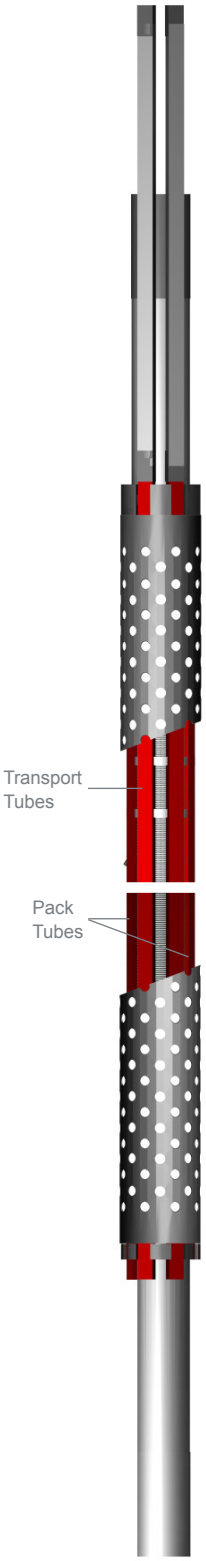
Openhole Shunted Screen System



Weatherford's shunt-tube technology (STT) openhole shunted screen system is designed to allow slurry to bypass sections that have bridged prematurely during gravel-pack operations. With multiple apertures located on the pack tubes (PT) in each screen, the slurry flows to all sections of the wellbore, ensuring a complete gravel pack is achieved.

In the openhole STT system, transport tubes (TT) and PT are arranged eccentrically on the base pipe. The openhole shunted screen can be configured into a 1 TT × 2 PT or a 2 TT × 2 PT screen. During gravel-pack operations, slurry is delivered the length of the screen section by TT, which connect the system from screen joint to screen joint. A portion of the slurry is diverted from the TT to the PT and exits through PT apertures, into the annulus, providing dispersed slurry placement.

Built on Weatherford's conventional well screen products including Ultra-Grip™, *Ultra-Grip* HD, Superflo®, and Excelflo® screens, the STT system provides a wide range of options to meet specific well requirements. A spiralizer-type centralizer is highly recommended as part of the system to provide optimal centralization for a uniform annular pack.

Applications

- Non-homogenous wellbores, particularly with significant shale
- High-angle wells (>40°)
- Long-interval gravel packs from 100 ft to >2,300 ft (30 m to >700 m).
- Formations with large permeability variation

Features, Advantages and Benefits

- The SST system increases gravel-pack success and well life by using multiple PT apertures to eliminate voids caused by sand-bridging.
- The shunted screen provides dedicated TT, independent of the PT, to provide trouble-free slurry transport across the screen.
- Leakoff tubes placed across the joint connectors allow dehydration of the slurry and help eliminate voids in the gravel pack.
- Timed threads provide joint-to-joint alignment of TT, ensuring straightforward makeup of the shunted screen system.

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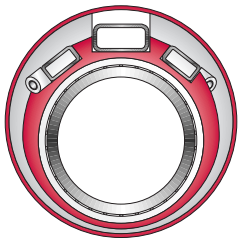
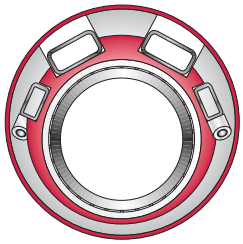


1 × 2



2 × 2

Specifications

Openhole Shunted Screen System with UltraGrip™ Screens			
Base Pipe Size (in./*mm*)	Screen OD (in./*mm*)	Outer Shroud OD* (in./*mm*)	
		1 TT × 2 PT	2 TT × 2 PT
2.375 *60.3*	2.780 *70.5*	4.940 *125.4*	5.260 *133.7*
2.875 *73.0*	3.280 *83.4*	5.250 *133.4*	5.560 *143.4*
3.500 *88.9*	3.910 *99.4*	5.670 *144.1*	6.100 *155.0*
4.000 *101.6*	4.420 *112.2*	6.140 *156.0*	6.460 *164.1*
4.500 *114.3*	4.920 *125.0*	6.650 *169.0*	6.850 *174.0*
5.000 *127.0*	5.410 *137.4*	7.130 *181.0*	7.200 *182.9*
5.500 *139.7*	5.910 *150.1*	7.620 *193.5*	7.620 *193.6*
6.625 *168.3*	7.030 *178.7*	8.740 *222.0*	8.750 *222.2*

Dimensions are based on 0.010-in. slot size *Ultra-Grip* screen and 316L material for screen and rings
Outer shroud thickness is 12 gauge (*0.105 in.*)
*Outer shroud dimension does not include centralizer dimension

Options

- STT: Inflow system (IS), bottom joint adaptor, leakoff tubes
- Well screen types: *Ultra-Grip* HD, *Ultra-Grip*, Superflo®, Excelflo®
- Pipe metallurgy: API grades, all chrome grades, duplex steel
- Screen metallurgy: 316L, INCOLOY® 825
- Outer shroud can be installed for distributed temperature sensing (DTS) equipment
- Specialty systems and metallurgies for meeting specific completion criteria

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For Internal Use
Link to Endeca assembly part numbers: Openhole Shunt Screen System