

# WWT High-Temperature (HT) 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 HT Specifications

| WWT NRP Model           | HT-350                            | HT-400               | HT-500               | HT-550               | HT-578               |
|-------------------------|-----------------------------------|----------------------|----------------------|----------------------|----------------------|
| Drill Pipe Size         | 3.50"                             | 4.00"                | 5.00"                | 5.50"                | 5.88"                |
| Sleeve Max OD           | 5.50"                             | 5.88"                | 7.25"                | 7.75"                | 8.00"                |
| Collar OD               | 5.00"                             | 5.50"                | 6.50"                | 7.00"                | 7.38"                |
| Sleeve Effective OD     | 5.20"                             | 5.54"                | 6.83"                | 7.34"                | 7.62"                |
| Sleeve Length           | 10"                               | 10"                  | 10"                  | 10"                  | 10"                  |
| Overall Length          | 20"                               | 20"                  | 20"                  | 20"                  | 20"                  |
| Side-Load Rating        | 1,500 lbs.                        | 1,500 lbs.           | 2,000 lbs.           | 2,000 lbs.           | 2,500 lbs.           |
| Cross-Sectional Area    | 11.6 in <sup>2</sup>              | 11.5 in <sup>2</sup> | 17.0 in <sup>2</sup> | 18.6 in <sup>2</sup> | 18.5 in <sup>2</sup> |
| <b>Total Flow Area</b>  |                                   |                      |                      |                      |                      |
| 7" x 29 ppf Csg.        | 8.8 in <sup>2</sup>               | 6.0 in <sup>2</sup>  |                      |                      |                      |
| 7" x 26 ppf Csg.        | 9.7 in <sup>2</sup>               | 6.9 in <sup>2</sup>  |                      |                      |                      |
| 7-5/8" x 39 ppf Csg.    | 13.2 in <sup>2</sup>              | 10.4 in <sup>2</sup> |                      |                      |                      |
| 9-5/8" x 53.5 ppf Csg.  | 36.0 in <sup>2</sup>              | 33.1 in <sup>2</sup> | 20.6 in <sup>2</sup> | 14.8 in <sup>2</sup> | 11.6 in <sup>2</sup> |
| 10-3/4" x 55.5 ppf Csg. | 53.6 in <sup>2</sup>              | 50.7 in <sup>2</sup> | 38.2 in <sup>2</sup> | 32.5 in <sup>2</sup> | 29.2 in <sup>2</sup> |
| 13-3/8" x 72 ppf Csg.   | 98.5 in <sup>2</sup>              | 95.7 in <sup>2</sup> | 83.1 in <sup>2</sup> | 77.4 in <sup>2</sup> | 74.1 in <sup>2</sup> |
| Collar Material         | 6061-T651 Extruded Aluminum Alloy |                      |                      |                      |                      |
| Sleeve Material         | HNBR                              |                      |                      |                      |                      |
| Max. Temperature        | 330° F (166° C)                   |                      |                      |                      |                      |



## 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.

Houston, TX, USA • Midland, TX, USA • Anaheim, CA, USA • Al-Khobar, Saudi Arabia • Quito, Ecuador • Aberdeen, Scotland  
Shannon, Ireland • Singapore • Dubai, UAE • Rio De Janeiro, Brasil

[www.wwtinternational.com](http://www.wwtinternational.com)

