

Creative
Well Intervention Solutions

a vision

Roller Bogie™
an advanced
wireline conveyance solution



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Wireline Engineering serves its upstream oil & gas customers by developing innovative wireline and flow control products that add tangible value to their well intervention activities. We are committed to the success of all our Customers, by finding smarter, easier and better ways to meet their operational and business goals. Wireline Engineering combines operational experience, creative design, state of the art manufacturing and product testing facilities to generate smart products and fast-track solutions, worldwide.

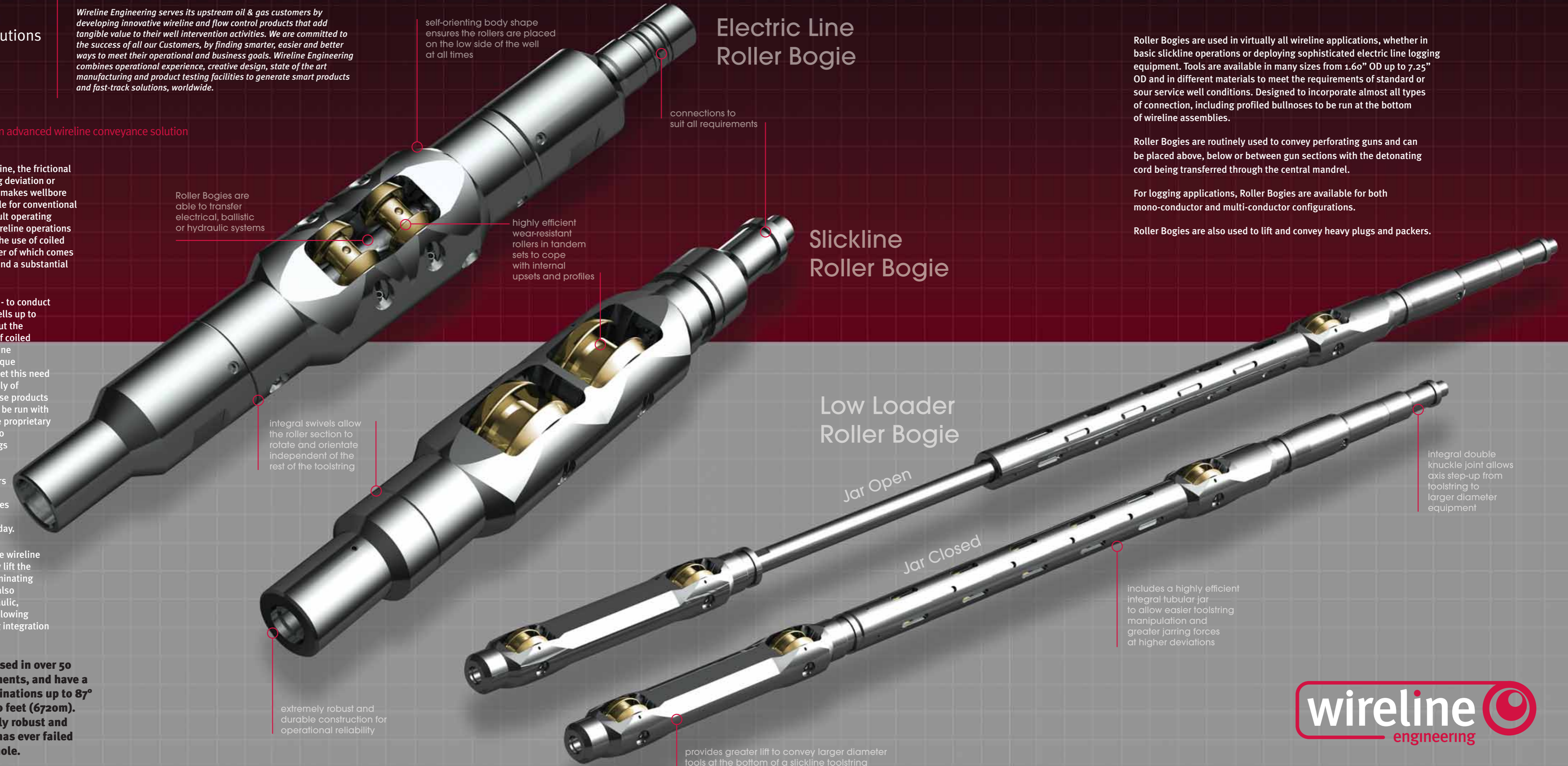
Roller Bogie™ an advanced wireline conveyance solution

Whether it's slickline or electric line, the frictional resistance imposed by increasing deviation or tortuous well profiles frequently makes wellbore access difficult or even impossible for conventional wireline toolstrings. These difficult operating conditions often mean certain wireline operations cannot be performed, requiring the use of coiled tubing or wireline tractors, neither of which comes without increased complexity – and a substantial price tag.

The challenge is straightforward - to conduct reliable wireline operations in wells up to sub-horizontal deviations, without the additional cost or complication of coiled tubing or wireline tractors. Wireline Engineering has developed a unique patented roller technology to meet this need and has engineered it into a family of innovative and functionally diverse products that allow wireline toolstrings to be run with virtually no frictional drag. These proprietary products are equally adaptable to slickline or electric line toolstrings and offer a level of performance that consistently surpasses all other roller products. With 8 years of development and field experience behind it, Roller Bogies are the most effective wireline conveyance product available today.

Installed at strategic points in the wireline toolstring, Roller Bogies not only lift the toolstring on to large rollers, eliminating friction with the tubing, but can also accommodate and transfer hydraulic, electrical or ballistic systems - allowing complete flexibility for toolstring integration and optimum positioning.

Roller Bogies are widely used in over 50 countries across six continents, and have a proven track record at inclinations up to 87° and at depths below 25000 feet (6720m). Roller Bogies are extremely robust and reliable - no Roller Bogie has ever failed or lost components downhole.



self-orienting body shape ensures the rollers are placed on the low side of the well at all times

Electric Line Roller Bogie

connections to suit all requirements

Roller Bogies are able to transfer electrical, ballistic or hydraulic systems

highly efficient wear-resistant rollers in tandem sets to cope with internal upsets and profiles

Slickline Roller Bogie

integral swivels allow the roller section to rotate and orientate independent of the rest of the toolstring

Low Loader Roller Bogie

Jar Open

Jar Closed

integral double knuckle joint allows axis step-up from toolstring to larger diameter equipment

includes a highly efficient integral tubular jar to allow easier toolstring manipulation and greater jarring forces at higher deviations

extremely robust and durable construction for operational reliability

provides greater lift to convey larger diameter tools at the bottom of a slickline toolstring

Roller Bogies are used in virtually all wireline applications, whether in basic slickline operations or deploying sophisticated electric line logging equipment. Tools are available in many sizes from 1.60" OD up to 7.25" OD and in different materials to meet the requirements of standard or sour service well conditions. Designed to incorporate almost all types of connection, including profiled bullnoses to be run at the bottom of wireline assemblies.

Roller Bogies are routinely used to convey perforating guns and can be placed above, below or between gun sections with the detonating cord being transferred through the central mandrel.

For logging applications, Roller Bogies are available for both mono-conductor and multi-conductor configurations.

Roller Bogies are also used to lift and convey heavy plugs and packers.



“ How can I run production logs at 87° deviation without mobilising expensive alternatives to wireline? ”

“ I need to plan my wells for optimum production but instead I'm limiting deviation to accommodate wireline operations – is there a cost-effective solution? ”

“ How can I halve the time to required to perforate by doubling the length of guns that I can easily deploy using wireline? ”

Electric-line Logging and Perforating - Middle East

Various Electric-Line and Perforating Roller Bogies were used to convey reservoir saturation, cement bond log and perforating toolstrings at a wellbore angle of eighty seven (87°) degrees. These toolstrings were all deployed under gravity using Roller Bogies without the need for more expensive intervention techniques such as coiled tubing or wireline tractor. The cost savings, together with reduced personnel requirement and a much lower exposure to overall risk has ensured that Roller Bogies are now regarded as this client's first choice intervention product when faced with challenging wellbore access.

Roller Bogies out-perform intervention simulation – North Africa

A combination of Slickline Roller Bogies and a Low Loader Roller Bogie successfully deployed a selective test tool, setting a production packer at a depth of 13,600 feet and 68 degrees deviation during the installation of a new completion. Using standard roller stem friction coefficients to model the intervention, simulation software had predicted a risk to wire integrity, with a pulling weight close to breaking strain, and had recommended the use of coiled tubing. In the event, the Roller Bogie toolstring was deployed successfully and the actual maximum overpull was recorded at only 35% of the predicted value. All intervention operations were performed successfully and all operational objectives were achieved without incident.

Roller Bogies, Low Loaders & Enhanced Performance Kickover Tools – Southeast Asia

A customer has a number of production wells equipped with gas lift mandrels set at depths below 9,000ft and at deviations greater than 70 degrees. Intervention operations to service these mandrels had always been problematic and sometimes simply impossible. In one particular well, several previous attempts had failed to locate and change out a valve in a mandrel set at 77 degrees – a combination of Roller Bogies and Wireline Engineering's Enhanced Performance Kickover Tool was used to deliver immediate improvement and the valve was changed out first time with no mis-runs. The Low Loader Roller Bogie has now been included in what has become the standard toolstring used in these gas lift operations.

Roller Bogies greatly reduce perforating time – Middle East

A combination of Electric-Line and Perforating Roller Bogies has become a standard part of wireline logging and perforating toolstrings in deviated offshore wells for a Middle East customer. Roller Bogies are used to eliminate frictional drag, allowing much longer perforating gun assemblies to be run and retrieved. This has substantially reduced the time taken to complete perforating operations in each well, resulting in large cost savings.

Slickline Roller Bogie

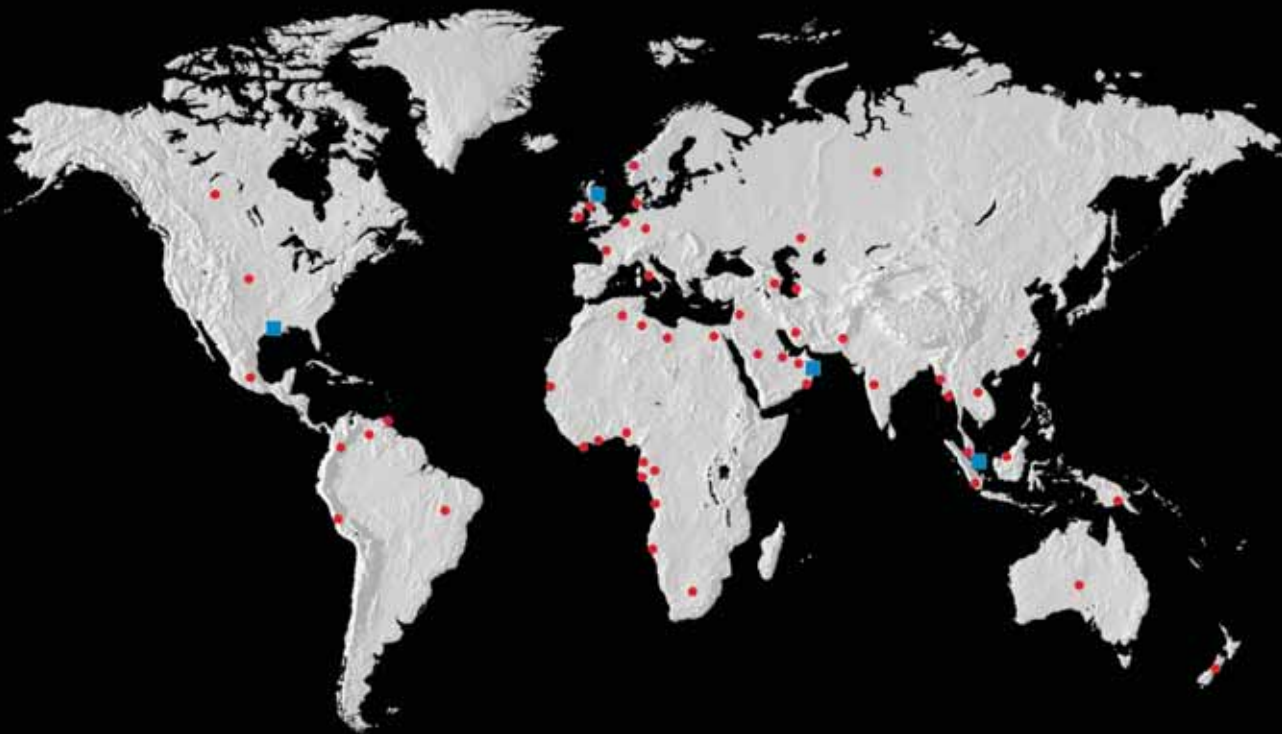


Perforating Roller Bogie

Electric Line Roller Bogie

Underplug Roller Bogie

Guide Roller Bogie



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