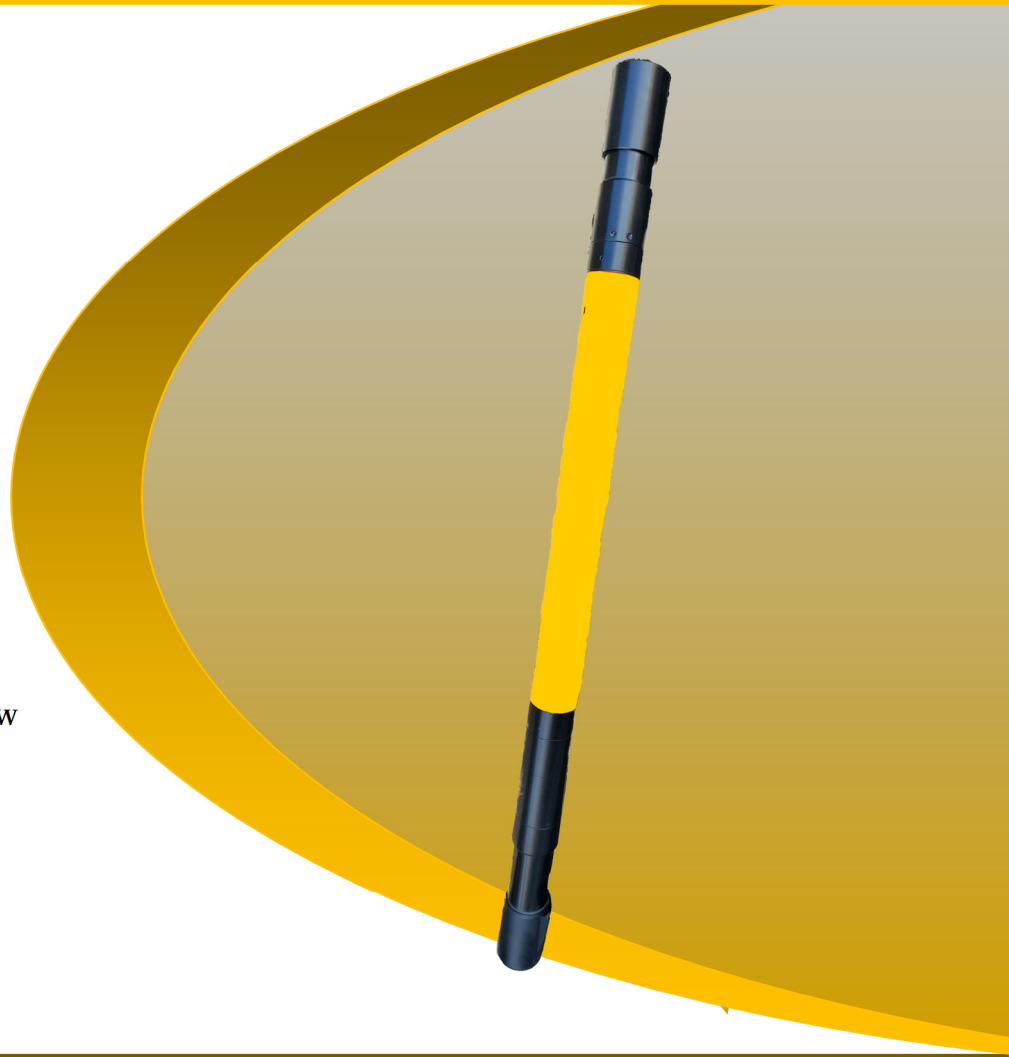




Titus Tubing Bailer

Titus Tools Tubing Bailer is a fast efficient way to clean out sand or other fill from a well. It is an efficient mechanical pump capable of removing large volumes of fill in a single trip. The Titus Tools tubing bailer does not depend on hydrostatic differential pressure in order to operate and therefore very proficient in extremely low fluid wells. The debris chamber is adjustable to accommodate any amount of sand or fill to be retrieved. The bailer assembly is designed with circulating drain ports eliminating the pulling of wet tubing strings.



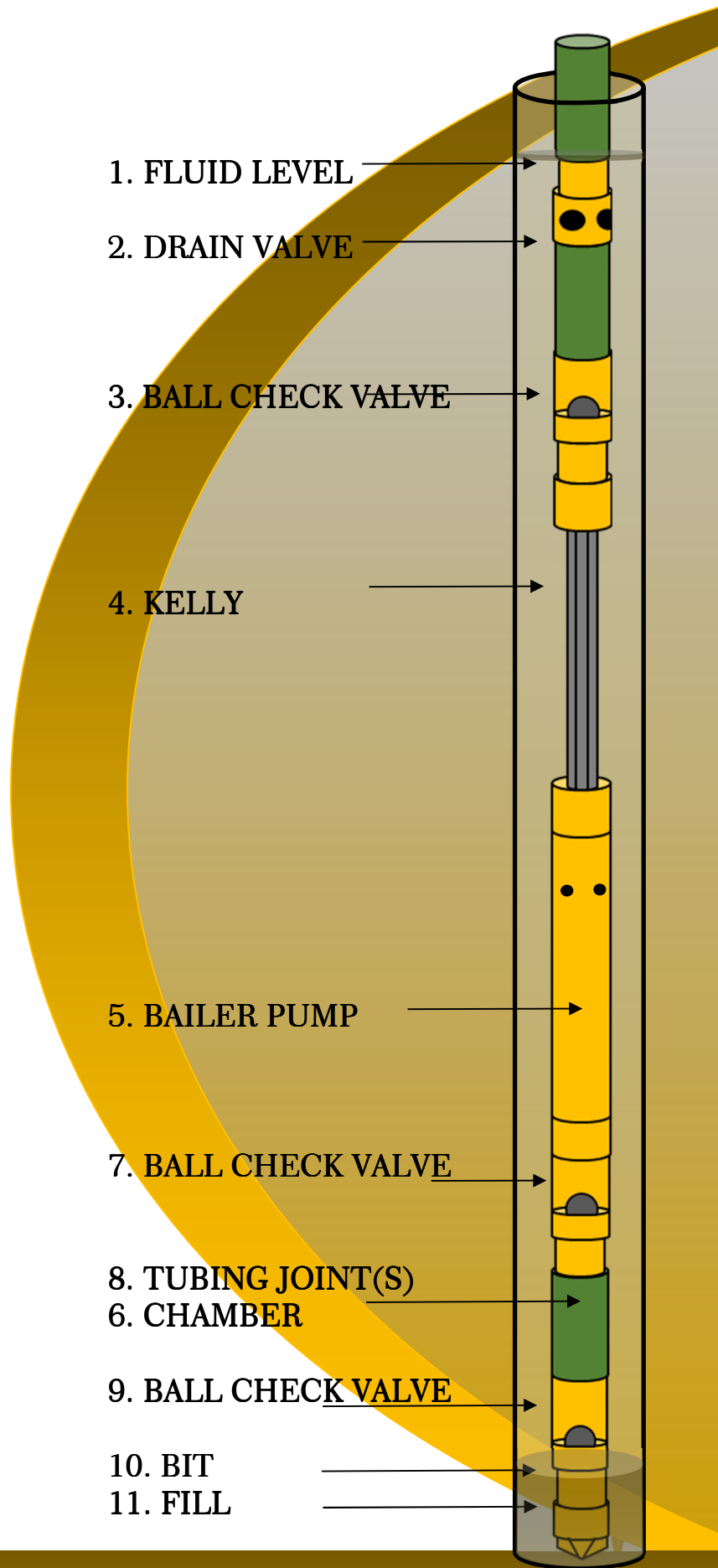
Product Features!

- Heavy duty construction
- Operation simplicity
- Circulating drain valve
- Economical
- Clean out can be established in one round trip run
- Effective in low fluid wells
- Available in 2 3/8", 2 7/8" & 3 1/2" tubing connections





1. **FLUID LEVEL:** The Fluid Level must be maintained above the circulating valve for the pump tubing bailer to function correctly.
2. **DRAIN VALVE:** The valve has two functions with the first being of recycling of fluid during pumping operations. The second function is to drain tubing while tripping out.
3. **BALL CHECK VALVE:** The Check Valve is of ball and seat design. The function of the valve is to maintain fill.
4. **KELLY:** The Kelly provides the transmission of torque from the tubing string to the bit.
5. **PUMP ASSEMBLY:** Reciprocation of the pump assembly draws fluid and sand in through the bottom valves and up into the tubing chamber. The sand and debris collects in the cavity pipe above the valves, while the fluid goes through the pump assembly and is discharged into the annulus.
6. **CHAMBER:** The Chamber is made up of tubing to accommodate the amount of estimated fill.
7. **BALL CHECK VALVE:** The Check Valve is of ball and seat design. The function of the valve is to maintain fill, trapping the fill in the adjustable chamber until surface is reached.
8. **TUBING JOINT:** Space out Check Valves.
9. **BALL CHECK VALVE:** The Check Valve is of either flapper or ball and seat design. The function of the valve is to maintain fill
10. **BIT:** Different bit types available dependent upon fill to be encountered. (Saw tooth / Spade Bit / Saw tooth-Spade Bit)
11. **FILL:** Production, Completion or maintenance sand, surplus frac-sand or debris where well cannot be circulated.





Operational Procedure

The Titus Tools Tubing Bailer Assembly is made up on the tubing string with the required amount of chamber between the pump assembly and the valve assembly. The Titus Bailer assembly must be spaced out so that it will be below the fluid level in the well for it to operate properly. Once on bottom, the pump is stroked up and down. As the sand is pumped up into the fill pipe, it is necessary to move the bailer assembly down so that the bottom of the bailer intake is always contacting the top of the fill. If necessary, the assembly may be rotated. Continue this operation until either bottom is reached or the fill pipe is full (will stop making hole). When pulling Titus Tubing Bailer out of the well, the tubing will drain automatically.

Titus Bailer Specifications

Connection Size	O.D.	I.D.	Material Spec.
2 3/8" EUE	3 1/8" or 3 1/4"	1"	4140 P110
2 7/8" EUE	3 3/4"	1 1/4"	4140 P110
3 1/2" EUE	4 1/2"	2"	4140 P110



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