

Slotted Liners and Screens

Slotted Liners

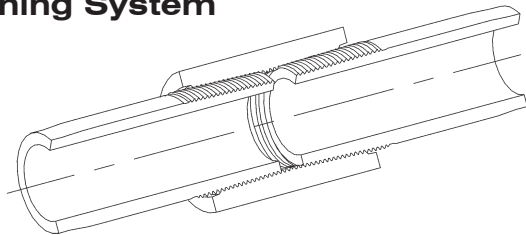
Slotted liners are single tube, fiberglass pipes with slots installed uniformly in the pipe wall to allow even distribution of flow through the pipe wall and into the tubing string. These are offered as either integral joint (IJ) or threaded and coupled (T&C) connection mechanisms.

Prepacked, Sand-Filled Screens

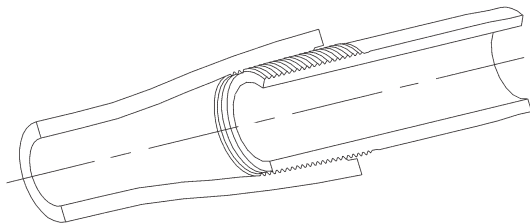
Prepacked Sand-Filled Screens are comprised of two slotted fiberglass pipes with a uniformly packed layer of sand filling the annular space. This configuration offers superior retention of formation fines and solids during production of the well. In addition to the benefit of corrosion resistance, the Prepacked Screens offer good collapse resistance and tensile strength properties for fiberglass materials. The Prepacked Sand-Filled Screens are offered with two pin ends and are connected using the threaded and coupled (T&C) connection mechanism.

The connections are made with NOV Fiber Glass Systems patented Advanced Composite Thread (ACT) which allows for multiple make and break properties without thread damage. This is an API 5B 8rd thread design, and is compatible with any other API 5B Long Form thread coupling. Therefore, no special thread adaptors nor X-overs are required.

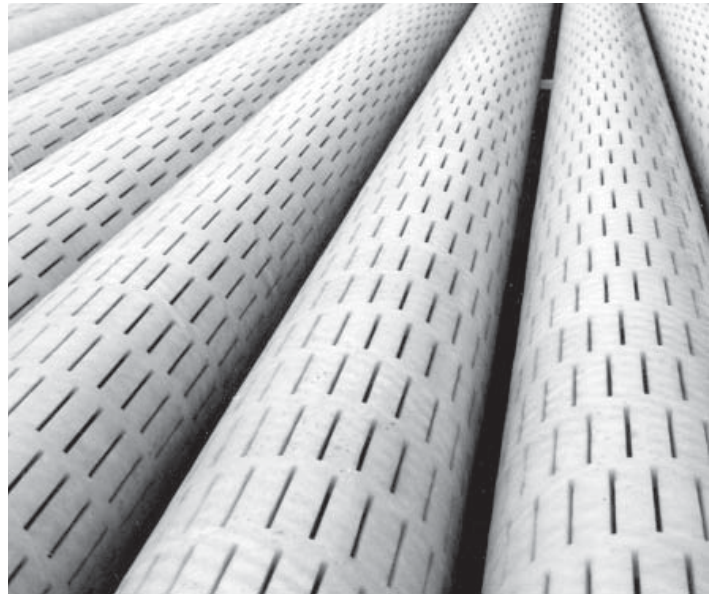
Joining System



Threaded and Coupled
(Prepacked Sand-Filled Screens or Slotted Liners)



Integral Joint
(Slotted Liner)



Pipe Size

- 1.5" through 13" (16" with advance notice)

Slot Length

- 3" Standard (Other lengths available upon consultation)

Slot Width

- 0.010", 0.015", 0.020", 0.030", 0.035", 0.040", 0.060", 0.100"

(Other sizes may be available with sufficient notice)

Slot Configuration

- Horizontal or Vertical: Custom variations are acceptable.

Pipe Material Temperature Limit

- 200 deg. F (93.3 deg. C)

Length

- Slotted Liner - 30 ft. nominal
- Prepacked Screens - 15 ft.

Screen Packing Material

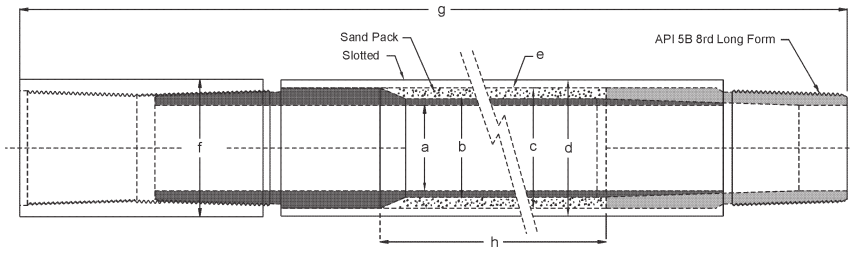
- Types of sand available: Ottawa or Colorado Silica.

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 **Fiber Glass Systems**

Pre-Packed Sand Screens



Dimensional Data											
Size		Inner Pipe			Outer Pipe			Annular Spacing (e)	Coupling OD (f)	Screen Length (g)	Slotted Length (h)
Screen	Thread	Size	ID (a)	OD (b)	Size	ID (c)	OD (d)				
in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	ft.	ft.
1 1/2"	1.90	1 1/2"	1.44	1.80	2 1/2"	2.36	2.65	0.280	2.80	15	12-13
2"	2 3/8"	2"	1.94	2.40	3"	2.94	3.25	0.270	3.40	15	12-13
2 1/2"	2 7/8"	2 1/2"	2.36	2.84	3 1/2"	3.33	3.70	0.245	3.80	15	12-13
3"	3 1/2"	3"	2.94	3.52	4"	3.93	4.35	0.205	4.55	15	12-13
4"	4 1/2"	4"	3.85	4.56	5 1/2"	5.50	6.00	0.470	6.15	15	12-13
5"	5 1/2"	5"	4.74	5.53	6"	5.93	6.55	0.200	7.00	15	12-13

Screen Details										
Screen Size	Screen ID	Screen Drift	Screen OD	Tensile Rating	Collapse Rating	Screen Weight	Thread Type	Thread Type	Connection	
in.	in.	in.	in.	lb.	psi	lb.				
1 1/2"	1.44	1.38	2.67	7000	2000	54.3	EUE10rd	ACT	T&C	
2"	1.94	1.88	3.28	10000	1900	78.6	EUE 8rd	ACT	T&C	
2 1/2"	2.36	2.30	3.78	12000	1600	95.5	EUE 8rd	ACT	T&C	
3"	2.94	2.88	4.37	16000	1400	111.9	EUE 8rd	ACT	T&C	
4"	3.85	3.79	6.02	25000	1200	241.9	EUE 8rd	ACT	T&C	
5"	4.74	4.68	6.57	30000	1000	232.7	OD 8rd	ACT	T&C	

Slot and Sand Details												
Screen Size	Slot Width	Slot Length	Slots per Foot	Slots per Screen	Slot Open Area			Flow Rate			Sand Type	Sand Size
					0.010"	0.020"	0.030"	0.010"	0.020"	0.030"		
					sq. in. / ft.			GPM / ft.				
in.		in.	no.	no.	sq. in. / ft.			GPM / ft.				
1 1/2"	Note 1	3"	36	432	1.08	2.16	3.24	0.33	0.67	1.00	Note 2	Note 3
2"		3"	54	648	1.62	3.24	4.86	0.50	1.00	1.51		
2 1/2"		3"	54	648	1.62	3.24	4.86	0.50	1.00	1.51		
3"		2.7"	72	864	1.94	3.89	8.75	0.60	1.21	2.71		
4"		2.6"	108	1296	2.81	5.62	8.42	0.87	1.74	2.61		
5"		2.25"	108	1296	2.43	4.86	7.29	0.75	1.50	2.26		

Note 1 - Available in 0.010", 0.020" or 0.030". (0.020" is standard unless otherwise specified)
 Note 2 - Available in Colorado Silica or Premium Ottawa Sand. (Colorado Silica is standard unless otherwise specified)
 Note 3 - Unless otherwise specified, grain sizes used are 20-40 mesh for 0.010" slot, 12-20 mesh for 0.020" slot, or 12-16 mesh for 0.030" slot.

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