

# WWT High-Temperature 3 (HT3) Non-Rotating Protectors (NRP)<sup>™</sup>



- Reduce rotary torque • Protect against casing, riser, and drill pipe wear
- Reduce buckling, heat checking, vibration and stick-slip



## Model HT3 Specifications

WWT NRP Model	HT3-400-Slim	HT3-500	HT3-550*	HT3-658*
Drill Pipe Size	4.00"	5.00"	5.50"	6.63"
Sleeve Max OD	5.50"	7.30"	7.75"	9.13"
Sleeve Effective OD	5.30"	6.81"	7.26"	8.53"
Collar OD	5.07"	6.50"	7.00"	8.13"
Sleeve Length	12"	12"	12"	12"
Side-Load Rating	2,000 lbs.	2,500 lbs.	3,000 lbs.	3,500 lbs.
Cross-Sectional Area	9.5 in <sup>2</sup>	16.8 in <sup>2</sup>	17.6 in <sup>2</sup>	22.7 in <sup>2</sup>
<b>Total Flow Area</b>				
7" x 32 ppf Csg.	7.1 in <sup>2</sup>			
7" x 29 ppf Csg.	8.0 in <sup>2</sup>			
7" x 26 ppf Csg.	8.9 in <sup>2</sup>			
7-5/8" x 39 ppf Csg.	12.4 in <sup>2</sup>			
9-5/8" x 53.5 ppf Csg.	35.1 in <sup>2</sup>	20.8 in <sup>2</sup>	15.9 in <sup>2</sup>	
10-3/4" x 55.5 ppf Csg.	52.7 in <sup>2</sup>	38.4 in <sup>2</sup>	33.5 in <sup>2</sup>	17.6 in <sup>2</sup>
13-3/8" x 72 ppf Csg.	97.7 in <sup>2</sup>	83.3 in <sup>2</sup>	78.4 in <sup>2</sup>	62.6 in <sup>2</sup>
Collar Material	6061-T651 Extruded Aluminum Alloy			
Sleeve Material	HNBR			
Max Temperature	330° F (149° C)			

\*Yet to be manufactured

## Features and Benefits

- Positive protection against casing and riser wear during drilling operations.
- Significant torque reduction created by our patented fluid bearing design allows for improved ROP.
- Compatible with most oil-, synthetic- and water-based drilling fluids.
- Optimum operating performance range of 30 - 250 RPM.
- Reduces drillstring and surface equipment stress.
- Each assembly accepts up to 30,000 lbs. of axial force before slippage.
- Installation time: less than 1 minute.
- Free, no-obligation confidential torque, drag and wear analysis.
- Global leadership in some of the world's most challenging drilling environments since 1989.
- On/off-site technical support 24/7.

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