

Production Services

Optimize Asset Value and
Maximize Production Efficiency



Production Services

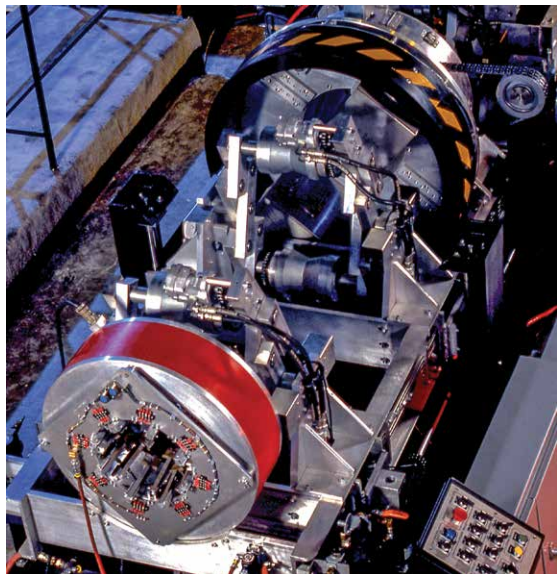
Optimize Asset Value and Maximize Production Efficiency

Tuboscope continually sets the industry standard for providing all-inclusive, value-added integrated products and services that deliver unrivaled integrity and performance. That expertise is clearly embodied in our comprehensive suite of Production Services that are proven to maximize production efficiency, lower lifting costs and reduce downtime.

Coupled with our complete package of products and services, our in-house quality control, technical and training resources make us your global one-stop full-service source to optimize the value of your assets.

Production Services Portfolio

- OCTG and Sucker Rod Inspection Services
- Reclamation Programs
- Corrosion Control and Wear Prevention
- Asset and Inventory Management
- Artificial Lift Technologies



Inspection Services

Identifying defects before they become profit-robbing problems

The best way to ensure your tubulars and sucker rods are free of defects is through a quality inspection program. Our mobile and fixed-site inspection services uncover multiple defects and identify critical downhole conditions that can shorten the life of your tubing and rod string.

All inspections are performed by ASNT — qualified Level I and Level II inspectors, employing Tuboscope's proven technologies and proprietary equipment:

- Electromagnetic Inspection (EMI) Sonoscope™ and Analog™
- Isolog™ Wall Thickness Measurement
- WellChek™ and Wellhead Scanalog Wellsite Tubing Inspection Services
- Eddy Current — Split Detection

Tubing Inspection Services

- Visual Tube to Identify Corrosion and Physical Damage
- Internal and External Removal of Light Scale and Paraffin
- Full Length Drift to Identify ID Constrictions and Ensure API Specification
- EMI of the Tube Body to Detect Assorted Service-Induced Flaws, Including Corrosion Pitting, Cuts, Gouges, Cracks and Rod Wear
- Special End Area (SEA) Visual and Magnetic Particle Inspection to Detects Defects in the Thread and End Area
- Application of Thread Dope and Installation of Thread Protectors
- Color Coded to API Specification and Pertinent Information Stenciled onto Tubing
- Tubulars Segregated by API Classification and Talled to Verify Length and Number of Joints Inspected
- Computerized Inventory Management Utilizing TuboGOLD (Global On-Line Data)





Associated Tubing Services

- Laser tally
- Hydrostatic / Pressure testing
- Gator hawk external leak detection thread test
- NORM (*Natural Occurring Radioactive Material*) Testing
- Saltwater / Chloride testing & remediation
- Cleaning
- Coupling inspection, removal and replacement
- Bucking services
- Hardness testing
- Rig prep, well return
- Pipe maintenance and storage
- Tubular packaging services (*Bolstering, Bundling, Pre-Sliding and Palletizing*)
- Transportation in select areas
- Buy / Sell programs in select areas

Please contact your local Tuboscope representative for information about these services in your area.

Sucker Rod Inspection Services

- Visual Rod Identification / Tagging System
- Cleaning
- Full-Length Visual Inspection of Body, Pin Ends, Thread and Face
- Coupling Removal and Inspection
- Shot Cleaning
- EMI Inspection
- Magnetic Particle Inspection (*MPI*)
- De-Mag
- Inhibitor Coating
- Grading / Color Code
- TuboGOLD Inspection Reports
- Bundling and Palletizing

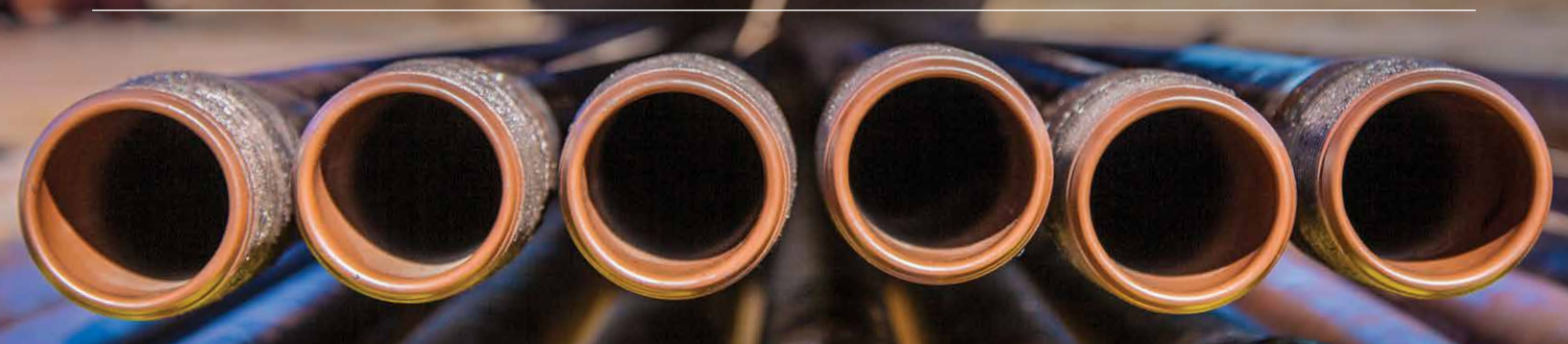


Associated Sucker Rod Services

- Rod Guide Recommendation
- Rod Recovery Analysis
- Rod Guide Calibrating
- NORM Testing
- Pony Rods and Sinker Bars
- Shot Blasting
- Straightening
- Coupling Inspection, Removal and Replacement
- Bolstering or Palletizing
- Tally
- Storage
- Transportation in Select Areas
- Buy / Sell Programs for Used Rods in Select Areas



Corrosion Control and Wear Prevention



Protecting your Investment from within

Production tubulars often operate in highly corrosive environments which can lead to tubing failures and budget-draining downtime. As the original and premier provider of internal coatings, we continue to develop innovative products to extend the life and improve performance in all operating environments.

With our industry leading line of Tube-Kote™ (TK™) internal coatings, Tuboscope sets the standard for preventing corrosion, wear and improving hydraulic efficiency.

Our TK™-Coatings are designed to meet all operating conditions, such as downhole temperatures up to 400°F (204°C), high H₂S concentrations and high CO₂ levels.

TK-Coating Benefits

- Superior corrosion and wear prevention
- Improves hydraulic efficiency
- Deposit mitigation
- Extends lifespan of tubing
- Reduces maintenance cost and downtime



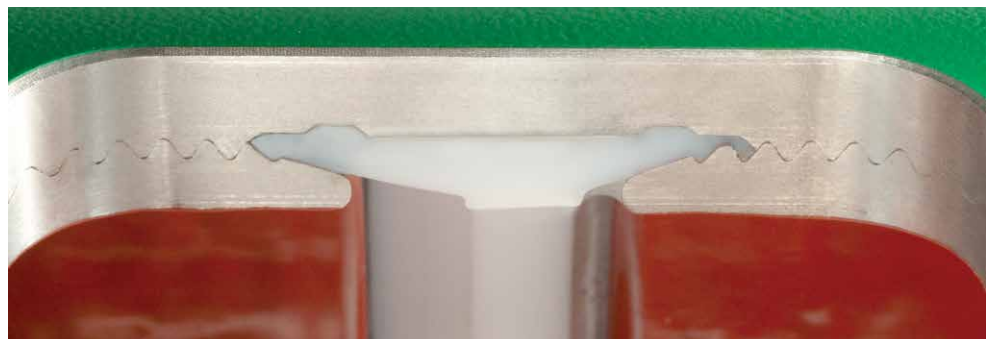
Complementing TK™-Coatings is our market-leading TK™-Liner System, a high performance fiberglass-reinforced protective lining system suitable for production and injection as well as disposal applications.

TK-Liner is ideal for maintaining production or injection in corrosive environments and is available for a variety of connection types.

Type	Benefit
TK™-Liner	For API Threaded Pipe
TK™-Ring	For Premium Threaded Pipe and Fluid Service
TK™-Ring II	For Premium Threaded Pipe with Enhanced Protection in Fluid and Gas Service
TK™-Fiberline I	A Ringless Fiberglass Lining System for API Threads
TK™-Fiberline II	An alternative version of Fiberline for more severe well conditions

Associated Corrosion Control Products

- Extensive Custom Coating Capabilities
- KC™ Connection for Modified 8th Connections
- Molydag
- Coupling Guard
- OD Varnish/Rust Preventative



Sucker Rod Protection

Protecting sucker rods is a critical component of successful and efficient rod pumping programs. The combination of highly corrosive environments and harsh pumping conditions can severely damage and shorten the life of your rod string. Tuboscope's advanced sucker rod coatings are proven to extend the life of your rod string in the harshest downhole environments.

Our Stainless Steel / Epoxy Coating (SS / EC) combines a sprayed stainless steel barrier with tough epoxy top-coated resins, which together deliver record-breaking performance in highly corrosive and abrasive well conditions.

The SS / EC double-strength interlocking shield provides the utmost protection against downhole corrosion, while also being exceedingly resistant to the physical abuse of every day oilfield handling. This double-tough coating consistently outlasts other available rod coatings. Stainless steel continues to resist corrosion even when exposed to chemical action. SS / EC rods are corrosion and abrasion resistant, but flexible enough to endure harsh pumping environments.



Modified Epoxy Coating Benefits

- Increases used rod inspection recovery rate
- Excellent for high-volume, hard-to-treat wells
- Reduces downtime and rod pulling costs due to failure
- Protects guided rods from corrosion attack due to turbulent flow

Stainless Steel Coating Benefits

- Superior chemical resistance
- Designed for CO₂ limited H₂S and salt H₂O Service
- Extremely durable — will handle incidental abrasion and mechanical contact
- No special handling required — use API recommended practice for bare rods
- Highly flexible — steel sucker rods will yield before this coating disbands
- Increases rod string life 6 to 10 times in severe cases



TK™-SMP

TK-SMP is a new type of hybrid external coating for sucker rods or the external surface of pipe that combines the wear and corrosion benefits of a metallic coating as well as the high performance properties of a liquid organic coating.

This hybrid system developed internally by Tuboscope provides temperature performance, excellent chemical and wear resistance along with flexibility in harsh pumping environments.

Reclamation Programs

Extending the Life of Used Tubing and Rods

In today's cost-sensitive environment, operators must explore every avenue to reduce their operating costs. Tuboscope's reclamation programs help you extend the serviceability of your tubing and sucker rods.

Our comprehensive programs evaluate your used tubing and rods to identify serviceability, where corrosion pitting to thread and coupling damage could lead to costly failures if unknowingly returned to service as is. For you, this also means valuable tubing and sucker rods that are deemed unserviceable are now restored as fit-for-service assets, reducing your well operating expenses.



Tuboscope All-Inclusive Reclamation Services

- Corrosion Resistant Coating / OD Brush Roll Spray
- Coupling Bucking, Inspection and Replacement
- Cleaning
- Straightening
- Thread Repair on 8th Connections and Tuboscope Two-Step Connections
- Rod Guide Removal



Asset and Inventory Management

The GOLD Standard for Tracking your Assets

Tuboscope's exclusive Global On-Line Data (*GOLD*) system provides you with 24 hr online access to numerous reports and inventory.

- 24 Hour Access to Tuboscope Yard(s) Current Inventory
- Real Time Inventory Tracking
- Ability to Run Reports: Inventory Reports, Shipping / Receiving Reports, Invoices, Work Orders, Inspection Reports
- Custom Reports Available on a Daily / Weekly / Monthly Basis
- Help Desk Support
- Customer Training Upon Request

To learn more about how our Production Services group can help keep your production flowing and reduce your operating costs, contact your nearest Tuboscope representative.

Integrated, Single-Source Solutions for the Life of Your Well

Tuboscope's Artificial Lift Technologies comprise integrated services, products and technologies engineered to seamlessly improve pumping efficiencies, minimize failures, and reduce your lease operating expenses.

From mitigation to planning, we combine real-time inspection data, proprietary evaluation and advisory programs with industry leading rod guides and coatings to give you a global one-stop, full-service source proven to maximize production and reduce downtime.

Our extensive in-house engineering, testing and R&D resources allow us to continually enhance product performance and integrity.

We also provide regular product and best practice training for both our employees and clients.

Tuboscope's Proven Systems Approach

- WellChek™ Inspection
- RGAP™ Rod Guide Advisory Program
- WellTrak — Tubing Data Management & Evaluation
- Tube-Kote™ (TK™) Coatings
- New Era® Rod Guides

All this is closely aligned with NOV's Artificial Lift and Wear Prevention offerings providing you with an unmatched customizable packaged solution.

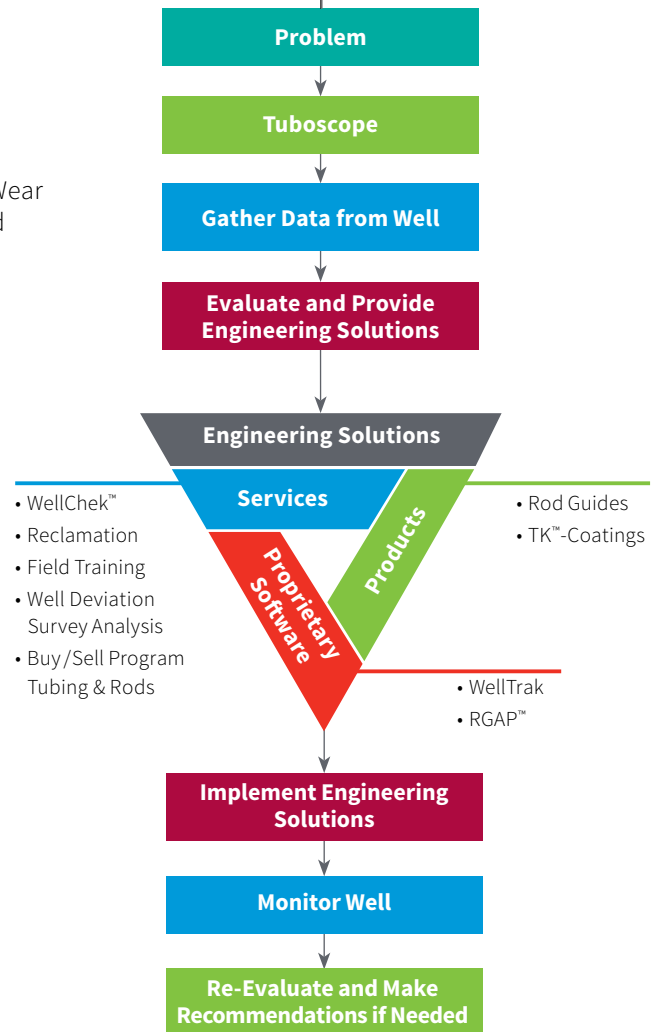


Artificial Lift

- Automation, Controls & Monitoring
- Progressing Cavity Pump Systems
- Rod Pump Systems
- Production Service Hookup
- Wear Prevention
 - Rodec™ Tubing Rotators*
 - Hercules™ Rod Rotators*

Together we help you enhance the value of your asset, advancing your aggressive failure reduction program.

For more information on NOV's Artificial Lift please visit nov.com/artificiallift



Artificial Lift Technologies Flow Chart

Tuboscope's Advisory, Management and Evaluation Technologies Provide You the Critical Data Needed for Successful and Efficient Production String Design



WellChek™ II

WellChek is a self-contained inspection and remote monitoring system used in conjunction with routine tubing pulling operations. Utilizing proprietary inspection technologies, we provide an unmatched evaluation of each tube, identifying and recording exact defect location in the well.

Employing proven inspection technologies, this advanced system offers an accurate evaluation of each tube.

- Sonoscope™ EMI for Detection of Internal and External Defects
- Isolog™ (Gamma Source) for Accurate Wall Loss
- Eddy Current for Split Detection

Each tube's assessment is available as soon as it clears the inspection head. In addition to a profile of the string as a whole, pipe is classified by standard API or customer specifications. Rejected tubes are laid down and reusable tubing is stood back in the derrick.

Benefits

- Professionally trained crew for efficient and safe operations
- Quick size changeover and standardization process
- Records exact defect and joint location in the well
- Real time usable information
- On-site inspection eliminates need for trucking to inspection facilities
- Immediate re-use of good tubing

Defect Detection

- Corrosion pitting
- Rod wear
- Wall loss
- Cracks
- 3-Dimensional Transverse Defects

Tubing Sizes

- Erosion
- Splits
- Cuts
- Holes
- 2 3/8"
- 2 7/8"
- 3 1/2"

Tube-Kote (TK™) Coatings for Tubing and Sucker Rods

TK-Coatings improve performance and mitigate problems associated with corrosive environments to extend the life of your tubing and rod string.

Our corrosion control specialists work closely with engineering teams to gather relevant application and environment data. The data is entered into our coating recommendation form, which provides the foundational data to narrow down the coating selection process. Once the field of potential coating materials is narrowed, we take into consideration any mechanical and chemical intervention plans to accurately select the proper coating.

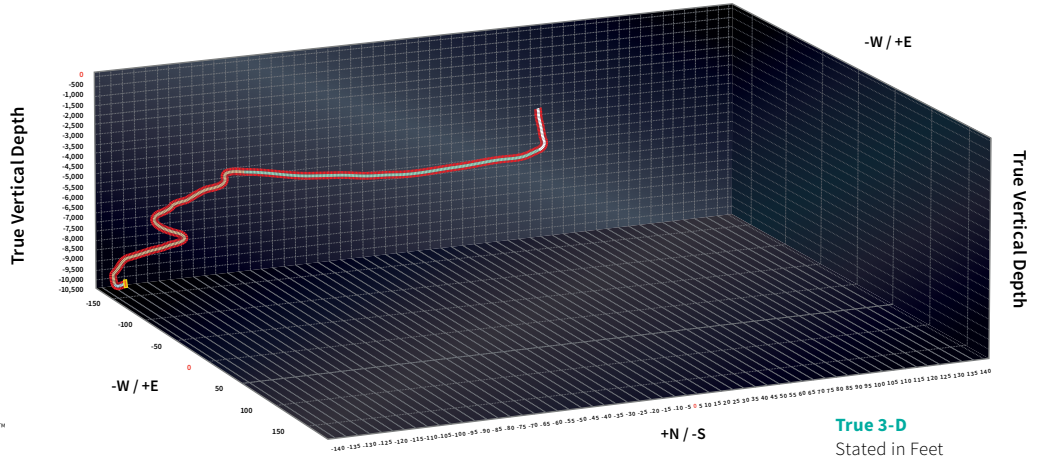


Rod Guide Advisory Program (RGAP™)

Rod guide design, placement, and material selection are all crucial for obtaining the best overall performance of your rod string.

Utilizing our proprietary Rod Guide Advisory Program (RGAP), we are able to recommend the proper guide design, material, spacing and auxiliary equipment for both beam and progressing cavity pump applications. Well conditions, workover histories and wellbore deviations are all considered when recommending guides.

WellTrak and RGAP take the guesswork out of production string design by providing you with the real-time data you need to make accurate tubing and rod management decisions.



RGAP™
3D representation of a sample well created by the latest version of RGAP™

WellTrak Tubing Data Management and Evaluation System

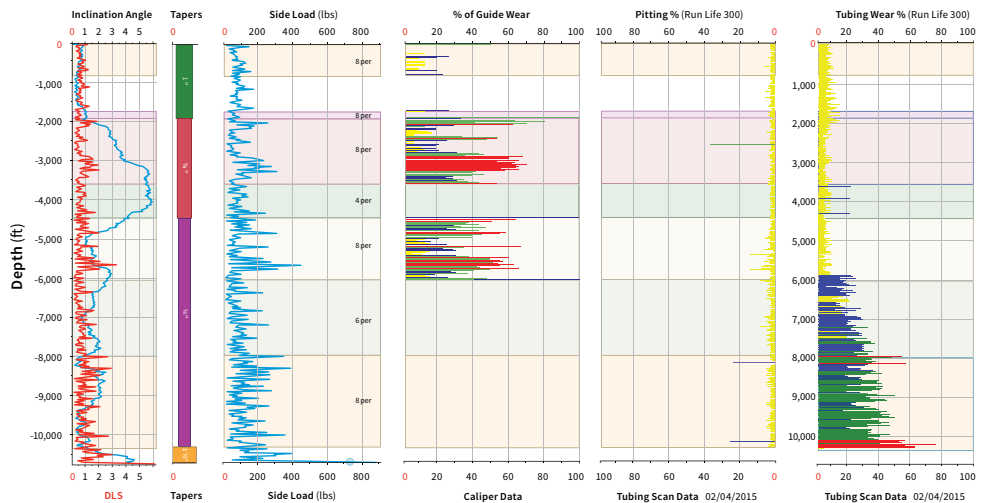
WellTrak provides sequential WellChek™ inspection results, profiling at precise depths where failures or potential problems have occurred.

This valuable information provides production and well optimization engineers critical data to help extend the run life of wells, measure the effectiveness of changes, and reduce overall tubing failures.

Tubing management decisions based on WellTrak's on-line historical database of well / field conditions can assist in string design, treatments or mitigation techniques before the well is put back on production.

Benefits

- Individual full inspection history
- Online access to well records
- Identify patterns or correlations among historical inspections
- General statistics for inspections performed



Combined WellTrak and RGAP Report

Results displayed in an assortment of charts

The Most Extensive Portfolio of Rod Guide Designs for Beam and Progressing Cavity (PC) Pumps

Wellbore deviations, dynamometer readings, workover histories, well operating conditions, completion information and production data should all be taken into consideration when selecting rod guides. Our advisory programs help you select the proper design, material and spacing for each well to ensure effective rod and tubing wear prevention.

Manufacturing



Tuboscope rod guides are manufactured from a complete line of engineered plastics, enhanced with performance additives, that can be tailored to virtually any well environment.

At all rod guide service centers, sucker rods are handled according to API specifications and moved quickly through our manufacturing system.

Prior to injection molding guides, sucker rods go through our patented rod cleaning system. Utilizing high speed rotating brushes rather than hard particle blasting, our process thoroughly cleans rods and eliminates the introduction of stress concentrations.

Field Support

Technicians provide field support to assist with the proper implementation of all recommended procedures.

Field Services Include

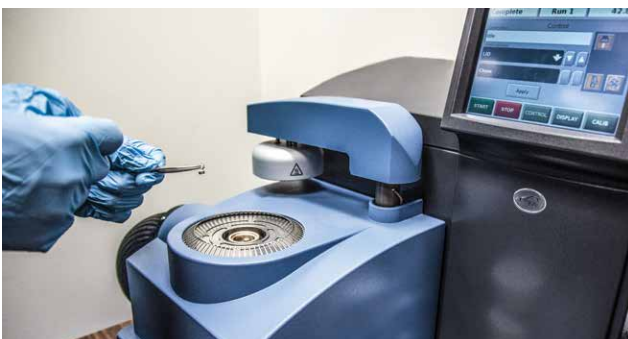
- On-site rod guide measurements for critical wells
- Computer-generated rod guide wear logs
- Detailed well data analysis report
- Rod storage
- Engineering support to evaluate problems not associated with rod guides, such as gas locking pumps, pump efficiencies and rod string design

Lab Capabilities

Our in-house R&D group designs, formulates, manufactures and tests all of our proprietary rod guide materials.

We utilize a variety of thermal characterization techniques and physical testing instruments in the research and development of rod guide materials.

Additionally, all rod guides go through our autoclave testing unit that simulates downhole environments. Materials undergo testing at high temperatures, high pressures, and are exposed to gases and solutions commonly encountered in production environments.



Quality Program

Our in-house quality department monitors each facility and manufacturing process so you receive the highest level of quality and service.

Standard operating procedures worldwide ensure that you are receiving the same consistent product at every Tuboscope location.



Rod Guide Materials

New Era® rod guides are manufactured from a complete line of engineered plastics, enhanced with performance additives, which can be tailored to virtually any well environment. Three base polymers — Nylon, PPA and PPS — have demonstrated excellent performance in a number of harsh environments. Additives such as glass, minerals and aramid fibers can enhance the performance of the basic polymers.

Rod Guide Designs

High Performance Designs

- Crossover™
- TNT 360™ & Nitro 360™
- NETB™, NEXTB™ & NEXXTB™
- Stealth™ & Stealth XL™

Classic Designs

- Straight Vane
- Positive Action® Slant Vane
- Turbulence Breaker™ & Smooth Flow™
- Slant Vane XL
- Dual System™
- Mort™

Rotating Rod Designs

- Spin-Thru®
- Pathfinder™

Field Installed Guides

- Blazer™
- FAST™
- Field Installed Stealth XL™ & Lotus Twist-On™
- NEPG™

Rod Guides for Reciprocating Applications



New Era® CrossOver™ Rod Guide

New Era® CrossOver™ Rod Guide

Features & Benefits

- Hydrodynamic design helps keep fluid closer to laminar flow around the guide, and decreases the chance of gas breakout
- Reduced hydraulic drag force maximizes carrier bar loads on the downstroke
- Wider vanes for maximum surface bearing area
- Concave body channel allows wider vanes, more erodible material than other designs and low fluid drag
- Custom designed for each rod and tubing size to allow maximum vane width and optimum bypass area
- DuraGuide™ wear indicators provide easy visual confirmation of remaining erodible material on guides
- All materials available

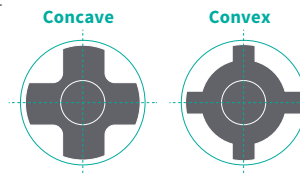


Stealth™ Rod Guide

Stealth™ Rod Guide

Features & Benefits

- Wider vanes for maximum surface bearing area
- Custom designed for each rod and tubing size to allow maximum vane width and optimum bypass area
- DuraGuide™ Wear Indicators provide easy visual confirmation of remaining erodible material on guides
- Concave body channel allows wider vanes and more erodible material than other designs
- All materials available



The concave body channel of the Stealth guides (left) allows wider vanes and more erodible material than conventional designs (right).



Stealth XL™ Rod Guide

Stealth XL™ Rod Guide

Features & Benefits

- Wider vanes for maximum surface bearing area
- Concave body channel allows wider vanes, more erodible material than other designs and low fluid drag
- Custom designed for each rod and tubing size to allow maximum vane width and optimum bypass area
- DuraGuide™ wear indicators provide easy visual confirmation of remaining erodible material on guides
- 7" overall length
- All materials available

Artificial Lift Technologies — Rod Guides



NETB™, NEXXTB™ & NEXXTB™ New Era® Turbulence Breakers Rod Guide

Features & Benefits

- Hydrodynamic design helps keep fluid closer to laminar flow around the guide, and decreases the chance of gas breakout
- Factory installation eliminates field installation problems plus provides over 10 times less drag force and 10 times more bonding power than most field installed designs
- Reduced hydraulic drag force maximizes carrier bar loads on the downstroke
- NEXXTB features wider vanes for maximum surface bearing area
- All materials available



TNT 360™ & Nitro 360™ Rod Guide

Features & Benefits

- Extra wide vanes and spiral design for increased contact surface
- Greater erodible wear volume for longer protection
- All materials available

Continuous Dual-Cleaning Action

Molded-on guides keep tubing clean and act as a stop for reciprocating scrapers



Reciprocating Scrapers
Keeps rods free of paraffin

Dual System™ Rod Guide

Features & Benefits

- Fixed, one-time expense
- Continuous, long term protection
- Virtually eliminates hot oil and chemical treatments for lower operating costs, reduced downtime and less environmental risk
- Maintains unrestricted flow and pump efficiency
- Materials available:

Guide: All **Reciprocator:** NF, AU

Guides per Rod Formula

Recommended number of guides per rod for complete paraffin removal is determined by using the following formula:

$$\frac{\text{ROD LENGTH (inches)}}{\text{STROKE (inches)}} + 1 = \text{Number of Guides Per Rod}$$

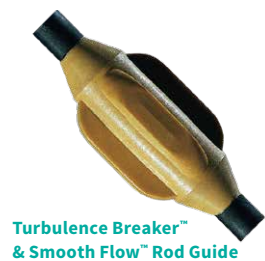


Straight Vane Rod Guide

Straight Vane Rod Guide

Recommended for low corrosion environments in wells having one pull or less per year from wear-associated problems, the straight vane design is an effective, low-cost solution to problems. It has more erodible wear volume, less drag and a greater bearing surface than the slant blade design and is available in a variety of materials. Used in conjunction with a Hercules® rod rotator, this design provides exceptional scraping action, as well as centralization.

- All materials available
- Available on fiberglass rods please contact your local Tuboscope representative



Turbulence Breaker™ & Smooth Flow™ Rod Guide

Turbulence Breaker™ & Smooth Flow™ Rod Guide

Fluid turbulence, usually above and sometimes below rod guides, can wash away corrosion inhibitors. When inspection shows evidence of rod pitting, the washing action of turbulent flow is usually the problem. The Turbulence Breaker & Smooth Flow guides are designed to minimize these corrosion problems. Straight vanes, working in tandem with extended tapered guide ends, improve the flow of fluids around the guide.

- All materials available

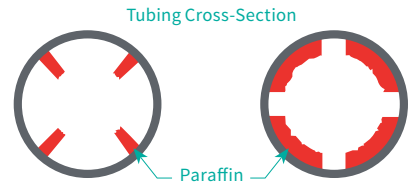


**Positive Action®
Slant Vane Rod Guide**

Positive Action® Slant Vane Rod Guide

The angle of the slanted vane provides broad cutting action and when coupled with increased turbulence, paraffin build-up is reduced dramatically. In wells where drag, high side loads and corrosion are not factors, the slant vane design is the choice for paraffin control, but it still must be used with a rod rotator to be most effective.

- All materials available



Slanted vane guides (left) remove paraffin from a broader area than straight vane guides (right)



**Slant Vane XL
Rod Guide**

Slant Vane XL Rod Guide

This design provides effective protection against both paraffin accumulation and tubing wear. The sucker rod guide combines both the characteristics of concaved and slanted vanes in order to maximize erodible wear volume and bearing surface.

- All materials available



**Mort™
Rod Guides**

Mort™ Rod Guide

This design is effective protection against paraffin accumulation on the interior walls of tubing, while also reducing downhole rod and tubing wear. The Mort design features slanted vanes to provide a broad cutting action to reduce paraffin buildup. Although the slanted vane scrapes almost the full circumference of the tubing with each pumping stroke, it still must be used with a rotator.

- Available for steel or fiberglass sucker rods
- Ability to mold onto fiberglass rods
- All materials available

Rod Guides for Progressing Cavity Applications



Pathfinder™ Rod Guide

Pathfinder™ Rod Guide

Features & Benefits

- Four channels on the rotating sleeve and three channels on the inner diameter of the stationary sleeve allow fluid to freely flow
- Reduces torque generated by the mechanical and hydraulic friction of the rotating rod string
- Fits rod sizes from 5/8" to 1"



Spin-Thru® Rod Guide

Spin-Thru® Rod Guide

Features & Benefits

- Unique Spin-Thru design reduces hydraulic resistance and mechanical friction, so primary drives operate more efficiently and with less power
- Ultra-High Molecular Weight Polyethylene (UHMW PE) guide for extremely durable construction
- Fin design provides less pressure drop
- Lower torque means less power required to operate the PC pump drive
- Materials available: **Stator:** UHMW PE **Rotor:** PPS, AF, SB-1

Field Installed Guides

Eliminate the need to remove rods from the well site, reducing costs and returning rods to service quicker.



Blazer™ Rod Guide

Blazer™ Rod Guide

The spin-thru Blazer rod guides can effectively increase production and decrease workover costs by extending rod and tubing service life in standard and high temperature applications. These rod guides deliver maximum performance, even in extreme well conditions.



Fast™ Rod Guide

Fast™ Rod Guide

The FAST rod guides are engineered for high performance in progressing cavity pumped wells. The proprietary spin-thru design reduces the torque that is generated by the mechanical and hydraulic friction of the rotating rod string. It also provides a flow path that reduces pressure drop by allowing fluid to flow through the rod guide rather than limiting flow to the space around it.

- Fits rod sizes from ¾" to 1", 1 ½"



Field Installed
Stealth XL™ Rod Guide

Field Installed Stealth XL™ Rod Guide

The Stealth XL rod guide offers a sleek profile for tough downhole conditions. Deep concave channels and the streamlined shape give the Stealth XL rod guide excellent flow characteristics in high volume wells. The wide vanes provide outstanding bearing surface area for wear protection on rods, rod couplings and tubing in deviated wells. Proprietary RC material provides superior holding power and a 400°F temperature rating, making the Field Installed Stealth XL the premium rod guide for your toughest well conditions.

- Sucker rod sizes: ¾", 7/8", 1"



Lotus Twist-On™
Rod Guide

Lotus Twist-On™ Rod Guide

The original twist-on design is now improved with modern materials that provide longer wear, better chemical resistance, broader service temperature ranges, better rod retention and easier installation. Unbreakable Nylon (NF) (180°F upper limit) can be installed at temperatures as low as 0°F without preheating. AU material resists salt water, temperatures as high as 250°F and a broad range of chemicals.

- Materials available: AU, NF

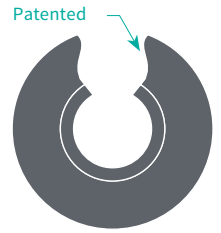


NEPG™ — New Era® Poly Guide Rod Guide

NEPG™ — New Era® Poly Guide Rod Guide

The Poly guide is manufactured from UHMW PE for high impact strength. Resistance to chemicals and salt water make this guide ideally suited for any temperature below 180°F. The NEPG's double-knock patented slot design makes field attachment to the rod quick and easy. Once installed, the superior holding power of this guide guards against slippage on the rod. There is lower coefficient of friction than nylon, minimizing resistance in both reciprocating and rotating applications. The superior abrasion resistance of the UHMW PE material gives the NEPG an exceptionally low friction under load, while also being ideal for high water cut wells. This proven design features provide enhanced downhole wear protection, ample fluid bypass and improved fluid flow characteristics.

- Materials available: UHMW PE



NEPG™ — New Era® Poly Guide

Global Rod Guide Service Centers

Edmonton, Alberta (Canada)

Nisku, Alberta (Canada)

Estevan, Saskatchewan (Canada)

Williston, North Dakota (US)

Mills, Wyoming (US)

Myton, Utah (US)

Wooster, Ohio (US)

Bakersfield, California (US)

Oklahoma City, Oklahoma (US)

Odessa, Texas (US)

Pleasanton, Texas (US)

Associated Products



Rodec™ Tubing Rotators

Our extensive line of tubing rotators and swivels effectively distributes wear evenly around the entire internal circumference of the production tubing. The application of these products can dramatically increase tubing life span and reduce operating costs proportionately.

- Pressure handling up to 5,000 PSI
- Available in mechanical and electric configurations
- NACE compliant



Hercules™ Rod Rotators

Rod rotation is the most effective means of removing paraffin from inside the tubing and distributing wear evenly. This process also protects against severe rod and tubing wear when used in conjunction with rod guides.

- Available in maximum recommended loads ranging from 13,000–40,000 lbs

National Oilwell Varco has produced this brochure for general information only, and it is not intended for design purposes. Although every effort has been made to maintain the accuracy and reliability of its contents, National Oilwell Varco in no way assumes responsibility for liability for any loss, damage or injury resulting from the use of information and data herein. All applications for the material described are at the user's risk and are the user's responsibility.

Corporate Headquarters
7909 Parkwood Circle Drive
Houston, Texas 77036
United States

Tuboscope Headquarters
2835 Holmes Road
Houston, Texas 77051
United States
Phone: 346 223 6100

© 2019 National Oilwell Varco All Rights Reserved
D392006083-MKT-001 Rev. 03