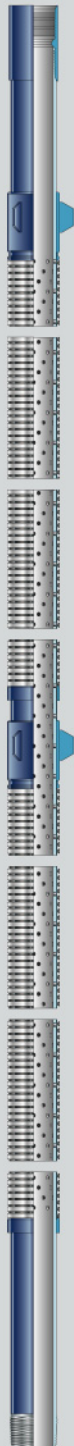


Wire-Wrap Screens

Schlumberger

Wire-wrap screen.



Schlumberger wire-wrap screens can be fully customized to meet any specific well application. They feature strong assemblies, are resistant to erosion, and cannot be plugged by fines or produced solids.

An exclusive slip-ring design isolates the wire-wrap jacket from mechanical loads applied to the screen assembly; i.e., compression, tension, or torque, while maintaining efficient sand control.

The typical screen unit arrangements are 32 ft of jacket on 38 ft of base pipe and 16 ft of jacket on 20 ft of base pipe, but any length of handling area for torque tongues can be ordered.

The protective shroud can be perforated or louvered and is designed to accommodate a fiber-optic cable.

Wire jacket

Depending on the application, the Schlumberger wire-wrap screens use 047088, 060105, 090075, 090105, or 090140 jacket and longitudinal rib configurations in house (for heavy duty applications) or keystone wire. The first three digits of these codes designate the width of the wire in thousandths of one inch, and the last three digits designate the height, also in thousandths of one inch. The wire is available in either 316L stainless steel material or Alloy 825 material.

For special applications, direct wrap (also known as shrink fit) can be made available with the same metal options as the slip-on wrap. In this case, the longitudinal ribs are mounted to the base pipe, and the jacket is wrapped and welded directly over this assembly, providing a very tight shrink fit. This process eliminates the requirement of welding to the base pipe, while creating a base pipe and jacket arrangement that behaves like a single part.

Applications

- Cased- and openhole gravel packs
- Cased-hole frac packs

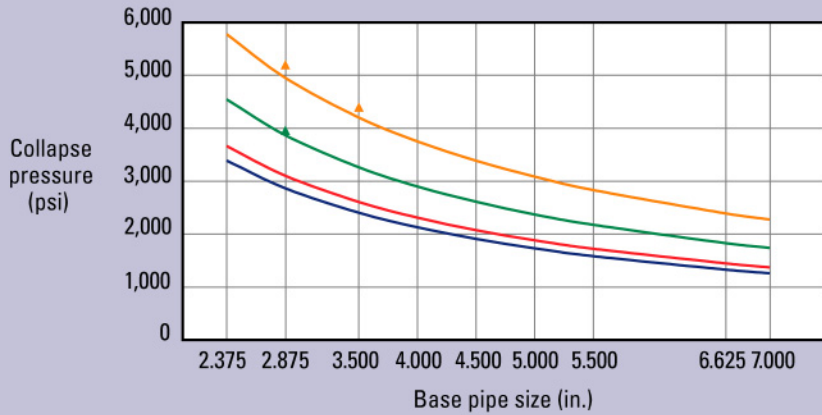
Benefits

- Performs in severe service environments
- Reliability
- Long life in harsh production environments
- Easy and fast installation

Features

- Multiple options for wire width and height in jacket and rib construction
- Slip rings that isolate the jacket from mechanical loads on the base pipe
- Fin-type or spiral centralizers
- Direct-wrap option for increased robustness
- Optional perforated or louvered shroud for extra protection with or without fiber-optic cable option
- Rugged design and construction

Wire-wrap screen collapse pressure versus base pipe size and delta wire size.



— 090075/090075
 — 047088/090075
 — 090105/090105
 — 090140/090140
 ▲ 090105/090105†
 ▲ Industry-accepted test values for sand-control screens

† Schlumberger test values for Schlumberger-manufactured screens

Dimensional Data for 075090/075090 Wire-Wrap Screens

Base Pipe OD (in. [mm])	Base Pipe Weight (lbm [kg])	Screen OD (in. [mm])	Fishing OD (in. [mm])
2.375 [60.3]	4.6 [2.1]	2.660 [67.6]	3.040 [77.2]
2.875 [73.0]	6.4 [2.9]	3.160 [80.3]	3.540 [89.9]
3.500 [88.9]	9.2 [4.2]	3.790 [96.3]	4.160 [105.7]
4.000 [101.6]	11.0 [5.0]	4.290 [109.0]	4.660 [118.4]
4.500 [114.3]	12.6 [5.7]	4.800 [121.9]	5.187 [131.7]
5.000 [127.0]	15.0 [6.8]	5.312 [134.9]	5.687 [144.4]
5.500 [139.7]	17.0 [7.7]	5.812 [147.6]	6.190 [157.2]
6.625 [168.3]	20.0 [9.1]	6.950 [176.5]	7.320 [185.9]
7.000 [177.8]	23.0 [10.4]	7.330 [186.2]	7.700 [195.6]

Wire-Wrap Screens Mechanical Data^{†,‡}

Pipe OD	Weight (lbm/ft)	Hole Size (in. [mm])	Number of Holes per ft	Tensile Load (lbf [N])	Torque Load (ft-lbf [N-m])	Bending Limit (°/100 ft)
2 1/16	3.3	0.375 [9.5]	40	46,622 [207,385]	1,720 [72.5]	45
2 3/8	4.6	0.375 [9.5]	40	67,946 [302,239]	2,863 [120.6]	45
2 7/8	6.4	0.375 [9.5]	50	93,673 [416,678]	4,823 [203.2]	45
3 1/2	9.2	0.375 [9.5]	60	135,051 [600,737]	8,512 [358.7]	45
4	11.0	0.500 [12.7]	40	170,176 [756,981]	12,438 [524.1]	45
4	11.6	0.500 [12.7]	40	184,328 [819,932]	13,313 [561.0]	45
4 1/2	11.6	0.500 [12.7]	40	189,190 [841,559]	15,855 [668.1]	45
4 1/2	12.6	0.500 [12.7]	40	203,890 [906,948]	17,249 [726.9]	45
5	15.0	0.500 [12.7]	50	242,278 [1,077,706]	22,417 [944.7]	45
5	18.0	0.500 [12.7]	50	291,296 [1,295,749]	26,257 [1,106.5]	45
5 1/2	17.0	0.500 [12.7]	50	280,151 [1,246,174]	28,682 [1,208.7]	45
5 1/2	20.0	0.500 [12.7]	50	328,370 [1,460,663]	34,149 [1,439.0]	45
6 5/8	20.0	0.500 [12.7]	60	324,628 [1,444,017]	41,072 [1,730.8]	45
6 5/8	24.0	0.500 [12.7]	60	392,049 [1,743,921]	48,657 [2,050.4]	45
7	23.0	0.500 [12.7]	70	369,720 [1,644,596]	49,246 [2,075.2]	45
7 5/8	26.4	0.500 [12.7]	70	424,728 [1,889,284]	61,906 [2,608.7]	40

[†] Screen strength with 80,000-psi [551,600-kPa] yield-strength base material

[‡] Safety factor for the above ratings: 1.2

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