



### Oil shear braking system

Offshore Source, LLC, has introduced an oil-shear braking system. The technology uses multiple friction disks cooled in recirculating transmission fluid. The result is precision control and greater longevity. The Drill Master Brake can serve as an energy absorber for winch, tensioning and drilling applications requiring high torque, low speed and precise weight-on-bit control. The smooth oil shear system eliminates the stick-slip and chatter common with low-speed drum rotation in hard rock formations. Also, by using the fluid for lubrication and cooling, the life under load is much longer, allowing for continuous drilling for weeks or months with no change in characteristics. The quick response piston and low inertia are also beneficial for drilling under varying load conditions such as rock to sand to shale, without interruption of drilling operations. The system features a totally enclosed design to protect equipment from the elements.

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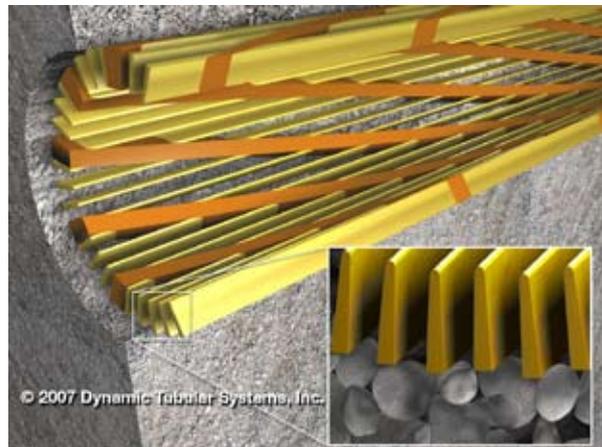


### Self-loading gasket

Garlock Sealing Technologies has launched Multi-Swell, a new gasketing material. The industry's first self-loading

### Self-expanding sand screen

Self-expansion is a high-ratio, elastic-compression and recovery process of oversized tubulars. Unlike traditional plasticizing approaches, it requires no expansion tooling or related rig time. Self-expansion for sand screens occurs by exposure to specific chemistry or other conditions that release the compressed cells comprising the overall structure. Alternatively, mechanical expansion methods can be used. Dynamic Tubular Systems, Inc., has entered into development agreements with the US DOE microhole



program, and has also collaborated with a major producer that is highly experienced with expandables and sand control development. A set of more critical specification areas was created to emphasize four ideal conditions: (1) Ultimate collapse, or assurance of minimum intervention diameter, 2,000 psi; (2) flexible formation compliance, or "cigarette paper effect," over 200 psi; (3) high flow-through at minimum diameter; and (4) particle retention for all formation types from 50  $\mu\text{m}$  to 250  $\mu\text{m}$ . Each of the criteria was met or exceeded by the design and construction of the single-layer, helical, lattice-type structure. The device consists of profile-shaped straining members, arranged longitudinally and integrated by elastic support-helices. Typically, the strainer and aperture widths are the same, resulting in 50% flow-area; the normal range is 35–60%. Spacing between the strainer members is maintained by precise lamination techniques used during manufacture.

The screens can be made to any size, wall thickness and material-type. Because half of the tubular is air-space and the actual structural members are made from inexpensive rolled-sheet, advanced materials can be used economically in screen construction. Substantially higher strength, corrosion and abrasion-resistance properties are viable by use of high-stainless, tool steels, tungsten alloys and other materials. The technology is suitable for use with material yield values 200–300% or higher than those of standard OCTG. Almost any sand screen mechanical performance can be attained by continually increasing the material properties, increasing the structure's wall-thickness, and otherwise tuning the flexibility.

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general service gasket creates its own load when it comes into contact with oil or water, virtually eliminating the most common cause of gasket failure, insufficient load. This new material performs equally well in oil or water, does not degrade in contact with oils, and adapts to all types of flange designs. Since it seals flanges in less than perfect conditions, reducing maintenance, the material is well-suited for MRO applications. Twice as soft as conventional gaskets, Multi-Swell is easy to cut and readily conformable to irregular flanges, ensuring tight seals with lower loads. The product features extremely high crush

strength, and can be safely installed in applications that would typically crush elastomeric gaskets.

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### Visualization software update

Interactive Network Technologies, Inc., announced the availability of its J/GeoToolkit 3.0, which allows software developers to rapidly deploy sophisticated data visualization and analysis technology in their E&P applications while taking advantage of the ease-of-use and portability of the Java platform