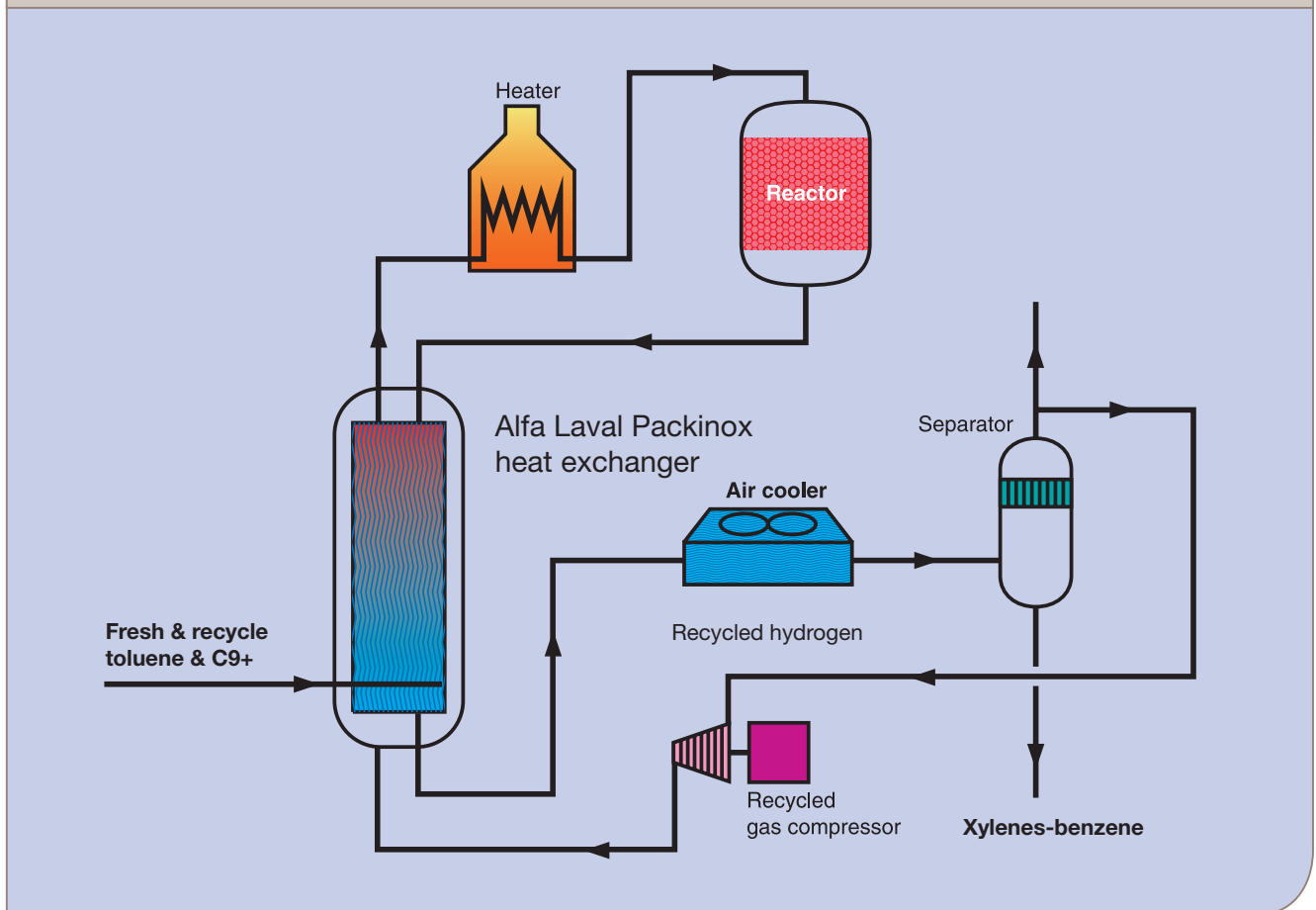




Alfa Laval Packinox for toluene disproportionation

Standard combined feed/effluent heat exchanger



Alfa Laval Packinox Standard Combined Feed/Effluent Heat Exchangers began service in toluene disproportionation units in the mid-1990s. By 2000, some 35 Alfa Laval Packinox Standard Combined Feed/Effluent Heat Exchangers had been installed in paraxylene production plants.

The example overleaf shows how a single Alfa Laval Packinox provides as much heat exchange area as two tubulars in a smaller footprint, and the lighter weight of one Alfa Laval Packinox heat exchanger makes it a more economical solution than vertical S&Ts.

Figures are given for an actual non-optimized toluene transalkylation unit.

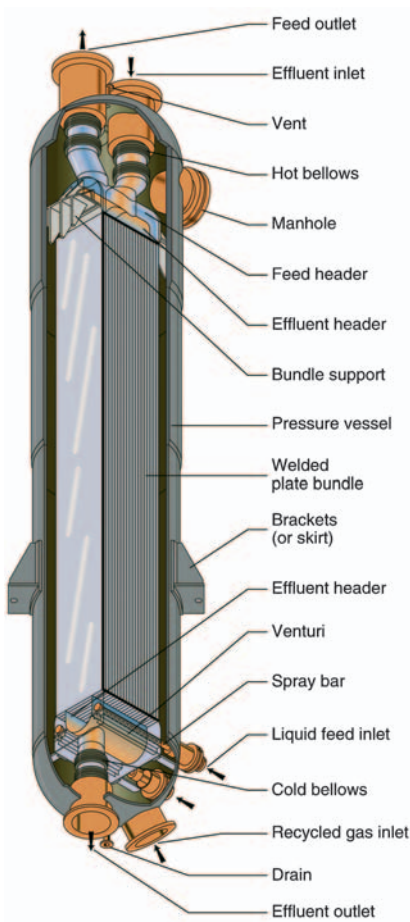
Technical data

	Alfa Laval Packinox case HEA = 40°C	Shell & Tube case HEA = 40°C
Number of shells	1	2
Duty	65.25 MW	65.25 MW
Feed outlet temperature	443 °C	443 °C
Estimated total dry weight	73 000 kg	170 000 kg
Estimated flange-to-flange height	15 m	17 m
Estimated shell diameter	2600 mm	1700 mm

Capital Cost (euros)

Estimated equipment cost	1 265 000	1 372 000
Estimated installation cost	503 000	1 100 000

Total (euros)	1 768 000	2 472 000
Capital cost savings (euros)	704 000	



In addition to lower foundation and transport costs, significant savings on installation are achieved by eliminating duplicate piping and instrumentation.

Similar studies based on optimized plant conditions would show additional operating cost savings.

How to contact Alfa Laval

Up-to-date Alfa Laval contact details for all countries are always available on our website at www.alfalaval.com