



Well Construction Catalog

SPIR-O-LIZER®

Solid Blade Centralizer

Product

The SPIR-O-LIZER is a durable, zinc alloy, solid blade centralizer designed to reduce torque and drag while running casing. The blade design will create turbulence promoting 360° cement coverage.

Features

- Manufactured from zinc alloy providing:
 - High strength – allowing thinner wall sections giving maximum flow-by.
 - Exceptional wear resistance – maximum standoff.
 - Low coefficient friction – reducing torque & drag.
 - Withstands temperatures up to 400°F.
- 360° spiral blade configuration gives maximum standoff, assisting with hole cleaning & cement placement.
- Self-cleaning blade design to reduce the risk of packing off.

Options

- Centralizer placement / T&D analysis available.
- Fully machinable allowing for custom ODs.
- Split units available.
- Size range from 2-7/8" – 13-5/8".

BLADERUNNER®

Ultimate Friction Reducing Centralizer

Product

The BladeRunner ultimate friction reduction Spir-O-Lizer® is designed to reduce cased hole running drag and maximize open hole standoff efficiency. Low friction blade inserts will reduce as the liner is run through the previous casing string to expose the Spir-O-Lizer 360° blade form to aid running as the liner enters open hole. Low friction bands in the bore of the centralizer ensure extremely low start up torque when the liner is rotated during the cementing process.

Features

- Low friction bearings in bore ensure extremely low start-up torque.
- Low friction blade inserts substantially reduce drag.
- Maximize torque & drag reduction.
- Solid single piece construction, no moving parts eliminate potential junk in the wellbore.
- All Spir-O-Lizer design features are incorporated.

Options

- BladeRunner 'BR' (Blade Runner), 'LD' (Low Drag) & 'LT' (Low Torque) available.
- Centralizer placement / T&D analysis available.
- Fully machinable allowing for custom ODs.
- Size range from 2-7/8" – 13-5/8".

ECON-O-GLIDER®

Pressed Steel Centralizer

Product

The Econ-O-Glider is a steel, single piece, spiral blade centralizer that has been specifically designed to centralize casing being run in the less demanding vertical & intermediate wells, where positive standoff is required, and torque & drag reduction is not deemed a critical requirement.

Features

- Positive standoff spiral blade.
- Maximum flow-by.
- Blades tested to withstand 15-20 tons side loading.

Options

- Dedicated engineering support team.
- Centralizer placement / T&D analysis available.
- Econ-O-Glider ST (Straight Blade) available.
- Size range from 2-7/8" – 30".





Product

The Riser-Lizer is a fabricated heavy duty steel centralizer that has been designed specifically for centralizing large bore casing inside risers, where conventional centralizers are not fit for purpose.

Features

- Heavy duty constructive.
- High holding force.
- Anti-vibration, high-tensile stainless-steel bolting system.

Options

- Centralizer placement / T&D analysis available.
- Anti-vibration, high-tensile stainless-steel bolting system.
- Size range from 16" – 36".



Product

The SPIR-O-LIZER® 'Passive Angled Four Blade' is a zinc alloy, solid blade centralizer that has been specifically designed for sand control / gravel pack applications. A four bladed unit c/w reduced blade angle to maximize flow area, minimize back pressure and potential pack-off.

Features

- Positive standoff protects screen jackets from damage while running in through the wellbore and greatly assists with hole clean-up.
- Fluid by-pass has been maximized to eliminate pack-off during clean-up and gravel pumping operations.
- Manufactured from zinc alloy providing:
 - High strength – allowing thinner wall sections giving maximum flow-by.
 - Exceptional wear resistance – maximum standoff.
 - Low coefficient friction – reducing torque & drag.
 - Withstands temperatures up to 400°F.
- Maximum torque & drag reduction.

Options

- Centralizer placement / T&D analysis available.
- Split unit available.
- Size range from 4-1/2" – 7".



EXPAND-O-LIZER[®] BS

Bow Spring Centralizer



Product

The standard EXPAND-O-LIZER 'Bow Spring' range are hinged non-welded bow-spring centralizers designed to be latched onto the casing over a stop collar to facilitate pulling the centralizer in and out of the wellbore and large diameter casing that use weld on connectors.

Features

- Engineered and tested to exceed industry standards.
- Low insertion & running forces.
- High restoring forces.
- Suitable for passing through well-bore / cased hole restrictions.
- High quality spring steel grade.

Options

- Centralizer placement / T&D analysis available.
- Dedicated engineering support team.
- Size range from 2-7/8" – 30".

EXPAND-O-LIZER® SR

Bow Spring Centralizer



Expand-O-Lizer SR

Semi-rigid bow centralizer specially designed with a double bow profile, increases restoring forces, reduces running force and increases contact area for less bow penetration into the formation.



Expand-O-Lizer PO

Specifically designed flat-bottomed U-shaped blades are provided for maximum fluid flow-by and required rigidity when concentric casing strings are required for liner and packer setting in cased hole.

EXPAND-O-LIZER[®] ES

Extreme Service Bow Spring Centralizer



Product

Downhole Products Expand-O-Lizer 'Extreme Service' is the patented engineered solution for a complete under-reamed casing operating, ensuring the best possible conditions for cement placement. A one-piece spring steel unit eliminated welded bows, the ES combines extremely robust manufacture with a proven drag reduction method of deployment.

Features

- The engineered solution for under-reamed hole applications where annual clearance is greater than 1-1/4".
- Non-welded blades, robust design.
- Unique design significantly reduces running forces in cased hole sections.
- Integral bi-directional drive collar c/w engineered high holding force set screws.
- Providing excellent standoff in the open hole sections.
- Testing criteria exceeds industry standards.
- Offering the best possible conditions for cement.

Options

- Centralizer placement / T&D analysis available.
- Dedicated engineering support team.
- Size range from 4-1/2" – 28".

EXPAND-O-LIZER® ESTD-T

Extreme Service Tear Drop-Taper Centralizer



Product

Downhole Products Expand-O-Lizer 'Extreme Service Tear Drop - Taper' is the ultimate engineered solution for under-reamed casing applications. Utilizing the already proven Expand-O-Lizer ES unique patented design and now incorporating an offset tear drop taper blade design, the Expand-O-Lizer ESTD-T lowers insertion forces and increases blade strength, providing superior standoff in the open hole sections.

Features

- Single piece, spring steel design.
- Unique design significantly reduces insertion and running forces.
- Integral bi-directional drive collar c/w engineered high holding force set screws.
- Testing criteria exceeds industry standards.

Options

- Centralizer placement / T&D analysis available.
- Dedicated engineering support team.
- Product designed to meet specific application requirements.
- Size range from 4-1/2" – 28".

EXPAND-O-LIZER® SS

Standard Service Bow Spring Centralizer

Product

Downhole Products Expand-O-Lizer 'Standard Service' is a one-piece semi-rigid bow. Manufactured from spring steel to allow for flexing when in gauge hole applications, where the operator is concerned that swelling/shifting shales are present that could impede a solid blade centralized string from getting to T.D.

Features

- Non-welded, robust one-piece design.
- Suitable for rotation due to axial rigidity.
- High restoring forces exceeds industry standards.
- Spring steel flexible design significantly reduce running forces and allows easy passage through wellbore obstructions.
- Gauge hole OD offering maximum standoff.
- Suitable for onshore installation reducing rig time costs and HSE exposure.

Options

- Centralizer placement / T&D analysis available.
- Dedicated engineering support team.
- Size range from 2-7/8" – 30".

EXPAND-O-LIZER® SUB

Inline Bow Spring Centralizer



Product

Downhole Products Expand-O-Lizer SUB is an inline centralizer sub for under-reamed tight tolerance applications. These subs are designed and manufactured specifically to the client's requirements to ensure the best possible solution, minimizing surge and drag while maximizing standoff.

Features

- One-piece machined sub, spring steel design.
- Fully rotatable.
- Radius blade edges – casing friendly drag reducing shape.
- Bi-directional and in-line design.

Options

- Centralizer placement / T&D analysis available.
- Dedicated engineering support team.
- Product design to meet specific application requirements.
- New sizes design and tested within two weeks.
- Size range from 2-7/8" – 20".

EXPAND-O-LIZER® ASLO

Under Reamed Bow Spring Centralizer

Product

The **EXPAND-O-LIZER ASLO** is a premium centralizer designed for optimum performance in under reamed and close tolerance applications. The single piece design with integrated stress relief blade profiles, allows the centralizer blades to flex in tight restrictions, yet return to OD giving restoring force that exceeds industry standards.

EXPAND-O-LIZER ASLO is a unique design and a premium addition to Downhole Products EXPAND-O-LIZER centralizer family, providing robust, competent and consistent product performance.

Features

- Single piece, spring steel design.
- Unique blade profile • Stress relief blade features.
- Low running forces.
- High restoring forces with excellent standoff.
- Competent and consistent performance.
- Testing criteria exceeds industry standards.
- Patent pending.

Options

- Centralizer placement / T&D analysis available.
- Dedicated engineering support team.
- Designed to meet specific application requirements.
- Sizes from 4-1/2" through 24" available.



STOP COLLARS

Stop Collars

Product

Downhole Products offer a range of stop collars to suit all centralizer options, all stop collars are tested in accordance with API 10D II recommended practices.

Ductile Iron

- One piece cast ductile iron stop collar.
- High axial holding force.

Heavy Duty

- Heavy duty one-piece steel collar.
- High holding force.

Steel

- Fabricated steel stop collar.
- 1/2" UNC S.S set screws.

Hinged Bolt

- Self lock in pins.
- Low budget.

Hinged Set Screw

- Easy installation.
- 1/2" set screws.

Hinged Spiral Nail

- Quick installation.
- Spiral nail design.



Product

SPIR-O-BITE® is a high holding force, slim diameter stop collar for close tolerance applications. With no set screws and easy installation without the need for special assembly tools. An easy twist on assembly with robust gripping mechanism and no risk of back-off, allows for the SPIR-O-BITE to be fitted to all API casing grade, sizes and tolerance bands.

The slim profile ensures the collar can slide through the tightest restrictions, maintain a holding force more than conventional set screw type stop collars and the perfect partner for the EXPAND-O-LIZER centralizer family.

Features

- Simple innovative design.
- No specialist assembly tooling or personnel required.
- Suitable for all API casing grades, sizes and tolerances.
- Low profile.
- No set screws or loose parts.
- Bi-directional, high holding force.
- Low assembly torque.
- Anti back-off mechanism.
- Simple, quick installation.
- Assemble anywhere.
- Patent pending.

Options

- Dedicated engineering support team.
- Designed to meet specific application requirements.
- All casing size options available.

PEN-O-TRATOR®

Reamer Shoe



Product

The Pen-O-Trator reamer shoe has been specifically designed to aid with the installation of any casing, liner or screen application where the operator has concerns over potential difficult wellbore conditions such as swelling shales, ledges and washed out areas within the wellbore.

Features

- Casing friendly tungsten carbide cutting structure.
- Anti-aggressive left-hand blades minimize torque.
- 360° cutting structure facilitates reaming past obstructions with or without rotation.
- Wellbore seeking eccentric guide nose negotiates troublesome formations.
- EZI-Drill® aluminum guide nose to aid drill-out without compromising nose strength.
- Flow ports offering 360° flow area.
- Slick body design helps reduce ECD.
- One-piece milled steel body.

Options

- Integral API rated single or dual valve option.
- Ball deflector / ball catcher options available.
- All API and premium connections available.
- All material casing grades available.

PRED-O-TOR

Reamer Shoe



Product

The Pred-O-Tor reamer shoe has been designed to be an uncompromising solution to today's most challenging wellbore conditions. The nose has an innovative profile design to aid in getting casing to T.D. by overcoming wellbore restrictions, but also includes integral hardfaced blades and optimized jetting, to ream and clean out the hole as the casing is run. The addition of PDC cutters on the outer shoulder of the Pred-O-Tor allows the shoe to efficiently ream and open the hole, where formation issues have impacted string progressing. The blades have tungsten carbide buttons to further assist with hole cleaning.

Features

- Innovative nose profile.
- Hardfaced blades.
- PDC to aid reaming.
- Efficient drillout.
- Aggressive right-hand blades.
- Casing friendly carbide gauge buttons.
- One-piece milled steel body.

Options

- All API and premium connections available.
- All casing grades and weight options.
- Customized OD to suit client requirements.
- Integral API rated single or dual float valve.



Product

The Reaper reamer shoe has been specifically designed to be an aggressive shoe for extreme wellbore conditions. The nose is designed to aid in getting casing to T.D. by using coated blades and optimized jetting to ream and clean out the hole as casing is run. The body blades have tungsten carbide buttons to further assist with hole cleaning.

Features

- Nose with integrated blades to assist with well-bore reaming and cleanout.
- Wellbore seeking eccentric guide nose negotiates troublesome formations.
- Casing friendly tungsten carbide cutting structure on body
- Aggressive right-hand blades.
- 360° cutting structure facilitates reaming past obstructions with or without rotation.
- One-piece milled steel body.
- Optimized flow ports offering efficient hole cleaning.
- Aluminum nose designed for fast and efficient drill-out.
- Profiled nose to provide good cement key.
- Junk slot area position on nose to keep blades clean.

Options

- Integral API rated single or dual valve option.
- All API and premium connections available.
- All material casing grades available.

PILOT GUIDE SHOE

Slick Body Guide Shoe



Product

The Pilot Guide Shoe is a slick body aluminum nosed guide shoe to aid with the running of any casing, liner and screen applications. Utilized where the operator has concerns over potentially difficult wellbore conditions and a conventional cement nosed float shoe is not considered robust enough.

Features

- Wellbore seeking eccentric guide nose negotiates troublesome formations.
- EZI-Drill® aluminum guide nose to aid drill-out without compromising nose strength.
- Flow ports offering 360° flow area.
- Slick body design helps reduce ECD.
- API rated integral float valve.

Options

- Integral API rated single or dual valve option.
- Concentric or other nose options available.
- All API and premium connections available.
- All material casing grades available.

NOSE OPTIONS

Float & Reamer Shoe Noses

EZI-Drill Nose

The EZI-Drill® nose feature is designed to withstand high set down weights when running the casing to T.D. while being drilled out the aluminum will break into small chips to avoid 'bird-nesting' of the bit to allow for a quick drill-out.

Concentric

The concentric nose assists running casing/liner in difficult well-bore conditions by pathfinding over and around swelling formations. Can be manufactured in both aluminum and phenolic materials.

Spade

The spade nose is specifically designed for use on less demanding liner applications where only a setting sleeve is run, the spade nose assists running tool released. When set on bottom the spade nose shoe anchors the liner against the formation allowing the running tool to be rotated to release from the liner.

Composite

Incorporating the engineered EZI-Drill nose features, but produced from a robust and drillable composite material, for applications where drill-out may be a concern and anticipated set down loads during casing running may be less.

CEMENT PLUG

Surface Release Cement Plug



Product

Downhole Products offers a non-rotating surface release cement plug, with a five wiper fin design, offering extremely effective casing wiping.

Features

- Five wiper fin conventional design for effective casing wiping.
- Anti-Rotational heavy duty teeth prevents plugs from spinning during drill-out.
- Tapered cone and receiver for easy engagement and landing.
- Integral burst disk located in bottom plug.
- PDC and roller cone bit drillable.

Options

- Custom pressure burst disk available.
- High temperature plugs available.
- Conventional plug available.

FLOAT COLLAR

Premium Cement Filled Float Collar



Product

The premium cement filled float collar is fitted with an API D24R10T400P5 qualified valve as standard, the collar can be ordered with single, double or auto-fill valve options.

Features

- Tightly controlled cementing process for valve installation
- Cement tested for compressive strength & pressure retention.
- Fitted with high flow phenolic float valve Qualified to API 10F.
- In-house manufacturing capabilities at global manufacturing facilities.

Options

- Single, double & auto-fill valve options.
- Ball deflector / ball catcher options available.
- All API and premium connections available.
- All material casing grades available.

FLOAT SHOE

Premium Cement Filled Float Shoe



Product

The premium cement filled float shoe is fitted with an API D24R10T400P5 qualified valve as standard, the shoe can be ordered with single, double or auto-fill valve options.

Features

- Tough durable profiled cement nose.
- Tightly controlled cementing process for valve installation.
- Cement tested for compressive strength & pressure retention.
- Fitted with high flow phenolic float valve tested in accordance with API test procedures.

Options

- Up / Down jet side ports.
- Single, double & auto-fill valve options.
- Ball deflector / ball catcher options available.
- All API and premium connections available.
- All material casing grades available.

PILOT GUIDE SHOE FTR

Slick Body Guide Shoe with self-aligning nose



Product

The Pilot Guide Shoe is a slick body eccentric nosed guide shoe to aid with the running of any casing, liner and screen applications. Run in conjunction with EZI-Drill® Free-To-Rotate (FTR) eccentric nose, this is an ideal solution where the operator has concerns over potentially difficult wellbore conditions, where string rotation is not possible or preferred, FTR nose can self-align to navigate past obstructions.

Features

- Free-To-Rotate (FTR) self-aligning nose.
- Wellbore seeking eccentric guide nose negotiates troublesome formations.
- Flow ports offering 360° flow area.
- Slick body design helps reduce ECD.
- Integral float valve – Spec API D24R10T400P5.

Options

- Single & double valve options.
- All API and premium connections available.
- All material casing grades available.

PILOT GUIDE SHOE LRL

Slick Body Guide Shoe with self-aligning lockable nose



Product

The Pilot Guide Shoe is a slick body eccentric nosed guide shoe to aid with the running of any casing, liner and screen applications. Run in conjunction with EZI-Drill® Lock-Rotate-Lock (LRL), a self-aligning eccentric lockable guide nose, engineered to freely orientate passed wellbore obstructions without mechanical intervention. When in its 'locked' position, the nose cannot spin and allows for efficient trouble-free drill out.

Features

- Lock-Rotate-Lock (LRL) self-aligning nose
- Wellbore seeking eccentric guide nose negotiates troublesome formations.
- EZI-Drill® nose design to aid drill-out without compromising nose strength.
- Fully locked during drill out.
- Flow ports offering 360° flow area.
- Slick body design helps reduce ECD.
- Integral float valve – Spec API D24R10T400P5.

Options

- Single & double valve options.
- Aluminum or composite nose options.
- All API and premium connections available.
- All material casing grades available.

PEN-O-TRATOR MAX-V®

Reamer Shoe



Product

The PEN-O-TRATOR® MAX-V Reamer Shoe is designed to aid with the installation of any Casing, Liner, or Screen application, where the operator has concerns over potentially difficult wellbore conditions such as swelling shales, ledges, and washed-out areas within the wellbore.

Features

The PEN-O-TRATOR MAX-V has been specifically designed for economically sensitive markets while delivering the same high-standards in performance and reliability known from the PEN-O-TRATOR platform.

- Casing friendly tungsten carbide cutting structure.
- Anti-aggressive left-hand blades minimize torque.
- 360° cutting structure facilitates reaming past the obstructions with or without rotation.
- Well-bore seeking eccentric guide nose negotiates troublesome formations.
- Ezi-Drill® aluminum guide nose to aid drill out without compromising nose strength.
- Flow ports offering 360° flow area.
- Slick body design helps reduce ECD.
- One-piece milled steel body.

Options

- Single, double, and auto-fill valve options.
- Ball deflector/ball catcher options available.
- All API and premium connections available.
- All material casing grades available.

Product

CaseBit is used on casing strings to drill and/or set casing in one trip to T.D. eliminating additional trips and ensuring uninhibited delivery and positioning of the casing string every time. This product combines industry recognized PDF drill bit technologies, force balancing, cutting structure wear modelling, and computational fluid analysis with flexible manufacturing technology.

Features

- Asymmetric raised blades, blind holes, and other disconformities to accelerate during drill out and improve breakup.
- Pressure controlled rupture port allows for continuous flow of drilling fluids or cement in the event of nozzle/port plugging.
- Wide-open hydraulics approach limits body erosion, accommodates wide range of flow rates, and eliminates need for specialty nozzles.
- Cutting structure optimized using proprietary SPOT-DN® Software.
- Drillable alloy with PDC drill bit.
- Full thru-bore after drill out.
- Flow ports offering 360° flow area.

Options

- Material choice driven by erosion concerns and finished diameter of product.
- Fully flexible design available with varying blade count, tool OD, casing weights and premium connections.
- All API and premium connections available.
- All material casing grades available.





Product

AQUEOUS, a proprietary slick body eccentric-nosed wet shoe track uniquely designed for predictable performance and reduction in overall operational costs. The modular, compact design consisting of four valves with provisions to seal a series of high-pressure casing wiper plugs that separate fluid, eliminate casing stringers, and facilitate a casing pressure test.

The AQUEOUS is **the economics leader in casing shoe track technology.**

Features

- The non-cemented Integrated Wet Shoe track is designed for 10,000psi forward (bump) and back pressure operation at 400°F.
- Four integral float valves tested to Spec API RP 10F Cat D24R10T400P7.5 tested to 10,000psi.
- System-matched “latch-in” wiper plug system with Double Bottom (1,000 psi) and Top Plug (3,000 psi) combination.
- Proven eccentric nose design .

Value Creation

- Ultra-short design allows the first full fracturing operation to commence closer to the shoe increasing wellbore exposure.
- Enabling access to the formation without the use of toe sleeves or Tubing Conveyed Perforating (TCP).
- The system eliminates cost and risk of additional premium connections.
- Proven eccentric nose designed to bypass unplanned casing obstructions.
- High performance tandem wiper plugs reduce the risk of casing obstructions.

Options

- Available in currently in 5.500” OD size.
- Up jet (standard) or down jet side ports available.
- All API and premium connections available.
- All material casing grades available.



Product

Grippy Cable Clamp is a cable clamp designed to fit over the coupling to convey and secure cables and control lines in and out of wellbores quickly, safely and efficiently.

Features

- Each clamp has a four-point friction pad gripping system providing strong grip and preventing slipping.
- Triple progressive contact pads on the channel improve gripping characteristics of the cable without compromising the integrity of the cable.
- Two hinge pin flanges make contact with the tubular to further assist gripping on the pipe.
- Tapered wedge-lock pin with dimples, when inserted, secures the clamp to the tubular.
- The channel design allows a smooth transition of cable over the coupling.
- The channel length aids in eliminating crimping of cable and damage from sharp edges.
- Galvanized to prevent corrosion.

Options

- Custom designs available for various cable configurations.
- Mid-joint and dual channel clamps.
- Sizes 2-3/8" to 9 5/8".
- Configured for both round and flat ESP cables, SSV's, DHSV's, chemical injection lines, smart well TEC's and fiber optics.