Completion Release Device (CRD)

Description

The CRD enables a safe and accurate release of the completion string and control lines without any intervention. It has a robust and clean design keeping leak paths to a minimum and all seals are generated by premium threads. Control lines are continuously fed through the assembly with no need for additional splicing or anchoring. Prior to shipping offshore it's made up to the packer assembly and, if applicable, the control lines are fed through. Hence, no extra rig time or crew is required for field installation.

Application

The CRD requires a pre-determined straight pull to release the internal weak point, cut and plug the control lines. Once the CRD is released, the completion string can be retrieved, leaving a short length of CRD with a ratch-latch head in the hole. This allows for cement logging, plugging, cementing etc. to be performed directly above the production packer after release, with no control line obstructions or control line leak paths. The CRD ratch-latch head is intervention-friendly with minimum upsets allowing an easy tie-back and latching of recompletions. It also contains a secondary cut-to-release function that can be utilised even with the completion string set in compression.

The CRD is a patented product.

Benefits

- Debris tolerant design
- Millable with no rotational parts
- Completion retrieval without intervention or tubing cutting
- Premium threads, metal-to-metal seals with minimum leak paths
- Saved time and cost for completion retrievals / P&A's / recompletions
- Can be integrated with all types and brands of production- and isolation packers
- Control lines continuously pre-fed through CRD with no control line splicing or fittings

Completion Release Device (CRD)

- Integrated in production/ isolation packer assembly, no-rig time or offshore crew used
- Autonomous and precise cutting and plugging of down-hole control lines upon completion release
- Short length, allows for cement logging, plugging, cementing etc. immediately above packer after release
- Reduced risks and HSE exposure associated with P&A and recompletion operations
- Secondary cut-to-release feature independent of potential compressional forces in the completion string
- No control line interference or intervention obstructions:
  - Fullbore access with no internal upsets when installed
  - Smooth interfaces with no internal upsets after release
  - Ratch-latch mechanism with slick intervention and tie-back between new and old completion strings for re-completion operations

Technical Specifications

Size	10 ¾'' x 5 ½'' CRD (Other sizes available on request)
Casing size	10 ¾"
Maximum OD	9.30"
Minimum ID	4.715" (Based on 5½" 20ppf Vam Top HC connections)
Drift ID	4.653" (Based on 5½" 20ppf Vam Top HC connections)
Length	1.44 m
Material	As per tubing grade
Top/bottom/internal threads	Premium threads as per tubing threads
Elastomers	None
Temperature rating	0-175 °C (Material temperature deration)
Compressional strength (downwards)	100 % PBYS
Tensile strength (upwards)	Field/well specific. The weak point is tailor made with respect to actual well/field specific tubing grades, packer envelope and tubing stress calculations.
Torque rating	As per tubing threads