

## **Double Knuckle Joint**

### Augments jarring performance in deviated wells

Impact Selector's Limited Articulation Double Knuckle Joint is designed with mechanical jarring in mind. Industry standard knuckle joints are typically manufactured with a 10° to 15° deflection angle taken from the center line. Impact Selector's Knuckle Joints are limited to 5°. A 5° axis shift ensures a continual linear platform throughout the tool string with full flexibility, allowing tool strings to negotiate restrictions and upsets within the well.

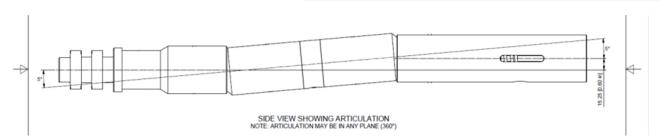
The Double Knuckle joint when used in combination with the High Deviation Roller Bogie® Jar and Roller Bogie® system can augment jarring performance in deviated wells. The Double Knuckle Joint is available with all industry standard connections and as a single or double knuckle.

#### **Features:**

- Robust design to accommodate mechanical jarring impact.
- Limited 5° axis shift ensures continual linear platform throughout tool string.

#### **Benefits:**

- Minimal angular movement eliminates over-flex.
- Maximizes load transfer between Jar and larger lower tool string component when flexed.



Specifications				
Size (inches)	*Weight (lb)	*Length (inches)	Service Type	Connection Type
1.250	2	17	Standard and Sour service available	All connections available to suit customer specification
1.500	7	16		
1.750	10	17		
1.875	11	16		
2.125	15	17		
2.500	23	20		

<sup>\*</sup>Tool weights and lengths are average values per Knuckle Joint size. Also available as single Knuckle Joints.







# Where Advanced Technology and Responsive Service Come Together to Reduce the Risk

For over 2 decades, Impact Selector has served the upstream oil and gas markets with innovative products and services that enhance formation evaluation and well intervention activities. Impact Selector is committed to the success of our customers by combining operational experience, creative design, state-of-the-art manufacturing, and product testing facilities to provide *Intelligent Conveyance* products and services worldwide to reduce costs and minimize risk.

#### **Products**

#### **Open Hole Wireline**

- MFT/MFT HPHT Multiconductor Jar
- MCX/MCX HPHT Multiconductor Jar
- SMART Jar™
- Wireline Stand Off
- Wireline Tool Stand Off
- Roller Bogie Hole Finder
- Bull Nose Roller Hole Finder
- Roller Bogie® Systems
- ImpactPro Prediction Analysis Software

#### **Cased Hole E-Line**

- XCS / XCS HPHT Jar
- Xcalibur Jar
- SMART Sens™ Tension Sub
- Low Friction Tubular Jar
- Roller Bogie® Systems
- Perforating Roller Bogie®
- Guide Roller Bogie<sup>®</sup>
- Orienting Perforating Tool

#### **Cased Hole Slickline**

- Blockbuster Jar
- Intensifier Jar
- Impact SL Jar
- Low Friction Tubular Jar
- Xcalibur Jar
- Roller Bogie<sup>®</sup> Systems
- Guide Roller Bogie®
- High Deviation Roller Bogie® Jar
- Low Loader Roller Bogie® Jar
- Advanced Kickover Tool
- Chemical Jetting Soak Tool
- Double Knuckle Joint
- Flapper Investigation Tool
- Flow Tube Exercising Tool
- Safety Valve Protection Sleeve

#### Services

#### **Leasing and Rental of Wireline Tools**

#### **Consultation Services**

 Operation, Customization, Maintenance and Repair

#### **Research and Development**

- Fast Track New Tool Development
- Turn-Key Engineering Design, Prototype Testing and Manufacturing
- Mechanical and Electrical Engineering
- Modeling Software

# Support 24 hours a day/7 days a week

- Wellsite Operations
- Training
- Maintenance
- Technical

#### Locations

#### Corporate Headquarters 6740 Horizon Road Heath, TX 75032 USA +1 (972) 772-5680

Asia Pacific Sales & Support Impact Selector Ltd. No. 40, Jalan 15/22 Taman Perindustrian Tiong Nam Seksyen 15, 40200 Shah Alam

Selangor, Malaysia

+60 (0) 355 246 988

Engineering and Design 30 Hope Drive Suite 100 Heath, TX 75032 USA +1 (972) 772-5680

Australia Sales & Support Impact Selector Limited Level 8 225 St Georges Terrace Perth WA 6000 Australia +61 420 435 850 Americas Sales & Support 100 Redmond Road Houma, LA 70363 USA +1 (985) 868-2611

Europe, Africa, Russia, Caspian Sales & Support Impact Selector Ltd.

Technology House Blackburn Business Park Blackburn, Aberdeen AB21 OPS Scotland, UK +44 1224 798 000 Americas Sales & Support 9933 Regal Row Houston, TX 77040 USA +1 (972) 809-2510

Middle East Sales & Support Impact Selector Ltd.

Jebel Ali Free Zone RA07 / AA07 PO Box 263312 Dubai, United Arab Emirates +971 (0) 4881 5513





Contact us:

24 hrs a day / 7 days a week Technical Assistance 1-800-238-9239

impact@impactselector.com

