

# Filtrex

## Novel Conformable Remedial Sand Control System

Compressible Open Cell Matrix Polymer regains sand control integrity.

Sand issues can account for up to 10% of all shut-in wells either due to failure of the existing downhole sand control or onset of sand production caused by pressure depletion and/or water production in mature basins.

The challenge to regain sand free production in existing completions without the requirement to perform a workover can be both costly and time consuming using traditional methodologies, with no single method offering benefits across all measures. To address this challenge, TAQA developed the Filtrex system.

The Filtrex remedial sand control system provides the flexibility to be installed thru-tubing, through tight restrictions whilst offering a compliant sand control solution in a significantly larger inner diameter (ID) of the sand producing section or failed screen.

If run on pipe or coil tubing, Filtrex provides the ability to perform sand clean out during deployment resulting in significant time savings over conventional systems. Activation of the expansion is achieved by removing the sleeve only and no activation fluids are required.

Using an open cell matrix polymer (OCMP), the system is run in hole compressed and deployed as a slick assembly, complete with high expansion anchor system or standard packer system depending on well architecture. Once set, the OCMP expands to conform with the ID of the wellbore or failed screen closing off any annular gap. The OCMP is fully protected during deployment and will not be exposed until at the correct depth. The process of expansion aids in the centralisation of the assembly allowing other sections to be sequentially stacked above. Filtrex will remain at depth and retain sand whilst allowing fluid flow through the porous filter media during its time in hole. The entire system can be easily retrieved should it be necessary in the future.

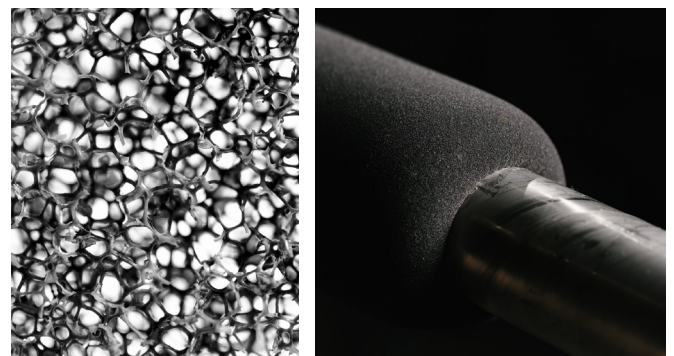
The Filtrex system maximises the ID through use of a customized unique base pipe.

### Features

- Conformable filtration layer and high expansion anchor sub
- Open Cell Matrix Polymer
- Full through bore system
- OCMP qualified to 100°C with common wellbore fluids including acids.
- High porosity – approx. 80%
- Stackable design

### Benefits

- Can be deployed through tight restrictions and conform to large ID
- Erosion resistant polymer filter
- Enables sand clean out in one trip reducing intervention time
- Applicable to a wide range of conditions.
- Little to no skin seen in well applications
- Can cover large perforated sections



### Technical Specification

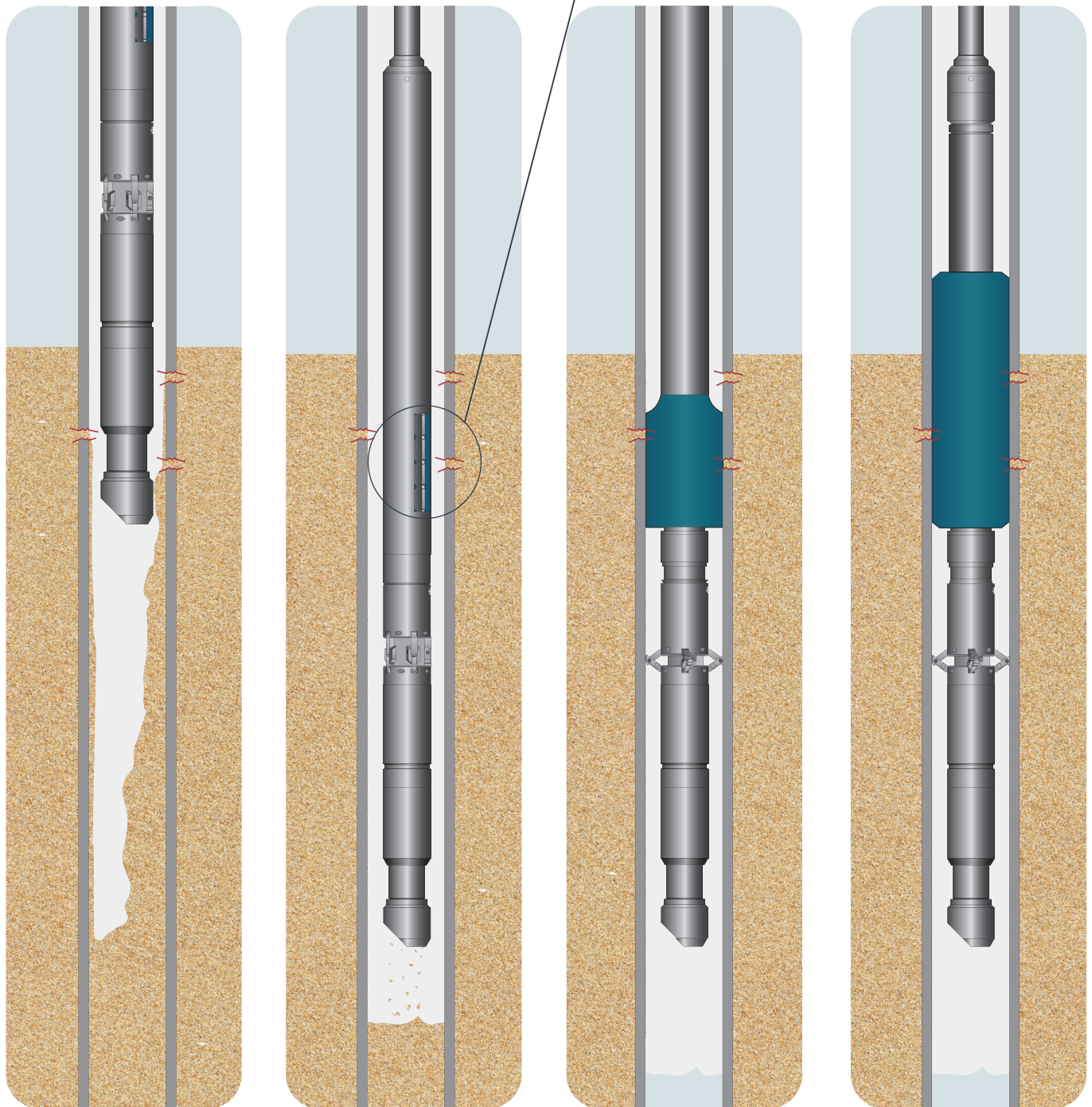
<b>Tool OD</b>	2.690"	3.600"	3.620"	3.940"	4.400"	5.650"	7.445"
<b>Min restriction tool passes through</b>	2.750"	3.810"	3.810"	4.125"	4.560"	5.750"	7.600"
<b>Min ID of tool*</b>	1.508"	2.300"	2.300"	2.300"	2.441"	2.441"	4.900"
<b>Casing/liner setting range</b>	3.500" 9.2#	4.500" 12.6#	4.500" 12.6#	5.500" 15.5#	7.000" 23-29#	7.000" 23-29#	9.625" 43.5#
<b>Section length</b>	2.5m - 5m **tools can be stacked						
<b>Max temp</b>	100°C / 212°F						

\* Excluding anchoring device

\*\* Multiple lengths and the ability to stack provides extensive coverage

## Coil Tubing Deployment

Filtrex, the One Trip Remedial Sand Control System, provides the flexibility to be installed thru tubing, through tight restrictions and expand into the casing ID filling all annular gaps regaining sand control. The first of its kind, the system provides the ability to perform sand clean out whilst installing the tool in one trip. Once set, the tool requires no further intervention.



### Stage 1

An existing screen or perforations can become damaged, and provide a sand breakthrough point. Once damaged, there is no sand control and sand is free to fill the wellbore. This can lead to issues on surface and can result in well abandonment.

### Stage 2

The Filtrex system is run in hole to depth using a running tool with compression outer sleeve.

Prior to expansion of the system, the jetting nozzles will activate and commence sand clean out.

### Stage 3

Sand clean out is complete, and the Filtrex system is ready to be expanded. The anchor sub is activated and locked into the casing.

As the running tool is then pulled from the assembly it removes the outer protecting sleeve, allowing the multi-layer OCMP to expand to confirm to the ID of the casing or liner.

### Stage 4

The running tool is fully removed allowing the full filter section to expand to the damaged section. Anchors are locked in the casing and running tool is pulled out of hole.