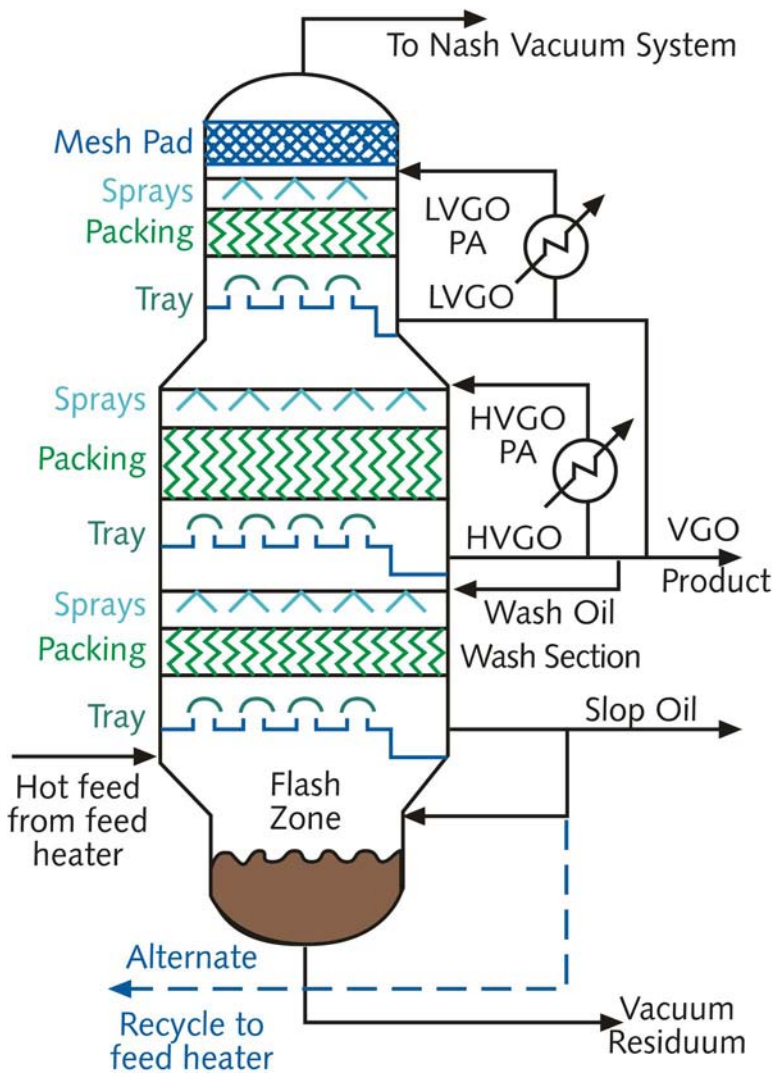


Vacuum Distillation Columns

Optimizing your vacuum distillation system is a complex job. Doing it right involves much more than meeting an equipment specification. The rewards in performance and cost savings over the life of the system make it very worthwhile.



- VGO = Vacuum gas oil
- LVGO = Light vacuum gas oil
- HVGO = Heavy vacuum gas oil
- PA = Pump-around circuit with cooler

Nash engineered vacuum systems for crude distillation bring you:

- Reduced operating costs
- Versatility for alternate feedstocks
- Reduced water treatment costs
- Improved environmental control
- Increased product yield
- Less or no need for stripping steam
- Ability to automate system

Optimizing your tower vacuum system

Industrial scale vacuum distillation has several advantages. The vacuum distillation columns, such as the one shown at left, typically have diameters ranging up to 46 ft (14 m), heights ranging up to 164 ft (50 m), and feed rates ranging up to about 160,000 barrels a day.

The columns's internal structure must provide good vapor-liquid contact while, at the same time, maintaining a very low pressure increase from the top of the column to the bottom. Therefore, the vacuum column uses distillation trays only where withdrawing products from the side of the column. Most of the column uses packing material for the vapor-liquid contact because such packing has a lower pressure drop than distillation trays. The packing material can be either structured sheet metal or randomly dumped packing such as Raschig rings.

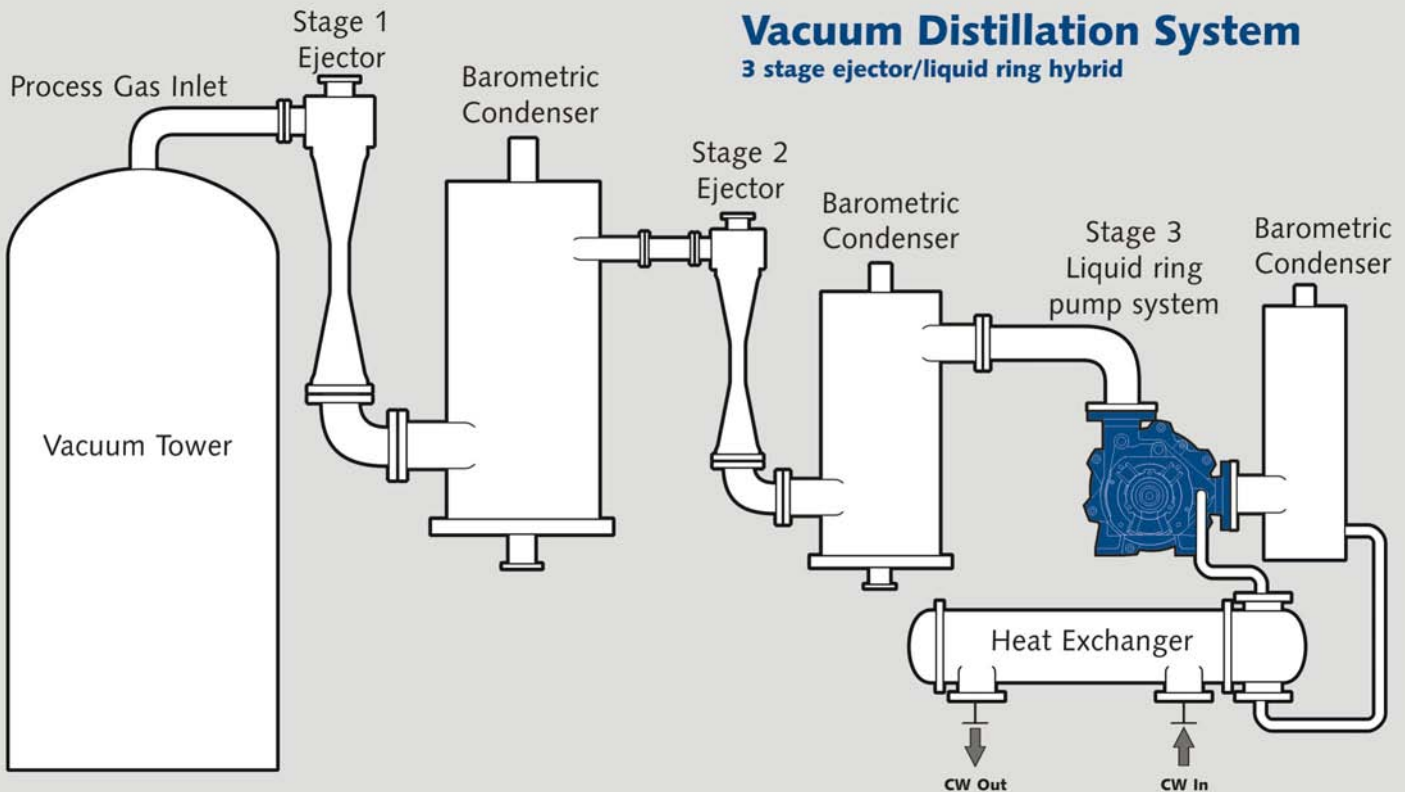
The absolute pressure of 10 to 40 mmHg in the column is most often achieved by using multiple stages of steam jet ejectors. The ejectors, in turn, can be made more efficient by the addition of Nash pumps.



Environmental Solutions - Helping You Comply With EPA and Kyoto Treaty Regulations

Gardner Denver Nash is committed to providing environmentally friendly solutions for your process needs. Gardner Denver Nash wants to be your partner in responsible stewardship of the environment and building more profitable refineries.

Vacuum Distillation System 3 stage ejector/liquid ring hybrid



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