JA OILFIELD MANUFACTURING, INC.

GENERAL CATALOG

JA Oilfield Manufacturing, Inc. ....the triumph of humility and great resolve!

JA Oilfield's vision is to be the leading provider of drilling technology and services to oil and gas businesses in every market we serve.

In today's competitive, ever-changing marketplace, oilfield drilling equipment manufacturers and exploration and production (E & P) companies require a professional, reliable oil and gas drilling technology and services provider that understands their business and recognizes their unique needs. With a customer-focused approach to everything we do, JA Oilfield is the right partner for the oilfield drilling equipment manufacturer and, E & P company who need reliable, affordable drilling technology and service solutions that help them produce oil and gas at less cost and safely.

JA Oilfield is a rapidly growing, drilling technology and services provider delivering a select array of downhole tools and services in several states across the Midwest and Southeast United States and internationally. An experienced management team, knowledgeable sales force, growing product portfolio and network of Field Maintenance Depots (FMD) give JA Oilfield the edge in serving the business customer - oilfield drilling equipment manufacturers and exploration and production (E & P) company.

JA Oilfield delivers a high value package of tools and services that include Drilling Performance Equipment and Systems, Hole Quality Enhancement Tools, Bottom Hole Assembly (BHA) and Tubular Repairs. As testament to the quality of customer service obtainable from the company, JA Oilfield's customers rank among the most prominent and recognized oil and gas drilling equipment manufacturers and E & P companies.

For additional information about JA Oilfield, our products and services, contact us at:

Main Facility and Headquarters:

JA Oilfield Manufacturing, Inc.
2101 S.E. 67th
Oklahoma City, OK 73149
1-800-523-3031
www.jaoilfield.com

JA OILFIELD MANUFACTURING, INC.

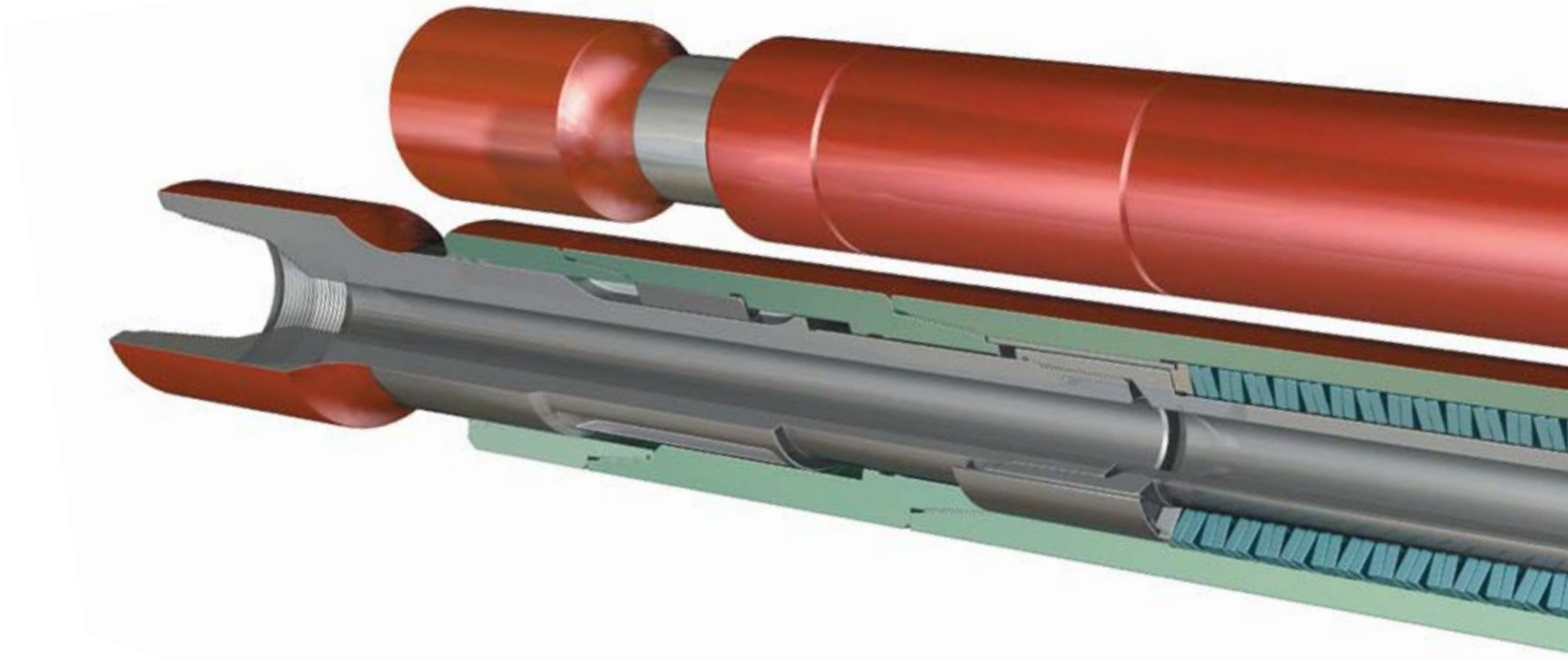
TABLE OF CONTENTS

SHOCK SUB SYSTEM

The **JA Oilfield Manufacturing, Inc. Shock Sub System** is a uniquely engineered drilling shock absorption system incorporating design enhancements to provide a new standard of drilling shock absorption performance. Compared to other shock tools currently available in the market, the Tympanum® series is equipped with an advanced heavy-duty spring design.

The progressive shock damping and shock load dissipation system prevents destructive shock loads produced by on-bottom drill-bit motion from traveling through the bottom-hole assembly to the sensitive MWD/LWD components while keeping the bit on bottom to maintain desirable penetration rates.

It features an optimized disc spring system offering industry-leading shock response performance over an extended dynamic load range. By design, the length is kept to an optimal minimum to ensure that the Shock Sub does not impair or interfere with directional or vertical bottom hole assembly behavior.

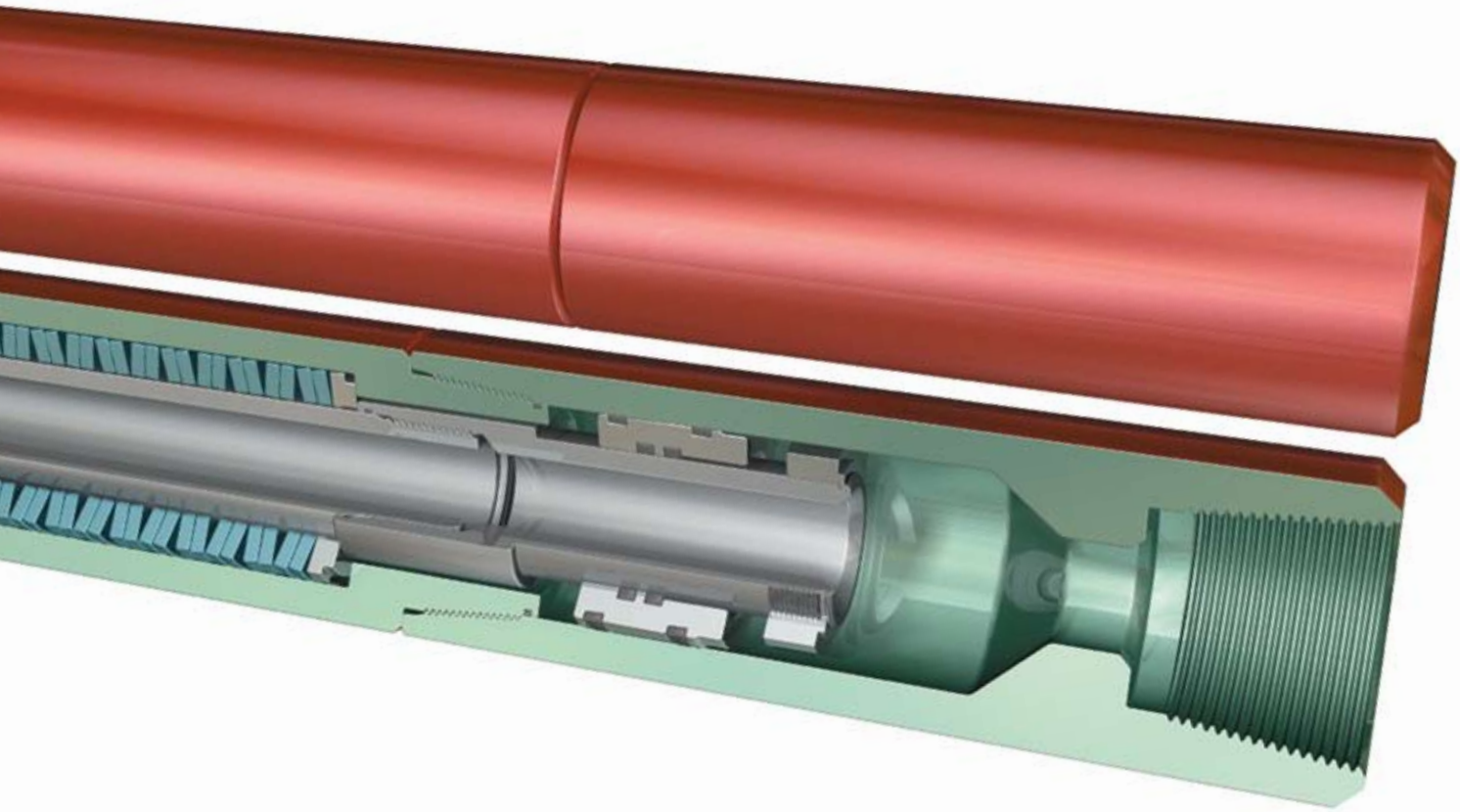


NORMAL LOAD SPRING CONFIGURATION SHOCK TOOLS

Series	Nominal Size	Length	ID	Max. Hole Size	Axial Load to Compress Tool (lb)	Opening Travel (inches)	Closing Travel	Spring Rate (lb/in)	Tensile Load (lb)	Torsional Load (lb) (to yield connections)	Nominal Weight (lb)
475	4.75"	9.5'	1.50"	6¾"	45,000	1.25"	1.25"	36,000	380,000	17,000	420
650	6.50"	13.5'	2.00"	8½"	85,000	1.50"	1.75"	48,000	555,000	50,000	1150
800	8.00"	13.5'	2.25"	12½"	110,000	1.90"	2.75"	40,000	777,000	80,000	1750
950	9.50"	14.5'	2.81"	17½"	110,000	1.90"	2.75"	40,000	1,205,000	110,000	2954
10-00	10.00"	14.5'	2.81"	17½"	110,000	1.90"	2.75"	40,000	1,205,000	157,000	3088
12-00	12.00"	12.0'	3.00"	17½"	130,000	2.50"	2.50"	52,000	1,337,000	244,000	4041

SHOCK SUB FEATURES

- **Optimized spring rate and better shock absorption over dynamic range**
- **Reduces bit bounce and extends bit life**
- **Smooth drill force reliably delivered to the bit even in the most demanding conditions**
- **Reduces Bottom-Hole Assembly premature failures due to shock and vibration loads**
- **Improves penetration rates**
- **Short sub length ensures neutral effect on BHA directional attitude**



LIGHT LOAD SPRING CONFIGURATION SHOCK TOOLS

Series	Nominal Size	Length (feet)	ID	Max. Hole Size (inches)	Axial Load to Compress Tool (lb)	Opening Travel	Closing Travel	Spring Rate (lb/in)	Tensile Load (lb)	Torsional Load (lb) (to yield connections)	Nominal Weight (lb)
475	4.75"	9.5'	1.50"	6¾"	30,000	1.25"	1.50"	20,000	380,000	17,000	420
650	6.50"	13.5'	2.00"	8½"	55,000	1.50"	2.50"	22,000	555,000	50,000	1150
800	8.00"	13.5'	2.25"	12¼"	85,000	1.90"	2.50"	34,000	777,000	80,000	1750
950	9.50"	14.5'	2.81"	17½"	82,000	1.90"	3.75"	22,000	1,205,000	110,000	2954
10-00	10.00"	14.5'	2.81"	17½"	82,000	1.90"	3.75"	22,000	1,205,000	157,000	3088
12-00	12.00"	12.0'	3.00"	17½"	87,000	2.50"	3.40"	26,000	1,337,000	244,000	4041

JA ROLLER REAMER

Model 3RXC and 6RXC mud-lubricated roller reamers are at the core of JA Oilfield Manufacturing "Hole Gauge" Assurance drilling tools. They offer easy rig floor replacement of cutters and parts that are also interchangeable with most other brands.

No welding is necessary to replace the blocks and only when needed, special repair tools are supplied for safety.

JA ROLLER REAMER FEATURES

Three roller cutter types are offered for formation-matched reamer performance.

- The type "VHM" soft formation cutters deliver maximum reaming action in soft formations like soft lime and shale. Service life of cutters is enhanced with hardened and carburized teeth.
- The type "QHM" medium to hard formation cutters are most suitable for cherty formations to hard formations such as dolomite, hard lime and chert.
- Knobby "KHM" cutters are prescribed for very hard formations. Knobby cutters deliver reliable reaming performance in hard, abrasive and semi-abrasive formations such as granite and sand.

JA ROLLER REAMER APPLICATION

Near-Bit Configuration:

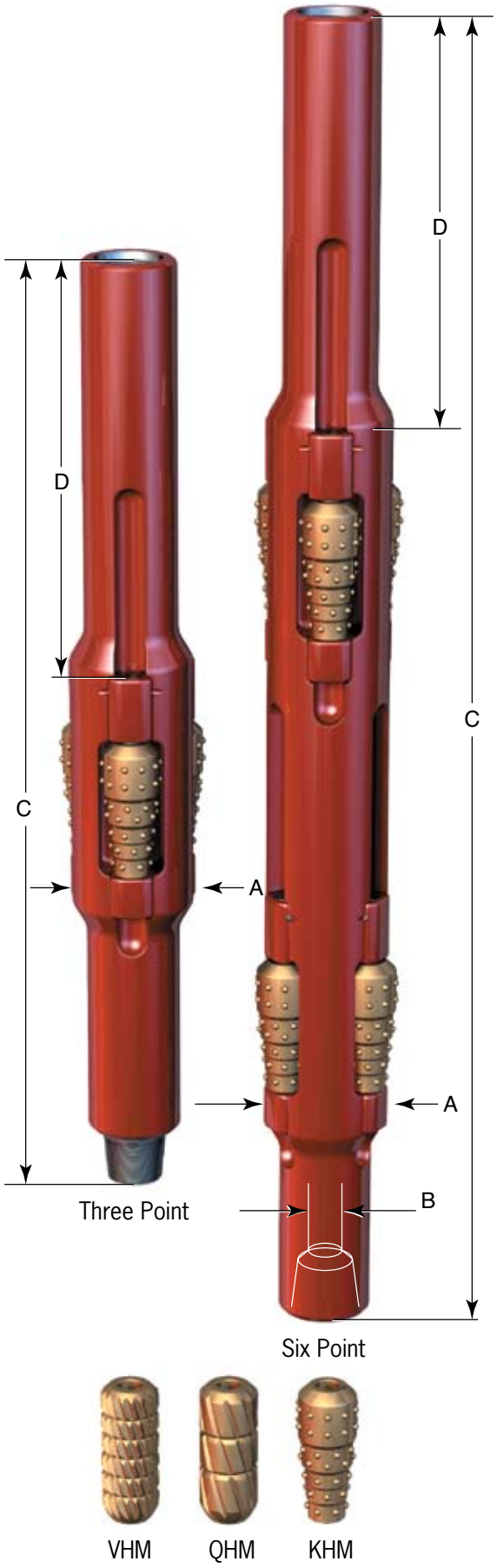
The JA 3RXC roller reamer is a three-point reamer that can be run between bit and drill collar to eliminate unnecessary back-to-bottom reaming with a new bit.

Drill String Configuration:

In this configuration the JA 3RXC is run between drill collars to ream out doglegs, key seats, and ledges in the hole. This reamer arrangement offers the most mitigation for prevention of hole gauge impairment that can result in a stuck-pipe.

Six Point (6RXC) Reamer Configuration:

The 6RXC roller reamer is run between the drill collars and the bit to afford greater stabilization and reaming capacity. It is very effective in preventing sharp hole angle changes when run as a packed hole assembly.

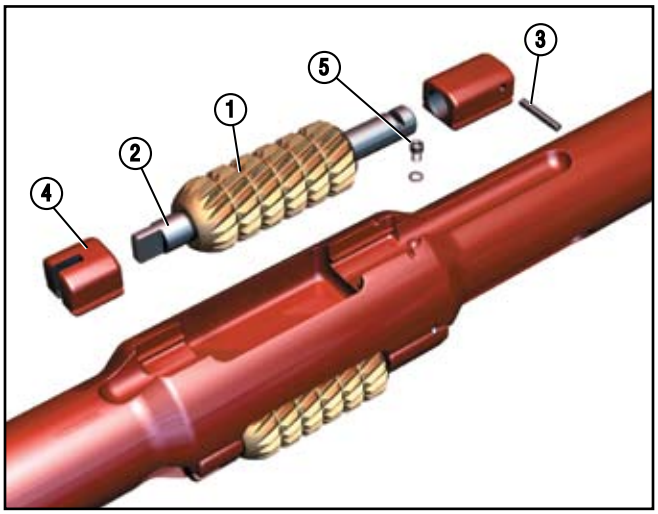


JA ROTARY REAMER MODEL KN-QR

Hole Size	Cutter Size	Bearing Pin Size	Bearing Blocks ID Size and Type	Cross Pins (Dia.)	Reamer Bodies Complete (String or Bottom-Hole)							
					Max Body (Dia.) (A)	Body Bore (B)	Three - Point			Six - Point		
							(C)	(D)	Weight + Cutters (lbs.)	(C)	(D)	Weight + Cutters (lbs.)
4 1/8"	1 3/8"	3/4"	3/4" A	1/4"	3 1/4"	1"	50"	19"	100	86"	32"	190
4 5/8"	1 1/2"	7/8"	7/8" A	1/4"	4 1/4	1"	50"	19"	130	86"	32"	250
4 3/4"	1 1/2"	7/8"	7/8" B	1/4"								
5 5/8"	2"	1"	1" A	5/16"	5"	1"	64"	25"	230	105"	32"	450
5 7/8"	2"	1"	1" C	5/16"								
6"	2"	1"	1" A	5/16"	5 1/2"	1 1/4"	64"	25"	260	105"	32"	510
6 1/8"	2"	1"	1" B	5/16"								
6 1/4"	2"	1"	1" C	5/16"								
6 1/2"	2"	1"	1" E	5/16"								
7 5/8"	2 5/8"	1 3/8"	1 3/8" A	1/2"	7"	1 5/8"	79"	33"	474	121"	35"	960
7 7/8"	2 5/8"	1 3/8"	1 3/8" C	1/2"								
8 3/8"	2 5/8"	1 3/8"	1 3/8" A	1/2"	7 3/4"	1 7/8"	80"	34"	575	122"	36"	1,160
8 1/2"	2 3/4"	1 3/8"	1 3/8" A	1/2"								
8 5/8"	2 3/4"	1 3/8"	1 3/8" B	1/2"								
8 3/4"	2 3/4"	1 3/8"	1 3/8" C	1/2"								
9 1/2"	3 1/8"	1 3/4"	1 3/4"A	1/2"	8 3/4"	2 1/4"	90"	39"	785	135"	37"	1,600
9 5/8"	3 1/8"	1 3/8"	1 3/8" A	1/2"								
9 7/8"	3 1/8"	1 3/8"	1 3/8" B	1/2"								
10 5/8"	3 1/4"	1 3/4"	1 3/4" A	1/2"	9 1/2"	2 1/2"	90"	39"	950	137"	40"	1,900
11"	3 1/4"	1 3/4"	1 3/4" A	1/2"								
12"	4"	2 1/4"	2 1/4" C	1/2"	10 1/2"	2 13/16"	112"	50 1/2"	1,088	155"	45 1/2"	2,230
12 1/4"	4"	2 1/4	2 1/4" E	1/2"								
13 3/4"	4"	2 1/4	2 1/4" E	1/2"	11 3/4"	2 13/16"	112"	50 1/2"	1,442	155"	43 1/2"	2,600
14 3/4"	5 1/2"	2 1/2	2 1/2" A	7/8"	12 3/4"	2 13/16"	112"	49"	1,705			
15"	5 1/2"	2 1/2	2 1/2" C	7/8"								
17 1/2"	5 1/2"	2 1/2	2 1/2" E	7/8"	15"	3"	112"	47"	2,400	164"	45	5,100
18 1/2"	5 1/2"	2 1/2	2 1/2" A	7/8"	16 3/8"	3"	112"	47"	2,650			
20"	5 1/2"	2 1/2"	2 1/2" M	7/8"								
24"	7"	3"	3" A	7/8"	22"	3"	112"	50"	3,900			
26"	7"	3"	3" C	7/8"								

JA ROTARY REAMER MODEL KN-QR-XL LARGE BORE REAMERS

6 1/2"	2"	1"	1"C	5/16"	5 1/2"	1 7/8"	64	25	232	105	32	409
6 5/8"	2"	1"	1"D	5/16"								
6 3/4"	2"	1"	1"E	5/16"								
7 5/8"	2 1/4"	1 1/8"	1 1/8" A	1/2"	7"	2 1/4"	79	39	422	106	32	812
7 7/8"	2 1/2"	1 1/8"	1 1/8" C	1/2"								
8 3/8"	2 5/8"	1 3/8"	1 3/8" A	1/2"	7 3/4"	2 1/4"	80	34	550	122	36	950
8 1/2"	2 5/8"	1 3/8"	1 3/8" B	1/2"								
8 5/8"	2 3/4"	1 3/8"	1 3/8" B	1/2"								
8 3/4"	2 3/4"	1 3/8"	1 3/8"C	1/2"								



(1) Cutters - See JA Roller Reamer Features
(2) Reamer Pin - A large diameter pin, carburized and hardened, ensures good bearing wear characteristics. The reamer pin is prevented from rotating by the engagement of the end of the pin with slot in the body bearing block.
(3) Cross Pin - This drive-fit cross-pin arrangement safely retains the main reamer pin and reamer cutter while providing a simple, yet safe, locking device.
(4) Drive-Fit Body Bearing Blocks - Blocks properly position the cutter in the body to cut a full-gauge hole. Blocks are readily changeable by the drilling crew.
(5) Socket Head Cap Screws and Lock Washers - Included as secondary locking device for the reamer pins on each body for hole sizes 6 inches and larger.

CAUTION: Surfaces of block are carburized. Beware of fragments of this brittle surface breaking off under impact of sledgehammer. **WEAR SAFETY GLASSES AT ALL TIMES**

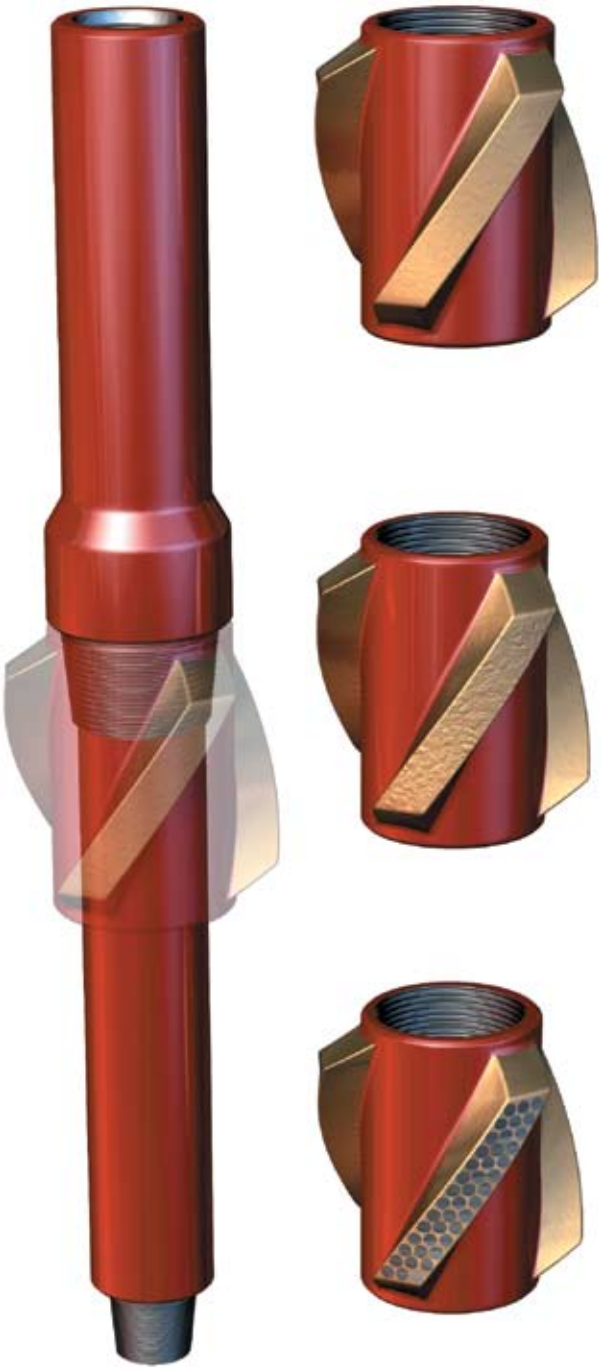
RIG REPLACEABLE SLEEVE-TYPE STABILIZER

JA Oilfield Replaceable Sleeve Type Stabilizer is a product of application-focused design for simplicity and versatility. The RapiDSwap® feature enables rig floor swaps of various stabilizer sleeve sizes to match BHA stabilization and hole requirements without compromise to ruggedness and strength.

The one piece mandrel is manufactured from high strength heat treated alloy steel and by design feature overall length allowances to provide ample tong space for recutting connections.

The JA Oilfield RapiDSwap® sleeve and mandrel design are made to be interchangeable with similar brand of tools.

Standard stabilizer sleeves are available with Plasma Transferred ARC (PTA), composite tungsten carbide rod, geothermal, tungsten carbide inserts (T.C.I) and hard banding and dressing.



STABILIZER SLEEVE SPECIFICATIONS						
		Sleeve Dimensions				
Series	Sleeve Hole Size Range	Length	Body Diameter	Blade Length	Weight (lb.)	Recommended Make-up Torque (ft.-lb.)
434	5⅝" - 6¼"	14"	5⅛"	11"	70	2,700 – 3,000
500	6¼" - 6¾"	14"	5¾"	11"	70	3,500 – 3,800
625 650	6¼" - 6¾ 6½" - 7¼"	14" 14"	7½" 7½"	12" 12"	70 80	4,500 – 5,500 3,500 – 4,500
625 650	6¼" - 6¾" 6½" - 7¼"	14" 14"	7½" 7½"	12" 12"	75 85	4,500 – 5,500 3,500 – 4,500
625 650	6¼" - 6¾" 6½" - 7¼"	14" 14"	7¾" 7¾"	11" 11"	85 95	4,500 – 5,500 3,500 – 4,500
725 850 950	7¼" - 8¼ 8½" - 9" 9" - 10"	14" 14" 14"	9¼" 10" 11"	11" 11" 11"	140 130 110	7,000 – 8,000 9,000 – 10,000 10,000 – 12,000
725 850 950	7¼" - 8¼" 8½" - 9" 9" - 10"	18" 18" 18"	11" 11" 11"	14" 14" 14"	330 300 270	7,000 – 8,000 9,000 – 10,000 10,000 – 12,000
725 850 950	7¼" - 8¼" 8½" - 9" 9" - 10"	18" 18" 18"	11" 11" 11"	12" 12" 12"	370 340 310	7,000 – 8,000 9,000 – 10,000 10,000 – 12,000
950	9" - 10"	22"	12"	12"	1,780	10,000 – 12,000
950	9" - 10"	32"	12"	16"	2,050	10,000 – 12,000
950	9" - 10"	32"	12"	16"	2,110	10,000 – 12,000
950	9" - 10"	32"	12"	16"	2,190	10,000 – 12,000

MANDREL SPECIFICATIONS						
Tool Series	Sleeve Hole Size Range	Drill Collar (Fishing Neck) Diameters	Upset Diameter	Overall Length	Weight (lb.)	Recommended Make-up Torque (ft.-lb.)
434	5⅝" - 6¼"	4¾" - 5⅝"	5⅛"	65"	200	2,700 – 3,000
500	6¼" - 6¾"	5"	5¾"	65"	425	3,500 – 3,800
625	8½" - 9⅞"	6¼" - 6¾"	7½"	65"	475	4,500 – 5,500
650	8½" - 9⅞"	6½" - 7¼"	7¼"	65"	575	3,500 – 4,500
725	12¼" - 17½"	7¼" - 8¼"	9¼"	66"	800	7,000 – 8,000
850	12¼" - 17½"	8½" - 9"	9⅞"	66"	1,000	9,000 – 10,000
950	14¾" - 20" 22" - 28"	9½" - 10"	11"	66" 90"	1,200 1,780	10,000 – 12,000

How to Order Mandrels

1. Specify mandrel tool series
2. Indicate String or Near Bit application
3. Specify top and bottom connection
4. Necessary special features:
   a. Stress Relief Groove on Conns.
   b. Bored for float
   c. Non-Mag Body

How to order Stabilizer Sleeves

1. Specify sleeve series
2. Provide Hole Size or required Blade O.D.
3. Hardfacing type:
   a. Borium
   b. Tungsten
   c. T.C.I.
4. Sleeve material – Non-Mag or Steel

JA INTEGRAL BLADE/ROTARY STEERABLE STABILIZER

JA Oilfield's Integral Blade Stabilizer (IBS) is a one piece rotating stabilizer which can be run near bit or up in the drill string. It is a one piece construction manufactured from high strength alloy steel. The solid one piece chassis with three spiraled blades, 1) minimizes downhole torque and drag, 2) is a neutral to low vibration excitation source, 3) reduces hole wall damage, 4) ensures maximum fluid circulation while maintaining desirable ROP in the most rugged and abrasive drilling conditions.

Because of our unique hardfacing and hardmetal application capabilities, IBS can be dressed in a variety of ways.

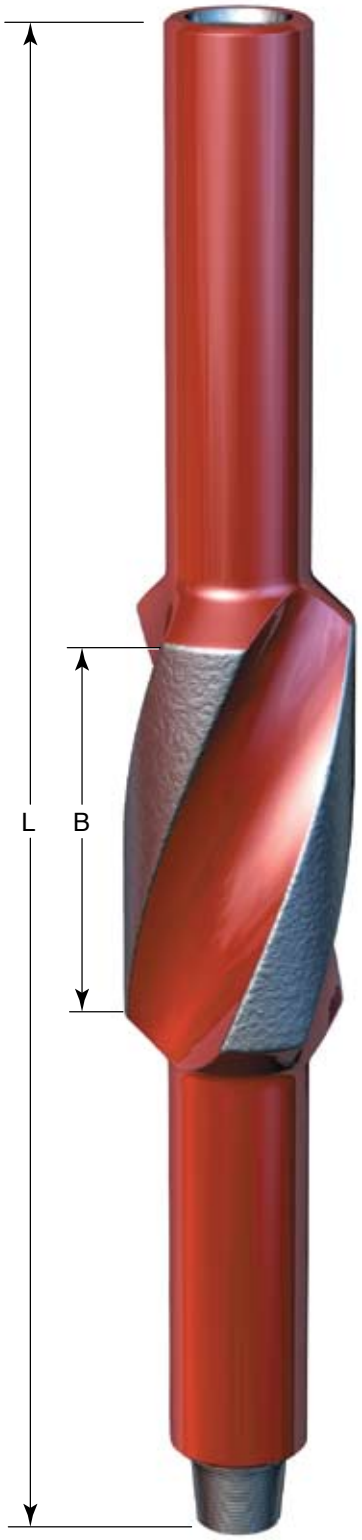
Choice of Hardfacing

- Plasma Transferred ARC (PTA)
- Tungsten Carbide Composite Rod
- Tungsten Carbide Inserts (or Compacts)
- Geothermal

PTA lengthens tool life nearly three to five times longer than conventional hardfacings and is extremely economical to run.

How to Order

1. Hole size or required blade O.D.
2. Number of blades required (3 or 4 are standard styles)
3. Straight or spiral blades
4. Hardfacing type (Tungsten Carbide, Geothermal, T.C.I. Tube Borium)
5. Top and Bottom Connections
6. Body diameter required
7. String or Near Bit application
8. Necessary special features (Stress Relief Groove(SRG) on connections, bored for float, non-mag body, non-mag blades)



JA INTEGRAL BLADE/ROTARY STEERABLE STABILIZER

JA Rotary Steerable Stabilizers are specially designed with extended tapers and "relaxed" spiral design reduces torque, drag and vibrations for enhanced ROP's and extended performance of Push or Point Rotary Steerable tools and Logging While Drilling/Measurement While Drilling components.

Sizes and dimensional data other than listed in specifications table available upon request and per customers requirements.

INTEGRAL STABILIZER SPECIFICATIONS

Hole Size	Drill Collar OD	String Bore	Bottom Hole Bore	Overall Length (L)	Blade Length (B)	Weight (lb.)
6 1/8"	4 1/8"	2"	1 3/4"	73"	14"	250
	4 3/4"	2 1/4"	1 3/4"	73"	14"	300
6 1/4"	4 1/8"	2"	1 3/4"	73"	14"	250
	4 3/4"	2 1/4"	1 3/4"	73"	14"	300
	5"	2 1/4"	1 3/4"	73"	14"	350
6 1/2"	4 1/8"	2"	1 3/4"	73"	14"	250
	4 3/4"	2 1/4"	1 3/4"	73"	14"	300
	5"	2 1/4"	1 3/4"	73"	14"	350
	5 1/4"	2 1/4"	1 3/4"	73"	14"	375
	5 1/2"	2 1/4"	1 3/4"	73"	14"	425
6 3/8"	4 1/8"	2"	1 3/4"	73"	14"	250
	4 3/4"	2 1/4"	1 3/4"	73"	14"	300
	5"	2 1/4"	1 3/4"	73"	14"	350
	5 1/4"	2 1/4"	1 3/4"	73"	14"	400
	5 1/2"	2 1/4"	1 3/4"	73"	14"	425
6 3/4"	4 1/4"	2 1/4"	1 3/4"	73"	14"	325
	5"	2 1/4"	1 3/4"	73"	14"	350
	5 1/4"	2 1/4"	1 3/4"	73"	14"	400
	5 1/2"	2 1/4"	1 3/4"	73"	14"	425
7 7/8"	5 3/4"	2 1/4"	2 1/4"	73"	16"	500
	6"	2 1/4"	2 1/4"	73"	16"	550
	6"	2 13/16"	2 13/16"	73"	16"	500
	6 1/4"	2 1/4"	2 1/4	73"	16"	600
	6 1/4	2 13/16"	2 13/16"	73"	16"	550
	6 1/2"	2 1/4"	2 1/4"	73"	16"	650
	6 1/2"	2 13/16"	2 13/16"	73"	16"	600
8 1/2"	6"	2 1/4"	2 1/4"	75"	16"	575
	6"	2 13/16"	2 1/4"	75"	16"	550
	6 1/4"	2 1/4"	2 13/16"	75"	16"	625
	6 1/4"	2 13/16"	2 1/4"	75"	16"	575
	6 1/2"	2 1/4"	2 13/16"	75"	16"	675
	6 1/2"	2 13/16"	2 1/4"	75"	16"	625
	6 3/4"	2 13/16"	2 13/16"	75"	16"	675
	7"	2 13/16"	2 13/16"	75"	16"	725
8 3/4"	6"	2 1/4"	2 1/4"	75"	16"	575
	6"	2 13/16"	2 1/4"	75"	16"	525
	6 1/4"	2 1/4"	2 13/16"	75"	16"	625
	6 1/4"	2 13/16"	2 1/4"	75"	16"	575
	6 1/2"	2 1/4"	2 13/16"	75"	16"	675
	6 1/2"	2 13/16"	2 1/4"	75"	16"	625
	6 3/4"	2 13/16"	2 13/16"	75"	16"	725
	6 3/4"	2 13/16"	2 13/16"	75"	16"	675
	7"	2 1/4"	2 1/4"	75"	16"	775
	7"	2 13/16"	2 13/16"	75"	16"	725
9 1/2"	7"	2 1/4"	2 1/4"	77"	16"	800
	7"	2 13/16"	2 13/16"	77"	16"	775
	7 1/4"	2 13/16"	2 13/16"	77"	16"	825
	7 1/4"	2 13/16"	2 13/16"	77"	16"	950
	8"	2 13/16"	2 13/16"	77"	16"	1000
9 7/8"	6 1/2"	2 1/4"	2 1/4"	77"	16"	700
	7"	2 1/4"	2 1/4"	77"	16"	825
	7"	2 13/16"	2 13/16"	77"	16"	775
	7 1/4"	2 13/16"	2 13/16"	77"	16"	825
	7 3/4"	2 13/16"	2 13/16"	77"	16"	950
	8"	2 13/16"	2 13/16"	77"	16"	1,025
12 1/4"	7 3/4"	2 13/16"	2 13/16"	81"	18"	1,100
	8"	2 13/16"	2 13/16"	81"	18"	1,150
	8 1/4"	2 13/16"	2 13/16"	81"	18"	1,225
	9"	3"	3"	81"	18"	1,400
	9 1/2"	3"	3"	81"	18"	1,550
	9 3/4"	3"	3"	81"	18"	1,650
	10"	3"	3"	81"	18"	1,725
14 3/4	7 3/4"	2 13/16"	2 13/16"	92"	20"	1,350
	8"	2 13/16"	2 13/16"	92"	20"	1,425
	8 1/4"	2 13/16"	2 13/16"	92"	20"	1,500
	9"	3"	3"	92"	20"	1,700
	9 1/2"	3"	3"	92"	20"	1,875
	9 3/4"	3"	3"	92"	20"	1,975
	10"	3"	3"	92"	20"	2,050
17 1/2"	8"	2 13/16"	2 13/16"	97"	20"	1,650
	8 1/4"	2 13/16"	2 13/16"	97"	20"	1,725
	9"	3"	3"	97"	20"	1,950
	9 1/2"	3"	3"	97"	20"	2,125
	9 3/4"	3"	3"	97"	20"	2,225
	10"	3"	3"	97"	20"	2,325
	10 1/2"	3"	3"	97"	20"	2,525
	11"	3"	3"	97"	20"	2,725

JA WELDED BLADE STABILIZER

JA Oilfield's Welded Blade Stabilizer is primarily used in soft to medium formations. Industry standards for welding downhole drilling tools are strictly followed to ensure operators of superior weld integrity of the blades to the stabilizer body.

Stabilizer bodies are manufactured from 4145H modified, quenched and tempered material. They are pre and post-heated to assure weld penetration. Bodies are ultrasonically and mag-particle inspected for cracks and flaws.

Extra long and wide blades are used for better stabilization. Both spiral and straight blade configuration are available at the user's request. Bodies can be dressed with a 3 or 4 blade design.

Choice of Hardfacing

- Plasma Transfer Arc (PTA)
- Tube Borium
- Tungsten Carbide Inserts
- Geothermal
- Tungsten Carbide Composite Rod

JA Oilfield welded blades are fabricated in a wide variety of configurations and hole sizes. They can be tailor-made to meet customer bottom-hole assembly (BHA) requirements, both in terms of performance and dependability.

How to Order

1. Hole size or required blade O.D.
2. Number of blades required (3 or 4 are standard styles)
3. Straight or spiral blades
4. Hardfacing type (Tungsten Carbide, Geothermal, T.C.I. Tube Borium)
5. Top and Bottom Connections
6. Body diameter required
7. String or Near Bit application
8. Necessary special features (Stress Relief Groove(SRG) on connections, bored for float, non-mag body, non-mag blades up to 12-1/4" O.D. straight only)

WELDED BLADE STABILIZER STANDARD SPECIFICATIONS

Hole Size or Blade O.D. Ranges	Min. to Max. Body Dia.	Max. Std. Length	Max. Finishing Neck Length	Std. Blade Length	Max. Std. Tong Length	Bore I.D.		Blade Width 3 or 4 Count	Min. Crown Length	Approx. Weight (lbs.)
						Near Bit	String			
4 1/8" - 4 3/4"	3 1/8" - 3 7/8"	60"	28"	14"	18"	1 1/2"	2"	1 1/2"	12.7"	115
5 5/8" - 6 1/8"	4 5/8" - 4 3/4"	60"	28"	14"	18"	1 1/2"	2"	1 1/2"	12.6"	200
6 1/4"	4 5/8" - 5"	60"	28"	14"	18"	1 1/2"	2"	1 1/2"	12.5"	210
6 1/2" - 6 3/4"	4 5/8" - 5 1/2"	61"	28"	15"	18"	1 1/2"	2"	2"	13.1"	220
7 3/8" - 7 7/8"	4 3/8" - 6 1/4"	61"	28"	15"	18"	2 1/4"	2 1/4"	2"	12.2"	378
8 3/8" - 8 3/4"	5 5/8" - 7"	61"	28"	15"	18"	2 13/16"	2 13/16"	2"	12.5"	490
9" - 11"	6 5/8" - 8"	64"	28"	15"	21"	2 13/16"	2 13/16"	3"	11.6"	810
12" - 17 1/2"	7 1/2" - 11"	66"	28"	18"	20"	2 13/16"	2 13/16"	3"	10.1"	1170
18 1/2"	7 1/2" - 11"	66"	28"	20"	18"	2 13/16"	2 13/16"	3"	11.3"	1775
5"			9 1/2"	9 1/2"	9 3/4"	7 5/8"	3"	86"	24"	1285

KEY SEAT WIPERS

JA Oilfield's Key Seat Wipers are most effective for reaming out key seats when pulling out of the hole using the single-clutch ascent type, or using the double-clutch dual-action ascent-descent type when reaming in and out of the hole.

The Key Seat Wiper is an active two piece body made from 4145H modified, quenched and tempered steel. The top and bottom mandrel are connected with a two-stage ACME thread and are shrink fitted. The clutch ring is shrink-fitted as well.

The key seat reaming tool is a sleeve with five blades dressed with an aggressive tungsten carbide hardfacing, SUPERLOY or tube borium.

Operation and Application

The Key Seat Wiper is placed in the string between the drill pipe and the drill collars. During drill ahead operations, the non-rotating sleeve will not ream the formation. In case of over-pull – when tripping out drill collars or reaming back to shoe through a dogleg – rotate the drillstring while pulling out of hole to cause the clutch ring to transmit rotation to the wiper sleeve and initiate reaming operations.

The wiper blades will enlarge the key seat to allow the passage of the bottom hole assembly through potential tight sections of the hole.

Standard Sizes

As may be required to fit drill string geometry, all sizes of key seat wipers can be manufactured. Key Seat Wipers are most effective when positioned in the drill string in the drill pipe or heavy weight drill pipe sections or between the pipe and the collars.

How to Order

1. Single or Double-clutch Key Seat Wiper
2. Upper and Lower Neck Diameter
3. Upper and Lower Connections
4. Circulation bore
5. Drill collar O.D. or gauge O.D. of wiper sleeve at blades (it is recommended that the O.D. of the blades on the sleeve be ¼" larger than the largest drill collar in the string)

KEY SEAT WIPER STANDARD SPECIFICATIONS

Std. DP Size	Std. DC Size	Fish Neck	Blade O.D.	Conn.	Body I.D.	Overall Length	Sleeve Length	Tool Wt. (lbs.)
3½"	4¾"	4¾"	5"	3½" IF	1¾"	86"	24"	365
4½"	6½" - 6¾"	6½" - 6¾"	7"	4½" IF - 4 IF	2 11/16"	86"	24"	695
5"	8"	8"	8¼"	6⅝" REG	2 11/16"	86"	24"	1035
5"	9½"	9½"	9¾"	7⅝" REG	3"	86"	24"	1285

JA HOLE OPENERS

The JA Oilfield's RAPTOR® Hole Openers are designed for both the enlargement of a pilot hole and for large hole applications.

The features that make the JA Oilfield hole opener one of the most rugged in the industry are:

- Solid one piece construction of the Hole Opener body
- Field replaceable cutters available in both Mill tooth or TCI variants to match formation requirements
- Standard bearing cutters and optional sealed journal bearings for extended service life
- Snap-ring changeable jets
- Optimized positioning of jets for effective cutter cleaning and maximum hole cleaning
- 2, 3 and 4 cutter tools
- Box down by Pin up and Box by Box connections
- Bull nose equipped Hole Openers

When ordering bull nose pilot equipped hole openers, specify:

- Solid bull nose
- Circulating bull nose
- Long or short bull nose

The JA Oilfield Hole Opener is available in a range of hole sizes and bull nose pilot options from 5½" to 26"

HOLE OPENER SPECIFICATIONS

Hole Tool Size	Min. Pilot Hole	Box Conn.	No. of Cutters Required	Weight/ Body (lbs.)	WT/Set Cutters (lbs.)
5⅞" – 6"	3⅞"	2⅜"	2	177	9
6¼" - 6½"	4¼"	2⅜"	2	178	9
6⅝" - 6⅞"	4⅝"	2⅜"	2	179	9
7⅝"	5⅜"	3½"	2	328	17
7⅞"	5⅜"	3½"	2	330	17
8¼" - 8½"	5⅝"	3½"	3	392	28
8⅜" - 8¾"	5¾"	3½"	3	410	28
9½" - 9¾"	6¼"	3½"	3	450	40
9⅝" - 9⅞"	6⅜"	3½"	3	457	40
10⅝"	7⅜"	4½"	3	710	48
11"	7¾"	4½"	3	715	48
12" - 12¼"	8⅛"	4½"	3	820	74
13½" - 13¾"	8⅛"	4½"	3	895	96
14¾" - 15¼"	9⅝"	6⅝"	3	1005	115
15½" - 16"	9¾"	6⅝"	3	1100	115
17¼" - 18"	11½"	6⅝" or 7⅝"	3	1185	175
20"	13½"	6⅝" or 7⅝"	3	1430	175
21"	13½"	6⅝" or 7⅝"	3	1430	175
22"	13½"	6⅝" or 7⅝"	3	1430	175
23"	13½"	6⅝" or 7⅝"	3	1430	175
24"	13½"	6⅝" or 7⅝"	3	1430	175
26"	13½"	6⅝" or 7⅝"	3	1430	175

How to Order

1. Hole size
2. Fishing Neck
3. Upper Connection type and size
4. Lower Connection type and size
5. Bull nose style
6. If spare cutter set is required

Unless otherwise specified, standard mill tooth cutters will be supplied

The JA Oilfield Sta*BR*eamer® combines the stabilization function of the Integral Blade Stabilizer and hole gauge quality maintenance of the Roller Reamer for reliability and drilling performance in borehole enlargement operations in a single sub.

The JA Oilfield Sta*BR*eamer® is a product of application-focused design and an exacting manufacturing process. The StaBReamer® assembly provides a functionally efficient and operationally effective approach for configuring a bias-neutral BHA to drill vertical wells and hold hole angle in directional wells, even in highly dipping formations.

- Provides gauge protection with enhanced stabilization value for directional control
- Shorter BHA with more active components to provide better drilling performance
- Reduce number of connections
- Increase Stabilizer service life and in special BHA configurations increase bit gauge endurance
- Reduce Vibration – with more contact points
- Better drill string centralization in the well bore

JA Sta*BR*eamer® COMBO TOOL

Three- Point Reamer					Stabilizer				
							Bore I.D.		
Hole Size	Cutter Size	Bearing Pin Size	Bearing Blocks ID Size and Type	Cross Pins (Dia)	Max Body Dia. (A)	Std. Max Blade Length	Near Bit	String	Max Blade Width
4 1/8"	1 3/8"	3/4"	3/4" A	1/4"	3 1/8" - 3 7/8"	16"	1 1/2"	2"	2"
4 5/8"	1 1/2"	7/8"	7/8" A	1/4"					
4 3/4"	1 1/2"	7/8"	7/8" B	1/4"					
5 5/8"	2"	1"	1" A	5/16"	4 3/8" - 4 3/4"	16"	1 1/2"	2"	2"
5 7/8"	2"	1	1" C	5/16"					
6"	2"	1"	1" A	5/16"					
6 1/8"	2"	1"	1" B	5/16"					
6 1/4"	2"	1"	1" C	5/16"					
6 1/2"	2"	1"	1" E	5/16"					
7 5/8"	2 5/8"	1 3/8"	1 3/8" A	1/2"	4 3/8" - 6 1/4"	18"	2 1/4"	2 1/4"	2 1/2"
7 7/8"	2 5/8"	1 3/8"	1 3/8" C	1/2"					
8 3/8"	2 5/8"	1 3/8"	1 3/8" A	1/2"	5 5/8" - 7"	18"	2 13/16"	2 13/16"	2 1/2"
8 1/2"	2 3/4"	1 3/8"	1 3/8" A	1/2"					
8 5/8"	2 3/4"	1 3/8"	1 3/8" B	1/2"					
8 3/4"	2 3/4"	1 3/8"	1 3/8" C	1/2"					
9 1/2"	3 1/8"	1 3/4"	1 3/4"A	1/2"	6 5/8" - 8"	18"	2 13/16"	2 13/16"	3 1/4"
9 5/8"	3 1/8"	1 3/8"	1 3/8" A	1/2"					
9 7/8"	3 1/8"	1 3/8"	1 3/8" B	1/2"					
10 5/8"	3 1/4"	1 3/4"	1 3/4"A	1/2"					
11"	3 1/4"	1 3/4"	1 3/4" A	1/2"					
12"	4"	2 1/4"	2 1/4" C	1/2"	7 1/2" - 10"	20"	2 13/16"	2 13/16"	3 1/4"
12 1/4"	4"	2 1/4"	2 1/4" E	1/2"					
13 3/4"	4"	2 1/4"	2 1/4" E	1/2"					
14 3/4"	5 1/2"	2 1/2"	2 1/2"A	7/8"					
15	5 1/2"	2 1/2"	2 1/2" C	7/8"					
17 1/2"	5 1/2"	2 1/2"	2 1/2" E	7/8"					
18 1/2"	5 1/2"	2 1/2"	2 1/2" A	7/8"	7 1/2" - 10"	20"	2 13/16"	2 13/16"	3 1/4"
20"	5 1/2"	2 1/2"	2 1/2" M	7/8"					
24"	7"	3"	3" A	7/8"					
26"	7"	3"	3" C	7/8"					

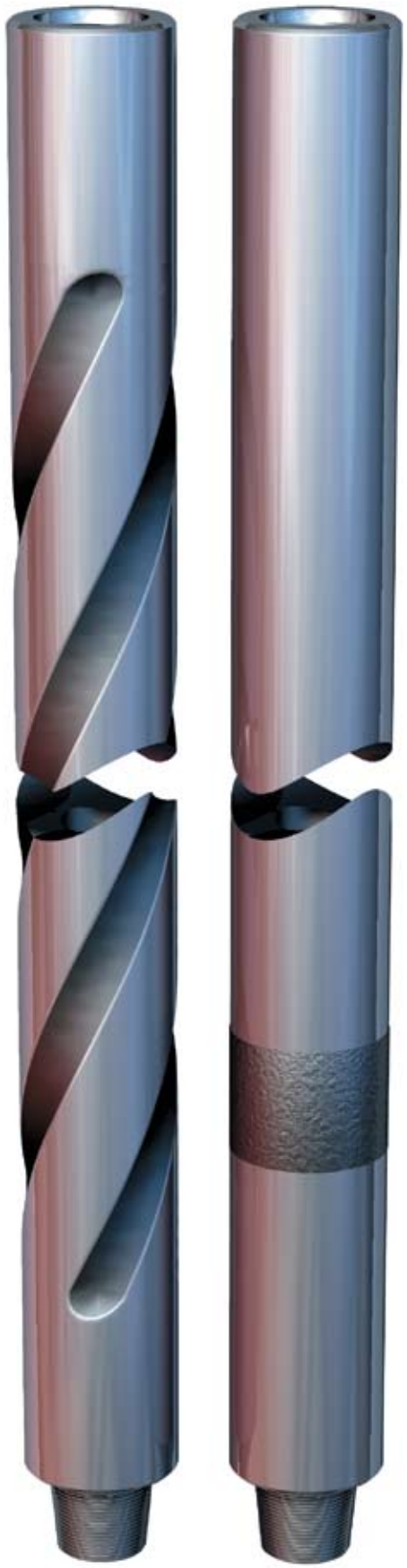
STEEL DRILL COLLARS

JA Oilfield Drill Collars are manufactured from 4145H modified quenched and tempered steel. Strict metallurgical specifications are followed to ensure that full length heat treating produces a consistent maximum depth of hardness.

Standard Features

The bores are held to close tolerances by trepanning and are drifted to API specifications. The outside surface is "as-rolled", which is the original mill finish. Connections are machined to API specifications and monogrammed with the API symbol. Connections are also kemplated to prevent galling.

Thread roots are "cold rolled" to provide longer fatigue life. Steel drill collars are offered both in a slick and spiral O.D. Spiraling the collars reduces wall contact between the drill collar and the wall of the hole to prevent differential wall sticking.



STANDARD SIZES, BORES & CONNECTIONS

Drill Collar Conn/ Size and Type	Minimum OD	Bore ± 1/16"	Length	Bending Strength Ratio**	Weight of 31-ft Drill Collar (lb.)
NC 26-35 (2 3/4" IF)	3 1/2"	1 1/2"	30'	2.42:1	801
NC 31-41 (2 7/8" IF)	4 1/8"	2"	30'	2.43:1	1,041
NC 38-47 (3 1/2" IF)	4 3/4"	2 1/4"	31'	1.85:1	1,451
NC 38-50 (3 1/2" IF)	5"	2 1/4"	31'	2.38:1	1,652
NC 44 - 60	6"	2 1/4"	31'	2.49:1	2,561
NC 44 - 60	6"	2 13/16"	31'	2.84:1	2,353
NC 44 - 62	6 1/4"	2 1/4"	31'	2.91:1	2,806
NC 46 - 62 (4" IF)	6 1/4"	2 13/16"	31'	2.63:1	2,598
NC 46 - 65 (4" IF)	6 1/2"	2 1/4"	31'	2.76:1	3,085
NC 46 - 65 (4" IF)	6 1/2"	2 13/16"	31'	3.05:1	2,877
NC 46 - 67 (4" IF)	6 3/4"	2 1/4"	31'	3.18:1	3,364
NC 50 - 70 (4 1/2" IF)	7"	2 1/4"	31'	2.54:1	3,643
NC 50 - 70 (4 1/2" IF)	7"	2 13/16"	31'	2.73:1	3,434
NC 50 - 72 (4 1/2" IF)	7 1/4"	2 13/16"	31'	3.12:1	3,714
6 5/8" Reg.	8"	2 13/16"	31'	2.60:1	4,675
6 5/8" Reg.	8 1/4"	2 13/16"	31'	2.93:1	5,016
7 5/8" Reg.	9 1/2"	3"	31'	2.81:1	6,727
7 5/8" Reg.	9 3/4"	3"	31'	3.09:1	7,130
7 5/8" Reg.	11"	3"	30'	2.78:1	8,970

** Ratio of box-to-pin section modulus. See API Spec. RP 7G for explanation

SPECIAL DRILL COLLAR FEATURES

Stress Relief Features

Stress relief features are recommended for drill collars as well as all downhole drilling tools where cyclic fatigue may occur from bending. The **API relief groove on the pin and the boreback on the box** remove unengaged threads in highly stressed areas of the drill collar connection. This provides a more flexible connection less likely to crack in fatigue because bending in the connection occurs in areas with smooth surfaces free of stress concentrations.

Slip and Elevator Recesses

Slip and elevator recesses are designed to cut drill collar handling time by elimination lift subs and safety clamps. Extreme care is taken to machine smooth radii free of tool marks.

Added fatigue life is obtained by cold rolling radii at the upper shoulders with a specially designed cold rolling tool.

Hardbanding

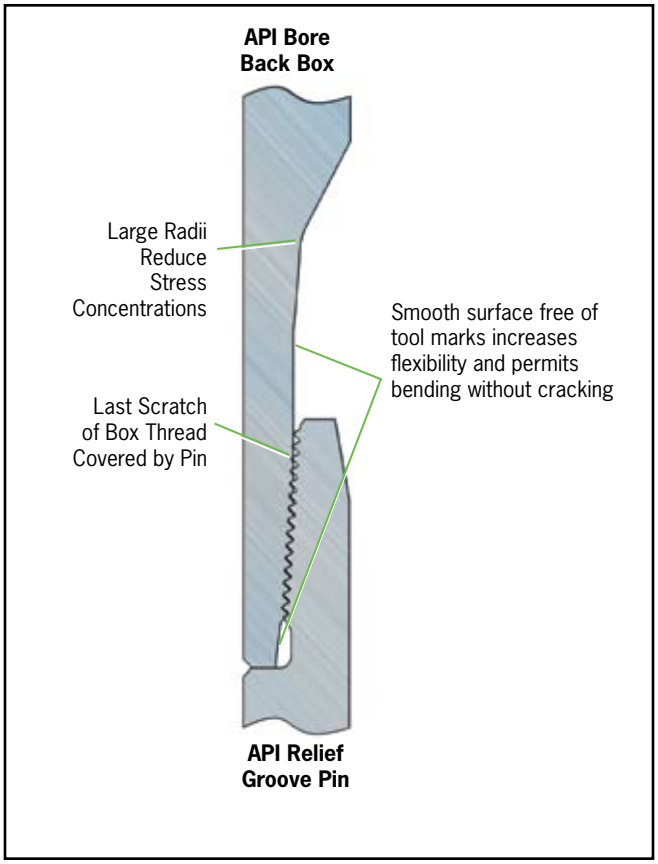
Hardbanding material consists of granular tungsten carbide that is fed automatically into the molten weld puddle to obtain uniform distribution of the tungsten carbide particles.

The resulting deposit of hardbanding is flush to 1/32" above the OD of the collar. Hardbanding on the box end (endless for the special purpose of protecting slip and elevator recesses) is not recommended because the hardbanding covers the normal slip area.

Ordering Instructions:
When ordering or requesting quotations on drill collars, please specify:

1. Drill collar OD
2. Drill collar ID
3. Overall length
4. Connections required (size and type)
5. Indicate preference for pressed or cast steel thread protectors
6. Special features desired, for example:
   Slick or Spiral
   Stress Relief Features
   Slip and/or Elevator Recess
   Hardbanding

Stress Relief Options



NON MAGNETIC STAINLESS DRILL COLLARS

JA Oilfield offers a full range of Non-Magnetic Stainless Steel Drill Collars for Horizontal and Directional drilling applications.

CHEMICAL COMPOSITION							
Cr	Si	S	Mn	Cr	Ni	Mo	N_2
0.3	1.0	0.01	18/20	13/15	2.5	1.0	0.2/0.4
Max	Max	Max			Max	Max	

MECHANICAL COMPOSITION			
	Minimum Yield	Minimum Tensile	Minimum Elongation
Up thru 7" OD	110,000	130,000	18%
7¼" thru 11" OD	100,000	120,000	20%
11" OD and above	90,000	110,000	20%

Magnetic Permeability

1.009 Maximum

Corrosion Resistance

To deter stress corrosion cracking, all of our Non-Mag material has the ID treated with a shot peening operation. This compresses the inside diameter, and has been very successful in preventing stresses from forming while drilling in chloride or H_2S atmospheres (sour gas) drilling environments.

Warranty

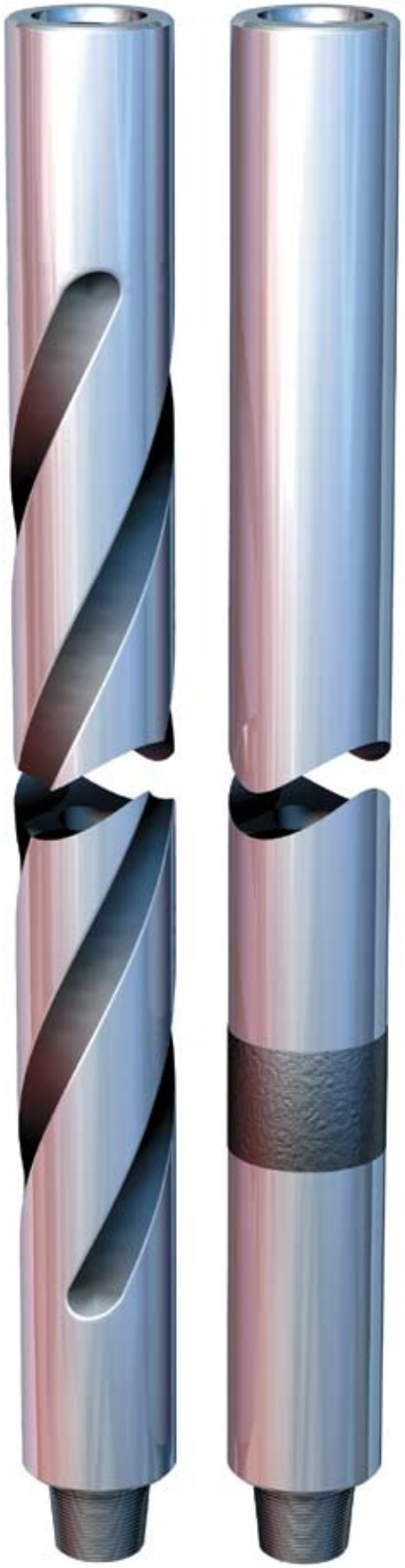
JA Oilfield Non-Mag is accompanied with a warranty for standard mill coverages, as well as a warranty against stress corrosion cracking. (A copy of the warranty is available upon request.)

Available Sizes - Ready to Deploy

- 4¾" OD x 2¼" ID
- 6¼" OD x 2¼" ID
- 6¼" OD x 2 13/16" ID
- 6½" OD x 2¼" ID
- 6½" OD x 2 13/16" ID
- 7" OD x 2 13/16" ID
- 7¼" OD x 2 13/16" ID
- 7¾" OD x 2 13/16" ID
- 8" OD x 2 13/16" ID
- 8½" OD x 2 13/16" ID
- 9" OD x 3" ID
- 9½" OD x 3" ID

Other Sizes Available on Request

Our Non-mag material is stocked in the "Blank End" condition. We also offer the product threaded upon request. All API tool joint connections are available and will be furnished with the API monogram and pressed steel thread protectors installed.



NON-MAG DRILL COLLAR LENGTH SELECTION GUIDE

Minimizing Magnetic Surveys Errors

Non-magnetic drill collars offer strength and hardness while preventing magnetic interference that may impair accuracy of magnetic surveys. To obtain accurate vertical, directional and bottom hole surveys, JA Oilfield non-magnetic drill collars isolate sensitive directional measurement tools from interference by steel BHA components for a true reading of the earth's magnetic field.

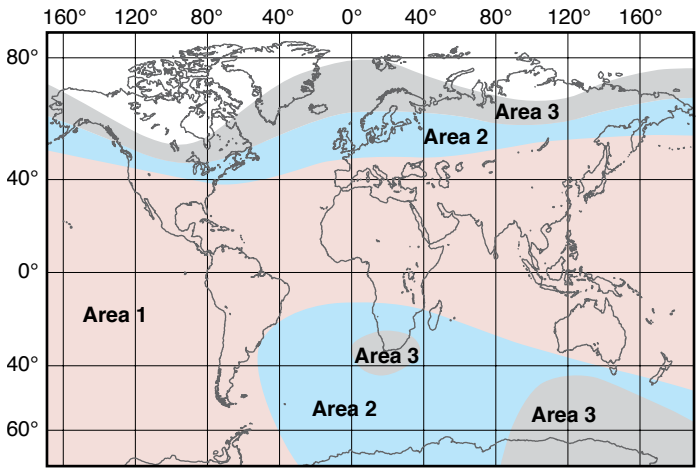
The non-magnetic drill collars are compatible with other standard drill string components and non-magnetic integral blade stabilizers, welded blade stabilizers and subs are available upon request.

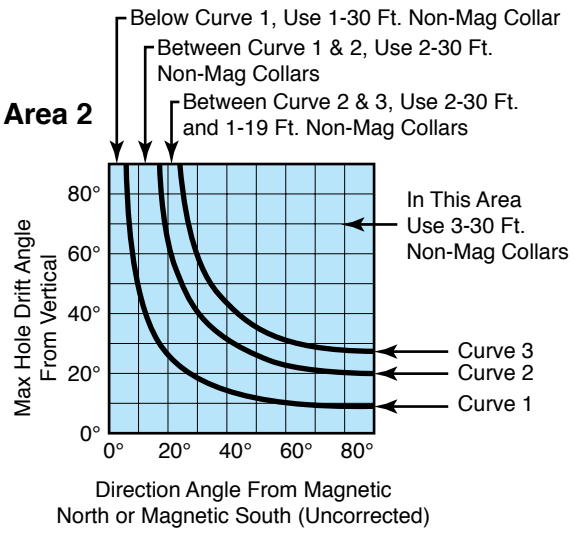
Well Location Determines String Lengths

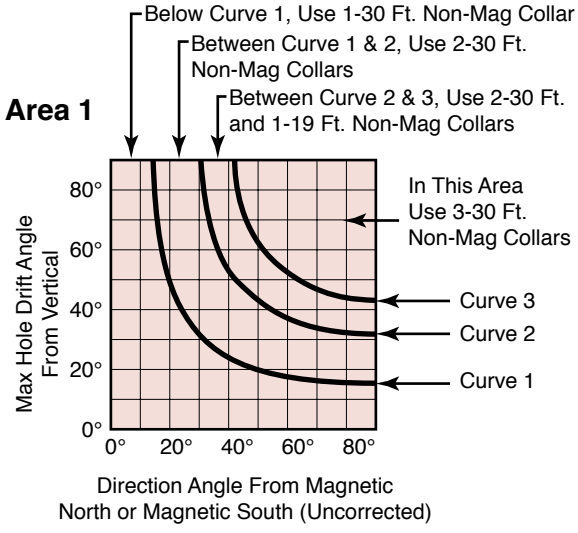
In areas closer to the earth's magnetic poles, long sections of our nonmagnetic collars and stabilizers are used. Determine the total length of the collars required by referring to the global map and the corresponding empirical data chart.

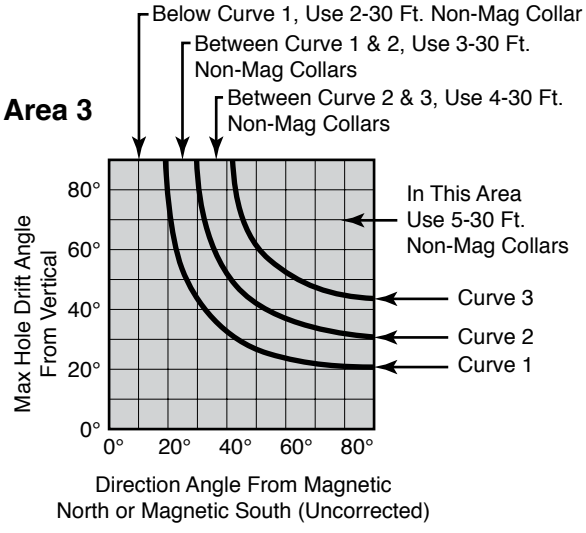
Ordering Information Please Specify:

1. Drill collar outside diameter, bore diameter, and length of collar.
2. Size and Type of Upper and Lower Connection.
3. Cast Steel or Pressed steel thread protectors.
4. Special Features Desired.









HEAVY WEIGHT DRILL PIPE

JA Oilfield Heavy Weight Drill Pipe is an intermediate weight drill string member with drill pipe dimensions for easier handling. JA Oilfield offers heavy weight drill pipe in standard, spiraled and non-magnetic models.

To optimize wear resistance, hardbanding is standard on tool joint connections and the center upset. This heavy duty hard metal application is a closely controlled welding process applied with an automatic hardbanding machine. Flush hardbanding is applied as follows:

- 4" flush with OD and 1 inch on taper on the Box Connection End
- 5" flush with OD on the Pin Connection End
- 2 x 3" long bands on each end of the center upset

API stress relief groove on pin and bore back relief feature on boxes are standard on the 4-½" and 5" Heavy Weight Drill Pipe. All connections are cold rolled, kemplated and furnished with pressed steel thread protectors. All connections are monogrammed with the API stamp.

STANDARD HEAVY WEIGHT DRILL PIPE DIMENSIONAL DATA

Nom. Size	Approx. Overall Length	Tube					Tool Joint			Weight Including Tube and Joints (lb.)	
		Nominal Tube Dimension		Area (in.²)	Center Upset OD	Elevator Upset	Connection Size	OD	ID	Weight/ft.	Weight/ Joint 30 ft.
		ID	Wall Thick-ness								
3½"	30.5'	2¼"	0.625"	5.645	4"	3⅝"	NC 38(3½" IF)	4¾"	2⅜"	23.2	695
4"	30.5'	2 9/16"	0.719"	7.410	4½"	4⅛"	NC 40(4" FH)	5¼"	2 11/16"	27.2	815
4½"	30.5'	2¾"	0.875"	9.965	5"	4⅝"	NC 46(4" IF)	6¼"	2⅞"	41.0	1,230
5"	30.5'	3"	1.000"	12.566	5½"	5⅛"	NC 50(4½" IF)	6⅝"	3 1/16"	49.7	1,480
5½"	30.5'	3⅛"	1.063"	14.812	6"	5 11/16"	5½" FH	7"	3½"	57.0	1,710
6⅝"	30.5'	4½"	1.063"	18.567	7⅛"	6¾"	6⅝" FH	8"	4½"	70.8	2,125

SPIRALED HEAVY WEIGHT DRILL PIPE DIMENSIONAL DATA

Nom. Size	Approx. Overall Length	Tube					Tool Joint			Weight Including Tube and Joints (lb.)	
		Nominal Tube Dimension		Area (in.²)	Center Upset OD	Elevator Upset	Connection Size	OD	ID	Weight/ft.	Weight/ Joint 30 ft.
		ID	Wall Thick-ness								
3½"	30.5'	2¼"	0.625"	5.645	4"	3⅝"	NC 38(3½" IF)	4¾"	2⅜"	26.7	800
4"	30.5'	2 9/16"	0.719"	7.410	4½"	4⅛"	NC 40(4" FH)	5¼"	2 11/16"	31.0	930
4½"	30.5'	2¾"	0.875"	9.965	5"	4⅝"	NC 46(4" IF)	6¼"	2⅞"	45.0	1,350
5"	30.5'	3"	1.000"	12.566	5½"	5⅛"	NC 50(4½" IF)	6⅝"	3 1/16"	54.0	1,620
5½"	30.5'	3⅛"	1.063"	14.812	6"	5 11/16"	5½" FH	7"	3½"	62.7	1,880
6⅝"	30.5'	4½"	1.063"	18.567	7⅛"	6¾"	6⅝" FH	8"	4½"	76.3	2,290

BENDING STRENGTH RATIOS

Heavy Weight Drill Pipe Size	Maximum Drill Collar Size	Bending Strength Ratio
3½"	5¾" x 2¼"	$^{18.2}/_{3.5}$ = 5.2
4"	6½" x 2¼"	$^{26.5}/_{5.2}$ = 5.1
4½"	7¼" x 2 13/16"	$^{36.5}/_{7.7}$ = 4.7
5"	8¼" x 2 13/16"	$^{54.3}/_{10.7}$ = 5.1
5½"	9" x 2 13/16"	$^{70.8}/_{14.0}$ = 5.1
6¾"	10½" x 3"	$^{113}/_{22.4}$ = 5.0

Indicates the largest size drill collar to be run directly below Heavy Weight drill pipe. If drill collars larger than the maximum size shown are to be used, run at least three collars of the maximum size shown between the large drill collar and the heavy weight drill pipe.

ROTARY KELLYS

JA Oilfield Kellys are manufactured from 4145H modified quenched and tempered forged bar with a hardness range of 285 to 341 BHN and a minimum Charpy V-notch impact value of 40 foot-pounds are guaranteed one inch below the surface at room temperature. All kellys meet mechanical properties listed in Table 15 API RP 7G.

Both ends and the center drive section are full length machined. All kellys are precision bored by trepanning to provide true bores and are drifted to API specifications. When applicable, all Kellys are stamped with the API monogram.

All Hex and Square Kellys are provided installed in a shipping scabbard to protect the milled area during transit, and furnished with a pressed steel thread protectors.

Standard lengths are: 40", 43", 46" and 54".

How to Order

1. Type of Kelly: Hexagonal or Square Kelly
2. Nominal Size
3. Length - Overall
4. Length – Working Headroom
5. Size and Type of Top Connections
6. Size and Type of Bottom Connection
7. Top Upset – OD
8. Bottom Upset – OD
9. If Shipping Scabbard is required

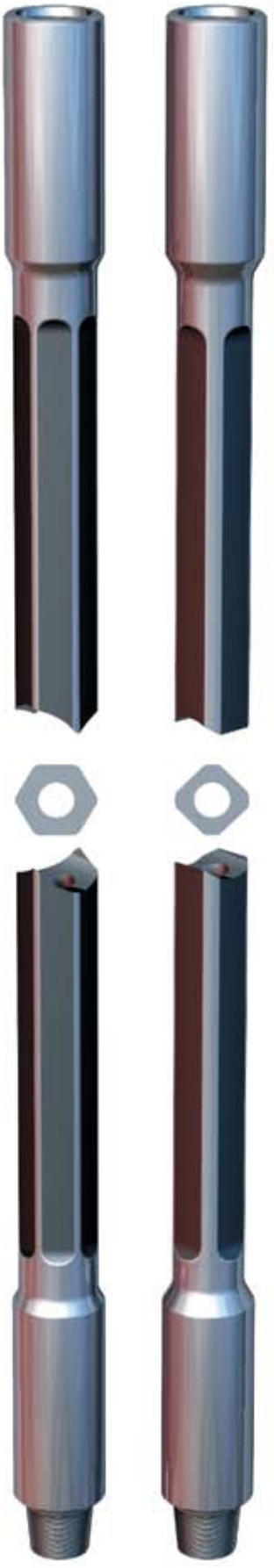
SQUARE KELLY SPECIFICATIONS

Nominal Size	Top Upset Joint		Bottom Upset		Bore	Drive Section		Approx. WT/FT (lbs.)
	API Box Thread (Left Hand)	OD	Right – Hand Connections	OD		Across Corners	Across Flats	
3"	6 3/4" Reg. 4 1/2" Reg.	7 3/4" 5 3/4"	NC 31 (2 3/8" IF)	4 1/8"	2"	3.875"	3"	24 22
3 1/2	6 5/8" Reg. 4 1/2" Reg.	7 3/4" 5 3/4"	NC 38 (3 1/2" IF)	4 3/4"	2 1/4"	4.437"	3 1/2"	32 29
4 1/4"	6 5/8" Reg.	7 3/4"	NC 46 (4" IF) NC 50 (4 1/2" IF)	6" - 6 3/8" 6 1/8" - 6 3/8"	2 13/16"	5.500"	4 1/4"	49 46
5 1/4"	6 5/8" Reg.	7 3/4"	NC 56 or 5 1/2" FH	7"	3 1/4"	6.750"	5 1/4"	55
6"	6 5/8" Reg.	7 3/4"	6 5/8" Reg.	7 3/4"	3 1/2"	7.625"	6"	60

HEXAGONAL KELLY SPECIFICATIONS

Nominal Size	Top Upset Joint		Bottom Upset		Bore	Drive Section		Approx. WT/FT (lbs.)
	API Box Thread (Left Hand)	OD	Right – Hand Connections	OD		Across Corners	Across Flats	
3"	6 3/4" Reg. 4 1/2" Reg.	7 3/4" 5 3/4"	NC 31 (2 3/8" IF)	3 3/8"	1 1/2"	3.375"	3"	24 22
3 1/2"	6 5/8" Reg. 4 1/2" Reg.	7 3/4" 5 3/4"	NC 31 (3 1/2" IF)	4 1/8"	2"	3.937"	3 1/2	32 29
4 1/4"	6 5/8" Reg.	7 3/4"	NC 38 (3 1/2" IF)	4 3/4"	2 1/4"	4.781"	4 1/4"	49 46
5 1/4"	6 5/8" Reg.	7 3/4"	NC 46 (4" IF) NC 50 (4 1/2" IF)	6" - 6 3/8" 6 1/8" - 6 3/8"	2 13/16" 3"	5.900"	5 1/4"	55
6"	6 5/8" Reg.	7 3/4"	NC 56 or 5 1/2" FH	7"	3 1/2"	6.812"	6"	60

WT/FT based on average 40ft. lengths



ROTARY SUBS

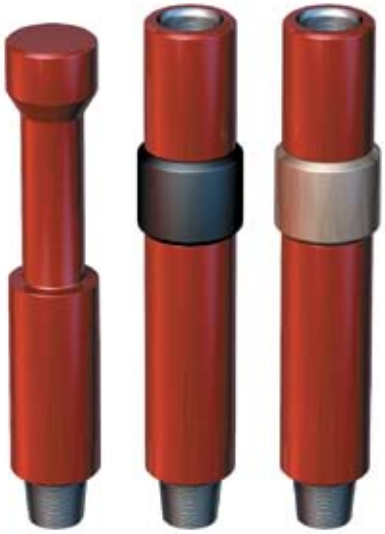
Reduced O.D. Box/Pin

Straight O.D. Box/Pin

Lift Plug Box/Pin

Straight O.D. Pin/Pin

Straight O.D. Box/Box



Lift Sub

Saver Sub Box/Pin

Saver Sub Box/Pin

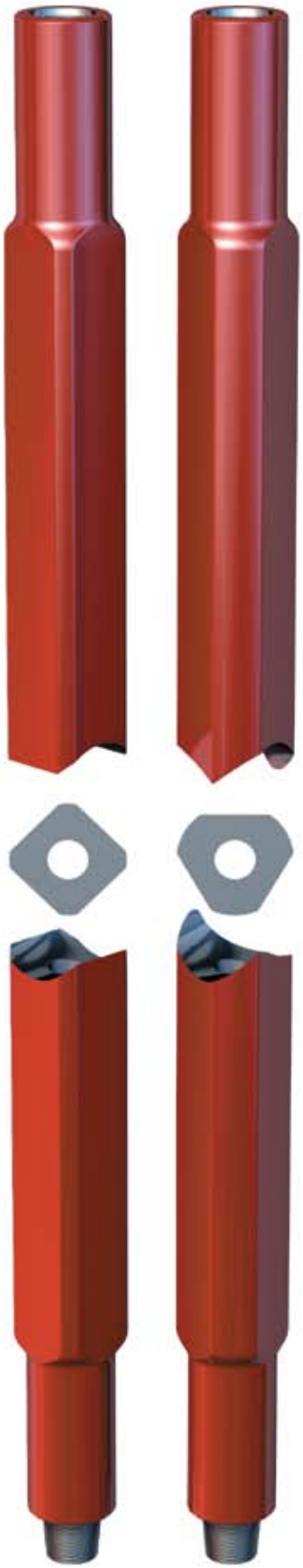
JA Oilfield Rotary Subs are made from 4145 H modified quenched and tempered material to API specifications, and carry the API monogram. All connections are cold rolled saver sub and kemplated and furnished with pressed steel thread protectors.

How to Order

1. Type of Kelly sub required
2. Length - Overall
3. Largest diameter required
4. ID required
5. Size and Type of upper and lower connections, indicate pin or box
6. On reduced section subs - indicate both OD's required
7. On lift subs - indicate bottleneck w/18" tapered shoulders or wafer top
8. On kelly saver subs - indicate whether or not rubber sleeve is required.

JA SQUARE DRILL COLLARS AND TRI-COLLARS

JA Oilfield's Square Drill Collars and Tri-Collars are run in packed hole assemblies to reduce rapid changes in crooked hole formations. While both afford the needed rigidity to accommodate weight on bit requirements to achieve desired rates of penetration, the Tri-Collar design allows for enhanced fluid circulation and less potential for differential sticking. Square Drill Collars are available in hole sizes 6 inches thru 17 inches. Tri-Collars are available in hole sizes 6 inches thru 12 1/2 inches



REPAIRS

JA Oilfield Manufacturing, Inc. maintains a plant for the repair of down-hole tools in Oklahoma City, Oklahoma.

We utilize stringent quality control procedures and modern machining techniques. We are continuously seeking improvements to quality and reliability of our manufacturing and repair work to exceed API Certification and recognized industry standards.

The following is a listing of tool repair services we provide:

- Straightening
  - Kellys
  - Collars
  - Drill Pipe
- Turning Down O.D.
- Re-cutting and changing connections
- Machining O.D.
  - Slips
  - Elevators
- Stubbing
- Replacing Kelly Ends
- Hard band application
- Build Up
- Refacing Shoulders and Chasing Threads Kelly Saver Sub Rubber Replacement
- Hardness Testing
- Junk Basket Replacement
- Saw Cutting

Our array of equipment for repairs and product manufacturing include CNC machining centers, Lathes and Automatic Welding Machines. Since opening shop in 1980, JA Oilfield Manufacturing, Inc. has repaired and serviced oilfield equipment with one goal – TO CARRY OUT THE BEST REPAIR AND MANUFACTURING WORK BACKED WITH OUR GUARANTEE OF PROMPT SERVICE AT THE MOST COMPETITIVE PRICES.

JA OILFIELD
MANUFACTURING, INC.

Oklahoma City
2101 S.E. 67th
Oklahoma City, OK 73149
Toll Free Phone: 1-800-523-3031
1-405-672-0923

Odessa, Texas
2912 East I-20
Odessa, TX 79766
Phone: 432-580-7595
Fax: 432-580-7569

Bridgeport, Texas
254-B County Road 3505
Bridgeport, TX 76426
Toll Free Phone: 1-800-523-3031

www.jaoilfield.com
info@jaoilfield.com