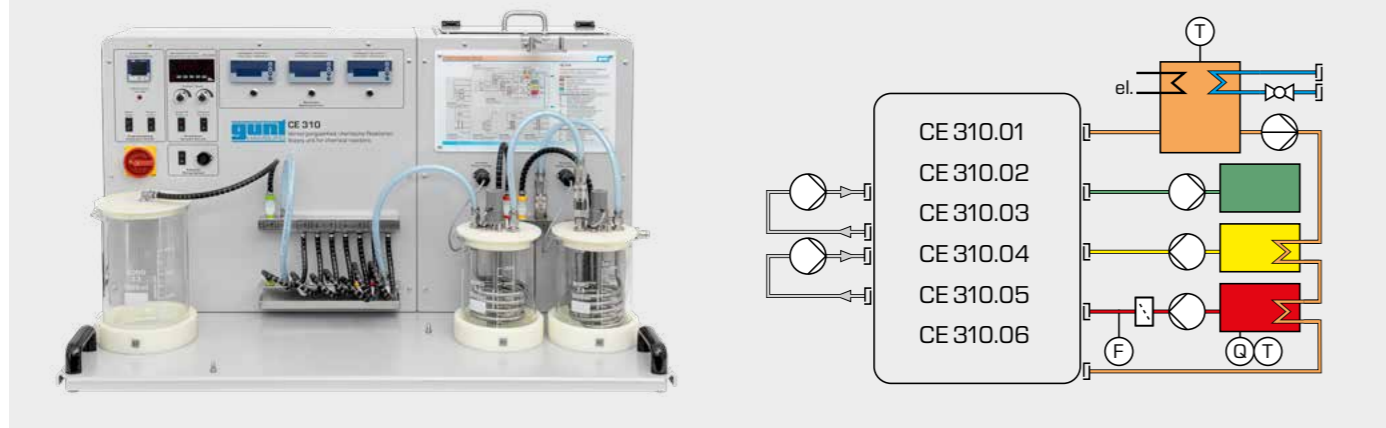


Overview

CE 310 The modular system for
chemical process engineering

One supply unit for all reactor types



The supply unit is equipped with all components that are required for operating the different reactors:

- tanks and pumps to supply the reactants, intermediate products and products.
- measuring equipment to determine the product concentrations
- water circuit for heating of the reactors and cooling with WL 110.20 Water chiller
- controls to adjust the flow rates and temperature

Learning contents:

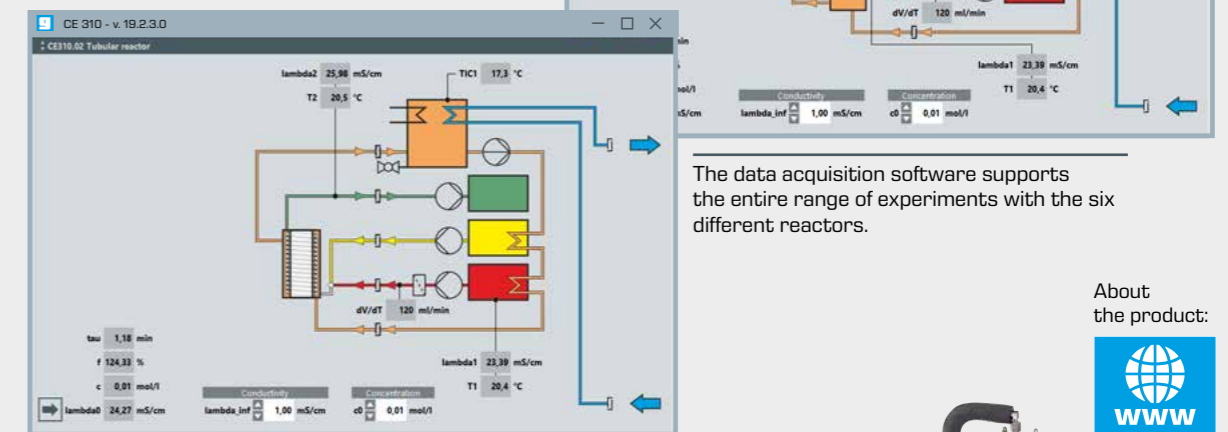
in conjunction with a reactor (CE 310.01 – CE 310.06):

- conversion determination of substances depending on
 - ▶ reactor type
 - ▶ retention time in the reactor
 - ▶ temperature
 - ▶ concentration
- fundamentals of a saponification reaction
- determination of retention time distribution
- design and operating principles of different reactor types

Software for data acquisition

Main features

- process schematic with display of the current measured data for each reactor type
- development of the conductivities over time as the measure for product concentration
- development of the temperature in the reactors over time
- conversion determination for a 2nd order reaction



The data acquisition software supports the entire range of experiments with the six different reactors.

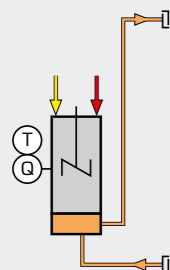
About
the product:



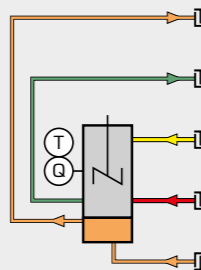
Stirred tank reactor



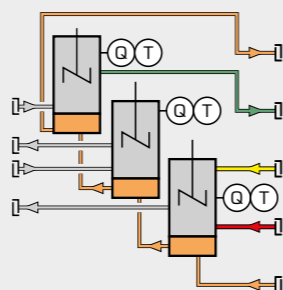
CE 310.04
Discontinuous stirred tank reactor



CE 310.01
Continuous stirred tank reactor



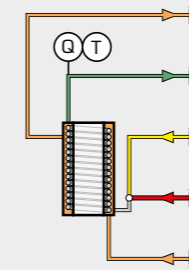
CE 310.03
Stirred tanks in series



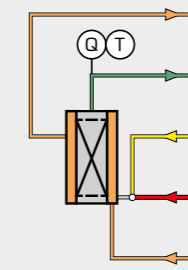
Tubular reactors



CE 310.02
Tubular reactor



CE 310.05
Plug-flow reactor



CE 310.06
Laminar-flow reactor

