

Oil and Gas Industry Downhole and Surface Equipment

www.dynamicoiltools.com

DYNAMIC
OIL TOOLS

DynamicLink Downhole Screen

Openhole System

SAND CONTROL

The DynamicLink Screen open hole system is a profile wire screen completion system, designed to achieve laminar flow conditions primarily in long horizontal wells. The profile wire design helps maximize sand free production that resists damage and erosion for effective, long term sand control.

The DynamicLink no base pipe screen is robust yet lightweight. It is suitable for high mechanical loads, short radius wellbores, and wells with high rate gas flow conditions. It can also be used with or instead of current completion systems. Whereas conventional sand screens are affected by high inflow velocity of gas or liquid, DynamicLink screens feature specially engineered profiles that force inflow to be distributed more uniformly over a longer length of screens compared with that of conventional screens. This reduces velocity and eliminates erosion hot spots through laminar flow regimes without the need to choke production.

Applications

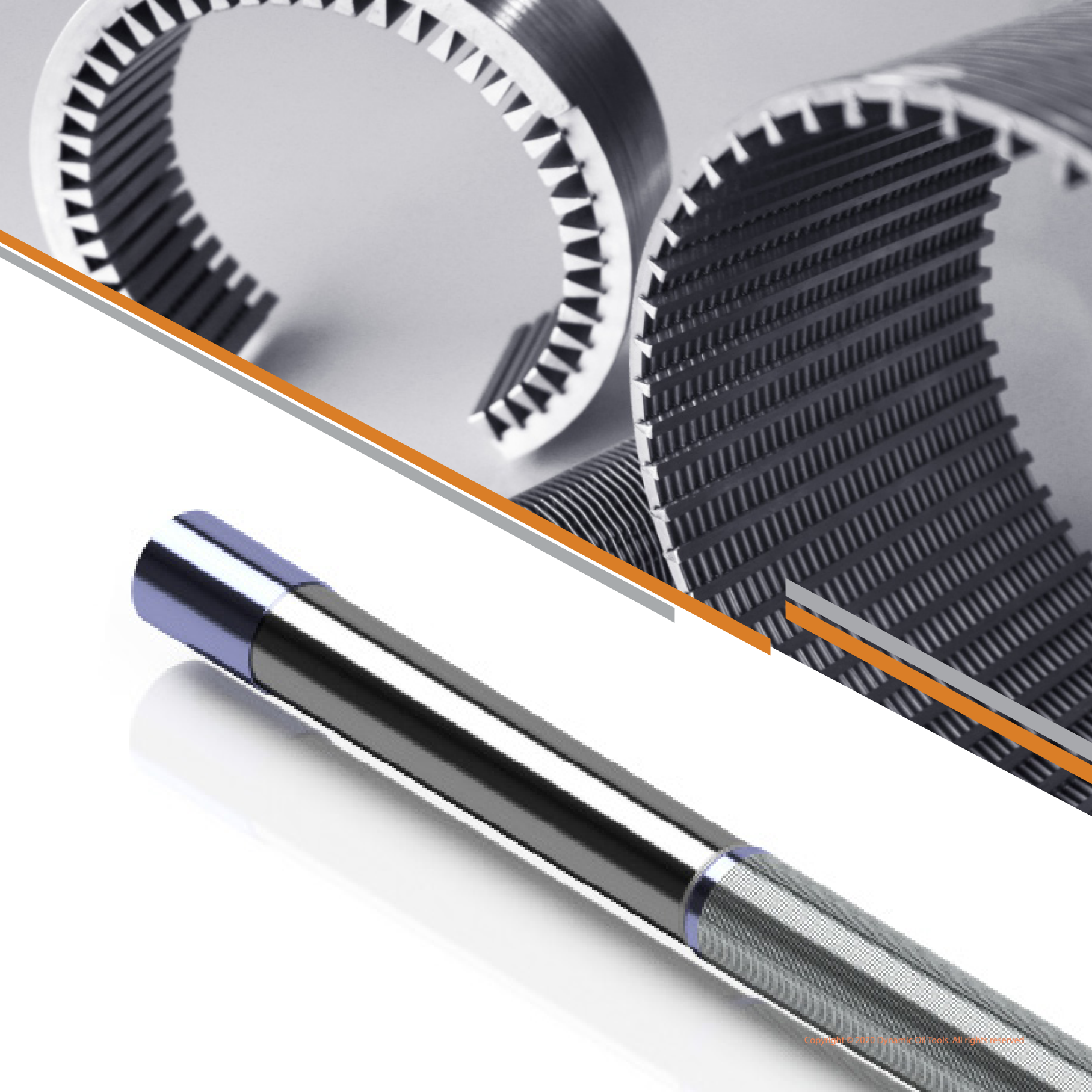
- § Onshore and Offshore wells
- § Stand-alone completions
- § High Rate Gas environment
- § Thermal applications, including heavy-oil and steam assisted wells

Features

- § No Base Pipe - Minimal Flow restriction
- § Robust design
- § Suitability for Short- Radius well profiles
- § Ability to clear / stimulate through entire joint

Benefits

- § Higher reservoir drainage
- § Longer Laminar flow preventing erosion
- § Longer well life and optimized production



DynamicLink Downhole Screen

SAND CONTROL

DESIGNS

This screen, with no base pipe, is designed through forming V-SLOT openings with the venturi nozzle profile.

This is done by configuring two adjacent profiled wires. The no base pipe screens are manufactured using a standardized process that assembles and welds all wire layers in a single systematic operation.

The structural design of the screen uses the basic mass research technique to calculate its permeability, which depends on the screen chosen structure. This technique considers the permeability and flow characteristics for unconsolidated formations in laminar, transition, and turbulent flows.

DOT DynamicLink Downhole Screen Dimensions

DYNAMIC LINK SCREEN JOINT SETUP

API SIZE	REFERENCE VALUES AS PER API SCT		MAIN DIMENSIONS OF SCREEN JOINT COMPONENTS								SCREEN PARAMETERS					
	API LBS ***	API DRIFT DIAMETER	SCREEN ID ***		SCREEN OD **		OD Coupling		OD Lift Area		SCREEN WIRES		NR. OF SUPPORTS	PITCH	API COUPLING	
			mm	in	mm	in	mm	in	mm	in	mm	in				SUPPORT
2.375	5.80#	46.0	1.773	47.6	1.870	72.6	2.86	73.0	2.875	60.3	2.375	V-15	V35	20	7.8	NS 2.375" TUB NU
2.875	8.60#	65.0	2.168	67.5	2.264	97.5	3.44	98.9	3.000	73.0	2.875	V-30	V40	26	6.5	NS 2.75" TUB NU
3.5	11.20#	72.5	2.867	78.5	3.004	108.3	4.19	108.0	4.252	85.9	3.500	V-30	V40	32	7.7	NS 3.12" TUB NU
4.000	13.90#	86.8	3.423	88.3	3.476	118.3	4.66	120.7	4.752	101.6	4.000	V-30	V40	40	6.8	NS 4.00" TUB NU
4.5	11.6#	98.4	3.874	101.8	4.000	125.8	4.54	127.0	5.000			V45	V30	44	7.3	NS 4.12" B/C
	12.6#	96.4	3.706	101.6	4.000	131.6	5.18	132.1	5.200	114.3	4.500	V50	V40	44	7.3	NS 4.12" BTC
5.000	15.2#	94.0	3.701	87.2	3.027	130.1	5.13	132.1	5.200			V50	V40	44	7.3	NS 4.12" BTC
	18.0#	125.1	4.151	108.9	4.287	138.9	5.47	141.3	5.563	127.0	5.000	V-50	V40	46	7.1	NS 5.00" BTC
5.5	26.0#	116.2	4.653	121.7	4.791	151.7	5.87	153.7	6.051	119.7	5.500	V50	V40	52	7.3	NS 6.12" BTC
6.25	28.0#	113.9	5.666	147.4	5.803	163.8	7.24	187.7	7.390	168.3	6.625	V-50	V40 S	50	7.5	NS 6.58" BTC
7.000	26.0#	156.2	6.150	158.4	6.276	197.3	7.79	200.0	7.875			V-50	V40 S	50	8.1	NS 7.00" BTC
	35.0#	118.3	5.879	162.8	5.016	180.8	7.51	181.5	7.657	177.8	7.000	V-50	V50	64	8.0	NS 7.00" BTC
7.875	39.0#	185.1	6.500	168.6	6.630	210.6	8.29	215.9	8.500	193.8	7.875	V60	V50	64	8.3	NS 7.50" BTC
8.625	40.0#	133.0	7.600	186.5	7.736	238.5	8.29	241.5	8.626	219.1	8.626	V60	V50	76	8.1	NS 8.50" BTC
9.625	43.5#	219.2	8.630	222.7	8.760	264.7	10.42	270.0	10.630	244.5	9.626	V60	V50	80	8.7	NS 9.50" BTC

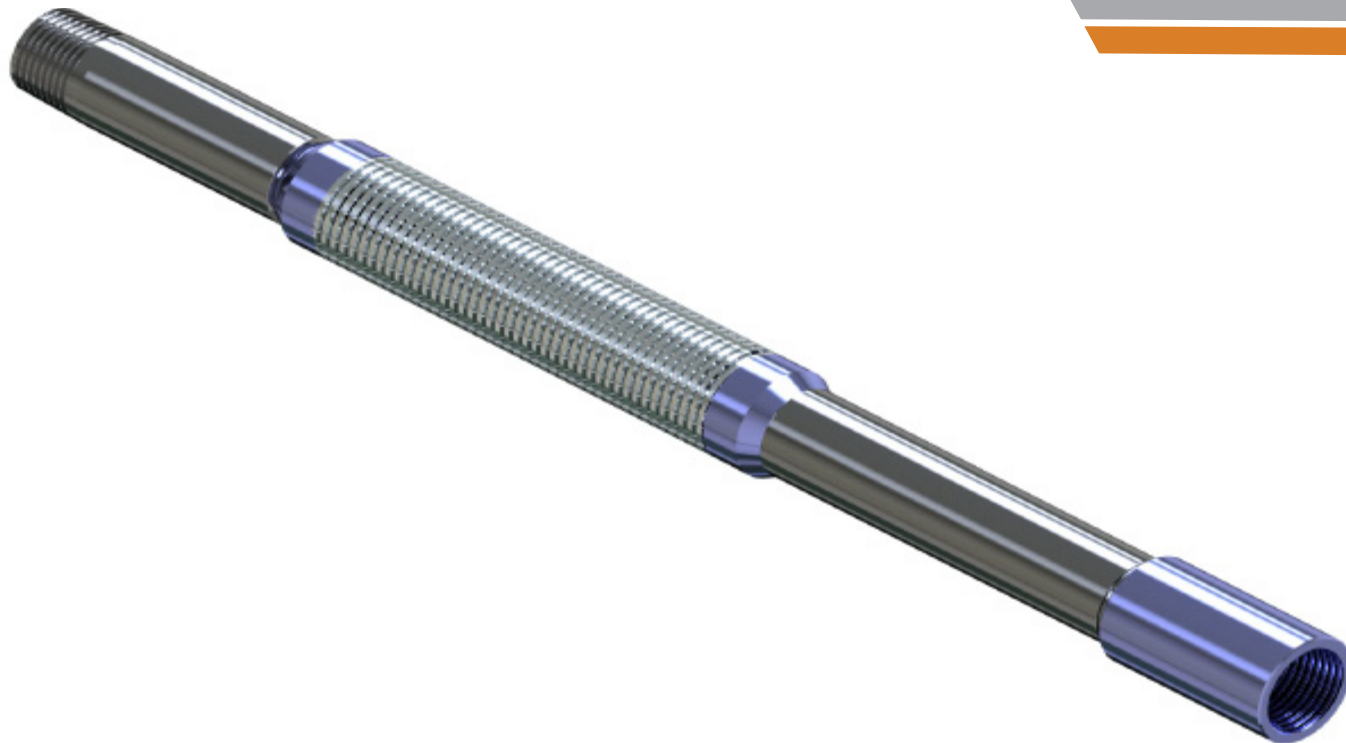
* Other types of connections possible

** Screen OD will be approximately flush to coupling OD

***Screen ID is built according to API Pipe ID as per ppf(#)

DOT DynamicLink Downhole Screen Mechanical Specifications

Weight (lb/ft)	Collapse Strength (psi)	Burst Strength (psi)	Tensile Strength (psi)	Column Strength (psi)	Torque Moment (lb.ft)	Torque to Yield (lb.ft)	Allowable Bending Radius (ft)	Kick-of (Grade/100ft)
5.8	2581	3567	8847.3	3190.83	613	10191	103.4	54.7
8.6	2190	3567	14068.7	5076.32	983	16316	122.4	46.2
9.2	1813	2972	19290	6961.81	1064	17622	148.3	38.5
9.5	1711	2233	23061	8412.19	1276	21196	166	33.6
15.1	2450	1900	19435.1	6961.81	1391	23091	176.8	31.9
18	2378	2697	22045.7	7977.08	1580	26228	192.2	29.6
20	2160	2422	23786.2	8557.23	2139	35506	209.3	27.3
28	2233	2175	37129.7	13343.5	4040	67064	256.9	22.3
35	2363	2277	38290	13923.6	4179	69370	283.8	19.9
39	2175	2190	43221.2	15664.1	4736	78616	312	18.1
40	1914	1943	49602.9	17984.7	5433	90186	353.3	16.1
43.5	2508	1813	55839.5	20305.3	6128	101741	394	14.8



Fit To Base Screen on Perforated Basepipe

SAND CONTROL

This product consists of a wire wrapped screen on a perforated base pipe up to 7"OD & 39ft length. The screen can be manufactured up to a total length of 28ft (8.5 meters) on the pipe. Meanwhile the joint is perforated casing with a 39ft (12 meters) bed length - 8 spindle drilling machine.

The DOT standard spiral and staggered perforation patterns use $\varnothing 3/8"$ and $\varnothing 1/2"$ diameter holes, to create the client's required open area. Upon request, custom hole sizes can be drilled in any number and / or pattern. Every joint perforated by DOT well screen is deburred internally and externally. The size, grade and weight of the base pipe are manufactured as per API casing/tubing specification.

Applications

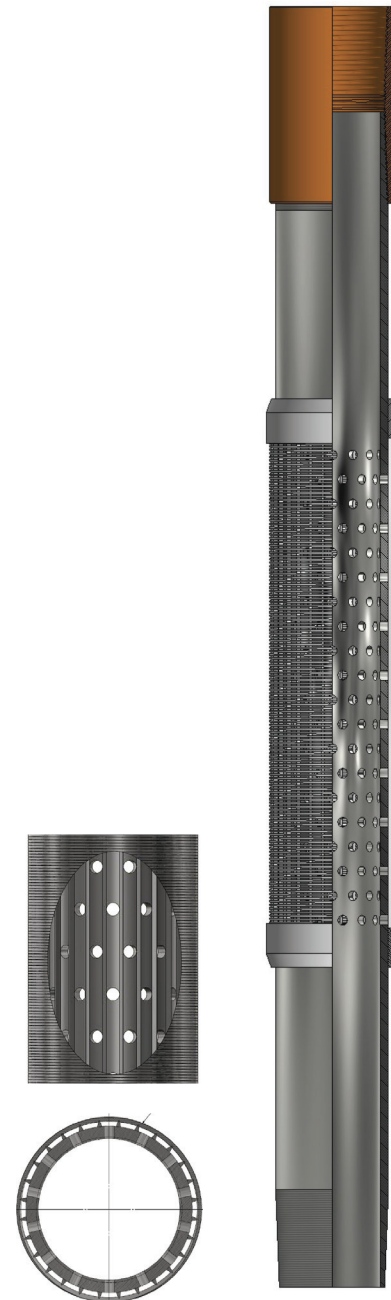
- § Oil and Gas wells.
- § Sand control completions
- § Thermal applications, including heavy-oil and steam assisted wells

Features

- § Available in basepipe sizes ranging from 2 7/8 to 7 in.
- § No requirement for welding on basepipe (screen wire is shrink-fitted to basepipe)
- § Coherent, harmonious, and precise slot opening
- § Slot opening from 50 micron up to 2000 micron
- § Customized material grades 304/316L/904/Duplex/Alloy 625

Benefits

- § Longer laminar flow preventing erosion
- § Improved flow efficiency into basepipe
- § Longer well life and optimized production



Fit To Base Screen on Perforated Basepipe

SAND CONTROL

Fit To Base Screen on Perforated Basepipe

Basepipe size		Basepipe Weight		Wall Thickness		Min. Basepipe ID		Max. Screen OD		Max. Screen Configuration	No. of perforation *
in	mm	lbm/ft	Kg/m	in	mm	in	mm	in	mm	-	Holes per ft
2.375	60.3	4.6	6.8	0.19	4.83	2	50.67	3.005	76.33	V30/V30	24
2.875	73	6.4	9.5	0.217	5.51	2.44	62	3.505	89.03	V30/V30	24
3.5	88.9	9.2	13.7	0.254	6.45	2.99	76	4.13	104.9	V30/V30	24
4	101.6	9.5	14.1	0.266	6.76	3.47	88.09	4.63	117.6	V30/V30	28
4	101.6	11	16.4	0.262	6.65	3.48	88.29	4.63	117.6	V30/V30	28
4.5	114.3	11.6	17.3	0.25	6.35	4	101.6	5.169	131.3	V30/V35	28
4.5	114.3	12.6	18.8	0.255	6.48	3.99	101.35	5.169	131.3	V30/V35	28
5	127	15	22.3	0.296	7.52	4.41	111.96	5.669	144	V30/V35	28
5	127	18	26.8	0.362	9.19	4.28	108.61	5.669	144	V30/V35	28
5.5	139.7	17	25.3	0.304	7.72	4.89	124.26	6.169	156.7	V30/V35	32
5.5	139.7	20	29.8	0.361	9.17	4.78	121.36	6.169	156.7	V30/V35	32
5.5	139.7	23	34.2	0.415	10.54	4.67	118.62	6.169	156.7	V30/V35	32
6.625	168.3	20	29.8	0.288	7.32	6.05	153.64	7.294	185.28	V30/V35	36
6.625	168.3	24	35.7	0.352	8.94	5.92	150.39	7.294	185.28	V30/V35	36
6.625	168.3	28	41.7	0.417	10.59	5.79	147.09	7.294	185.28	V30/V35	36
7	177.8	23	34.2	0.317	8.05	6.37	161.7	7.669	194.8	V30/V35	36

* Upon request, custom hole sizes can be drilled in any number and any pattern.



Screen Jacket on Perforated Basepipe

This wire wrapped screen jacket is installed on a perforated base pipe up to $\text{Ø } 7''$ - 39ft length. The screen can be manufactured up to a total length of 33ft (10 m), from corrosion resistant materials. The perforated joint is perforated with a 39ft (12m) bed length, 8 spindle Drilling machine.

The DOT standard spiral and staggered perforation patterns use $\text{Ø } 3/8''$ and $\text{Ø } 1/2''$ diameter holes, to create the client's required open area. Upon request, custom hole sizes can be drilled in any number and any pattern. Every joint perforated is deburred internally and externally.

The screen jacket is fully pickled and passivated for maximum corrosion resistance.

Applications

- § Oil and Gas wells
- § Sand control completions
- § Installations with Inflow or injection control devices
- § Thermal applications, including heavy-oil and steam assisted wells

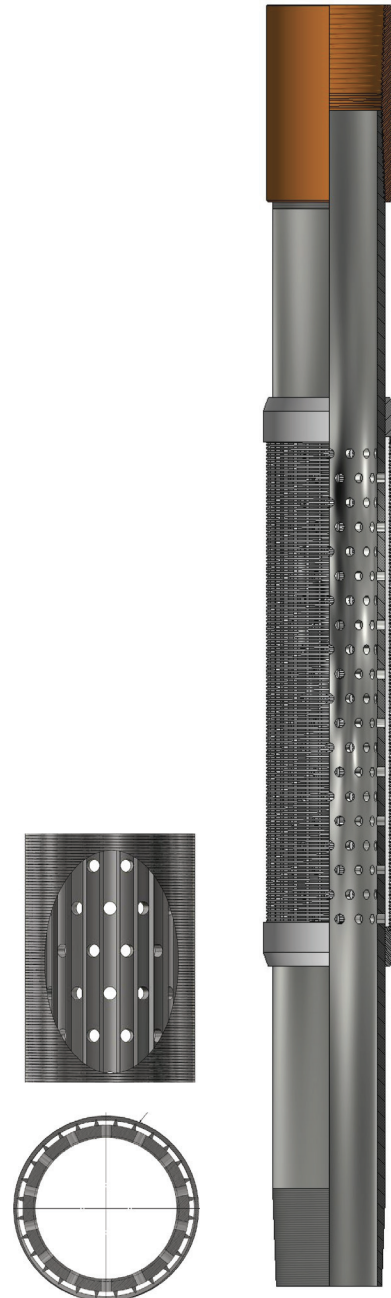
Features

- § Available in base pipe sizes from 2 7/8 to 7 in.
- § Coherent, harmonious, and precise slot opening
- § Slot opening from 50 micron up to 2000 micron
- § Customized material grades 304/316L/904/Duplex/Alloy 625

Benefits

- § Longer laminar flow preventing erosion
- § Improved flow efficiency into basepipe
- § Long well life and optimized production

SAND CONTROL



Screen Jacket on Perforated Basepipe

SAND CONTROL

Screen Jacket on Perforated Basepipe

Basepipe size		Basepipe Weight		Wall Thickness		Min. Basepipe ID		Max. Screen OD		Max. Screen Configuration	No. of perforation *
in	mm	lbm/ft	Kg/m	in	mm	in	mm	in	mm	-	Holes per ft
2.375	60.3	4.6	6.8	0.19	4.83	2	50.67	3.005	76.33	V30/V30	24
2.875	73	6.4	9.5	0.217	5.51	2.44	62	3.505	89.03	V30/V30	24
3.5	88.9	9.2	13.7	0.254	6.45	2.99	76	4.13	104.9	V30/V30	24
4	101.6	9.5	14.1	0.266	6.76	3.47	88.09	4.63	117.6	V30/V30	28
4	101.6	11	16.4	0.262	6.65	3.48	88.29	4.63	117.6	V30/V30	28
4.5	114.3	11.6	17.3	0.25	6.35	4	101.6	5.169	131.3	V30/V35	28
4.5	114.3	12.6	18.8	0.255	6.48	3.99	101.35	5.169	131.3	V30/V35	28
5	127	15	22.3	0.296	7.52	4.41	111.96	5.669	144	V30/V35	28
5	127	18	26.8	0.362	9.19	4.28	108.61	5.669	144	V30/V35	28
5.5	139.7	17	25.3	0.304	7.72	4.89	124.26	6.169	156.7	V30/V35	32
5.5	139.7	20	29.8	0.361	9.17	4.78	121.36	6.169	156.7	V30/V35	32
5.5	139.7	23	34.2	0.415	10.54	4.67	118.62	6.169	156.7	V30/V35	32
6.625	168.3	20	29.8	0.288	7.32	6.05	153.64	7.294	185.28	V30/V35	36
6.625	168.3	24	35.7	0.352	8.94	5.92	150.39	7.294	185.28	V30/V35	36
6.625	168.3	28	41.7	0.417	10.59	5.79	147.09	7.294	185.28	V30/V35	36
7	177.8	23	34.2	0.317	8.05	6.37	161.7	7.669	194.8	V30/V35	36

* Upon request, custom hole sizes can be drilled in any number and any pattern.



Fit To Base Screen Joint with Passive or Active Control Device

FLOW CONTROL

The basepipe is machined to accommodate different kinds of active or passive flow control valves.

The screen is then wrapped as per client specifications directly on the pipe.

Rings and covers are manufactured with high precision as per clients request, then assembled and welded into the basepipe.

Applications

- § Suitable for flow control applications with or without sand control
- § Suitable for vertical, deviated and horizontal completions

Features

- § No elastomers, all welded construction
- § Simple construction
- § Robust design

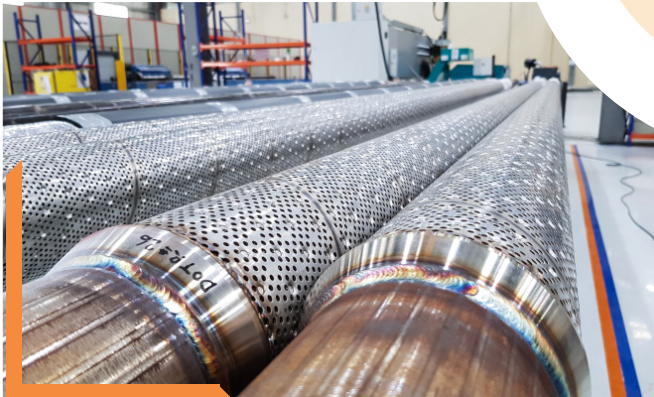
Benefits

- § Installations with flow control devices
- § Optimized flow performance into the basepipe
- § Control of unwanted water/gas production
- § Can be re-configured to fit other applications



*Any type of ICD








Contact us

Industrial City 3, Sector II, Block 7,
Dammam, Saudi Arabia

info@dynamicoiltools.com
www.dynamicoiltools.com

 +966 13 804 1290