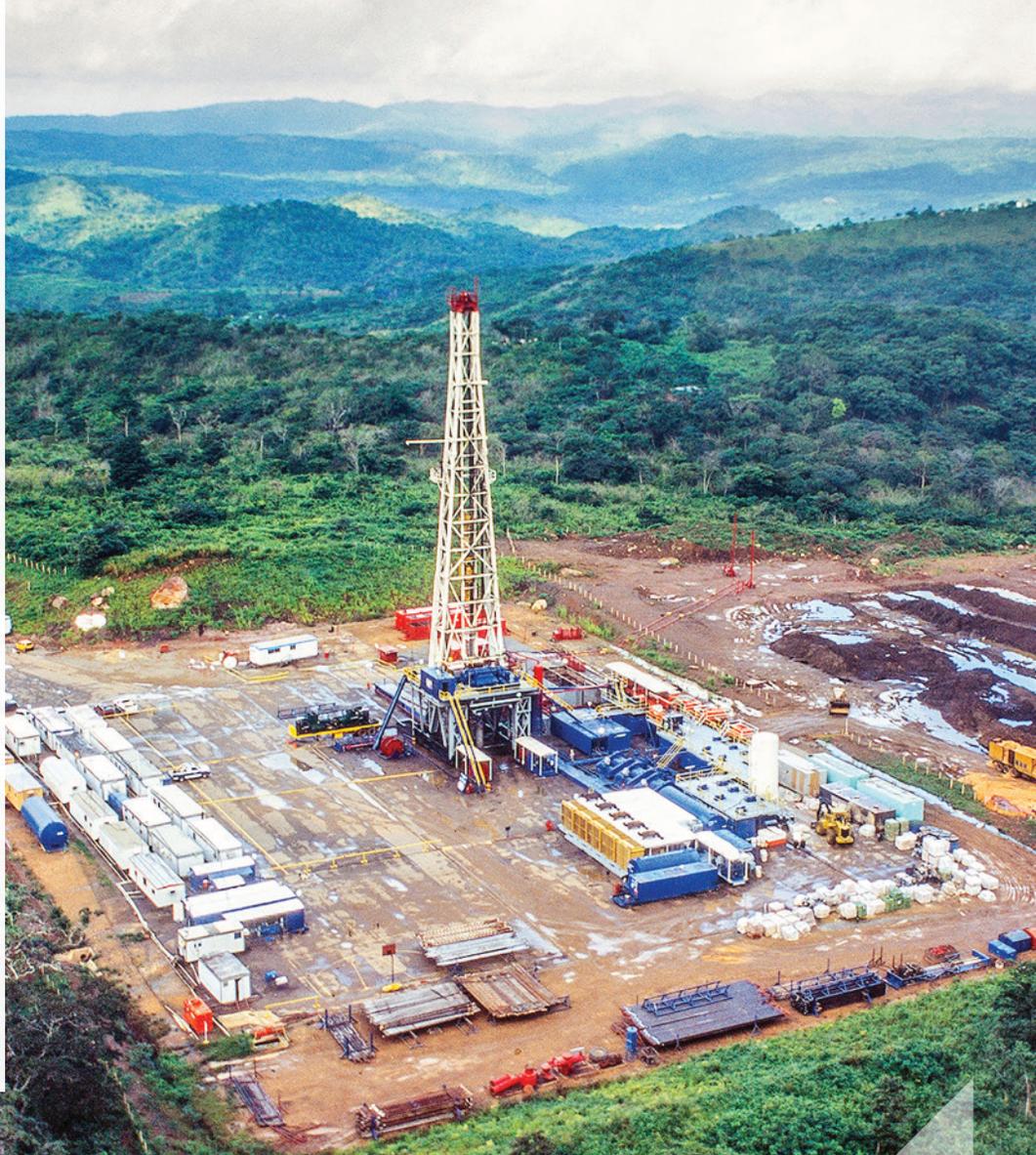


STABILIZERS

Versatility for various
BHA configurations



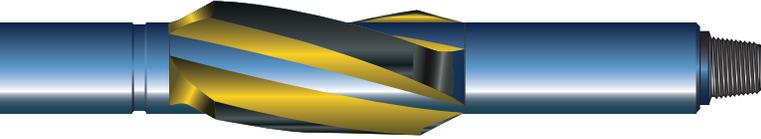
INTEGRAL BLADE STABILIZERS*

Our integral blade stabilizer sets the standard in both directional and straight hole drilling applications. The all-in-one construction makes it an industry workhorse – able to perform in the most rugged and abrasive drilling conditions. Milled directly into a steel forging, the one-piece rotating stabilizer can be run near the bit or up in the drill string in soft to medium and abrasive formations.

With our unique hardfacing capabilities, this tool can be dressed with five hardfacing materials, including HF2000 for soft formations and HF3000 for non-magnetic stabilizers. In hard or abrasive formations, HF5000, HF6000 and HF6500 hardfacing will extend this tool's lifespan by 3x–5x longer making it a very economical choice.

INTEGRAL BLADE SPIRAL STRING STABILIZER

Used primarily in rotating application

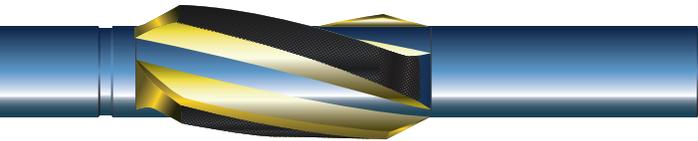


Specifications

- Three blades x 270-degree wrap
- Longer crown lengths
- Typically highest total flow area (TFA)
- Most meet API 7-1 stabilizer dimensional requirements
- Hardfacing on crown and leading edges

INTEGRAL BLADE NEAR BIT STABILIZER

Only used at the bit

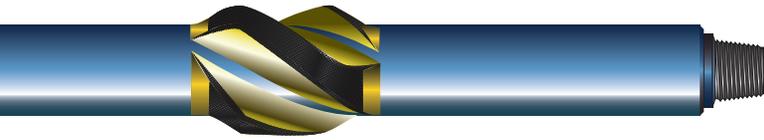


Specifications

- Like a three-blade spiral string, but with:
 - Box connections both ends
 - Bore for float on bottom end
- Typically highest total flow area (TFA)
- Most meet API 7-1 stabilizer dimensional requirements
- Hardfacing on crown and leading edges

INTEGRAL BLADE AUTOTRAC STABILIZER

Integral blade spiral stabilizer with medium crown length and shorter taper angles

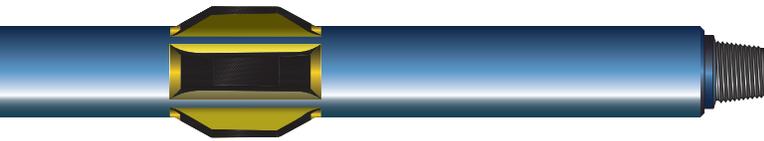


Specifications

- Three blades with 270-degree spiral
- Medium crown length
- Medium flow area (TFA)
- Hardfacing on crown and both leading and trailing taper angles
- Used in both directional and horizontal applications

INTEGRAL BLADE NORTRAC STABILIZER

Straight blade stabilizer used to maintain directional control during sliding operations

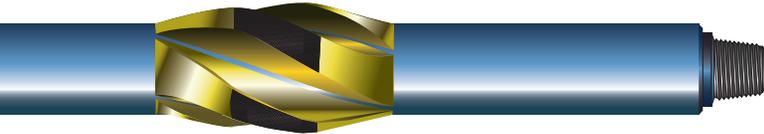


Specifications

- Three or four straight blades
- Short crown length
- Medium to high flow area (TFA)
- Hardfacing on crown and both leading and trailing taper angles
- Used in both directional and horizontal applications

INTEGRAL BLADE D-TRAC STABILIZER

Integral blade spiral stabilizer with short crown length and long smooth taper angles. Used to reduce vibration and torque leading to great reliability of downhole tool life on MWD, LWD, Mud Motor, and RSS assemblies



Specifications

- Four or five blades x tighter spiral with 300–330 degrees
- Short crown length
- Low flow area (TFA)
- Smooth transitions each end of crown
- Hardfacing on crown and both leading and trailing taper angles
- Used in rotating and sliding applications (Used in both directional and horizontal applications)

| Hole Size (in) | Standard DC Size (in) | Wall Contact (in) | Blade Width (in) | Fishing Neck Length (in) | Blade Undergage (in) | Overall Length (in) | | Approximate Weight (kgs) |
|-------------------|-----------------------|-------------------|------------------|--------------------------|----------------------|---------------------|----------|--------------------------|
| | | | | | | String | Near-bit | |
| 6" – 6 3/4" | 4 1/2" – 4 3/4" | 16" | 2 3/16" | 28" | -1/32" | 74" | 70" | 160 |
| 7 5/8" – 8 1/2" | 6 1/2" | 16" | 2 3/8" | 28" | -1/32" | 75" | 70" | 340 |
| 9 5/8" – 12 1/4" | 8" | 18" | 3 1/2" | 30" | -1/32" | 83" | 78" | 750 |
| 14 3/4" – 17 1/2" | 9 1/2" | 18" | 4" | 30" | -1/16" | 92" | 87" | 1000 |
| 20" – 26" | 9 1/2" | 18" | 4" | 30" | -1/16" | 100" | 95" | 1800 |

WELDED BLADE STRING STABILIZER

For large diameter holes

Specifications

- Three or four blades, usually straight
- Hardfacing on crown and leading edges
- High-strength 4145 steel body
- Post weld heat treatment



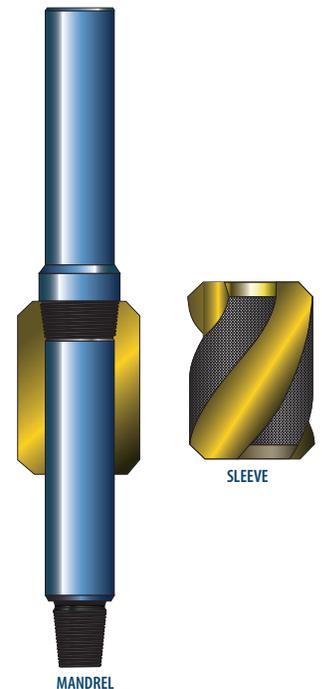
RIG REPLACEABLE SLEEVE TYPE STABILIZERS and MANDRELS

Our sleeve stabilizers are the product of simple design coupled with engineered technology. We understand the need to swiftly change out a sleeve on the rig floor which is why our sleeve and mandrel design is virtually foolproof. Our one-piece mandrel is manufactured from high strength 4145 heat treated alloy with ample tong space for connection recuts.

Easily interchanged with other brands, our sleeve and mandrel design is long-wearing and extremely economical. When they wear out, they can simply be thrown away – a must for remote areas where there is limited access to a field shop and inventory must be kept light.

Due to our hardfacing abilities, our sleeves can be stocked in the same sizes to meet different formation demands while being interchangeable to fit the same mandrel.

- Easily changed out on the rig floor
- Sleeve and mandrel design is interchangeable with similar brands
- Sleeves can be discarded when worn out



SLEEVE SPECIFICATIONS

| REAMCO Sleeve Series/Size | Hole Size or Blade O.D. Range (in) | Sleeve Body Diameter (in) | Sleeve I.D. (in) | Sleeve Length (in) | Blade Width (in) | Minimum Crown Length (in) | Maximum Sleeve Weight (lbs) |
|---------------------------|------------------------------------|---------------------------|------------------|--------------------|------------------|---------------------------|-----------------------------|
| 475 | 6 1/4" – 6 3/4" | 5 3/4" | 4 3/4" | 14" | 2" | 12 1/5" | 43 |
| 625 | 8 3/8" – 9 7/8" | 7 1/2" | 6 1/4" | 14" | 2 1/2" | 11 1/10" | 84 |
| 775 | 8 7/8" – 12 1/4" | 9 1/4" | 7 3/4" | 18" | 3" | 14 3/5" | 162 |
| 775 | 10 5/8" – 17 1/2" | 10" | 7 3/4" | 18" | 3" | 11 1/10" | 294 |
| 963 | 12 1/4" – 17 1/2" | 11" | 9 5/8" | 18" | 3 1/2" | 11 9/10" | 253 |

MANDREL SPECIFICATIONS

| REAMCO Mandrel Series | Maximum Fishing Neck Diameter (in) | Mandrel Upset Diameter (in) | Sleeve End Diameter (in) | Fishing Neck Length (in) | Sleeve End Length (in) | Total Overall Length (in) | Bore I.D. | | Maximum Mandrel Weight (lbs) |
|-----------------------|------------------------------------|-----------------------------|--------------------------|--------------------------|------------------------|---------------------------|-----------|----------|------------------------------|
| | | | | | | | Near Bit | String | |
| 47 | 4 3/4" – 5" | 5 1/8" – 5 3/4" | 4 3/4" | 23" | 32" | 62" | 1 1/2" | 2 1/4" | 302 |
| 62 | 6 1/2" – 7" | 7 1/2" | 6 1/4" | 23" | 32" | 62" | 2 1/4" | 2 13/16" | 500 |
| 77 | 8 1/4" | 9 1/4" | 7 3/4" | 27" | 37" | 71" | 2 13/16" | 2 13/16" | 893 |
| 96 | 10" | 11" | 9 5/8" | 27" | 37" | 71" | 2 13/16" | 2 13/16" | 1400 |

MAKE-UP TORQUE

| Series | 41 | 47 | 62 | 65 | 77 | 85 | 96 |
|-------------------------|-----------|-----------|-----------|-----------|-----------|-------------|-------------|
| Make-up Torque (ft-lbs) | 2000–2500 | 2000–2500 | 4500–5500 | 5000–6000 | 7000–8000 | 10000–12000 | 10000–12000 |

* There are other types of integral and welded stabilizers that are used less frequently

CUSTOM MOTOR / MWD AND RSS SLEEVE STABILIZERS

Using client supplied drawings and specifications, Drilling Tools International is able to manufacture any type of 4145 HT steel sleeve stabilizer or non-magnetic type sleeve. Utilizing our in-house engineering team and the latest 3D modeling software, we are also able to assist with the design process. Coupled with the latest CNC milling equipment we are able to produce any blade configuration or dimensional requirement a client might need. With a large inventory of steel and non magnetic heavy wall tubing and custom forgings, we are able to deliver custom sleeves with relatively short lead times. This ability coupled with the application of our latest hardfacing technology assures optimal run time and durability.

Corporate

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832.742.8500

Offshore/International and Manufacturing

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Broussard, LA 70518
337.856.0333

Product Sales

337.364.9244

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Midland, TX • 432.563.0676

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New Iberia, LA • 337.256.5848

Oklahoma City, OK • 405.604.2763

Bakersfield, CA • 661.869.1752

Casper, WY • 307.237.5248

Charleroi, PA • 724.565.5682

Williston, ND • 701.609.8702

Nisku, Alberta, Canada • 877.570.1962

HARDFACING

To meet a variety of the most demanding drilling conditions, we offer hardfacings in five different options for our stabilizer blades. We are constantly working to develop improvements on wear characteristics and matrix hardness. Our extensive research has increased reliability in bonding. Each hardmetal is tailored to your specific needs and our expert application ensures exceptional resistance to wear and tear, prolonging the life of your tool.

HF2000

Geothermal hardfacing utilizes tungsten carbide bricks, brazed to the stabilizer blade and surrounded by tungsten impregnated composite rod.

HF3000

A hardfacing method that applies the maximum amount of premium tungsten carbide on any wear surface. It can be applied in varied thickness and uses tungsten carbide inserts to maximize abrasive and impact durability.

HF5000

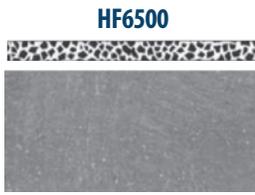
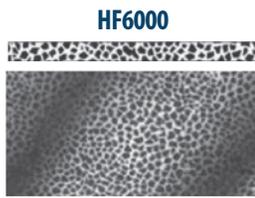
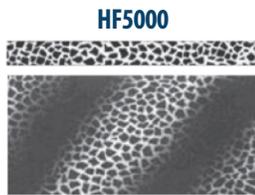
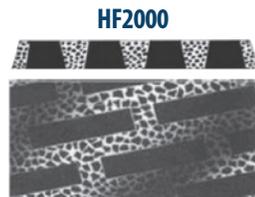
Most common hardfacing technique that utilizes crushed tungsten in a nickel bronze matrix for soft to medium drilling applications.

HF6000

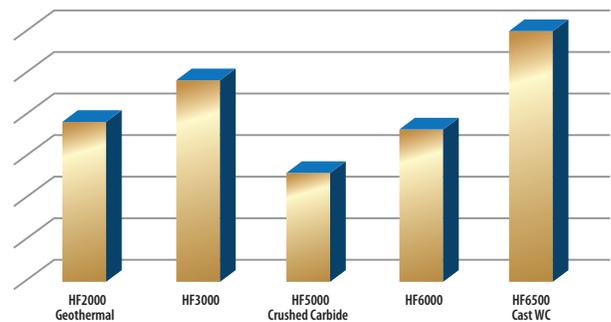
A premier hardfacing which suspends fine tungsten carbide pellets or crushed material in a hard, ferrous matrix. The matrix attains a hardness of approximately 45 HRC and is completely saturated with carbide. It is typically used with non-magnetic stabilizers due to lower application temperature.

HF6500

This slag-free material features a high density of hard-cast tungsten carbide particles evenly distributed in a nickel allow matrix. It offers exceptional resistance to abrasive and erosive particles with moderate impact and is applicable with all body materials. This matrix attains a hardness of approximately 55 HRC.



ASTM G65 Abrasion Test



Abrasion testing completed per ASTM G65 – 16 using the dry sand/rubber wheel test method and quantitative values determined from adjusted weight loss.

Drilling Tools International, Inc. is a leading provider of downhole tools to the land and offshore drilling markets. For nearly 40 years our company has been guided by the principals of Strength, Innovation and Performance. We consistently deliver world class customer service while providing quality products that meet the demanding drilling applications of today's market.

Our Quality Management System is certified in compliance to ISO 9001, and API Spec Q1 and our manufacturing is licensed to API Spec 7-1. Our Quality Management System governs all of our processes from planning, to process control, to delivery. This ensures that we consistently manufacture products that not only meet API standards but also meet the ever-changing needs of our customers.