

Stream	1	2	Unit
Pressure	50	50	atm
Temperature	250	320	°C
Flow rate	200	155.179	kmol / h
Mole frac Ethylene	0.5	0.355582	
Mole frac Water	0.5	0.355582	
Mole frac Ethanol	0	0.288835	

Ethanol Synthesis Reactor		
Parameter	Value	Unit
Temperature	320	°C
Heat duty	-376936	W
Heat duty type	Isothermal	
Enthalpy Type	Use EnthalpyF	
Ethylene conversion	0.448211	
Water conversion	0.448211	

```

Last run for unit Ethanol Synthesis Reactor:

+++ specifications +++

Using enthalpyF in enthalpy calculations
Temperature:    593.15 K
Pressure drop:  0 Pa
Reaction phase: Vapor
Tolerance:      0.0001
Maximum iterations: 100
basis for reaction "Ethylene Hydration (Gibbs Keq)":    molarity (molar density)

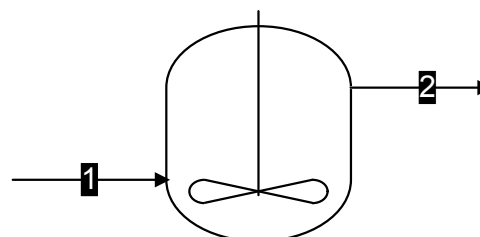
+++ solution +++

Solution converged in 6 iterations
Extent of reaction "Ethylene Hydration (Gibbs Keq)":    12.4503 mol/s
Equilibrium constant reaction "Ethylene Hydration (Gibbs Keq)": 0.002025
Conversion Ethylene:    44.8211 %
Conversion Water:       44.8211 %

+++ optional parameters +++

Heat duty:        -376936.387858299 W

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Ethanol Synthesis Reactor

Ethanol Synthesis Reactor  
CSTR (Equilibrium)

Title:	Ethylene (CSTR equilibrium) V1.0
Author:	DAE
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