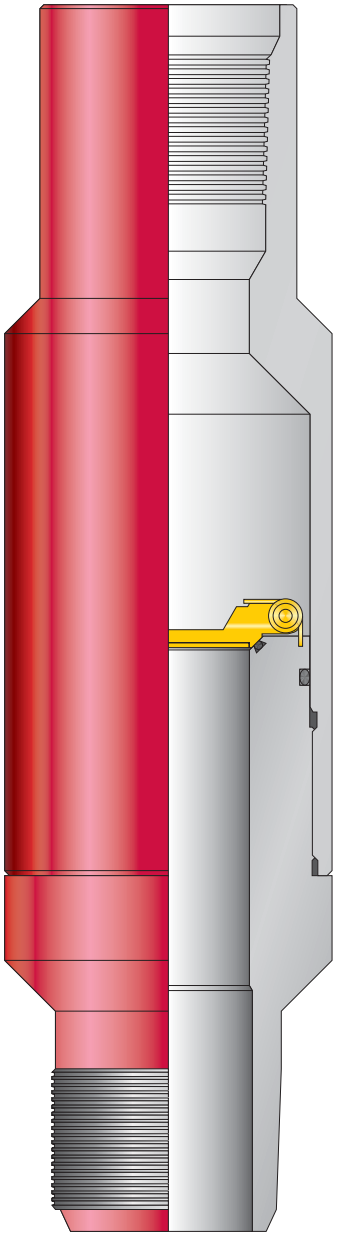
FLF Fluid-Loss Flapper Valve



Weatherford's model FLF fluid-loss flapper valve is a robust device that can help operators stem the undesired loss of well-completion fluid into a formation, after a production or gravel-pack packer is installed in the well. Perforated or openhole wells often experience severe fluid loss resulting from hydrostatic overbalance and good permeability. Fluid loss can occur as a result of different completion-related events, including perforating, removal, loss of filter cake or fluid-loss material, acidizing, gravel packing, or frac packing. Having a fluid-loss valve in the completion assembly can eliminate the need to spot fluid-loss pills, which can result in damage to the formation or additional intervention to remove.

The model FLF valve is a simple-to-operate valve that enables the completion process to continue without addressing fluid loss or the resulting well-control issues that could arise from the loss of hydrostatic pressure. The valve uses a spring-loaded, beryllium copper flapper, which is normally held open by a washpipe or a stinger made up to the packer setting tool. After the packer is set and the setting tool is withdrawn, the flapper closes. Hydrostatic overbalance keeps the flapper closed. If an underbalance is created above the flapper, it opens and the well can flow.

The flapper is normally removed at the end of the completion process by mechanically breaking it. This removal can be completed with the production seal assembly, slickline, or coiled tubing. The flapper fragments are then allowed to fall out of the way to the bottom of the well. The berrylium copper flapper is designed to break into small pieces, allowing the pieces to fall to the bottom of the well. It is not recommended to break this flapper with pressure.

Applications

- Gravel-pack and frac-pack completions
- Standalone screen completions

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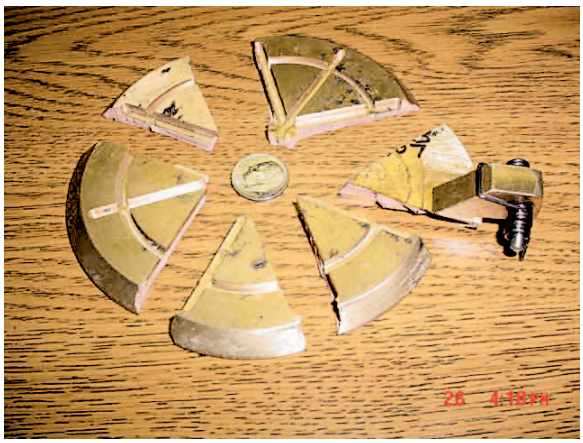
FLF Fluid-Loss Flapper Valve

Features, Advantages and Benefits

- The FLF flapper valve is made in common screen and blank sizes and threads.
- If the bottomhole assembly encounters obstructions, the valve's simple and torsionally locked design enables rotation of the assembly, which could eliminate the need to pull out of the well.
- The flapper valve prevents fluid loss into weak formations, saving rig time spent addressing fluid loss.
- Use of the FLF flapper valve can prevent the spotting of fluid-loss pills, which could result in reduced productivity from the well.
- Removal methods of the valve are basic and inexpensive.

Specifications

Size (in./*mm*)	OD (in./*mm*)	ID (in./*mm*)	Material Yield (psi/*MPa*)	Housing Pressure Rating (psi/*MPa*)	Flapper Pressure Rating (psi/*MPa*)	Part Number
2-3/8 *60.33*	3.90 *99.06*	1.93 *49.02*	80,000 *550*	10,000 *68.95*	2,500 *17.24*	1135348
4 *101.60*	5.56 *141.22*	3.21 *81.53*	110,000 *758*	10,000 *68.95*	2,500 *17.24*	1165965
4-1/2 *114.30*		3.24 *82.30*				1165966
5 *127.00*	7.91 *200.91*	4.27 *108.46*	110,000 *758*	10,000 *68.95*	2,500 *17.24*	1333794
5-1/2 *139.70*		4.50 *114.30*				1331413



The FLF fluid-loss flapper valve is easily removed at the end of the completion process by mechanically breaking it.

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