

KNUCKLE JOINT

The **LiMAR**[®] Knuckle Joint is designed to provide a point of flexibility along the length of a wireline toolstring.

Configuring a Knuckle Joint within the toolstring enables it to pass unrestricted over nipple shoulders, tubing crossovers and other points where a rigid toolstring may encounter difficulty.

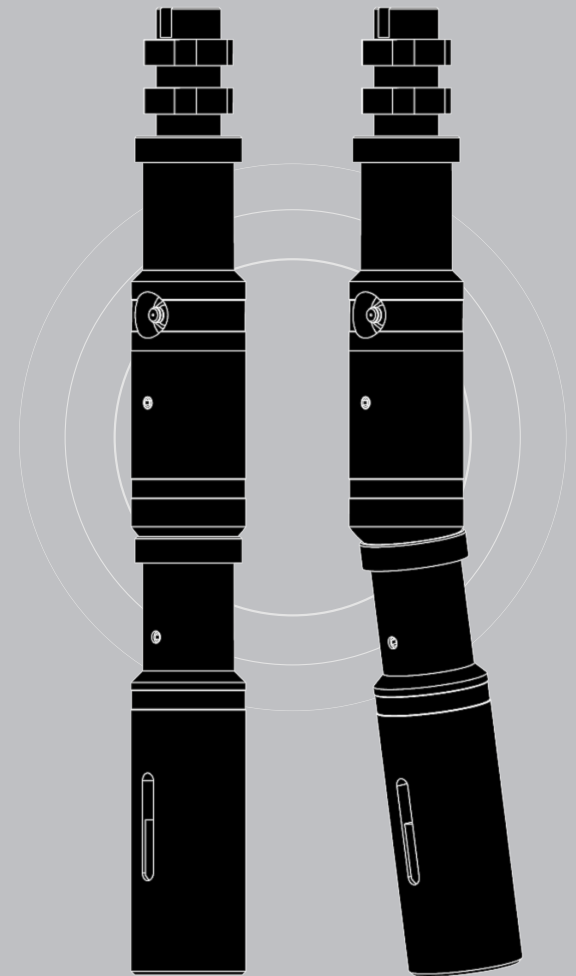
The Knuckle Joint can also be used below the mechanical jars to improve the engagement of ill-positioned objects within the tubing or the location of Gas Lift Valve's within Side Pocket Mandrel's.

TOOL APPLICATIONS:

- To provide a point of flexibility within a wireline toolstring

DESIGN FEATURES & BENEFITS:

- Integral grease nipple for ease of maintenance and operation
- 10 degree deflection angle from centre line
- Contingent fish necks on lower components to enable recovery
- Connection options to suit customer requirements
- Simple, robust design ensuring ease of operation for the end user
- Selected components QPQ treated
- Hexagonal flats for safe make-up & break-out



TECHNICAL DATA

| Assembly Part No. | Actual OD | Fish Neck | Connection | Contingent Fish Neck | Make up Length |
|-------------------|-----------|-----------|------------|----------------------|----------------|
| 1009-1250-XXX-RX | 1.250" | 1.187" | Optional | 1.187" | 11.37" (LQK) |
| 1009-1500-XXX-RX | 1.500" | 1.375" | Optional | 1.375" | 13.17" (LQK) |
| 1009-1750-XXX-RX | 1.750" | 1.375" | Optional | 1.375" | 13.50" (LQK) |
| 1009-1875-XXX-RX | 1.875" | 1.750" | Optional | 1.750" | 13.63" (LQK) |
| 1009-2125-XXX-RX | 2.125" | 1.750" | Optional | 1.750" | 13.88" (LQK) |
| 1009-2500-XXX-RX | 2.500" | 2.313" | Optional | 2.313" | 18.28" (LQK) |

XXX - Last 3 digits of part number denotes connection type
 For additional sizes or further information please contact sales@limaroiltools.com