



VAN RUTH PRODUCTS

PLUGS, PACKERS & ASSOCIATED DRILLING EQUIPMENT

VAN RUTH® CEMENTING & WEDGING BOTTOM PACKER (CWBP)

is used for bridging a drill hole, spot cementing or wedging operations similar to the CW PLUG yet where the drill hole is making water and two way seal is required. For dry holes where only a single acting seal is required, please see the CW PLUG.

The CWBP is placed by pumping through the drill string and locks in the drill hole upon leaving the rods. Further compression of the packer will seal off the drill hole.

Spot Cementing: For bridging and spot cementing the CWBP is inserted and pumped down an open rod string with either cement or water depending on the intended use. Spring loaded slips grab the wall of the drill hole upon leaving the rod string and the tapers of the plug body and slips lock the plug in location. A high pump pressure reading and relief valve discharge indicates the plug has locked in the hole with the upper portion of the plug still in the rods. Slowly raising the rods while maintaining a positive fluid pressure will complete the setting process. A drop to open hole pressure indicates the plug has left the rods and is ready for operations to follow. The CWBP may be drilled out after cementing if required.

Wedging: For wedging with Hall-Rowe type wedges, the CWBP is inserted and pumped down to required location with water and set. A wooden plug is placed on top of the CWBP and the wedge is lowered and set in position before the wooden plug has time to expand, the wedge is then cemented in to prevent vibration and branch hole drilling operations can commence.

Zone Isolation: Highly effective zone isolation can be achieved by setting a CWBP along with a good quantity of cement, one placed above and another below the zone. The CWBP is also highly effective in preventing cross contamination by inflow from drill holes.

Pressure grouting: CWBP are also used together with SSGP to facilitate a vast range of operations. The CWBP is set with a good quantity of cement at the bottom of the zone while the SSGP is subbed to the rodstring above the zone for pressure grouting specific fault zones, fortifying unstable formations, facilitating permeability testing and so on. Both types of packer can be drilled out after cementing if required.

Where higher pressures are expected below the CWBP location, up hole suction or up hole slippage is of concern, adding the HD PLUG will provide an opposing mechanical lock to the assembly. A vented hoisting plug should be used for withdrawing the rodstring with the rods being withdrawn at moderate speeds only. Where a HD PLUG is not being used suction above the CWBP may have a tendency to pull it up the hole. This effect is further increased if grease or soft sections in the hole seal against the rod string.

Packers are available for all diamond drill sizes. Where non standard, internally upset rods or large rotary percussion holes a CWBP SS is used instead.

Construction: Drillable aluminium and rubber. Also available in non spark material illustrated above in black. Material Data Safety Sheets (MSDS) available upon request

INSTRUCTIONS FOR USE

Lower open rod line (no barrel) to depth where Cementing and Wedging Bottom Packer (CWBP) is required to be located, a casing shoe bit may be used to protect pin end of rod or to bypass caves etc.. (the shoe bit must be internally flush with rod), or cut pin end of damaged rod and deburr inside edge.

It is recommended that some water is pumped down rod line for lubrication of seal and apply some clean rod joint grease to tapered section of packer.

Insert packer into rod until slips cable tie is level with top of rod, remove cable tie and push down on slips as far as possible, push packer to below thread, connect head rod and tighten in chuck.

Set pressure relief valve at 400 PSI or 27 Bar minimum and pump packer down at medium pumping rate. A high pressure reading and relief valve discharge indicates packer has locked in hole, slowly raise rods while maintaining fluid pressure, a drop to open hole pressure indicates packer has set correctly

****Do not lower the rod string back down on the packer in either situation as this will damage the packer and/or become stuck in the rods and pulled up hole****

It is recommended to back fill hole after cementing in the CWBP while pulling rods to stop differential pressure forcing packer back up hole. In high pressure situations below packer location we recommend the use of Hold Down Plugs (HD).