

Screens for the Oil and Gas Industry



Super Weld® Super Weld Ht® Thin Pack[™] Ultra Pack® Shroud[™]

A brand of Aqseptence Group



Drilling an oil or gas well has been described as an act of faith. At the very least, it's a gamble. You can, however, tilt the odds in your favor by using the most dependable, most tested technology you can find – Johnson Screens' oil and gas well screens.

Johnson Screens pioneered the all-welded, continuous slot screen. And after nearly 100 years of designing and building these custom screens for all sorts of demanding applications, we truly are the world's most experienced provider of premium screens.

That's why you – like completion engineers all over the world – can look confidently to Johnson Screens to provide the best solutions for the difficult downhole conditions in the high-cost, high-risk world of oil and gas wells.

Uncompromising Quality from Start to Finish



Johnson Screens' screen jackets are manufactured in plants certified to ISO 9000 Standard/Series. The rigorous manufacturing and quality standards of that program assure that slot control of our screen jackets is consistently tighter than the industry's general standards. In a typical screen, for example, we will produce slots of any required size in increments of 0.001".

To meet quality standards for materials, Johnson Screens' suppliers provide a mill certificate or certificate of compliance. From the day these materials arrive on our dock to the day the finished screens are shipped, continual inspections assure that the screens will meet our comprehensive quality standards. Once the screens are completed and inspected, they're scanned by an optical reader and a statistical summary of the slot openings is prepared.

Because the oil and gas industry is a global business, Johnson Screens is too. Manufacturing plants are situated to provide quick delivery of screens to the major oil and gas fields around the world, including Africa and the North Sea, the Middle East and the Far East, Eastern Europe, South America, and the Gulf of Mexico.

These strategic locations also mean you can reach Johnson Screens from anywhere in the world and get information on everything from shipping to technical design.

Screens for Conventional Gravel Packing



When completing wells with low pressure gravel packing methods, Johnson Screens' Super Weld™ screens represent the quality standard. Two general types are available:

Super Weld® Screens

Super Weld screens use Vee-Wire® construction with narrow face-width wires to create a high percentage of flow area. Standard wire width is 0.090". For even greater open area, 0.060" can be used.

Other features of Super Weld screens:

- More rods than competitive screens, permitting more precise slot control and increased screen jacket tensile strength.
- More rods also makes a rounder screen which reduces washouts caused by necked wires over the rods.

- Standard sizes from 3/4" PS through 9-5/8" OD pipe.
- Design options available for increased collapse resistance or tensile strength.

Super Weld HT® Screens

When bottom hole temperatures exceed 250°F, differential expansion between the pipe base and screen jacket may result in loss of sand control. In these cases, a Super Weld HT screen should be used. This patented product has an expansion ring on one end to maintain product integrity under high temperature conditions.

Screens for High Pressure Gravel Packing



High pressure gravel packing and fracturing operations can sometimes cause premature bridging of the gravel in the annulus. To prevent this, the Alternate Path™ method was developed by Mobil Oil Corporation. Johnson Screens is an approved manufacturer of the ALLPAK[™], ALLFRAC[™] screens used in this system. The key feature of these screens is an array of shunts welded along the exterior length of the screen. If bridging occurs in the annulus during gravel packing, the slurry will flow down these tubes, thus bypassing the bridge and providing a uniform, continuous gravel pack.

For high pressure and fracturing applications, erosion resistant nozzles are used in the shunt tubes (the ALLFRAC design) to improve erosion resistance. Shunt tube connectors are quickly assembled during make-up to link the tubes between joints.

Horizontal wells can also be successfully completed with this technology by using a perforated protective shroud to protect the shunts and screen from possible running damage.

* ALLPAKTM and ALLFRACTM are trademarks and proprietary technology of the Mobil Oil Corporation, and are marketed under an exclusive license with Schlumberger Technology Corporation through Schlumberger/Dowell.



Prepacked Screens for Horizontal Wells

Conventional gravel packing of horizontal wells is not feasible. In these cases, prepacked screens are commonly used. We have a variety of prepacked designs to meet these special conditions.



Thin Pack[™] Screens

Two concentric Vee-Wire screens with a 0.25" thick integral gravel pack make a screen suitable for either cased or open hole horizontal completions to 6,000 feet long. Thin Pack screens are also widely used at the top of high pressure gravel pack completions and for workovers where the OD/ID ratio is critical. Recommended minimum annular bore- hole clearance is 0.75". Among the other features:

- Heavier surface wires withstand running damage in short radius wells and provide improved erosion resistance.
- Thicker gravel packs (3/8" to 5/8") are available if extra sand retention properties are needed.
- For even greater damage resistance, a protective shroud can be used.
- Proprietary recessed fitting designs optimize screen body tensile strength and collapse resistance.

Ultra Pack® Screens

Commonly used for workovers or where damage to the screen surface is likely, the Ultra-Pack design uses an outer perforated pipe over a wire wrap screen on a base pipe.

- Sizes available from 1.66" OD (0.070" ID) to 7.0" OD (4.9" ID).
- All sizes use proprietary external pipe flush thread connections in R1 lengths. Also available with threaded base pipe connections in R1, R2 or R3 lengths.

Testing

In order to maintain maximum quality in screens destined for horizontal wells, we periodically conduct various tests to measure the key performance areas. Among these tests:

- Combined bending with axial tension or compressive loads.
- Flexure bending through 40°/100 feet.
- Compaction loading and collapse resistance of screen assemblies.
- Tensile and torque resistance of the screen body and base pipe.

Fittings, Accessories and Special Screens

We have the special screens, fittings and accessories in stock to help your well completion go faster and easier.



Shroud[™] Screens

To retain medium or larger formation sands, Johnson Screens use a heavyduty wire wrap screen inside a perforated pipe.

- Available in 3-1/2" through 7" O.D.
- Screen liner is designed for 1000 psi or higher collapse resistance. Outer pipe further contributes to collapse strength.
- For high temperature applications, we supply a proprietary internal slip fit design.

Pump Guard Screens

For wells completed without sand control screens, Pump Guard Screens provide protection to pumps if small amounts of sand are produced. Available in 5 diameters, and various lengths and slot openings.

Fittings and accessories

Johnson Screens' in-stock fittings and accessories include: bull plugs, combination couplings, cross-over subs and cast aluminum centralizers. Blank pipe pup joints can have centralizers welded in place. Lifting subs can also be screwed into the top of a screen joint to facilitate lifting by rig elevators.

Give us a call

This brochure represents a brief overview of the Johnson Screens line of Oil and Gas well products. Applications assistance and technical data sheets detailing the specifications for each screen product are available on request.

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