

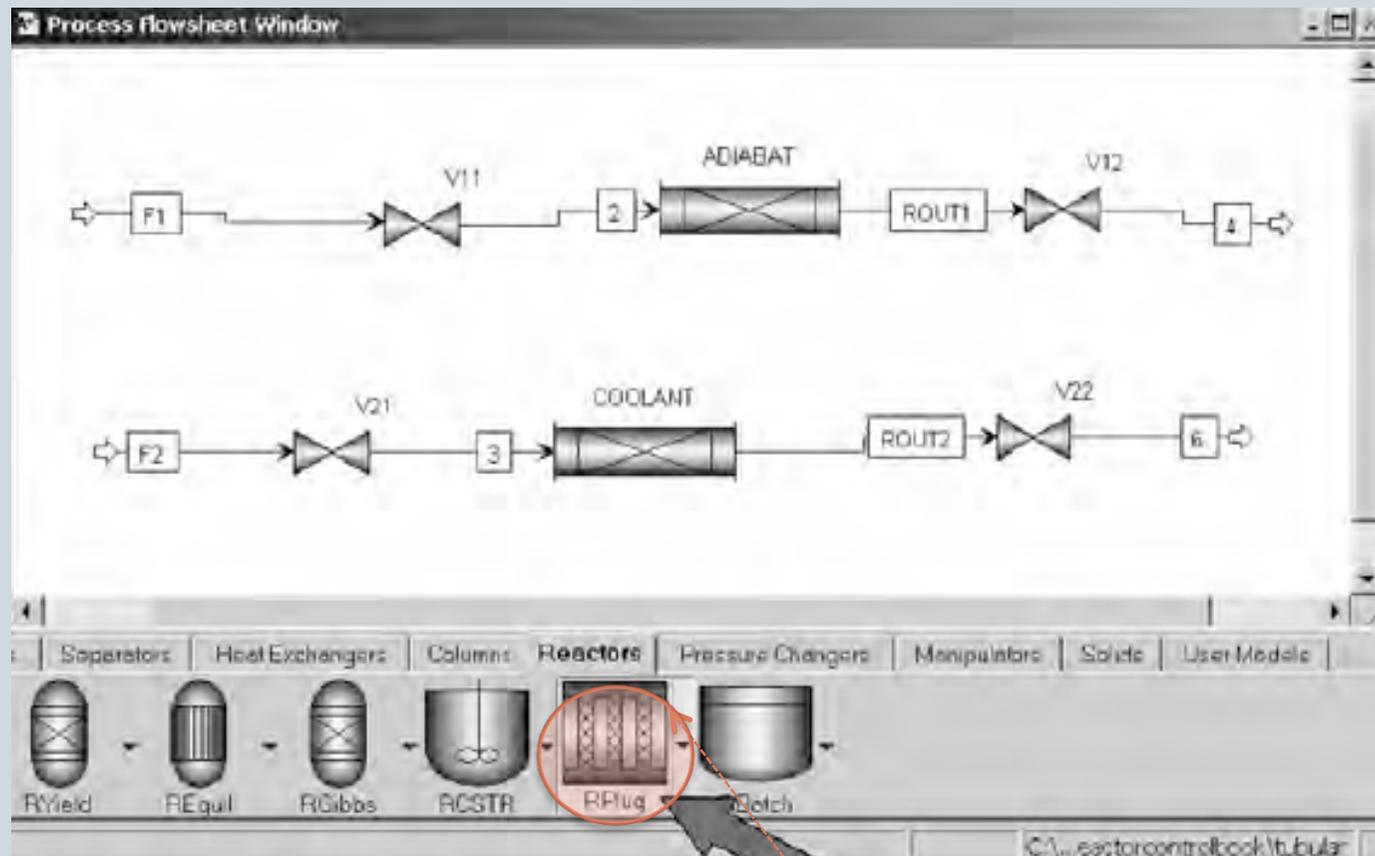


**Aspen Plus.  
Simulación de un reactor PFR.**



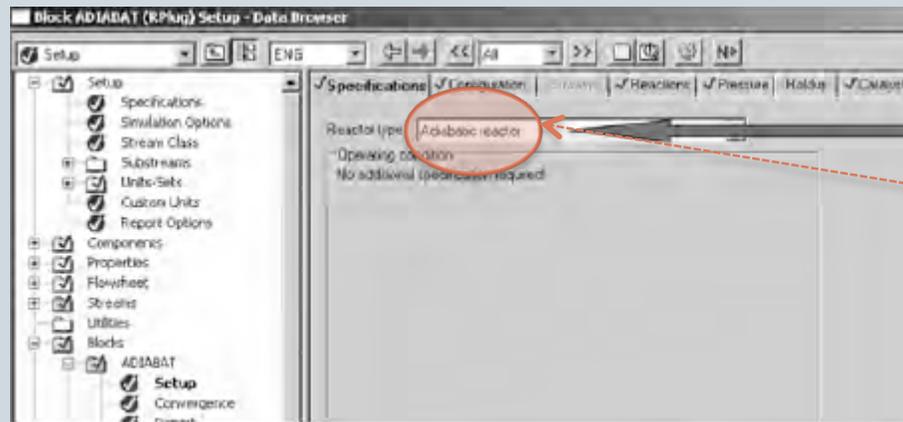
1. Establecer componentes, propiedades físicas (Chao-Seader) y crear las reacciones que tienen lugar, con su estequiometría y órdenes de reacción

2. Seleccionar el equipo, hacer el diagrama de proceso y rellenar datos de las corrientes de entrada

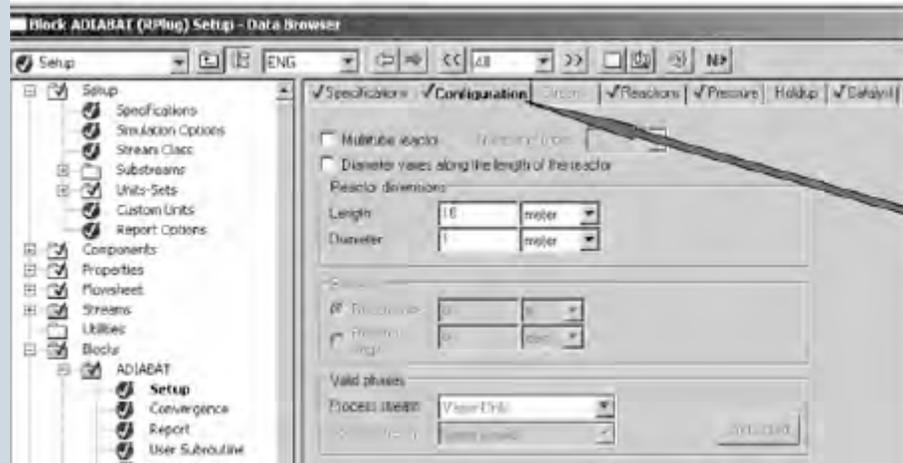


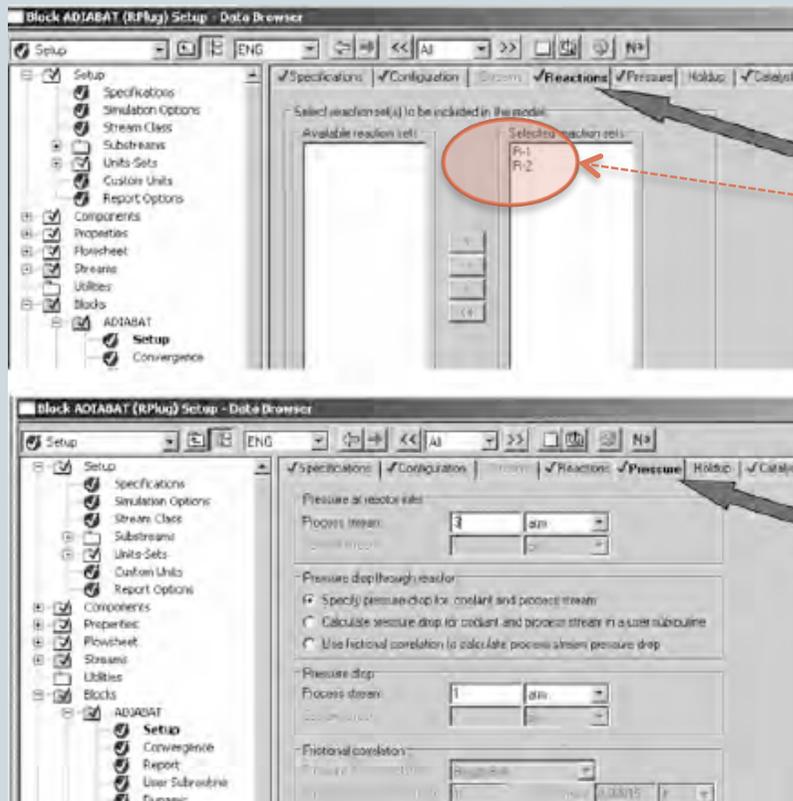
Tipo de reactor

### 3. Definir el tipo de reactor flujo tubular y poner las condiciones de operación (caso adiabático)



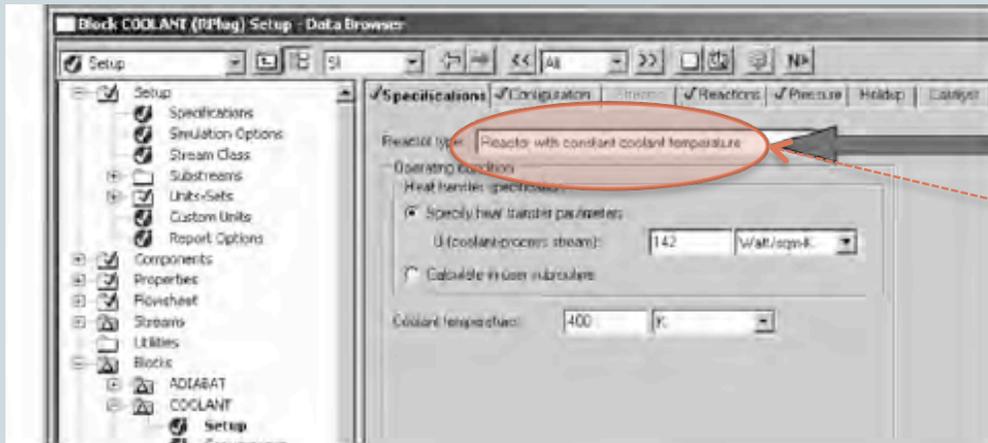
Caso adiabático





Indicar las reacciones que tienen lugar (definidas previamente de la forma indicada para el CSTR)

### 3a. Definir el tipo de reactor flujo tubular y poner las condiciones de operación (caso temperatura refrigerante constante)



Caso adiabático



3b. Definir el tipo de reactor flujo tubular y poner las condiciones de operación (caso contracorriente el refrigerante)

The image displays a screenshot of the Aspen Plus software interface. The top window shows a process flow diagram with a central 'COUNTER' reactor block. The flow starts from a feed stream 'F3' through a valve 'V01' and a heat exchanger 'HE1' into the reactor. The reactor effluent goes through another heat exchanger 'HE2' and valve 'V02' to a product stream 'P3'. A cooling water stream 'CWINLET' enters through valve 'V03' and heat exchanger 'HE2' to cool the reactor. The cooling water outlet is 'CWOUT'. The bottom window is the 'Block COUNTER (RPlug) Setup - Data Browser'. The 'Specifications' tab is active, and the 'Reactor type' is set to 'Reactor with counter-current coolant', which is circled in red. The 'Cooling condition' section is expanded, showing 'Specify heat transfer parameters' checked. The heat transfer coefficient 'U (coolant process stream)' is set to 142 W/m<sup>2</sup>/K. The 'Coolant outlet temperature' is set to 450 K. A red callout box with the text 'Caso contracorriente' points to the 'Reactor type' selection.