

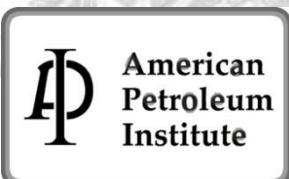
## PT. Mulia Jaya Mandiri

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East Borneo – Indonesia  
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## **About Us :**

PT. Mulia Jaya Mandiri was established in 2003 has line of business in fabrication in oil and gas industrial and other.

PT. Mulia Jaya Mandiri is located in Balikpapan, East Borneo for further enhanced our market position, giving us the competitive edge in supplying product or service with shorter turnaround time and better pricing. To strengthen our product and service range, we have reliable sources for raw material and machinery from over the world, that allows us to fabricate national and international standard in oil and gas industries.

## **Costumer :**

**TOTAL E&P INDONESIE**

**VICO INDONESIA**

**CHEVRON INDONESIA**

**KANGEAN ENERGY**

**SERICA KUTAI B.V**

**ENI INDONESIA LIMITED**

**CONOCO PHILLIPS**

**PT. DOWELL ANADRILL SCHLUMBERGER**

**PT. WELLTEKINDO NUSANTARA**

**PT. FMC SANTANA PETROLEUM EQUIPMENT INDONESIA**

**PT. SANDVIK MINING AND CONSTRUCTION INDONESIA**

**PT. AFRICAN EXPLOSIVES LIMITED**

**PT. TESCO INDONESIA**

**PT. ELNUSA TBK OILFIELD SERVICES DIVISION**

**PT. BAKER HUGHES INDONESIA**

**PT. BAKER HUGHES INTEQ**

**PT. WEATHERFORD INDONESIA**

**PT. EXPRO INDONESIA**

**PT. SMITH TOOL INDONESIA**

**PT. PERFORINDO TEKNIKA NUSANTARA**

**PT. HALLIBURTON LOGGING SERVICES**

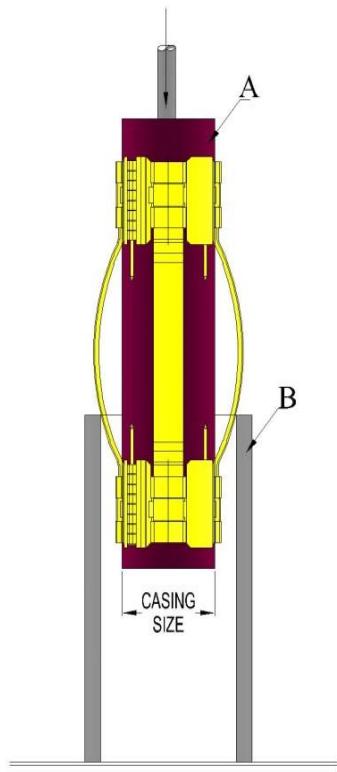
**PT. BJ. SERVICES**

**PT. HALLIBURTON INDONESIA**

**PT. CAMERON SYSTEMS**

**PT. NESITOR**

## STARTING FORCE TEST

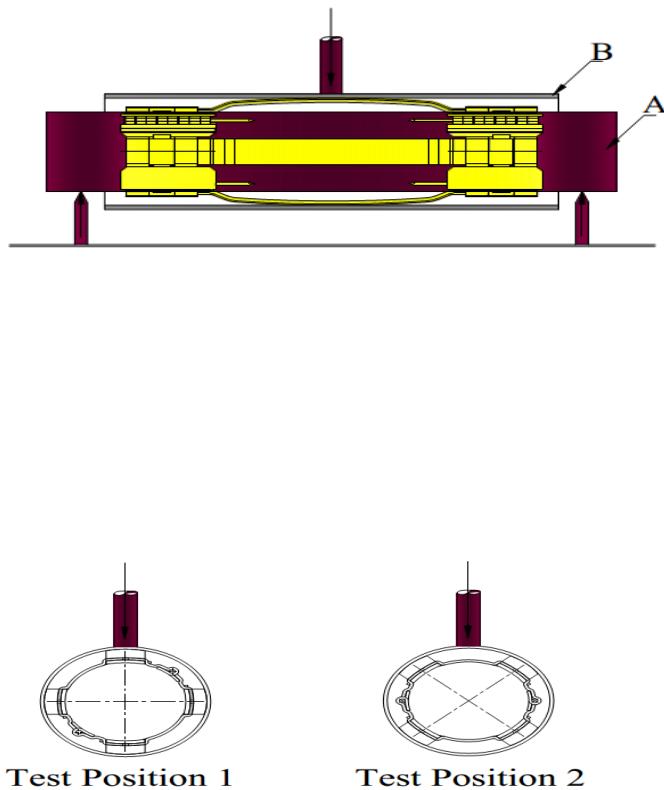


A new fully assembled centralizer is installed over four equally spaced hinges (Inner pipe (A) as shown in figure 1. The test assembly is held within 5 degrees of the vertical. With the centralizer resting on the edge of the outer pipe B, load is applied on the inner pipe top pull the centralizer into the outer pipe B. starting force equals the maximum force required to start the centralizer inside pipe B. the starting force should be less than the weight of 40 ft (12.2 mtrs) of medium weight casing.



## RESTORING FORCE TEST

Restoring force is the force exerted by a centralizer against the casing to keep it away from the bore hole wall. The test is performed with pipe A and pipe B within 5 degree of the horizontal. External force is applied to the outer pipe B which is transferred to the centralizer. Load is then applied and load deflection readings are recorded for 3 times when the minimum restoring force has been obtained. Each spring is tested and the final load deflection curve is prepared using the arithmetic average of the force readings at corresponding deflection. Restoring force is determined from the curve at 67% stand off ratio. Field experience shows that stand off values of 75 – 90% are adequate even in horizontal wells



## CEMENTING ACCESSORIES

MJM's Cementing accessories includes range of product serve as primary cementing equipment, which has been carefully designed and manufactured, accommodating the most essential factor in well cementing process. Throughout many years of service in the oil industry, consistent learning and development strategy ensure the outcome of matured products that exceeds the API Specification.

Designed to fit in various well conditions, range from shallow to deep ones, our product guarantees proper fitting and centering in each casing or borehole. In a extraordinary situation where critical well conditions emerge, our flexibility in service allow our team of expert to propose alternative casing design, re-engineered to overcome the situation.

Made to comply with the API 10-D specification, our cementing accessories product are oblige to pass series of test before being marked ready to market. Our computerized testing facility assures real time high accuracy result in different types of test of starting, running and restoring process versus stand off stand off specification from API 10-D requirement.



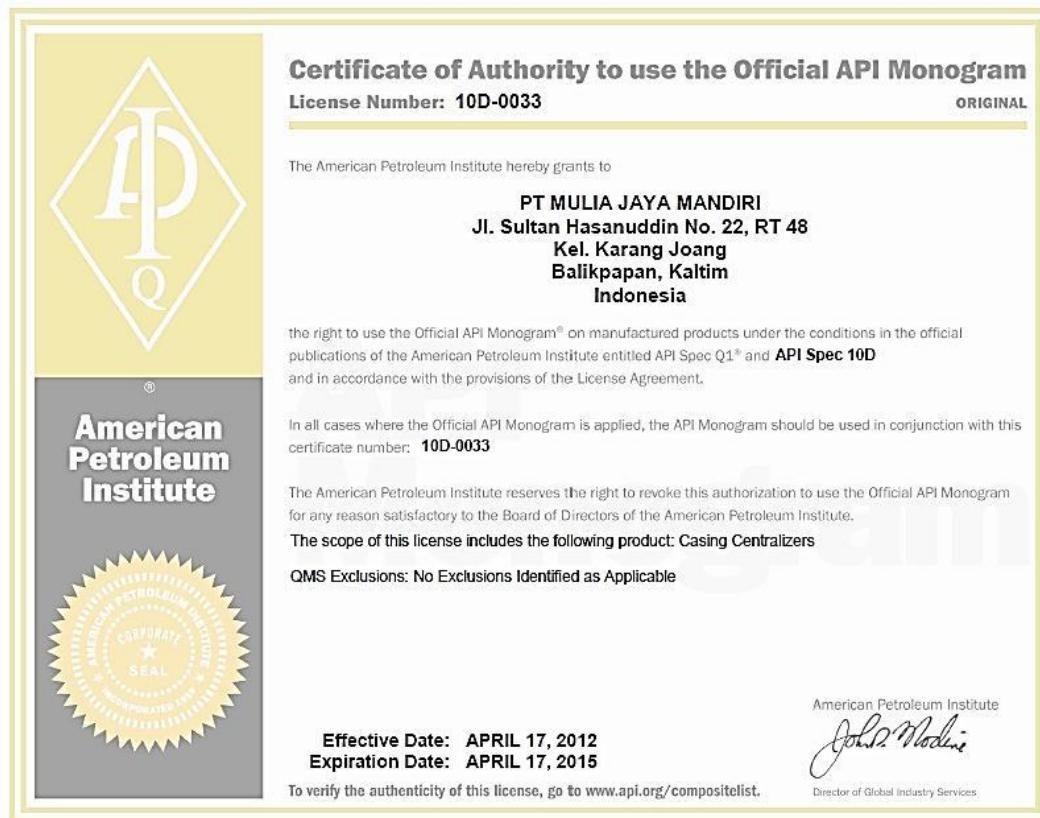
MJM's casing centralizer incorporates range of product comprise of Bow Centralizer, and solid rigid centralizer. We produce variety of product characterized by installation method, model and type.

Our casing centralizer includes Slip On and Latch On type of installation method, Spiral and Straight model and Welded and Non Welded product type.

# Casing Accessories & Downhole Equipment

## Quality Management System :

MJM quality measurement and management starts from the beginning of product design and material selection phase and concluded as a warranty to our customer. After gone thru accurate design and precise material selection engineering process, our product will be manufactured using hi-precision equipment in standardized process framework which includes number of quality control checkpoint. Once produced, the product will need to endure and pass series of test conducted in our computerized testing facility before being handled for on-time shipment and handover to our costumer. Yet, quality does not stop just there. MJM post-assistance scheme is available to provide extended support to ensure successful product implementation.



<b>TenarisConnections</b>			
Workshop:	PT.MULIA JAYA MANDIRI (MJM)		
Country:	Indonesia	Province:	Kaltim
City:	Balikpapan		
Address:	Jl. Projakal Km.5 N° 119		
Contact:			
Contact:	Eddy Effendi	e-mail:	<a href="mailto:muljadi@indo.net.id">muljadi@indo.net.id</a>
Phone:	+62 542 7024814/15	Fax:	+62 542 862350
Currently Licensed for the following connection families:			
TENARIS			
Qualified Connections:			
Product:	Blue™	MS XT/XC™	MS28 XT/XC™
	MS™ SR	MS28™	MS™



<b>The API Composite List</b>							
Product Listing for PT. Mulia Jaya Mandiri							
Company Name:	PT. Mulia Jaya Mandiri						
Company Location Address:	Jl. Projakal Km. 5 Sokoarmo Hatta Simpang Karangku No. 119 Balikpapan, Kalim 76126 Indonesia						
Phone:	+62 542-702-4814						
Fax:	+62 542-862-350						
Web Site:	<a href="http://www.muljadiindo.net.id">www.muljadiindo.net.id</a>						
Sales E-Mail:	<a href="mailto:muljadi@indo.net.id">muljadi@indo.net.id</a>						
Sales Phone:	+62 542-702-4814						
Certification Information for Licenses/Registrations							
Number:	5CT-0700	Certification:	API-SCT	Status:	Active	Exclusions:	7.3
Number:	7-1-0534	Certification:	API-T-1	Status:	Active	Exclusions:	7.3
SCT-0700 - Casing and Tubing							
O Threader							
7-1-0534 - Rotary Drill Stem Elements							
O Treading for Rotary Shouldered Connections							

**PT. Mulia Jaya Mandiri**

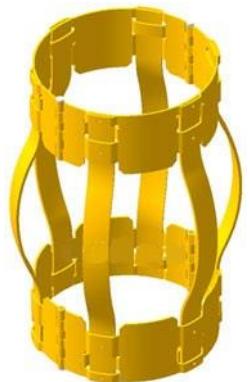
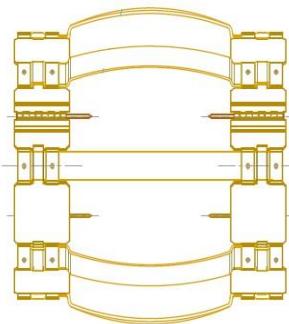
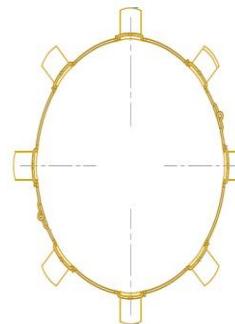


## Bow Centralizer Non Weld Hinged Type

MJM's Bow Spring Centralizer is Extremely powerful and durable. Available in latch-on type features integral hinges which wrap to the inside for superb durability. MJM's Bow Centralizer can be supplied in spiral or Straight bow configuration.

### Features :

- ✓ *Flexible Bow Springs*
- ✓ *Centralizer Outside Diameter > Hole Size*
- ✓ *Hingher Drag When Running in Hole*
- ✓ *Installed Over Stop Collars*
- ✓ *Available For Low Running Force or High Restoring Force*

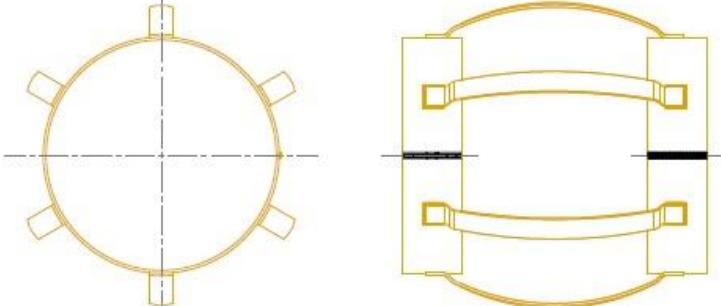


CASING SIZE	HOLE SIZE	ID	OD	BOW NUMBER	OVERALL LENGTH
3.500"	6.125"	3.625"	6.375"	4	20.250"
	6.125"	3.625"	5.875"	4	22.000"
	8.500"	3.625"	9.000"	4	22.000"
4.500"	6.125"	4.625"	6.375"	4	17.750"
	6.125"	4.625"	6.375"	4	22.000"
5.000"	6.125"	5.125"	6.125"	4	17.875"
6.625"	8.500"	6.750"	8.875"	4	20.000"
7.000"	8.500"	7.125"	8.250"	4	17.875"
	8.500"	7.125"	8.875"	6	17.875"
	9.875"	7.125"	11.750"	6	19.750"
9.625"	12.250"	9.750"	13.375"	6	20.000"
	12.250"	9.750"	13.375"	6	22.000"
13.375"	17.500"	13.625"	18.500"	8	19.750"
	18.625"	13.625"	19.875"	8	19.750"
18.625"	22.000"	18.875"	23.750"	8	19.750"
	24.000"	18.875"	25.625"	8	19.750"
20.000"	26.000"	20.250"	27.500"	10	22.000"

Note : Other Size and Requirement are Available Based on Request

## Bow Centralizer Welded Type

MJM's Bow Centralizer is designed with very low starting and running force while giving the substantial restoring force. Range from slip on and latch-on installation model to welded type with variation number of bow, this product is truly engineered to fit market needs



### Features :

- ✓ *Durable in Deep Well*
- ✓ *Easy Installation*
- ✓ *Heavy Duty Well Capability*

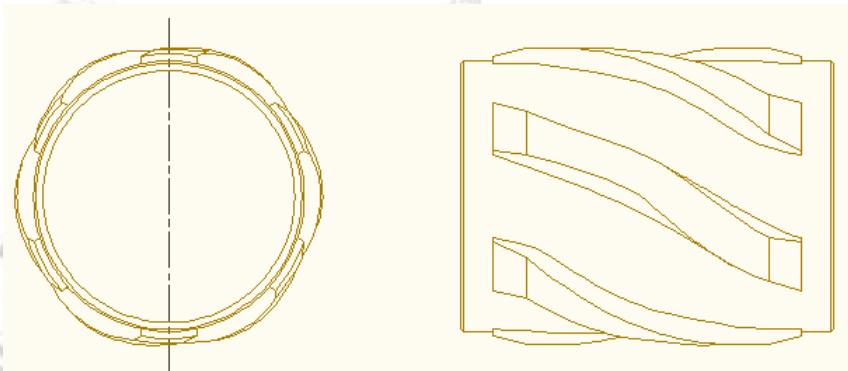


CASING SIZE	HOLE SIZE	ID	OD	BOW NUMBER	OVERALL LENGTH
3.500"	6.000"	3.625"	6.125"	4	17.625"
	6.125"	3.625"	6.375"	4	20.250"
	6.125"	3.625"	6.375"	4	22.000"
	8.500"	3.625"	9.000"	4	22.500"
4.500"	6.000"	4.625"	6.125"	4	17.750"
	6.125"	4.625"	6.375"	4	22.000"
	6.125"	4.625"	6.375"	4	17.750"
	8.500"	4.625"	9.000"	4	20.500"
7.000"	8.500"	7.125"	9.000"	4	17.875"
	8.500"	7.125"	9.000"	6	17.875"
	9.875"	7.125"	11.750"	6	17.500"
	12.250"	7.125"	13.375"	6	19.500"
9.625"	12.250"	9.750"	13.375"	6	20.125"
	12.250"	9.750"	13.375"	6	22.000"
10.750"	12.500"	10.875"	13.375"	6	21.875"
	14.375"	10.875"	15.375"	6	20.250"
11.750"	17.500"	11.875"	18.500"	6	20.250"
13.375"	16.000"	13.625"	17.000"	8	19.750"
	17.500"	13.625"	18.500"	8	19.750"
	18.625"	13.625"	19.500"	8	19.500"
16.000"	20.000"	18.730"	21.750"	8	19.750"
18.625"	22.000"	18.875"	23.750"	8	19.750"
	24.000"	18.875"	25.625"	8	21.500"
20.000"	26.000"	20.187"	27.500"	10	21.250"

Note : Other Size and Requirement are Available Based on Request

## Spiral Solid Body Rigid Centralizer

MJM's Spiral Solid Body Rigid Centralizer are made by using casting steel thru foundry process. This items are made by third party in Indonesia for foundry process then machine process and finishing by in house machining process in Balikpapan Plant.



MJM's Spiral Solid Body Rigid Centralizer are manufactured either both using cast iron, steel, and aluminum material as required by customer



### Features :

- ✓ Stronger Than Regular Rigid Centralizer
- ✓ Creates Good Circulation and Turbolensing Flow / Direction
- ✓ Creates Positive Drag for Horizontal and Deviation Holes
- ✓ Available for Left and Right Handed
- ✓ Blade Available in Straight or Spiral

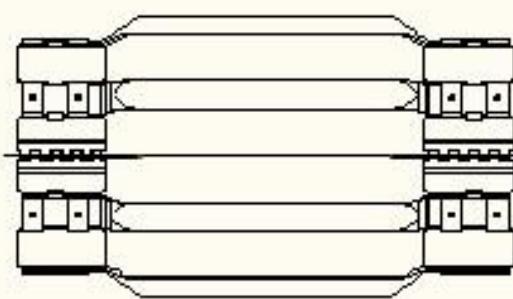
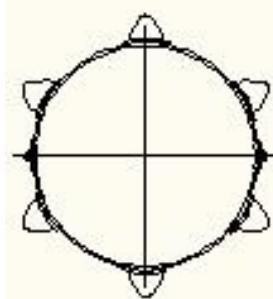
Note : Other Size and Requirement are Available Based on Request

CASING SIZE	HOLE SIZE	ID	OD	BOW NUMBER	OVERALL LENGTH
3.500"	6.000"	3.625"	6.125"	4	17.625"
	6.125"	3.625"	6.375"	4	20.250"
	6.125"	3.625"	6.375"	4	22.000"
	8.500"	3.625"	9.000"	4	22.500"
4.500"	6.000"	4.625"	6.125"	4	17.750"
	6.125"	4.625"	6.375"	4	22.000"
	6.125"	4.625"	6.375"	4	17.750"
	8.500"	4.625"	9.000"	4	20.500"
7.000"	8.500"	7.125"	9.000"	4	17.875"
	8.500"	7.125"	9.000"	6	17.875"
	9.875"	7.125"	11.750"	6	17.500"
	12.250"	7.125"	13.375"	6	19.500"
9.625"	12.250"	9.750"	13.375"	6	20.125"
	12.250"	9.750"	13.375"	6	22.000"
10.750"	12.500"	10.875"	13.375"	6	21.875"
	14.375"	10.875"	15.375"	6	20.250"
11.750"	17.500"	11.875"	18.500"	8	20.250"
13.375"	16.000"	13.625"	17.000"	8	19.750"
	17.500"	13.625"	18.500"	8	19.750"
	18.625"	13.625"	19.500"	8	19.500"
16.000"	20.000"	18.730"	21.750"	8	19.750"
18.625"	22.000"	18.875"	23.750"	8	19.750"
	24.000"	18.875"	25.625"	8	21.500"
20.000"	26.000"	20.187"	27.500"	10	21.250"

## Rigid Centralizer

MJM's Rigid Centralizer are designed for highly deviated horizontal well where casing centralization is a main consideration. The Straight fins Centralizer is made in various lengths to satisfy various needs. Encompasses

special size rolled formed end collar, which assures ultimate strength and uniformity in every weld. Steel construction provides superior toughness over other materials. This product assures positive standoff, maximum flow, maximum well bore stabilization, maximum holding strength and minimum drag. Centralizers are provided for direct installations on pipe by slipping on, with or without set screw for elimination of Stop Collar. This product is Available in All Sizes ranging from 3 ½" to 20"

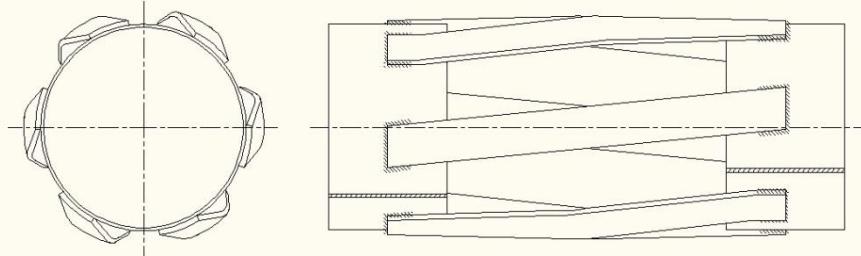


CASING SIZE	HOLE SIZE	ID	OD	BOW NUMBER	OVERALL LENGTH
3.500"	6.125"	3.625"	5.875"	4	21.500"
	8.500"	3.625"	8.250"	4	19.750"
4.500"	6.125"	4.625"	5.875"	4	20.125"
6.625"	8.500"	6.750"	8.250"	4	21.500"
7.000"	8.500"	7.125"	8.250"	4	21.000"
	8.500"	7.125"	8.250"	6	21.000"
	9.875"	7.125"	9.625"	6	21.500"
9.625"	12.250"	9.750"	12.000"	6	21.500"
	13.375"	9.750"	13.125"	6	21.500"
13.375"	17.500"	13.625"	17.250"	8	18.500"
	18.625"	13.625"	18.375"	8	21.625"
	20.000"	13.625"	19.750"	8	21.625"
18.625"	22.000"	18.875"	21.750"	8	21.500"
	24.000"	18.875"	23.750"	8	21.625"
20.000"	26.000"	20.250"	25.750"	12	22.000"

Note : Other Size and Requirement are Available Based on Request

## Spiral Bow Centralizer Welded

MJM's Spiral Bow Centralizer is specially designed for highly deviated or horizontal wells. This product is ideal for use with liner hangers. The steel construction ensures extra strength and superior toughness. The 'Boat' shaped spiral minimize Drag force while running pipe. The glide smoothly in the low side of horizontal bore holes. Wide symmetrical are smoothly beveled on the both end to have lower coefficient of friction and to ease casing movement in either direction.



CASING SIZE	HOLE SIZE	ID	OD	BOW NUMBER	OVERALL LENGTH
3.500"	6.000"	3.625"	6.125"	4	17.625"
	6.125"	3.625"	6.375"	4	20.250"
	6.125"	3.625"	6.375"	4	22.000"
	8.500"	3.625"	8.625"	4	22.500"
4.500"	6.000"	4.625"	6.125"	4	17.750"
	6.125"	4.625"	6.375"	4	22.000"
	6.125"	4.625"	6.375"	4	17.750"
	8.500"	4.625"	8.625"	4	20.500"
7.000"	8.500"	7.125"	8.625"	4	17.875"
	8.500"	7.125"	8.625"	6	17.875"
	9.875"	7.125"	10.000"	6	17.500"
	12.250"	7.125"	12.375"	6	19.500"
9.625"	12.250"	9.750"	12.375"	6	20.125"
	12.250"	9.750"	12.375"	6	22.000"
10.750"	12.500"	10.875"	12.625"	6	21.875"
	14.375"	10.875"	14.600"	6	20.250"
13.375"	16.000"	13.625"	16.125"	8	19.750"
	17.500"	13.625"	17.625"	8	19.750"
	18.625"	13.625"	18.875"	8	19.500"
18.625"	22.000"	18.875"	22.250"	8	19.750"
	24.000"	18.875"	24.125"	8	21.500"
20.000"	26.000"	20.187"	26.125"	10	21.250"

### Features :

- ✓ Design to Far Exceed API Specification 10D for High Restoring Force
- ✓ Be Used in Highly Deviated and Horizontal Well Where Low Running Force are Required

Note : Other Size and Requirement are Available Based on Request

## Cement Basket Slip On

MJM's Cement Basket are ideal for supporting cement in situation where operators require to keep cement off the bottom of the hole because of weak formations or slotted liner screens. MJM's cement basket is available in a wide range of casing to hole sizes and is self centering due to it's sturdy spring steel bows. The cement basket design features the well proven metal petal type basket component. The design minimizes interference against casing for assisting pipe rotation and reciprocation and comes complete with a stop collar

### Features :

- ✓ Commonly Used in Situations Where Porous or Weak Formations Require Help in Supporting a Cement Column.
- ✓ It's Design Allow Cement to Flow in an Upward Direction, Yet Helps to Prevent From Falling Downward.
- ✓ Basket is Easily Installed by Sliding it Over the Pin end of a Casing Joint, Prior to Make-up of The Joint.

Size	OD	ID	Length	Qty Spring
4 1/2	6.250	4.625	27 - 3/8	8
7	8.600	7.1875	27 - 3/8	8
7	10.750	7.1875	27 - 3/8	9
7	12.700	7.1875	27 - 3/8	10
9 5/8	13.225	9.875	27 - 3/8	12
9 5/8	15.375	9.875	27 - 3/8	12
10 3/4	12.500	10.9375	28	13
10 3/4	16.375	10.9375	28	13
13 3/8	16.875	13.625	27 - 3/8	17
13 3/8	18.250	13.625	27 - 3/8	17
13 3/8	13.625	13.625	27 - 3/8	17

Note : Other Size and Requirement are Available Based on Request



## Drill Pipe Centralizer

MJM's Drill Pipe Centralizer are designed to give a minimum amount of drag resistance when passing through the previous casing or wellhead and then spring out to fit undreamed sections and washouts.



### Features :

- ✓ Used For Oversized Holes
- ✓ The Welded Constructions Provides for Superior Strength over non-Welded Centralizer
- ✓ High Quality Springs Steel Undergo Consistency Special heat Treatment
- ✓ Hinge Installed Around the Casing O.D
- ✓ Runs Freely into Difficult Well-Bores While Providing Excellent Standoff

## Wellbore Wiper

MJM's Wellbore Wiper is a hinged collar featuring high strength steel wire cables looped in overlapping manner to produce an uninterrupted wiping action during pipe rotation

These Wipers cleans the wellbore efficiently by permitting removed filter cake to pass, thereby providing excellent reinforcement to the cement column especially under close spacing.



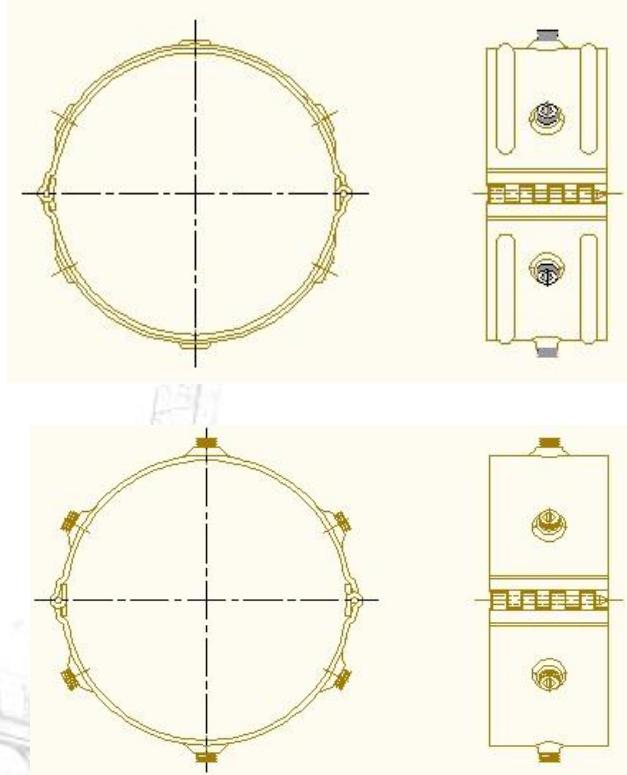
### Features :

- ✓ Their Hinged Design Makes Them Easy to Install
- ✓ High Strength & Tempered Wire
- ✓ Improve Mud Removal
- ✓ Creating a More Uniform Wall Thickness

## Stop Collar

MJM's Manufactures a full range of Stop Collar complement our range of centralizer products. MJM's Stop Collar are available with either grub screw or torsion nail type positive locking mechanism and can be provider in either Latch-on or Slip-on configuration for close tolerance applications. MJM's Stop Collar undergo Slip and Hold testing in accordance with API specification 10D recommended procedures for testing as an integral part of MJM's quality program.

CASING SIZE	HOLE SIZE	ID	OD	BOW NUMBER	OVERALL LENGTH
3.500"	6.000"	3.625"	6.125"	4	17.625"
	6.125"	3.625"	6.375"	4	20.250"
	6.125"	3.625"	3.375"	4	22.000"
	8.500"	3.625"	9.000"	4	22.500"
4.500"	6.000"	4.625"	6.125"	4	17.750"
	6.125"	4.625"	6.375"	4	22.000"
	6.125"	4.625"	6.375"	4	17.750"
	8.500"	4.625"	9.000"	4	20.500"
7.000"	8.500"	7.125"	9.000"	4	17.875"
	8.500"	7.125"	9.000"	6	17.875"
	9.875"	7.125"	11.750"	6	17.500"
	12.250"	7.125"	13.375"	6	19.500"
9.625"	12.250"	9.750"	13.375"	6	20.125"
	12.250"	9.750"	13.375"	6	22.000"
10.750"	12.500"	10.875"	13.375"	6	21.875"
	14.375"	10.875"	15.375"	6	20.250"
	11.750"	17.500"	11.875"	8	20.250"
	13.375"	16.000"	13.625"	8	19.750"
13.375"	17.500"	13.625"	18.500"	8	19.750"
	18.625"	13.625"	19.500"	8	19.500"
	16.000"	20.000"	18.730"	8	19.750"
18.625"	22.000"	18.875"	23.750"	8	19.750"
	24.000"	18.875"	25.625"	8	21.500"
	20.000"	26.000"	20.187"	10	21.250"



### Features :

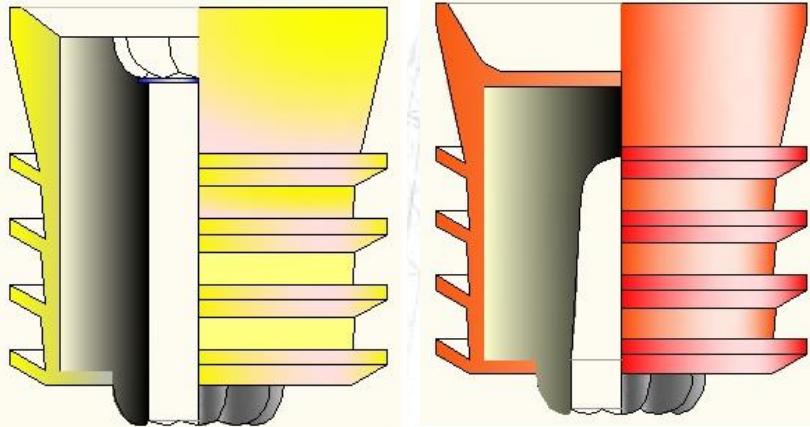
- ✓ Heavy Duty Beveled Stop Collar
- ✓ Torque Set Screw To 20-25 ft/lbs
- ✓ Other Sizes Available Upon Request



**Note : Other Size and Requirement are Available Based on Request**

## Cementing Plugs ( Top & Bottom Plug )

MJM's Cementing Plugs has to type based on material made there are Aluminum core and Plastic core. Also available for non rotating cementing plugs which mean there are easy to drill. Our cementing plugs can be run in heavy duty well also have durability, resistance and temperature for geothermal well, abrasion resistance and withstand differential pressure of standard float equipment. We also can manufacture custom plugs to customer specification.



### Features :

- ✓ The Innovative Non Rotating Device
- ✓ The Wipe Lock Ensure Will Not Shear During Drill-Out
- ✓ Are Material ID Are PDC Drillable
- ✓ High Abrasive And Wear Resistance



CASING SIZE (INCHES)	CASING WEIGHT (Lb/Ft)	BURSTING PRESSURE (PSI)	PRESSURE RATING (PSI)	TEMPERATURE RATING (°C)	A (INCH)	B (INCH)	WEIGHT (KGS)
4.500	9.50-13.50	250 - 350	8000	200	4.500	8.250	9.50
5.000	11.50-18.00	250 - 350	8000	200	4.750	9.371	13.50
6.625	20.00 - 32.00	250 - 350	8000	200	6.125	8.625	15.00
7.000	26.00 - 38.00	250 - 350	6500	200	6.800	9.350	16.00
9.625	32.00 - 53.00	250 - 350	5500	200	9.375	9.375	29.00
10.625	32.75 - 55.50	250 - 350	3500	200	12.800	14.609	35.00
13.375	48.00 - 72.00	250 - 350	3500	200	12.800	14.609	42.00

Note: Other Size and Requirement are Available Based on Request

## Floating Equipment

For Float Equipment Product Support by Complete CNC Machining by Our Selves With Official License : Premium Connection, Tenaris Hydrill, API Connection and NSCT

### MJM Floating Product :

- ✓ *Float Shoe*
- ✓ *Float Shoe Stab-in*
- ✓ *Guide Shoe*
- ✓ *Reamer Shoe*
- ✓ *Float Collar*
- ✓ *Float Collar Stab-in*
- ✓ *Stab in Adapter / Stinger*

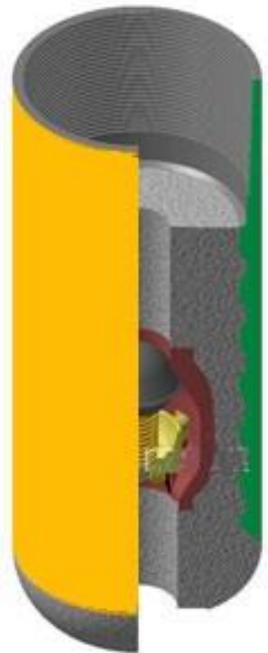


## Float Shoe

MJM's has developed this new range of premium products capable of meeting and exceeding these demands to meet more modern requirements for Float Shoe and Float Collar to provide a positive seal in high temperature, highly deviated well, horizontal well and hostile environments. This Float Collar is Assembly together with Float Shoe when running well.

### Features :

- ✓ Quick PDC Drillable
- ✓ Wiperlock System Proven Anti-Rotation
- ✓ Withstands Long Period of Circulation

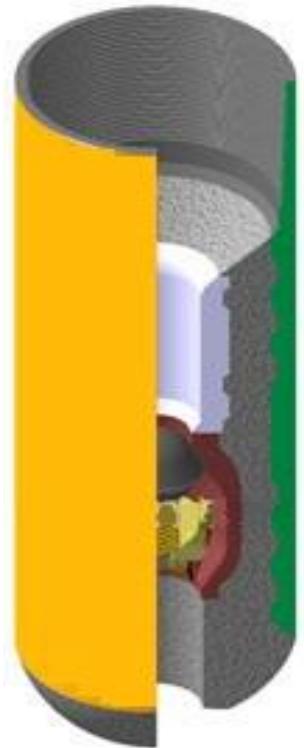


Casing Size (Inches)	Outside Diameter (Inches)	Drillout ID Inches	Weight Range		Overall Length Inches	Flow Area (Inch <sup>2</sup> )	Pressure Rating PSI	Valve No.
			Lbs/Ft	Lbs/Ft				
7.000"	7.000	6.275	20.00	35.00	24.000	5.409	8,500	2
9.625"	10.625	8.865	32.30	53.50	30.000	8.292	8,500	3
10.750"	11.750	10.056	32.75	65.70	30.000	8.292	8,500	3
13.375"	14.375	12.579	48.00	72.00	30.000	8.292	8,500	3
18.625"	20.000	17.755	87.50	139.00	30.000	8.292	3,500	3
20.000"	21.000	19.125	94.00	133.00	30.000	8.292	3,500	3
30.000"	31.000	19.125	94.00	133.00	30.000	8.292	3,500	3

**Note : Other Size and Requirement are Available Based on Request**

## Float Shoe Stab In

MJM's has developed this new range of premium products capable of meeting and exceeding these demands to meet more modern requirements for Float Shoe and Float Collar to provide a positive seal in high temperature, highly deviated well, horizontal well and hostile environments. This Float Collar is Assembly together with Float Shoe when running well.



### Features :

- ✓ Quick PDC Drillable
- ✓ Wiperlock System Proven Anti-Rotation
- ✓ Withstands Long Period of Circulation

Casing Size (Inches)	Outside Diameter (Inches)	Drillout ID Inches	Weight Range		Overall Length Inches	Flow Area (Inch <sup>2</sup> )	Pressure Rating PSI	Valve No.
			Lbs/Ft	Lbs/Ft				
7.000"	7.000	6.275	20.00	35.00	24.000	5.409	8,500	2
9.625"	10.625	8.865	32.30	53.50	30.000	8.292	8,500	3
10.750"	11.750	10.056	32.75	65.70	30.000	8.292	8,500	3
13.375"	14.375	12.579	48.00	72.00	30.000	8.292	8,500	3
18.625"	20.000	17.755	87.50	139.00	30.000	8.292	3,500	3
20.000"	21.000	19.125	94.00	133.00	30.000	8.292	3,500	3
30.000"	31.000	19.125	94.00	133.00	30.000	8.292	3,500	3

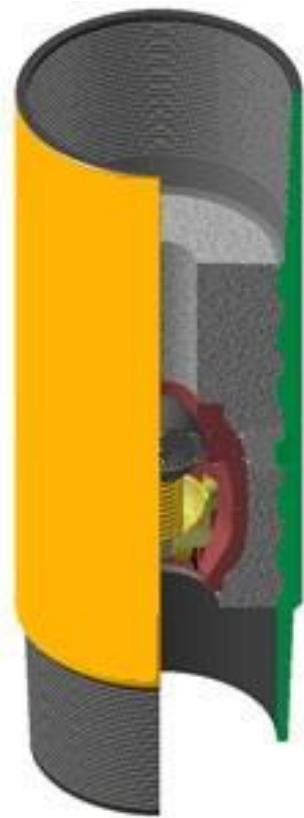
**Note : Other Size and Requirement are Available Based on Request**

## Float Collar

MJM's has developed this new range of premium products capable of meeting and exceeding these demands to meet more modern requirements for Float Shoe and Float Collar to provide a positive seal in high temperature, highly deviated well, horizontal well and hostile environments. This Float Collar is Assembly together with Float Shoe when running well.

### Features :

- ✓ Quick PDC Drillable
- ✓ Wiperlock System Proven Anti-Rotation
- ✓ Withstands Long Period of Circulation



Casing Size (Inches)	Outside Diameter (Inches)	Drillout ID Inches	Weight Range		Overall Length Inches	Flow Area (Inch <sup>2</sup> )	Pressure Rating (PSI)	Valve No.
			Lbs/Ft	Lbs/Ft				
4.500"	5.000	4.000	9.50	13.50	22.000	2.760	8,500	1
5.000"	5.560	4.408	13.00	18.00	22.000	2.760	8,500	1
5.500"	6.050	4.907	14.00	23.00	22.000	2.760	8,500	1
6.625"	7.388	5.944	20.00	32.00	23.500	5.409	8,500	2
7.000"	7.656	6.275	20.00	35.00	23.500	5.409	8,500	2
7.625"	8.500	6.864	26.40	47.10	23.500	5.409	8,500	2
8.625"	9.625	7.992	24.00	49.00	25.000	8.292	8,500	3
9.625"	10.625	8.865	32.30	53.50	25.000	8.292	8,500	3
10.750"	11.750	10.056	32.75	65.70	25.000	8.292	8,500	3
11.750"	12.750	11.020	42.00	71.00	25.000	8.292	8,500	3
13.375"	14.375	12.579	48.00	72.00	25.000	8.292	8,500	3
16.000"	17.000	15.124	65.00	109.00	25.000	8.292	8,500	3
18.625"	20.000	17.755	87.50	139.00	25.000	8.292	8,500	3

**Note : Other Size and Requirement are Available Based on Request**

## Float Collar Stab In

MJM's has developed this new range of premium products capable of meeting and exceeding these demands to meet more modern requirements for Float Shoe and Float Collar to provide a positive seal in high temperature, highly deviated well, horizontal well and hostile environments. This Float Collar is Assembly together with Float Shoe when running well.

### Features :

- ✓ Quick PDC Drillable
- ✓ Wiperlock System Proven Anti-Rotation
- ✓ Withstands Long Period of Circulation



Casing Size (Inches)	Outside Diameter (Inches)	Drillout ID Inches	Weight Range		Overall Length Inches	Flow Area (Inch <sup>2</sup> )	Pressure Rating (PSI)	Valve No.
			Lbs/Ft	Lbs/Ft				
4.500"	5.000	4.000	9.50	13.50	22.000	2.760	8,500	1
5.000"	5.560	4.408	13.00	18.00	22.000	2.760	8,500	1
5.500"	6.050	4.907	14.00	23.00	22.000	2.760	8,500	1
6.625"	7.388	5.944	20.00	32.00	23.500	5.409	8,500	2
7.000"	7.656	6.275	20.00	35.00	23.500	5.409	8,500	2
7.625"	8.500	6.864	26.40	47.10	23.500	5.409	8,500	2
8.625"	9.625	7.992	24.00	49.00	25.000	8.292	8,500	3
9.625"	10.625	8.865	32.30	53.50	25.000	8.292	8,500	3
10.750"	11.750	10.056	32.75	65.70	25.000	8.292	8,500	3
11.750"	12.750	11.020	42.00	71.00	25.000	8.292	8,500	3
13.375"	14.375	12.579	48.00	72.00	25.000	8.292	8,500	3
16.000"	17.000	15.124	65.00	109.00	25.000	8.292	8,500	3
18.625"	20.000	17.755	87.50	139.00	25.000	8.292	8,500	3

**Note : Other Size and Requirement are Available Based on Request**

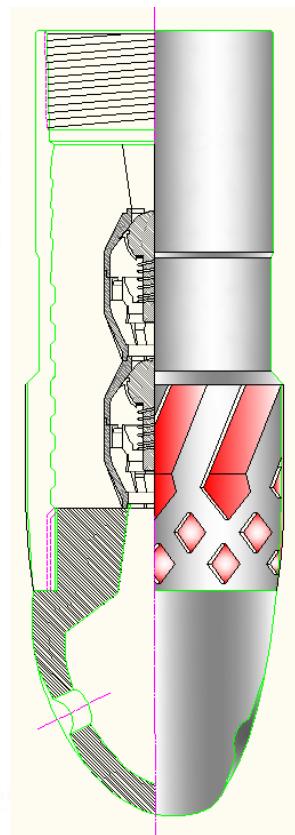
## Reamer Shoe

MJM's Reamer Shoe overcomes wellbore obstructions and guide the casing or liner to total depth. MJM's Reamer Shoe designs use an eccentric Guide Nose to Negotiate ledges and other impediments while it's integrate cutting structures simultaneously ream out tight spot. Its Applications is favored on wells where casing running difficulties are expected or have historically been experienced. The tools is used principally in liners, both in vertical and horizontal wellbores.



### Features :

- ✓ Runs of Casing to TD by Reaming Out Restriction
- ✓ Ideal for Running Large Diameter Casing with Little or no Rotation is Possible



SIZE	P/N	HOLE SIZE	Weight Range	OD (Inches)	Nose Type		Cutting Structure		Type	
					Aluminum	Steel	Carbide	PDC	Drillable	Non-Drillable
4.500"	772-0412-001	6.000"	11.5 - 13.5	5.750"	V		V	V	V	
4.500"	772-0412-002	6.000"	11.5 - 13.5	5.750"	V		V	V	V	
5.000"	772-0500-001	6.000"	18.5 - 23.2	5.750"	V		V	V	V	
5.000"	772-0500-002	6.000"	18.5 - 23.2	5.750"	V		V	V	V	
5.500"	772-0512-001	6.750"	17.0 - 23.0	6.250"	V		V	V	V	
5.500"	772-0512-002	6.750"	17.0 - 23.0	6.250"	V		V	V	V	
5.500"	772-0512-003	8.500"	17.0 - 23.0	8.250"	V		V	V	V	
5.500"	772-0512-004	8.500"	17.0 - 23.0	8.250"	V		V	V	V	
7.000"	772-0700-001	8.500"	26.0 - 32.0	8.250"	V		V	V	V	
7.000"	772-0700-002	8.500"	26.0 - 32.0	8.250"	V		V	V	V	
7.625"	772-0758-001	8.500"	26.4 - 33.7	8.250"	V		V	V	V	
7.625"	772-0758-002	8.500"	26.4 - 33.7	8.250"	V		V	V	V	
9.625"	772-0958-001	12.250"	47.0 - 53.5	12.000"	V		V	V	V	
9.625"	772-0958-002	12.250"	47.0 - 53.5	12.000"	V		V	V	V	
13.375"	772-1338-001	17.500"	68.0 - 72.0	15.500"	V		V	V	V	
13.375"	772-1338-002	17.500"	68.0 - 72.0	15.500"	V		V	V	V	
13.375"	772-1338-003	15.500"	68.0 - 72.0	14.500"	V		V	V	V	
13.375"	772-1338-004	15.500"	68.0 - 72.0	14.500"	V		V	V	V	

Note : Other Size and Requirement are Available Based on Request

## Guide Shoe

MJM's Guide Shoe is designed to provide the following benefits such as guiding casing smoothly through surface and open hole, providing adequate circulation around shoe for washing down, assisting cement bonding and providing durable beveled guide for drilling tools in subsequent drilling operations.



## Down Jet Guide Shoe



MJM's Down Jet Guide Shoe ample of circulation through side ports when the running casing is reaching the bottom. This application will add beneficial turbulence to the slurry near the shoe. The lower edge is rounded to provide smooth running tool entry. This guide shoe is PDC Drillable.

Casing Size	OD Inches	Drill-Out ID Inches	Weight Range		L1 Inches	L2 Inches	A Inches2
			Lbs/Ft	Lbs/Ft			
4.500"	5.000	4.000	9.50	13.50	12.000	9.000	1.766
5.000"	5.565	4.408	13.00	18.00	12.000	9.000	1.766
5.500"	6.050	4.905	14.00	23.00	12.000	9.000	1.766
6.625"	7.375	5.944	20.00	32.00	12.000	9.000	1.766
7.000"	7.625	6.351	20.00	35.00	13.500	10.500	6.489
7.625"	8.625	6.864	26.40	47.10	14.000	11.000	6.489
8.625"	9.625	7.992	24.00	49.00	15.500	12.500	9.616
9.625"	10.625	8.865	32.30	53.50	15.500	12.500	9.616
10.750"	11.750	10.056	32.75	65.70	15.500	12.500	9.616
11.750"	12.750	11.020	42.00	71.00	15.500	12.500	9.616
13.375"	14.375	12.579	48.00	72.00	16.000	13.000	9.616
16.000"	17.000	15.124	65.00	109.00	16.000	13.000	9.616
18.625"	20.000	17.755	87.50	139.00	16.000	13.000	9.616
20.000"	21.000	19.125	94.00	133.00	16.000	13.000	9.616

Note : Other Size and Requirement are Available Based on Request

**Casing Accessories & Downhole Equipment**  
**Our Machine**

