

CS-3-Series Nonelastomeric Sliding Sleeve

The CS-3-series nonelastomeric sliding sleeves are communication devices with a ported inner sleeve. Sizeable chokes are available as options for adjusting the opening to the tubing annulus.

APPLICATIONS

- Equalizing pressure between an isolated formation and the tubing string
- Spot acidizing and fracturing
- Killing a well
- Directing flow from the casing to the tubing in alternate or selective completions

BENEFITS

- Choice of shift direction
- Choice of nipple profiles
- Material choices to suit most environments

FEATURES

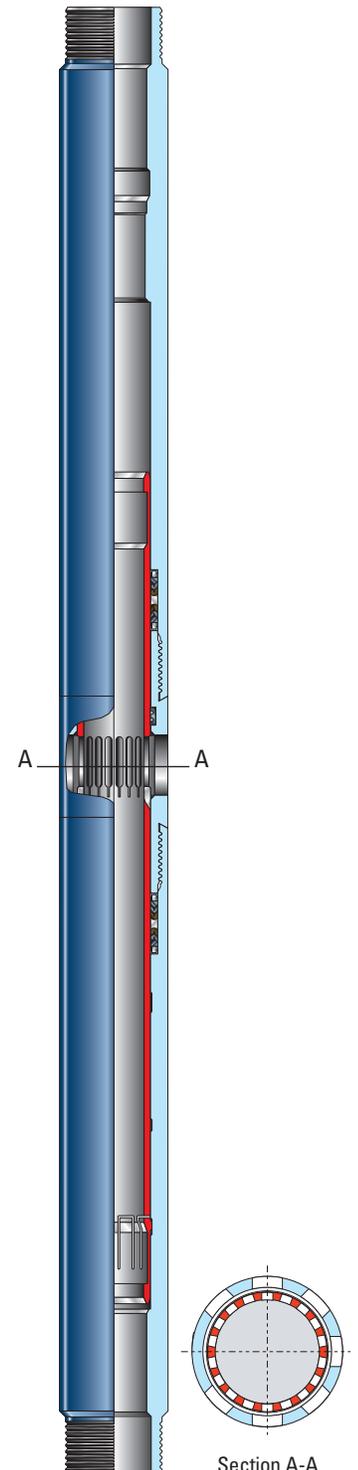
- Nonelastomer packing
- Includes backup sealing system
- Includes sizable chokes in the tubing-to-annulus communication ports
- Compact modular design
- Valve components of stainless steel or nickel alloys
- Available with Otis®- and Baker®-style landing nipple profiles.

These sleeves are used in applications such as equalizing pressure between an isolated formation and the tubing string, spot acidizing and fracturing, killing a well, and directing the flow from the casing to the tubing in alternate or selective completions. The simplicity of the sliding-sleeve design provides a long operating life. Equalizing slots in the inner sleeve permit gradual equalization between the tubing and casing annulus. These sleeves may be ordered with Otis®-style X-type and Baker®-style F- and R-type landing nipple profiles.

DESCRIPTION AND OPERATION

CS-3-series sliding sleeves can be opened or closed using a shifting tool and standard wireline and coiled tubing methods. The CS-3U sliding sleeve shifts up to open and down to close, and the CS-3D sliding sleeve shifts down to open and up to close. The sliding sleeve is assembled to, and forms part of, the tubing string. For all CS-3-series sliding sleeves with X, D, and DB nipple profiles, separation tools and packoffs are available.

Equalizing pressure between the tubing and casing annulus is normally accomplished by applying pressure or filling the tubing or casing with fluid. The sliding sleeve can also be opened even if facilities for equalizing pressures are not available beforehand. This requires careful monitoring of tubing and annulus pressures while slowly opening the sleeve until equalization.



Section A-A

CS-3-Series Nonelastomeric Sliding Sleeve

CS-3-Series Nonelastomeric Sliding Sleeve Specifications

Tubing		Sliding Sleeves [†]				
OD (in. [mm])	Weight (lbm/ft)	Type	Max. OD (in. [mm])	Min. OD (in. [mm])	Flow Area Through Ports (in. ² [cm ²])	Pressure Rating (psi [kPa])
2.875 [73.0]	6.5	CSX-3U	3.702 [94.0]	2.312 [58.7]	6.39 [41.2]	7,500 [51,711]
3.500 [88.9]	9.3	CS-3U	4.280 [108.7]	2.812 [71.4]	6.59 [42.5]	
		CSD-3U		2.750 [69.9]		
		CSX-3U		2.812 [71.4]		
4.500 [114.3]	12.8	CS-3D	5.500 [139.7]	3.687 [93.6]	11.93 [77.0]	
		CSDB-3D		3.750 [95.3]		
5.500 [139.7]	17.0	CSDB-3D	6.795 [172.6]	4.500 [114.3]	18.60 [120.0]	
		CSX-3U		4.562 [115.9]		

[†] Other sizes and models are available on request. Contact your local Schlumberger representative.

www.slb.com/completions

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