



Zenith[®] PCP Tubing Drain Valve with backflush capability

The Zenith Tubing Drain Valve for progressing cavity pumps (PCP-TDV) is a tubing-mounted downhole tool installed as part of a PCP completion.

The PCP-TDV protects the pump from sand and debris settlement and prevents pump-off situations by diverting fluid and entrained solids from the production tubing to the annulus when flow to surface stops.

Fig. 1: The valve is installed above the pump stator allowing passage of well fluids upward through production tubing to surface while the pump is running.

Fig. 2: On pump shut-down, the valve immediately shuts off the flow path down through the pump, opening a series of annular ports to divert the fluid column from upper production tubing into the annulus along with any solids, preventing problematic build-up of production solids on top of the pump rotor / stator assembly.

Backflush operations

The Zenith PCP-TDV with backflush capability is designed to allow the pump rotor to be retracted and reset without running out of hole.

Fig. 3: Backflush operations may be carried out by simply retracting the rotor far enough to clear the stator then flushing fluids and chemicals down the production tubing and through the stator. On completion of backflush operations, the rotor is run back to depth in the PCP stator. Pump operation can then recommence.

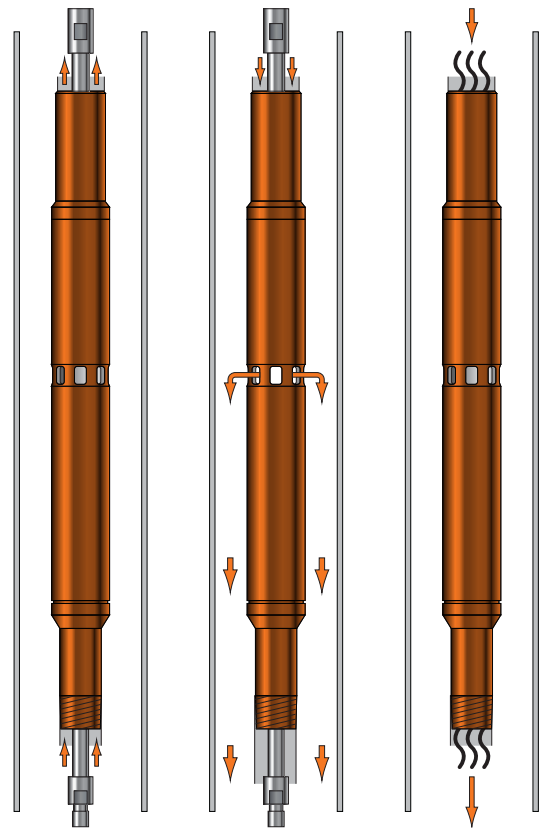


Fig. 1

Fig. 2

Fig. 3

| Description | Ref. # Carbon Steel | Ref. # 13 Chrome | Top Thread | Bottom Thread | Make Up Ln (ft) | OD (in) | Rating (psi) |
|-----------------------|---------------------|------------------|------------------------|------------------------|-----------------|---------|--------------|
| PCP-TDV c/w backflush | 12350010202 | 12350010402 | 3-½" 9.3 lb-ft EUE Box | 3-½" 9.3 lb-ft EUE Pin | 4.50 | 5.20 | 5,000 |