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MeshSlot

Premium sintered mesh screens

APPLICATIONS

- Openhole and cased-hole completions
- Vertical, deviated, and horizontal completions of oil, gas, and injector wells
- Stand-alone completions
- Gravel-pack and frac-pack completions
- Completions that use Alternate Path† gravel-pack shunt tube technologies
- Long and extreme-reservoir-contact wells
- Wells with severe downhole conditions
- Installations with inflow and injection control devices
- Sandface sensor installations

BENEFITS

- Longer well life and optimized production
- Versatile completion geometries that enhance production

FEATURES

- Robust design that minimizes risk of screen damage during installation
- Redundant sand retention method
- Smaller screen OD than conventional premium sintered mesh screens
- Direct-wrapped drainage layers that enhance mechanical properties and reduce screen diameter
- Sintered laminated filter medium
- 316L, alloy 20, or equivalent sintered mesh
- Fine, medium, and coarse mesh sizes
- Inner and outer drainage layers for optimized flow distribution
- Optimized base perforation patterns and high-flow shroud design combined for efficient distribution of flow through sintered mesh

MeshSlot* premium sintered mesh screens are designed for openhole and cased-hole completions with or without a gravel pack. The screens are manufactured and tested for robustness, reliability, sand control efficiency, and longevity in harsh production environments.

MeshSlot screens are among the strongest premium mesh screens available with a small outer diameter. This combination enables operators to optimize the completion geometry of a gravel pack during the design and execution of the job, and it sometimes allows for the selection of a larger screen for stand-alone screen completions.

Inner and outer drainage layers

MeshSlot screens have an inner drainage layer that provides a uniform standoff between the filter medium and the basepipe and an outer drainage layer that provides a uniform standoff between the filter medium and the protective shroud. The two drainage layers help ensure uniform flow over the surface area of the filter medium.

Sintered woven-wire mesh

A premium screen's performance reflects the filter medium and overall screen construction. The MeshSlot screen's filter is made up of multiple layers of a sintered, woven-wire mesh laminate that enhances sand retention and plugging resistance. The wire is woven with either a Dutch weave or a square weave, depending on the desired pore size.

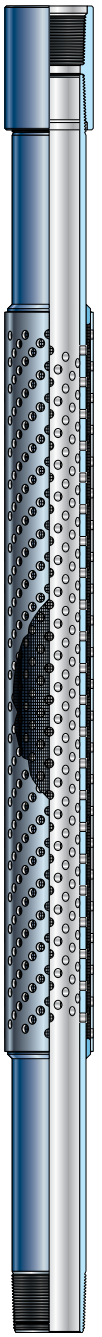
Sintering adds strength and mechanical stability to the mesh and locks the engineered pore geometry, ensuring that pore openings do not change during installation or production and injection. A patented end ring isolates and protects the sintered mesh from heat while the basepipe is being welded.

Protective shroud

A protective shroud fits tightly over the outer drainage layer, enhancing the mechanical properties of the screen assembly. A swaging, or shaping, process centers the screen assembly and shroud and reduces the diameter of the shroud uniformly so that its ID contacts the outer drainage layer consistently. Tight control of tolerances and diameters ensures consistent sizing. Swaging takes place after the screen is assembled and one end of the shroud is welded to the basepipe. The other end is welded to the basepipe after the swaging process.

MeshSlot XL screen

The MeshSlot XL* premium sintered mesh screen has four layers (sometimes three) of mesh. Its inner drainage layer is open along the axis of the filter medium tube, with gaps between the filter medium and basepipe. An optional outer drainage layer, available on request, is the same as the inner layer, with gaps between the filter medium and protective shroud.



MeshSlot premium sintered mesh screen.

MeshSlot

MeshSlot Screen Specifications (Two Mesh Layers)

Basepipe Size, in	Basepipe Weight, lbm/ft	Additional Assembly Weight,† lbm/ft	Basepipe ID, in	Max Screen OD, in	Number of Perforation Holes per ft	Max. Tensile Rating,‡ lbf	Max. Torque Rating,‡,§ lbf.ft	Max. Collapse Rating,‡ psi	Max. Burst Rating,‡ psi
2.375	4.6	3.0	2.00	2.99	48	58,446	2,400	9,300	2,028
2.875	6.4	3.6	2.44	3.49	60	82,823	4,200	8,800	1,749
3.500	9.2	4.2	2.99	4.11	72	115,926	7,300	8,300	1,495
4.000	9.5	4.6	3.55	4.61	84	152,710	9,900	5,000	1,338
4.000	11.0	4.6	3.48	4.61	84	165,261	11,100	6,600	1,338
4.500	11.6	5.4	4.00	5.11	96	172,523	14,400	5,000	1,206
4.500	12.6	5.4	3.96	5.11	96	185,823	15,400	5,900	1,246
5.000	15.0	5.7	4.41	5.61	108	222,545	20,500	5,600	1,102
5.000	18.0	5.7	4.28	5.61	108	267,163	24,000	8,100	1,102
5.500	17.0	6.2	4.89	6.11	120	249,751	25,600	4,800	1,012
5.500	20.0	6.2	4.78	6.11	120	292,270	29,300	6,700	1,012
6.625	20.0	7.8	6.05	7.24	132	295,828	37,400	2,700	858
6.625	24.0	7.8	5.92	7.24	132	356,849	44,200	4,500	858
6.625	28.0	7.8	5.79	7.24	132	416,324	51,567	5,250	858
7.000	23.0	8.0	6.37	7.61	144	338,020	45,000	2,900	816

† Data based on filter length per ISO 17824.
‡ Data based on 20% perforated, 14 GA with outer drainage layer high-flow shroud and 80,000-psi basepipe, R3.
§ Torque value based on perforated basepipe.
Note: ISO certifications are available on request.

MeshSlot XL Screen Specifications (Three or Four Mesh Layers)

Basepipe Size, in	Basepipe Weight (lbm/ft)	Additional Assembly Weight,† lbm/ft	Min. Basepipe ID (in)	Max. Screen OD, in	Number of Perforation Holes per ft	Max. Tensile Rating,‡ lbf	Max. Torque Rating,‡,§ lbf.ft	Max. Collapse Rating,‡ psi	Max. Burst Rating‡ psi
2.375	4.6	4.0	2.00	3.29	80	58,400	2,400	9,300	2,028
2.875	6.4	4.6	2.44	3.79	93	82,800	4,200	8,800	1,749
3.500	9.2	5.2	2.99	4.41	120	115,900	7,300	8,300	1,495
4.000	9.5	5.6	3.55	4.91	80	133,400	9,900	5,000	1,338
4.000	11.0	5.6	3.48	4.91	80	152,700	11,100	6,600	1,338
4.500	11.6	6.4	4.00	5.43	80	172,500	14,400	5,000	1,206
4.500	12.6	6.4	3.96	5.43	80	185,800	15,400	5,900	1,246
5.000	15.0	6.7	4.41	5.93	93	222,500	20,500	5,600	1,102
5.000	18.0	6.7	4.28	5.93	93	267,100	24,000	8,100	1,102
5.500	17.0	7.2	4.89	6.44	107	249,700	25,600	4,800	1,012
5.500	20.0	7.2	4.78	6.44	107	292,200	29,300	6,700	1,012
6.625	20.0	8.8	6.05	7.57	120	295,800	37,400	2,700	858
6.625	24.0	8.8	5.92	7.57	120	356,800	44,200	4,500	858
6.625	28.0	8.8	5.79	7.57	120	417,000	50,700	6,400	858
7.000	23.0	9.0	6.37	7.95	133	338,000	45,000	2,900	816

† Data based on 34-ft filter length.
‡ Data based on 35% perforated, 14 GA with outer drainage layer high-flow shroud and 80,000-psi basepipe, R3.
§ Torque value based on perforated basepipe.
Note: ISO certifications are available on request.

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