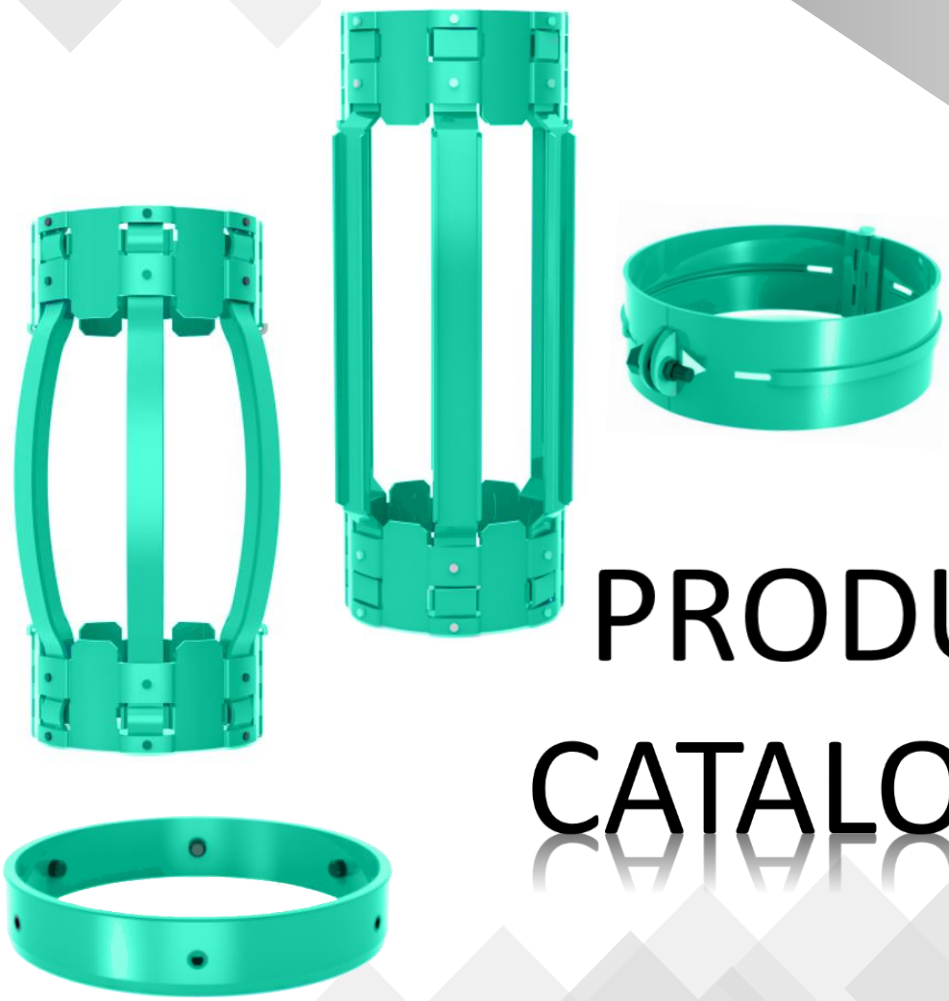
IMPERO PETRO TOOLS

FUELING THE FUTURE



PRODUCT CATALOGUE

CASING ACCESSORIES & CEMENTING EQUIPMENTS

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CASING & CEMENTING ACCESSORIES

IMPERO PETRO TOOLS

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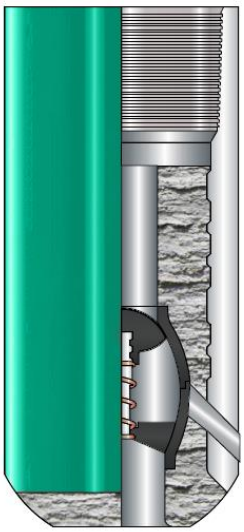
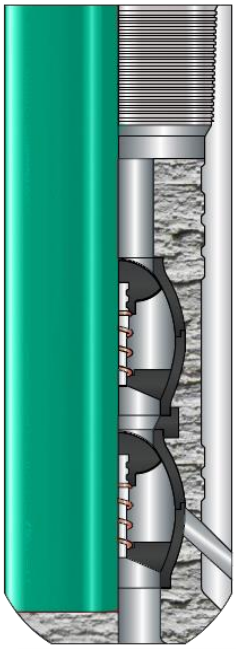
SINGLE & DOUBLE VALVE FLOAT SHOE
MODEL NO : IP – 49; IP – 50



Description :

Float Shoe is a cylindrical steel section with a rounded nose, which guides the casing. It is attached to the bottom of the casing string towards the center of the hole. It contains a check valve/ poppet valve to permit fluid to pass downward but not upward through the casing.



Features:

- Fast Drill Out.
- Non-Rotating Profile Available
- Available in Side-Jet, Down-Jet, Up-Jet Port
- Stab In profile available in large size
- Internal Parts are PDC drillable.
- Float Shoe is available in all API grade material.
- Both API and Premium threads are available for the Float Shoe.
- Jet Port/Nose configuration is available upon request. Impero offers Side Jet Ports, Down Jet Ports and Up Jet Ports.
- Valve is tested as per API RP 10F Category III C. Float Shoe is available in Single and Double valve Configuration.
- Maximum Back Pressure rating: 5000 PSI at 400°F.
- Tubing Float Shoe for high pressure up to 10000 PSI.
- Float Shoe is available in different types of nose as per the application.
- Chip breaker features are available in all aluminum noses as well as the Phenolic nose.

Types of Nose :

Bullet Nose

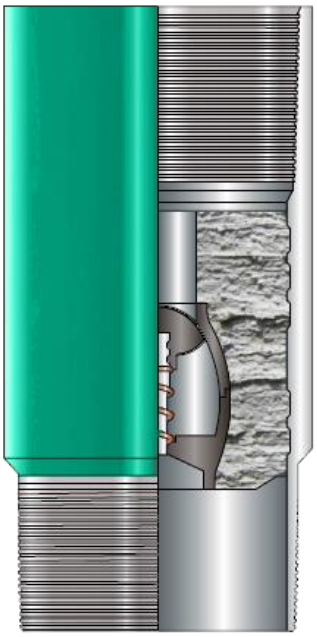
Spade Nose

Eccentric Nose

Phenolic Nose

IMPERO PETRO TOOLS

SINGLE & DOUBLE VALVE FLOAT COLLAR
MODEL NO : IP – 51; IP – 52

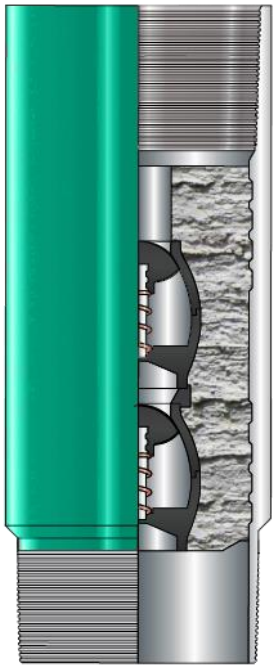


Description :

Float Collar is a cylindrical steel section with box and pin threads. Float Collar generally uses one string above the Float Shoe. It contains a check valve/ poppet valve to permit fluid to pass downward but not upward through the casing and provides a flat landing surface for cementing plugs.

Features:

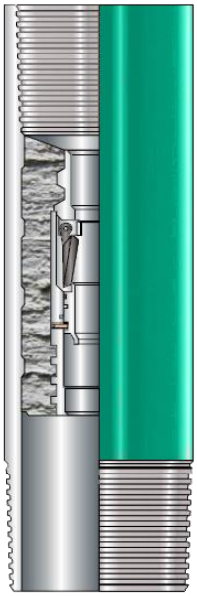
- Fast Drill Out
- Non-Rotating Profile also available
- Internal Parts are PDC drillable
- Float Collar is available in all API grade material.
- Both API and Premium threads are available for the Float Collar.
- Float Collar can be furnished with Non-Rotating feature
- Valve is tested as per API RP 10F Category III C. Float Collar is available in Single and Double valve Configuration.
- Maximum Back Pressure rating 5000PSI at 400°F
- Tubing Float Collar for high pressure up to 10000 PSI
- Orifice float collar for Tie-back application
- Ball Catcher/Ball Deflector is available upon request
- Flat surface provides platform to bump the bottom plug
- Baffle plate float collar is available upon request
- Inner String Float Collar is available



IMPERO PETRO TOOLS

DIFFERENTIAL VALVE FLOAT COLLAR
MODEL NO : IP – 53

Description :



Differential fill-up Float Collar allows 90% casing fill-up during run-in, reducing surge pressures caused by the piston effect of running in restricted I.D. Use of differential collar provides additional buoyancy by allowing only 81% casing fill-up further enhancing work efficiency.

Circulating can be established at any time while running in. Dropping a ball converts the differential valve to a regular back-pressure valve. When the collar and shoe are run together, dropping one ball converts both units. After allowing sufficient time for the ball to reach the equipment conversion can be achieved by applying approximately 600-800 psi of pump pressure (adjustable).

Features:

- 90% Casing fill-up during Running In
- Reduce Surge Pressure
- All internal parts are PDC drillable

CEMENT GUIDE SHOE
MODEL NO : IP – 54

Description :

The Guide Shoe is a cylindrical steel section with a rounded nose which guides the casing toward the that is attached to the bottom of the casing string towards the center of the hole. The guide shoe thru-bore allows debris, tubes and conversion balls to exit the casing without obstruction.

Features:

- All internal parts are PDC drillable
- Load bearing capability for setting on bottom

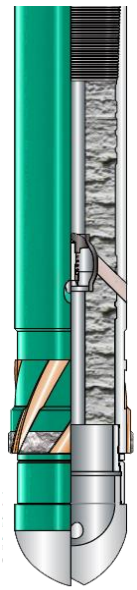
IMPERO PETRO TOOLS

REAMER SHOE

MODEL NO : IP - 55

Description :

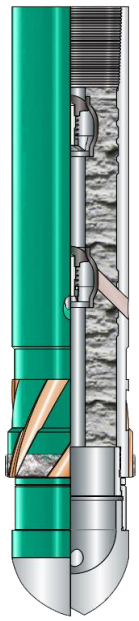
Reamer Shoe is a cylindrical steel section with an eccentric nose which guides the casing toward the that is attached to the bottom of the casing string towards the center of the hole It contains a check valve to permit fluid to pass downward but not upward through the casing. Reamer shoe is the single and double valve available.



Features:

- Carbide spiral vanes and diamond shape structure provides full-bore coverage in rotating and reciprocating applications, which provides easy passage to total depth
- The eccentric nose can climb ledges and negotiate other well bore obstructions while the cutting structure reams out tight spots
- Reamer shoe enables both rotating and reciprocating reaming action while running casing and liners
- Flow ports provide full-bore coverage while rotating and reaming, and they prevent channeling while cement is pumped.
- All internal parts and standard aluminum alloy nose are PDC drillable
- Reamer Shoe is available in all API grade material
- Reamer Shoe can be furnished in API threads as well as in Premium threads
- Reamer Shoe is available in Single and Double valve Configuration
- Maximum Back Pressure rating: 5000 psi @400°F
- Reamer shoe is available in welded design as well as single piece design

MODEL NO : IP - 56



IMPERO PETRO TOOLS

CONVENTIONAL TOP & BOTTOM PLUG
MODEL NO :

MODEL NO : IP - 57

Description :

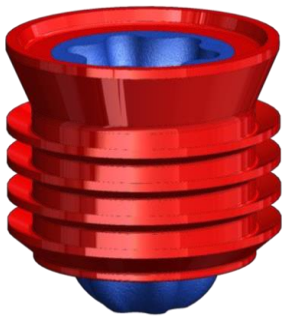
Cementing plug is used to separate cement slurry from other fluids, reducing contamination and maintaining expected slurry Performance. Impero provides two types of cementing plug which are generally used on a cementing operation.

MODEL NO : IP - 58

Features:

- Internal core is available in Phenolic as well as Aluminum
- Oil Resistant
- Plugs are available in Nitrile, Viton, Aflas and other elastomers.
- Plugs are available in conventional and Non-Rotating Design. Plugs are PDC drillable
- One plug can be used in range of PPF for same size of casing.
- Maximum temperature rating 400°F
- Non-Rotating profile reduces the drilling time

NON-ROTATING TOP & BOTTOM CEMENTING PLUG
MODEL NO : IP – 59; IP – 60



Description :

Non-Rotating Cementing Plug is used with a profile float collar. Both the cementing plug Top cementing plug and bottom cementing plug are manufactured with an auto lock profile which on plumbing automatically locks in each other and restricts rotation of cementing plugs.

These plugs are made of phenolic core integral teeth which eliminates aluminum and large masses of rubber found in conventional cementing plugs. There are no metal parts used and the plugs are completely PDC drillable. It consists of wiping fins molded from natural rubber or hydrogenated nitrile (HNBR). They are suitable for standard and high-temperature wells. After the top plug latches into the bottom plug, they provide an anti-rotational feature to eliminate rotation during drilling and save drill out time.

Note : The plugs available in 3-1/2" to 20" size.

COMBINATION TOP & BOTTOM CEMENTING PLUG
MODEL NO : IP – 61; IP – 62

Description :

Cementing plug involves wiping the inner diameter of two or more casing strings in one wiping action. The plugs allow tapered casing strings to be cemented while ensuring that cement is thoroughly removed from casings of different IDs within the string.

They are designed and tested to withstand 5,000 psi differential pressure. The different sizes of rubber fins which help in wiping on the casing wall as well as assist in displacing the cement in one step. It is made of graded rubber. These plugs are completely PDC drillable.

Note : The plugs available in 2-3/8" to 20" size.

NON-ROTATIONAL COMBINATION TOP & BOTTOM PLUG
MODEL NO : IP – 63; IP – 64

Description :

Cementing plug involves wiping the inner diameter of two or more casing string in one wiping action. The plugs allow tapered casing strings to be cemented while ensuring efficient wiping of cement from different IDs on the string.

They are designed and tested to withstand 5,000 psi differential pressure. The different sizes of rubber fins which help in wiping on the casing wall as well as assist in displacing the cement in one step. It is made of graded rubber. These plugs are completely PDC drillable.

Note : The plugs are available in 2-3/8" to 20" size

TOP PLUG & BOTTOM PLUG WITH ALUMINIUM CORE
MODEL NO : IP – 65; IP – 66

Description :

These plugs are ideal for use in high temperature wells. They are made of cast aluminum core and the wiping fins are molded from natural rubber or Hydrogenated nitrile (HNBR). These plugs are PDC Drillable. The top plug is manufactured in black natural rubber and the bottom plug-in orange with a rapture diaphragm at 300 psi differential. Operating range is up to 275 °F. Plugs can be ordered in Viton.

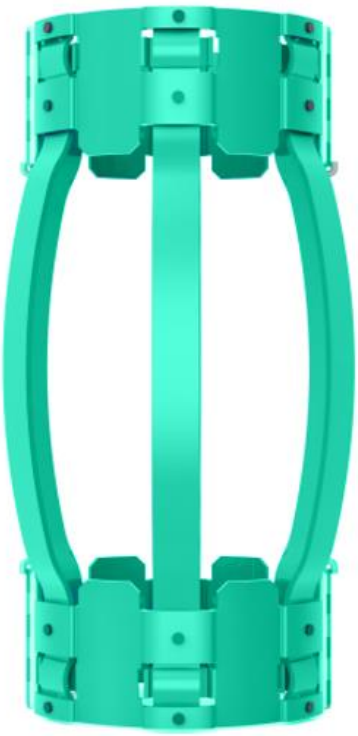
Note: The plugs are available in sizes ranging from 4-1/2" to 20"..

IMPERO PETRO TOOLS

HINGED NON-WELDED BOW SPRING CENTRALIZER
MODEL NO : IP - 01

Description :

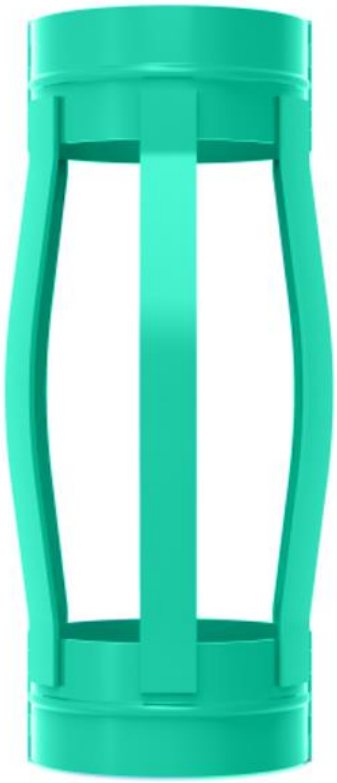
Non-Welded Bow Spring Centralizers are designed for vertical, deviated and horizontal well for enhanced restoring force combined with low starting force ensuring good zone isolation. Bow springs are of high-quality alloy steel, hot bent to shape using dies and then heat treated under controlled time cycles for consistent tensile strength and spring characteristics for “spring back” action.



- Five standard size Bows can be configured to any hole diameter
- Special zinc Phosphate and powder coating process to prevent from Rust and ensure stocking in the open for a long time.
- These are shipped in half assembled condition for economical in freight and storage costs
- Designed in accordance with API 10D
- Available in 4-1/2" to 20 " sizes. Any special sizes or combination can be made available on request

IMPERO PETRO TOOLS

HINGED WELDED BOW SPRING CENTRALIZER
MODEL NO : IP - 02



Description :

Welded Bow Spring Centralizers have more restoring force as compared to Non-Welded Centralizers. The Centralizers have Bow Spring strongly welded to the End Collar under required temperature and condition with extra low Hydrogen coated Electrodes. Integral hinges folded on the inside stay intact even under extreme stress. The end collars are designed with a Reinforcing Rib stamped into the end collar to give maximum structural toughness.

- These are shipped in half assembled condition for economical in freight and storage costs.
- Special Iron Phosphate coating process to prevent from Rust and ensure stocking in the open for a long time
- Supplied with hinge pins
- Designed in accordance with API 10D
- Available in 4-1/2" to 20 " sizes. Any special sizes or combination can be made available on request

IMPERO PETRO TOOLS

SLIP ON WELDED BOW SPRING CENTRALIZER
MODEL NO : IP - 03

Description :

Slip on welded centralizers are manufactured with solid end rings that can be easily slipped on the casing OD during installation. Slip-on welded centralizers are designed for high restoring force combined with low starting force for centralizing the casing pipe. High performance characteristics are combined with easy field assembly. Bow springs are manufactured of high-quality alloy steel, hot bent to shape using dyes and then heat treated under controlled temp and time cycles for consistent spring characteristics to ensure a crack free weld with a minimum amount of distortion and maximum amount of rigidity.

- Special zinc phosphate and powder coating process to prevent from rust and ensure stocking in the open for a long time
- Designed in accordance with API 10D
- Available in 4-1/2" to 20 " sizes. Any special sizes or combination can be made available on request

IMPERO PETRO TOOLS

HINGED NON-WELDED STAINLESS STEEL BOW SPRING CENTRALIZER MODEL NO : IP - 04

Description :

Hinged Non-Welded Stainless Steel Bow Spring Centralizers are special purpose centralizer, it's used where the chances of corrosion and contamination are present, or it can be used for water well also. It's a 100% stainless steel manufacturing along with stainless steel nails. Premium quality bows are made of stainless-steel material and hot formed in totally controlled Heat Treatment Plant to achieve the uniform hardness all over and good spring action.

End Collars are designed with self-locking action, which are easy to assemble, time saver and having strong grip. These bows with an extended profile prevent them from hitting against casing collars.

- Five standard size Bows can be configured to any hole diameter
- These are shipped in half assembled condition for economical in freight and storage costs
- Designed in accordance with API 10D
- Supplied with hinge pins
- Available in 4 1/2" to 20 " sizes. Any special sizes or combination can be made available on request

SLIP ON WELDED WITH SET SCREW BOW SPRING CENTRALIZER
MODEL NO : IP - 05

Description :

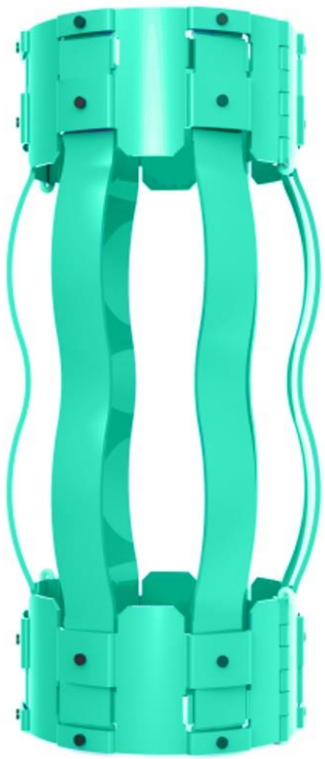
Welded Slip-On set Screw Bow Spring Centralizers share all the operational and design features of Hinged Welded Centralizers. The key difference is that the End Collars do not have hinges and instead 'slip' onto the casing. The collars are specially designed with roll-formed peripheral ridges that provide extra rigidity and can be accompanied by set screws for elimination of Stop Collars. Designed in accordance with API 10D.

These are available in sizes ranging from 4 1/2" to 20". Any special sizes or combinations can be available on request.

IMPERO PETRO TOOLS

HINGED NON-WELDED SEMI-RIGID BOW SPRING CENTRALIZER
MODEL NO : IP - 06

Description :



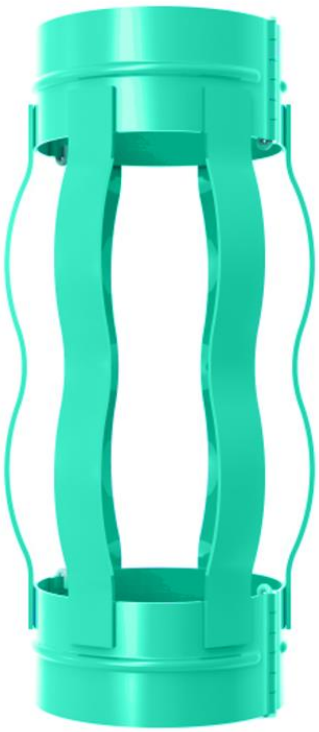
Semi-Rigid Centralizers are designed to pass through tight spots and doglegs. It ensures high efficiency in casing jobs on deviated and horizontal wells. This design makes these centralizers act as a rigid centralizer under high side loads. It is constructed with hinges and a non-welded bow.

- It has high restoring force and high stand off with low running force
- Special zinc phosphate and powder coating process to prevent from rust and ensure stocking in the open for a long time
- These are shipped in half assembled condition for economical in freight and storage costs
- Supplied with hinge pins
- Designed in accordance with API 10D
- Available in 4 1/2" to 20 " sizes. Any special sizes or combination can be made available on request

IMPERO PETRO TOOLS

HINGED WELDED SEMI-RIGID BOW SPRING CENTRALIZER
MODEL NO : IP - 07

Description :



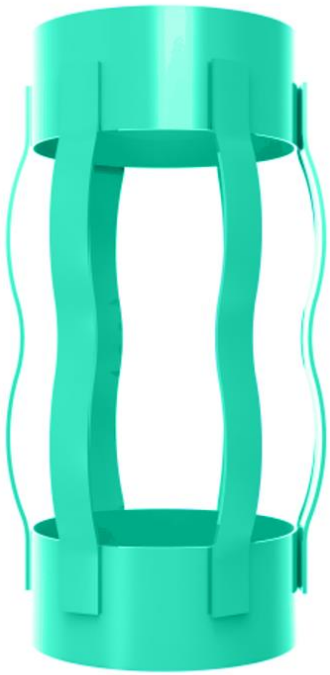
Hinged Welded Semi Rigid Centralizer ensures high efficiency in casing. Welded centralizer has more restoring force as compared to Non-Weld Centralizer. The Centralizers have double crested bow springs strongly welded to the end collar under required temperature and condition with extra low hydrogen coated electrodes. This assures ultimate strength and uniformity in every weld. Integral hinges folded on the inside stay intact even under extreme stress. The End Collars are designed with a reinforcing rib stamped into the end collar to give maximum structural toughness.

- It has high restoring force and high stand off with low running force
- Special zinc phosphate and powder coating process to prevent from rust and ensure stocking in the open for a long time.
- These are shipped in half assembled condition for economical in freight and storage costs
- Supplied with hinge pins
- Designed in accordance with API 10D
- Available in 4-1/2" to 20 " sizes. Any special sizes or combination can be made available on request.

IMPERO PETRO TOOLS

SLIP ON WELDED SEMI-RIGID BOW SPRING CENTRALIZER
MODEL NO : IP - 08

Description :



Slip On Welded Semi-Rigid Centralizers share many of the same design and operational features as Hinged Welded Centralizers. They can be directly installed onto pipe and are provided with set screw style Stop Collars to increase the holding force. The collars are innovatively designed with roll formed peripheral ridges that provide extra rigidity. The Centralizers are available in a variety of bows configured from a choice of four standard bow heights.

- Special zinc Phosphate and powder coating process to prevent from Rust and ensure stocking in the open for a long time.
- Designed in accordance with API 10D
- Available in 4-1/2" to 20 " sizes. Any special sizes or combination can be made available on request.

IMPERO PETRO TOOLS

SINGLE PIECE BOW SPRING CENTRALIZER
MODEL NO : IP - 09

Description :

Single Piece Bow Spring Centralizer is integrated steel flexible Centralizer used to centralize casing during the cementing stage of oil wells. Single Piece Centralizers are designed for tight tolerance applications. It performs very well in open holes as well as in cased holes.

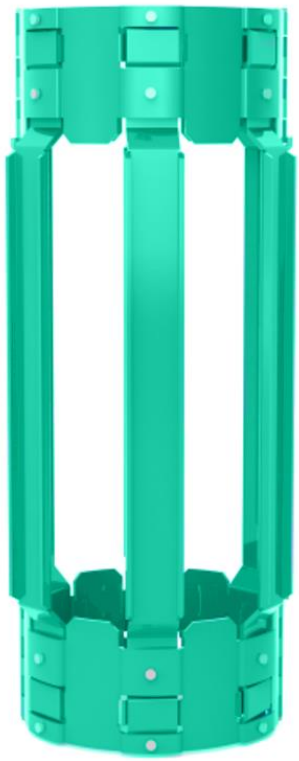
Features:

- Used in vertical, deviated and horizontal wells
- Low start and running forces
- Flexible and High restoring force
- Developed to have good stand-off
- Designed in accordance with API 10D
- Note : Available in 4-1/2" to 20 " sizes. Any special sizes or combination can be made available on request.

IMPERO PETRO TOOLS

HINGED NON-WELDED POSITIVE BOW CENTRALIZER
MODEL NO : IP - 10

Description :



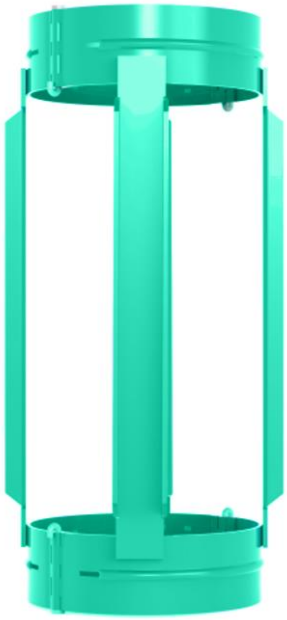
Non welded positive Centralizers are uniquely designed with flat bottom U profile of different depths. The Centralizers significantly reduce frictional drag while being used in deviated holes. They provide almost 100% Stand Off when run inside a cased hole. They are supplied 1/4" or 6 mm less than the inside diameter of the hole size in which Centralizer is to be run. This design eliminates weak (brittle) spots passage. The flat U profile is fitted in self-locking retaining lips for firm and positive hold.

- These are shipped in half assembled condition for economical in freight and storage costs .
- Special zinc Phosphate and powder coating process to prevent from Rust and ensure stocking in the open for a long time
- Supplied with hinge pins
- Designed in accordance with API 10D
- Available in 4-1/2" to 20 " sizes. Any special sizes or combination can be made available on request

IMPERO PETRO TOOLS

HINGED WELDED POSITIVE BOW CENTRALIZER
MODEL NO : IP - 11

Description :



Hinged welded positive bow centralizers have strongly welded to the end collar under required temperature and condition with extra low hydrogen coated electrodes. Operational and general design features are the same as non-welded positive bow centralizer.

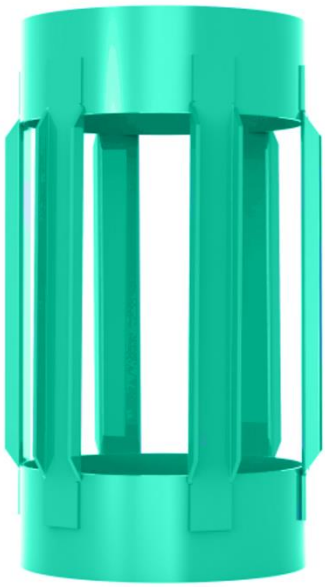
- These are shipped in half assembled condition for economical in freight and storage costs
- Special zinc Phosphate and powder coating process to prevent from Rust and ensure stocking in the open for a long time
- Supplied with hinge pins
- Available in 4-1/2" to 20 " sizes. Any special sizes or combination can be made available on request.

IMPERO PETRO TOOLS

SLIP-ON WELDED POSITIVE BOW CENTRALIZER MODEL NO : IP - 12

Description :

Slip-On Positive Bow Centralizer are manufactured with solid end rings that can be easily slipped on the casing OD during Installation. The bows are strongly welded to the end collar under required temperature and condition with extra low hydrogen coated electrodes. Operational and Design features is the same welded positive bow centralizer.

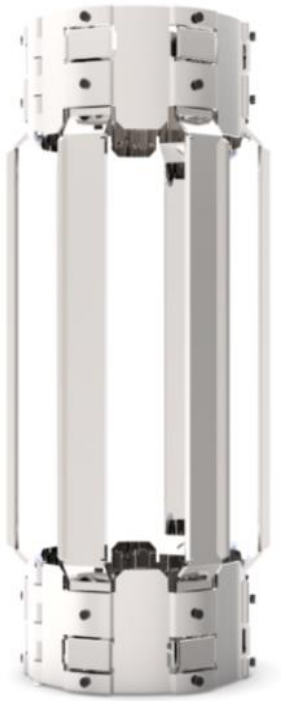


- Special zinc Phosphate and powder coating process to prevent from Rust and ensure stocking in the open for a long time
- Supplied with hinge pins
- Designed in accordance with API 10D
- Available in 4 1/2" to 20 " sizes. Any special sizes or combination can be made available on request.

IMPERO PETRO TOOLS

STAINLESS STEEL NON-WELDED POSITIVE BOW CENTRALIZER MODEL NO : IP - 13

Description :



Slip-On Positive Bow Centralizer are manufactured with solid end rings that can be easily slipped on the casing OD during Installation. is the same welded positive bow centralizer.

- Special zinc phosphate and powder coating process to prevent from rust and ensure stocking in the open for a long time
- Supplied with hinge pin
- Designed in accordance with API 10D
- Available in 4 1/2" to 20 " sizes. Any special sizes or combination can be made available on request.

IMPERO PETRO TOOLS

HINGED NON-WELDED BOW SPRING TURBOLIZER
MODEL NO : IP - 14

Description :

Non-Welded Turbolizer has deflector blade fitted on standard bow spring which creates a difference from the standard centralizers. These blades or fins are made of heat-treated spring steel. The metal fins are installed on the bows, to help induce turbulence in the cement slurry during pumping operation. Spring action of blades makes them flexible, which minimizes damage while moving down hole.

- Device improves the cleaning action of Drilling Fluids. Distribute the cement slurry into Well bore irregularities and minimizes channeling
- Special zinc phosphate and powder coating process to prevent from rust and ensure stocking in the open for a long time
- These are shipped in half assembled condition for economical in freight and storage costs
- Supplied with hinge pin
- Designed in accordance with API 10D
- Available in 4 1/2" to 20 " sizes. Any special sizes or combination can be made available on request.

IMPERO PETRO TOOLS

HINGED WELDED BOW SPRING TURBOLIZER
MODEL NO : IP - 15

Description :

Welded Turbolizer has deflector blade fitted on standard bow spring which creates a difference from the standard centralizers. The end collars are designed with a reinforcing rib stamped into the end collar to give maximum structural toughness. Another special characteristic is the built-in stop device on the leading end collar. The metal fins are installed on the bows, to help induce turbulence in the cement slurry during pumping operation. Spring action of blades makes them flexible, which minimizes damage while moving down hole..

- Device improves the cleaning action of Drilling Fluids. Distribute the cement slurry into Well bore irregularities and minimizes channeling
- Special zinc phosphate and powder coating process to prevent from rust and ensure stocking in the open for a long time
- These are shipped in half assembled condition for economical in freight and storage costs
- Supplied with hinge pin
- Designed in accordance with API 10D
- Available in 4 1/2" to 20 " sizes. Any special sizes or combination can be made available on request.

IMPERO PETRO TOOLS

SLIP-ON WELDED BOW SPRING TURBOLIZER
MODEL NO : IP - 16

Description :

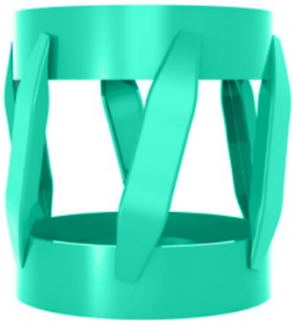
Slip-On Welded Turbolizer has deflector blade fitted on standard bow spring which creates a difference from the standard centralizers. These blades or fins are made of heat-treated spring steel. The metal fins are installed on the bows, to help induce turbulence in the cement slurry during pumping operation. Spring action of blades makes them flexible, which minimizes damage while moving down hole. Collars are specially designed with roll formed peripheral ridges which provide extra rigidity. Slip-On Turbolizers are provided for direct installation on pipe by slipping on stop collar and can be provided with Setscrew for elimination of stop collar..

- Device improves the cleaning action of Drilling Fluids. Distribute the cement slurry into Well bore irregularities and minimizes channeling
- Special zinc phosphate and powder coating process to prevent from rust and ensure stocking in the open for a long time
- Designed in accordance with API 10D
- Available in 4 1/2" to 20 " sizes. Any special sizes or combination can be made available on request.

SLIP-ON WELDED SPIRALIZER-L MODEL NO : IP - 17
SLIP-ON WELDED SPIRALIZER-R MODEL NO : IP - 18
SLIP-ON WELDED SPIRALIZER-S MODEL NO : IP - 19

Description :

Slip-On Welded Spiralizers provide a low coefficient of friction to reduce drag forces while running in the pipe, thus optimizing mud displacement and minimizing pressure drop across the Centralizer. Bow is welded to the end collars. While giving maximum standoff these blades create vortex flow to optimize mud displacement. They are available with straight vane or spiral vane type options which resist high side loads. They can provide maximum stand-off.



- It help for proper distribution of cement around the casing during the cementing
- It also help to reduce the friction for inserting the casing in wellbore
- It helps to improve strength of cement bond by evenly distributing the cement
- Available in 4 1/2" to 20 " sizes. Any special sizes or combination can be made available on request.

HEAVY DUTY WELDED SPIRALIZER-L MODEL NO : IP - 20
HEAVY DUTY WELDED SPIRALIZER-R MODEL NO : IP - 21
HEAVY DUTY WELDED SPIRALIZER-S MODEL NO : IP - 22

Description :

Heavy Duty Welded Spiralizers are a high quality welded product which meets the specification. These have boat type bows which are welded with the end collars or pipe in controlled temperature conditions making use of correct grade electrodes. These are made in a variety of categories such as having curved vanes with right or left orientation. They can be secured to the casing OD, or they can float between casing stop collars if the well casing is to be rotated during cementing.

- Reduce friction between the casing and the hole, allowing the casing to be inserted more easily into the wellbore
- Help centralize casing in the hole, allowing an even distribution of cement around the casing during cementing operations
- Improve cement bonding to the casing
- Prevent the casing string from becoming differentially stuck

- Break up gel pockets in the wellbore while casing is being run, improving drilling-fluid displacement during cementing
- Increase fluid turbulence removing filter cake on the wellbore face

IMPERO PETRO TOOLS

STAND OFF CENTRALIZER – L MODEL NO : IP - 23
STAND OFF CENTRALIZER – R MODEL NO : IP - 24
STAND OFF CENTRALIZER – S MODEL NO : IP - 25

Description :

Slip-On Stand Off Band rigid centralizer is designed to provide a positive stand off for both cased and open holes. The angled fins provide increased turbulent flow. The Slip-On Stand-Off centralizers are used when the casing and the hole have a close tolerance. They are designed for liner applications.

They are designed to rotate and reciprocate easily during cementing, and can be installed between Set Screw Stop Collars. These standoff bands undergo a special phosphate coating process to prevent rust, followed by a polyester powder coating.

These are available in sizes ranging from 4 1/2" to 20"

IMPERO PETRO TOOLS

ROLLER LD TYPE CENTRALIZER
MODEL NO : IP - 26

Description :

Roller Centralizer is a complete mechanical friction-reduction solution designed for extended-reach wells. It reduces torque, drag, casing wear, tool-joint wear and differential sticking while also improving directional control, ROP and hole cleaning. In Low Drag Roller Centralizer, all rollers are arranged in horizontal direction. This kind of arrangement of rollers efficiently reduces dragging force.

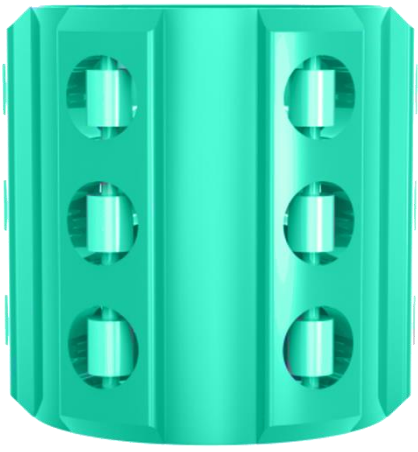
Note : Available in 4 1/2" to 20 " sizes. Any special sizes or combination can be made available on request.

ROLLER LT TYPE CENTRALIZER
MODEL NO : IP - 27

Description :

Roller Centralizer is a complete mechanical friction-reduction solution designed for extended-reach wells. It reduces torque, drag, casing wear, tool-joint wear and differential sticking while also improving directional control, ROP and hole cleaning. In Low Torque Roller Centralizer, all rollers are arranged in vertical direction. This kind of arrangement of rollers efficiently reduces dragging force.

Note : Available in 4 1/2" to 20 " sizes. Any special sizes or combination can be made available on request.



IMPERO PETRO TOOLS

CASTED SPIRALIZER-RIGHT [STEEL/ALUMINIUM/ZINC]
MODEL NO : IP – 28; IP – 29; IP – 30

Description :

IMPERO manufactures spiral blade solid spiralizers. These are made of one-piece high-grade corrosion resistant aluminum cast and non-sparking metal-zinc alloy. They are high impact and shock resistant, possess high tensile and yield strengths and are wellhead friendly. They provide maximum casing or wellbore standoff, the prime requisite of an excellent primary cement job. This is irrespective of lateral loads. The straight blades are self-cleaning in nature and designed to enhance flow. They endure steep temperatures in the wellbore, friction factor is minimum, with reduced drag and torque, ensuring maximum fluid passage. Spiralizers provide the almost wall contact and fluid swirl. They give optimum flow area in highly deviated and horizontal wells. The casing effectively reaches TD due to the sloping rare ends reducing drag. The slope also ensures that no balling between the vanes takes place, as scraping, gouging or digging into the formation is eliminated.

Spiralizers are developed in response to the need for better cementing in highly deviated and horizontal wells. These are designed to provide optimum flow area. The 360 degrees overlapping solid vane provide maximum wall contact and fluid swirl.

Reduced flow area between the spiral blades produces a vortex motion of the fluids for more fluid velocity with direction. These are made of high strength corrosion resistant cast aluminum and non-sparking zinc alloy. The 30° slope of the vane end reduce drag and aids the casing in reaching TD. This gentle flow from the body to the height of the vane will eliminate scraping, gouging or digging into the formation and consequently reduce balling between the vanes. They also possess high impact and shock resistance combined with tensile and yield strength as well as resists corrosion.

CASING CENTRALIZER

IMPERO PETRO TOOLS

CASTED SPIRALIZER-LEFT [STEEL/ALUMINIUM/ZINC]
MODEL NO : IP – 31; IP – 32; IP – 33

Description :

Impero's - Spiral Vane solid rigid centralizer provide the right feature for getting a good primary cementing job with maximum wellbore standoff with suitable functionality. Straight vane solid rigid centralizers provide ultimate drag and torque reduction with maximum fluid bypass. Available in different material grades.

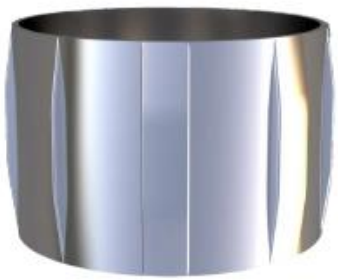
Spiralizers are developed in response to the need for better cementing in highly deviated and horizontal wells. These are designed to provide optimum flow area. The 360 degrees overlapping solid vane provide maximum wall contact and fluid swirl.

Reduced flow area between the spiral blades produces a vortex motion of the fluids for more fluid velocity with direction. These are made of high strength corrosion resistant cast aluminum and non-sparking zinc alloy. The 30° slope of the vane end reduce drag and aids the casing in reaching TD.

- High axial load strength
- Units can be run between casing and less demanding wells
- Construction provides superior toughness
- Spiral blades allow passage through unexpected under gauge open hole
- Available in 4 1/2" to 20 " sizes. Any special sizes or combination can be made available on request.

CASTED STRAIGHT VANE SOLID RIGID CENTRALIZERS [STEEL/ALUMINIUM/ZINC]
MODEL NO : IP – 34; IP – 35; IP – 36

Description :

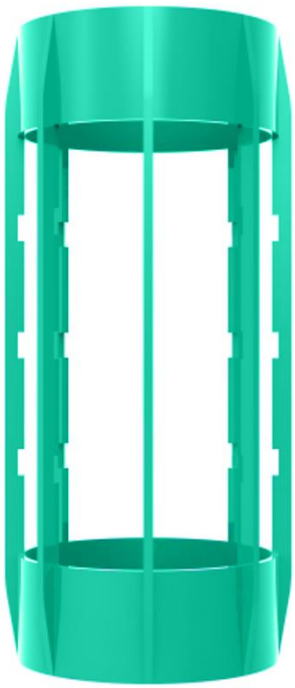


IMPERO straight blade solid centralizers provide the right features for getting a good primary cementing job with maximum casing/ wellbore standoff. These are constructed of one-piece high strength corrosion resistant cast aluminum, steel or non- sparking zinc alloy as per the customer's requirement. They provide ultimate drag and torque reduction with maximum fluid bypass with low friction factor, withstand high wellbore temperatures while providing maximum horizontal standoff. Our centralizers are wellhead friendly and have high impact with shock resistance, optimum tensile and yield strength.

Available in 4-1/2" to 20" sizes. Any special sizes or combination can be made available on request.

CONDUCTOR PIPE CENTRALIZER
MODEL NO : IP – 37

Description :



Conductor Pipe Centralizers are being used in oil well rigs in big well bore. These centralizers are very heavy-duty centralizers. Conductor pipe centralizers provide the right features for getting a proper primary cementing job with maximum casing/ wellbore standoff. These conductor pipe centralizers are constructed of two-piece high strength corrosion-resistant materials. Conductor Pipe centralizers provide ultimate drag and torque reduction with maximum fluid bypass with low friction factor. Conductor pipe centralizers can withstand high wellbore temperatures while providing maximum horizontal standoff. Centralizers are wellhead friendly and have high impact and shock resistance, along with optimum tensile and yield strength.

Available in 4-1/2" to 20" sizes. Any special sizes or combinations can be made available on request.

IMPERO PETRO TOOLS

HINGED BOLTED STOP COLLAR

MODEL NO : IP - 38

Description :

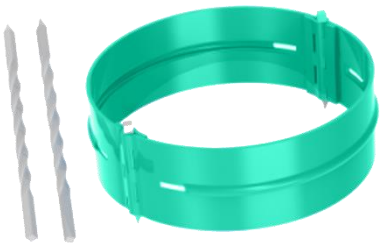
An economical collar suitable for sub-critical annular tolerances. Available in the size range 4 ½" to 20", it has a cross bolt design which makes it an efficient and user-friendly device.

HINEGD SPIRAL NAIL STOP COLLAR

MODEL NO : IP - 39

Description :

Available in the size range 4 ½" to 20", this device can be set in both upset and Non-Upset casing to provide maximum clearance during rotation. It has a groove in the middle into which a spiral nail can be driven for improved grip on the casing. The broader band firmly grips the collar into position around the casing

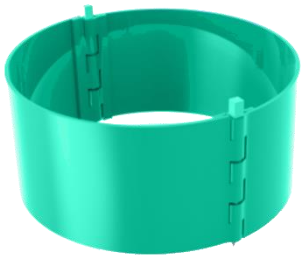


HINEGD STOP COLLAR WITH SET SCREW

MODEL NO : IP - 40

Description :

Available in the size range 4 ½" to 20", this device has a high cost-utility ratio. This hinged collar with a row of set screws positions easily and firmly around the casing.



IMPERO PETRO TOOLS

SLIP-ON STOP COLLAR WITH SET SCREW
MODEL NO : IP - 41

Description :

This slip-on stop collar with set screw device is recommended for small whole operations. Available in size range 2-7/8" to 20" and is gripped on casing by a row of set screws. This is a heavy-duty device.

SLIP ON SET SCREW STOP COLLAR SINGLE SIDE BEVELLED
MODEL NO : IP - 42

Description :

Slip on Set Screw Stop Collar single side beveled is of one-piece high strength corrosion resistant alloy collar and the gripping force is applied by one row of Set Screws. The outside ends of these collar are generally tapered to a degree which helps to hold the centralizer and avoid the ends to hit the Bows or Vanes when the centralizers are placed over them.

Available in 4 1/2" to 20 " sizes. Any special sizes or combination can be made available on request.

HINEGD WELDED CEMENT BASKET
MODEL NO : IP - 43

Description :

Cement baskets are run on casing or liners above porous or weak formations that require protection from the hydrostatic pressure enervated by the cement column. They can also be used to help support a cement column near the well surface while the cement sets.

In stage-cementing operations, one basket is run on the joint just below the stage tool and another is run on the string above the tool. Some operators pump their first stage of cement above the lower basket and allow the cement to set while they circulate mud for the next stage.

- Available in the size range 4 ½" to 20", this device consists of flexible steel spring bows welded to hinged collars
- Bows are hardened and tempered for maximum strength and uniformity
- It is run on casing or liners above weak or porous formations to provide protection from hydrostatic pressure generated by the cement column.

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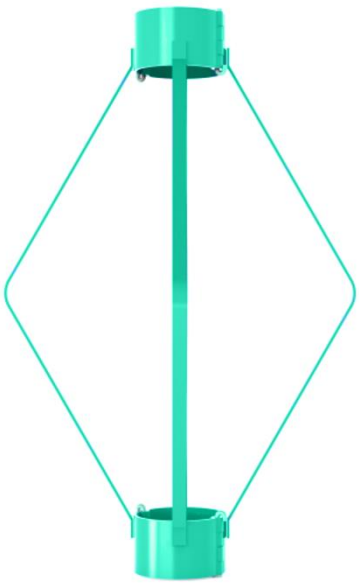
DRILL PIPE CENTRALIZER
MODEL NO : IP - 44



Description :

Drill Pipe Centralizer Runs freely into difficult well-bores while providing excellent standoff. The Bows of these Centralizers are heat treated in special furnace which gives it a peculiar 'bow spring' action. The Heat-Treated bows enable these centralizers to provide best centralization as well as help in faster running of casing. In this type of Centralizers, the End Collars have hinges which makes it in two halves. The longer bow profile allows centralizers to be pulled into restrictions and into larger under reamed open hole.

IMPERO PETRO TOOLS

SLIP ON WELDED CEMENT BASKET
MODEL NO : IP - 45

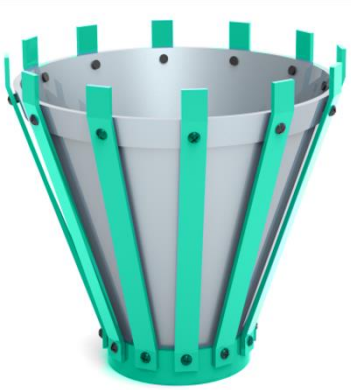
Description :

Hinged Welded Cement Basket is designed with Flexible Bow Springs, heat-treated under controlled conditions for maximum strength. The circulation is not restricted whenever in the process of running casing, during lifting and lowering or in the halfway.

OPEN TOP CEMENT BASKET
MODEL NO : IP - 46

Description :

Open Top cement baskets are made of heavy canvas liners mounted to staves and fabricated using high strength, flexible steel bows that are mounted on steel slip-on end collars. The baskets are not duplicated and occasionally travel the length of the joint to allow pipe movement. Cement baskets have better adaptability to bore holes and can accommodate larger holes than nominal ones. Sizes are available for all hole sizes and standard casings. They are recommended for all grades of standard casings.

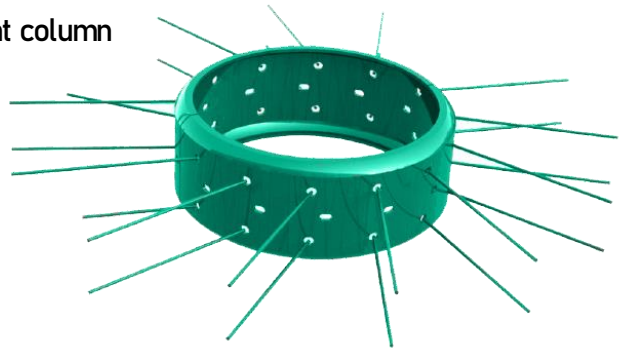


IMPERO PETRO TOOLS

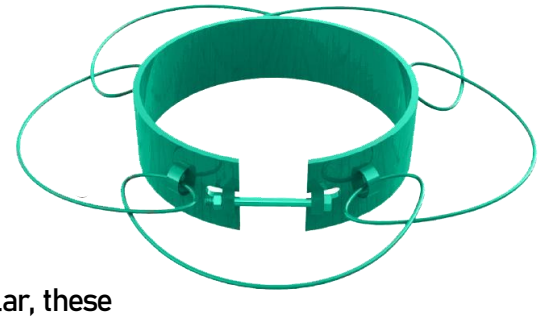
WIRE BRISTLE SCRATCHER
MODEL NO : IP - 47

Description :

Consists of a hinged collar radiating into bristles. Each bristle is made of hardened & tempered wire with two scratching elements. Available in the size range 4-½" to 20" these scratchers improve the cement bond between the casing and porous formations while reinforcing the cement column



WELLBORE WIPER
MODEL NO : IP - 48



Description :

Consisting of loop wire cables of tempered steel laced into a collar, these wipers clean the well bore efficiently by permitting removed filter cake to pass, thereby providing excellent reinforcement to the cement column especially under close spacing.
Available in size range 4 ½" to 20"