

Cement Swivel



Effective zonal isolation of a wellbore is vital to ensuring that it is put into production.

A bad cement job can create costly NPT, so operators are requesting to rotate and/or reciprocate the casing during cementation. Engineered to compliment Nabors' Casing Drive System™ (CDS), the Cement Swivel provides an entry port for the cement between the CDS and the top drive. This combination of equipment allows almost immediate transition from casing running operations to cementing, and it also allows the casing to be rotated and reciprocated during the cementing process.

Prior to the Cement Swivel, this type of dynamic cementation was a time-consuming task that resulted in inconsistent results and increased NPT. Nabors' Cement Swivel is the only product available that can simultaneously rotate and reciprocate the casing while pumping or circulating. The 6 5/8" connections are compatible with your existing top drives or casing running tools (CRT), but can come preassembled with a CDS tool to further reduce rig up/down time.



FEATURES & BENEFITS

- Simultaneously rotating and reciprocating the casing reduces channeling and improves mud displacement, enabling better zonal isolation or cement job
- The compact design takes up less rig space
- Side port entry allows instant transition to cementing after running casing, further reducing NPT
- Side port entry allows the flow of fluid while cementing and automatic ball launching using our ball launching assembly
- A 2 1/2" bore enables easy flow of fluids through the swivel via the Top Drive when rotation is not applicable and via side port during Dynamic Cementation
- 6 5/8" box connection is compatible with top drives, TesTORK™ sub, and CDS/CRT, which enables casing running operations while the swivel is in place

Cement Swivel

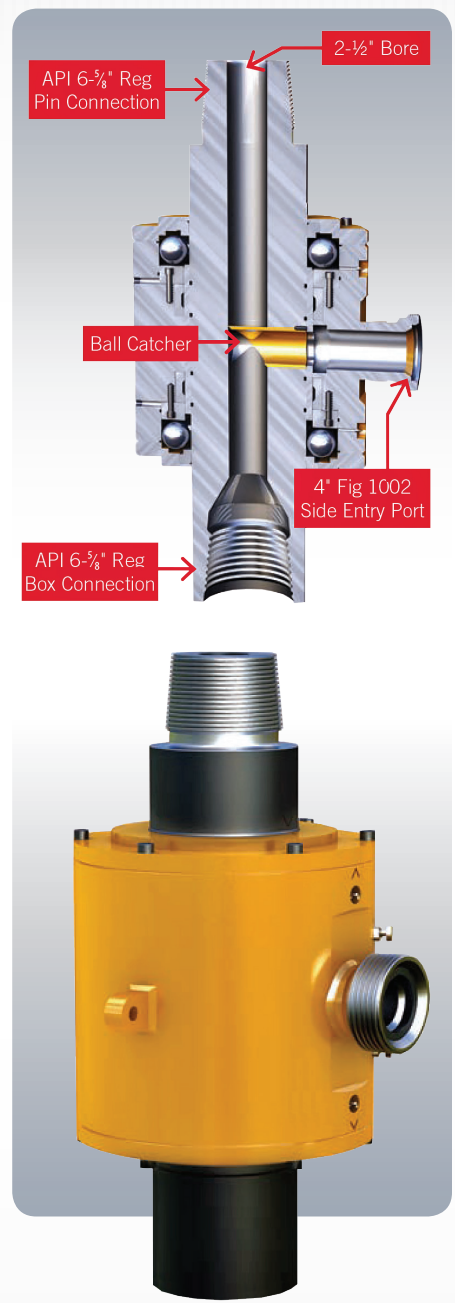


CEMENT SWIVEL TECHNICAL SPECIFICATIONS*

Feature	Standard System Specification	Hi-Pressure System Specification
Load Rating	600 Ton (with API 8C safety factor)	Same as standard
Bore Size	2 1/2 in.	Same as standard
Temperature Rating	Shaft: -50°C High-Pressure seals: -23°C	Shaft: -50°C High-Pressure seals: -23°C
Side Port Connection	4 in. Fig. 1002 Female Hammer Union (threaded side)	3 in. Fig. 1502 Female Hammer Union (threaded side)
Ball Launcher Connections	2 in. Fig. 1502 Hammer Union	2 in. Fig. 1502 Hammer Union
Ball Launcher Pressure Rating	5,000 PSI (34,473 kPa)	10,000 PSI (68,947 kPa)

CEMENT PLUG LAUNCHING SYSTEM TECHNICAL SPECIFICATIONS*

Feature	Standard System Specification	Hi-Pressure System Specification
Cement Plug Range	4 1/2 - 13 3/8 in.	Same as standard
Ball Sizes	4 1/2 - 5 1/2 in. Casing » 1 3/16 in. Ball 7 - 13 3/8 in. Plugs » 1 1/2 in. Ball	Same as standard
Packer Cup Pressure Rating (with safety factor ≥ 2:1)	4 1/2 - 7 in. » 5,000 PSI 7 5/8 in. » 4,200 PSI 8 5/8 in. » 3,500 PSI 9 5/8 in. » 3,750 PSI 10 3/4 in. » 3,000 PSI 11 3/4 in. » 2,500 PSI 13 3/8 in. » 2,000 PSI	4 1/2 - 7 in. » 10,000 PSI 7 5/8 in. » 10,000 PSI 8 5/8 in. » 10,000 PSI 9 5/8 in. » 10,000 PSI 10 3/4 in. » 10,000 PSI 11 3/4 in. » 10,000 PSI 13 3/8 in. » 10,000 PSI
Max Working Pressure	5,000 PSI (34,473 kPa)	10,000 PSI (68,947 kPa)
Max Rotational Speed	50 RPM	30 RPM
Connection	PI 6 5/8 in. Regular Pin Up API 6 5/8 in. Regular Box Down	API 6 5/8 in. Regular Pin Up API 6 5/8 in. Regular Box Down OR NC50 Pin Up NC50 Box Down



*All specifications are subject to customization and continuous product improvement.