



# Copper State Ful-Flo Rotary Hose Coupling

adds new performance features to rotary drilling and flexible vibrator hose.

- 1** Built-in Ful-Flo coupling has no protruding parts . . . eliminates snagging.
- 2** Secondary carcass and cover are both flush with and bonded to coupling body.
- 3** Cable is spirally wound at each end of hose for additional reinforcement at couplings and hose ends.
- 4** Reinforcement wires are spirally wound at precisely the same angle throughout, eliminating undesirable stress and strain on hose and coupling.
- 5** Forged steel, one-piece body built into the permanently bonded carcass. Stainless steel expansion ring protects rubber face of hose and prevents leakage at coupling head.
- 6** Built-in coupling body completely enclosed within hose wall is securely anchored to fabric and wire reinforcement. Hose has unrestricted full flow the entire length.
- 7** API threads cut in separate head that is screwed on and securely locked in place.
- 8** Coupling Weights are 4" API thread ends.

**CERTIFIED FACTORY GRAPH TEST REPORTS FURNISHED WITH "EVERY" HOSE. (We test 100% of our hoses before shipment)**

## ROTARY DRILLING HOSE

**Copper State Rotary Hose Coupling**  
No protruding parts Ful-Flo Coupling.

Licensed under API Spec 7K Approval #7K-0014

**Steel Cable**  
For additional reinforcement at coupling, a cable is spirally wound at each end of hose.

**4, 6 and 8 Layer Wire Reinforcement**  
Assures maximum safety, strength, and flexibility. This all-important section of the hose consists of six spirally-wound layers of special fatigue-resistant high-tensile steel wires, each imbedded in a thick layer of rubber and tough fabric.

**Oil Resistant Tube**  
Compounded for elevated temperatures of oil-base mud and oil emulsions.

**Breaker Fabric**  
Insures positive bonding of tube to primary carcass.

**Abrasive Resistant Cover**  
Extra tough, compounded with neoprene-base synthetic, to assure greater resistance to oil, cutting, abrasion, weather, and temperature extremes. Guide stripe provides for easy alignment.

**Open-Weave Breaker Fabric**  
Provides maximum bonding between secondary carcass and cover.

**Secondary Carcass**  
Gives added strength and safety with one ply of specially woven fabric and layer of protective rubbers.

**Primary Carcass**  
Provides greatest flexibility through scientifically constructed multiple plies of premium grade, high-tensile fabric impregnated with finest quality rubber.

It's the hose drilling operators and tool pushers have been waiting for. Stronger, more flexible, the Copper State Rubber 4, 6 or 8-wire layer Rotary Drilling Hose provides maximum safety and hose life.

Extreme pump pressures are required for the deepest drilling operations without the added hose bulk or loss of handling ease.

Built-in flexibility, flush-type Copper State Rubber Ful-Flo couplings and alignment stripe on cover assure easier handling, better draping, and positive alignment on every type of rig.

Both today and in years ahead, drilling rig operators will discover that the new Copper State Rubber 4, 6 or 8-wire layer Rotary Drilling Hose

delivers performance in excess of the demands for pressure, abrasion and heat resistance encountered at maximum drilling depths.

Copper State Rubber now offers a new rubber compound for deep well drilling where severe service against abrasion and snagging is present. This gives added hose cover life at only a slight increase in cost.

Style	Bore Size	O.D.	Length	Rated	Stripe Color	Bend Radius	Straight End	Coupling Wt./Ea.
SUPER DRILLER Spec. 090-1912	2½"	4.50"	Up to 150 Ft.	API Grade E 15,000 PSI Tested 7,500 W.P.	5 Orange Bands and Longitudinal Stripe	36"	42"	85 lbs.
	3"	5.75"				48"		125 lbs.
MASTER DRILLER Spec. 090-1910	2½"	4.35"	Up to 150 Ft.	API Grade D 10,000 PSI Tested 5,000 PSI W.P.	4 Orange Bands and Longitudinal Stripe	36"	40"	75 lbs.
	3"	5.35"				48"		125 lbs.
IMPERIAL DRILLER Spec. 090-1908	2½"	4.35"	Up to 150 Ft.	API Grade C 8,000 PSI Tested 4,000 PSI W.P.	3 White Bands and Longitudinal Stripe	36"	36"	65 lbs.
	3"	5.35"				48"		125 lbs.
MOTION COMPEN-SATOR	2½"	4.35"	Up to 150 Ft.	API Grade D 10,000 PSI Tested 5,000 PSI W.P.	3 White Bands 2 Orange Bands and Longitudinal Stripe	36"	40"	75 lbs.
	3"	5.35"				48"		125 lbs.
SHALLOW WELL	2½"	3.75"	Up to 150 Ft.	6,000 PSI Tested 4,000 PSI W.P.	Identified with SS Band Welded to Coupling Body	36"	36"	45 lbs.
	3"	4.85"						

MOTION COMPENSATOR HOSE AVAILABLE ALSO IN API GRADE C CONSTRUCTION.

## DECOKING HOSE

Copper State Rubber manufactures a high quality decoking hose to give many years of trouble-free services. Chemicals and heat conditions encountered in refinery decoking service do not affect the hoses.

The hoses are normally manufactured to specification with 4", 5" or 6", 1500# or 2500#, RTJ flanges at each end. The flanges are constructed to be butt-welded to a built in steel coupling, which is permanently bonded to the hose. A swivel flange is provided to enable easier installation of the hose by allowing the hose free rotation without disengaging the RTJ flange bolting. Additionally, an alignment stripe on the cover assures better draping, and positive alignment on every type of installation.

The hoses are available in various design working pressures at 4000, 5000 & 7500 PSI with continuous lengths to 150 feet. Factory certified visual hydrostatic test report with graph furnished with each hose.

### Rotary Hose Weight Specifications

Rated Test Pressure	2½" Size	3" Size	3½" Size	4" Size
8,000 lbs.	13 lbs./ft.	16 lbs./ft.	19 lbs./ft.	22 lbs./ft.
10,000 lbs.	17 lbs./ft.	20 lbs./ft.	23 lbs./ft.	26 lbs./ft.
15,000 lbs.	25 lbs./ft.	28 lbs./ft.	38 lbs./ft.	41 lbs./ft.
22,500 lbs.	33 lbs./ft.	36 lbs./ft.		