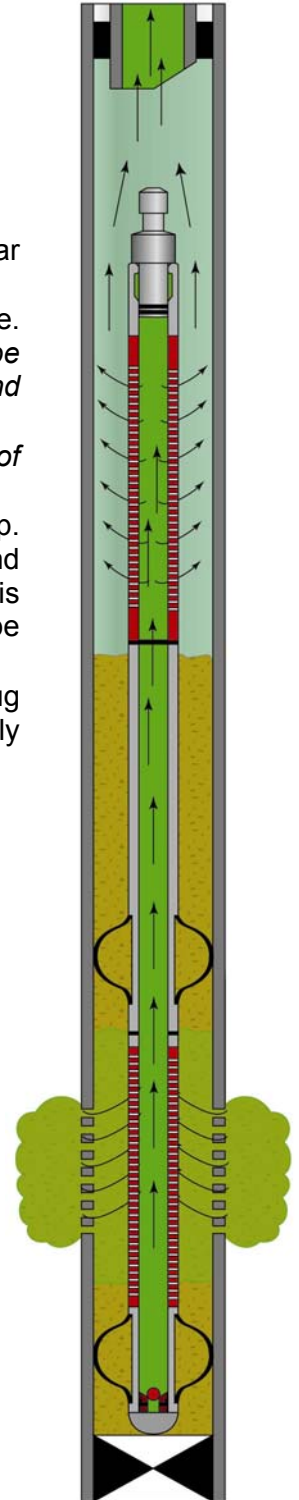


Sand Control Systems

TTS Thru-Tubing Gravel Pack Vent Screen Installation

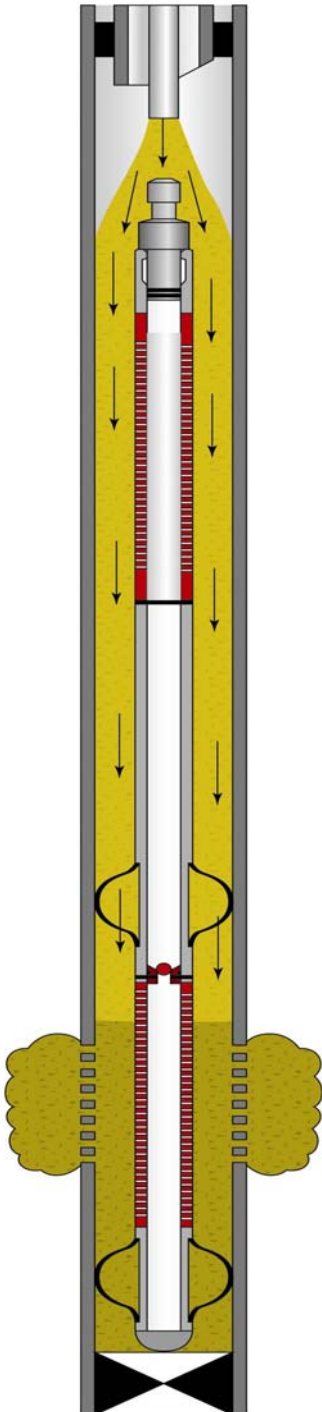
Features/Benefits

- ♦ Available for tubing sizes from 2-3/8" and up. Readily available for all popular production tubing sizes.
- ♦ Does not require packers or attachments to production tubing with blank pipe. *Eliminates excessive pressure draw down due to long sections of blank pipe needed in some applications where distances are excessive between the end of the production tubing and the proposed completion interval.*
- ♦ Does not interfere with future plug back completions. *No required fishing of any hardware.*
- ♦ Can be deployed on coil tubing and gravel packed in one trip. Expendable Sand Height Control Valve diverts slurry from entering and dehydrating across vent screen while pumping slurry. Once sand out is achieved and additional sand out pressure is applied, the ball seal will be sheared and blown down to the bottom of the screen assembly.
- ♦ Retrieval Plug on top of vent allows flow thru BHA if vent screen should plug up with fines. Plug can be pulled after gravel pack or at a later date. Easily accommodates installation of sealing accessories such as packers.

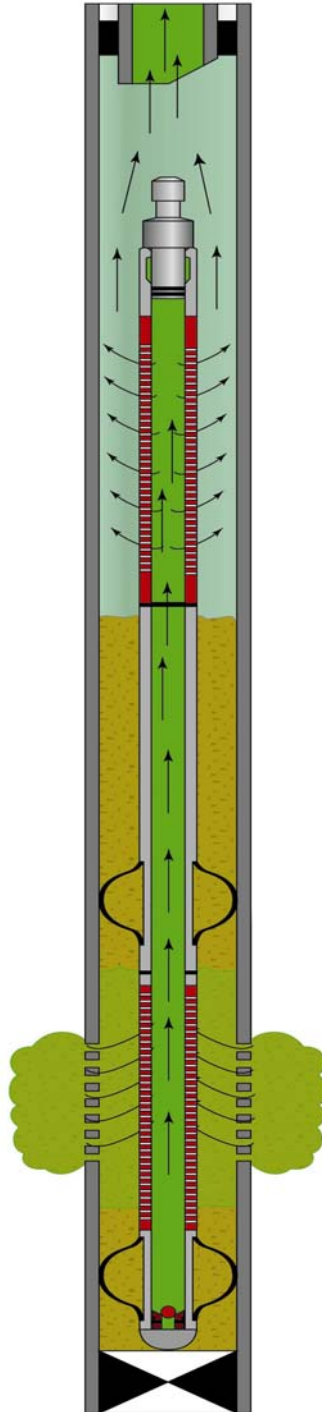


Vent Screen

Gravel packing



Production w/Plug in Place



Producing w/Plug Removed

