INTRODUCING THE CROWN FVS (FIXED VALUE SYSTEM) OIL STRIPPER

The Crown FVS Oil Stripper is the latest development in Oil Stripping technology for the vegetable oil industry. The FVS utilizes 100% direct contact of steam to oil for hexane flashing and 0% surface area flashing and represents a natural progression in Crown’s oil stripper technology which began with the introduction of the Super Stripper in 1995.

FVS STRIPPER DESIGN

- Eight (8) shallow bed trays with weir over-flows and down-comers in a typical oil stripper
- Large diameter expansion dome with demister device to minimize oil entrainment
- 100% of hexane flashing is accomplished using direct contact of steam with the oil
- Multiple steam injection points for fresh steam and oil dryer ejector motive steam
- Steam forced to rise through the trays by specially designed downcomers with hydraulic seals on every tray

FVS TRAY DESIGN FEATURES

- Horizontal steam discharge means less oil entrainment
- Larger valve openings results in less potential for fouling
- Superior mechanical strength due to stiffening effects of valves
- Stainless steel tray construction to eliminate corrosion
- Specially designed tray valves chosen for maximum turn-up/turn-down capability
- Valves designed to help move the oil across the trays

FVS STRIPPER PERFORMANCE

- FVS Stripper relies on 100% direct contact of steam with oil to flash off hexane
- Steam consumption in the range of 0.75-1.0 lb steam per lb of Hexane
- Residual Hexane in the stripped oil in the range of 25-50 ppm
FVS STRIPPER ADVANTAGES

- Significantly reduced steam consumption and residual hexane over previous designs
- Trays are bolted together inside vessel so can be replaced if operating conditions change
- Reduced stripper diameter over Super Stripper design
- Lower sparge rate reduces load on stripper condenser and improves vacuum
- Significantly reduced overall height
- Full range of Crown FVS strippers for all plant capacities

FVS TRAY DESIGN SPECIFICATIONS

<table>
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<tr>
<th>VESSEL NOM. (IN)</th>
<th>VESSEL INSIDE DIA (IN)</th>
<th>ACTIVE TRAY TRAY AREA (ft²)</th>
<th>MINIMUM SPARGE STM lb/hr</th>
<th>NOMINAL SPARGE STM lb/hr</th>
<th>MAXIMUM SPARGE STM lb/hr</th>
<th>CALC SOY MTPD</th>
<th>NOMINAL SOY CAP. IN MTPD</th>
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WHO SHOULD BUY AN FVS STRIPPER?

- Processors operating with expanders tend to have more problems with strippers fouling due to pre-degumming in the stripper and can see significant reduction in fouling
- Processors who want to minimize hexane loss to meet emission restrictions
- Processors who want to reduce steam consumption by roughly 3 kg/ton
- Plants with under-sized stripper condensers should see an improvement in vacuum

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