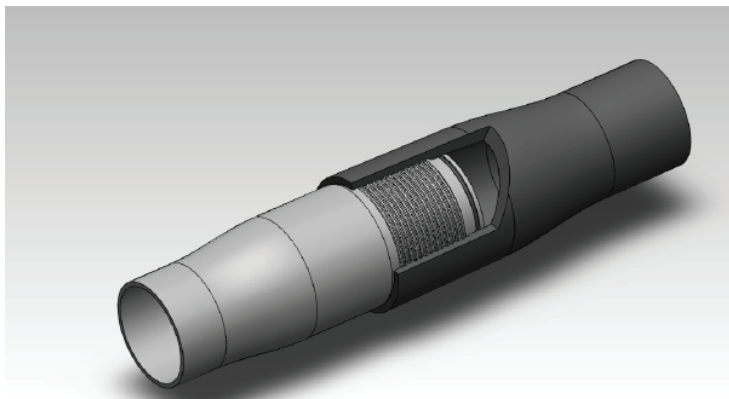


SP Series - Fiberglass Epoxy Integral Joint Surface Pipe

APPLICATIONS

- *Flow Lines*
- *Injection Lines*
- *Gas Gathering & Transport Lines*
- *Recirculating Lines*
- *Solution Mining*
- *Water Processing*



Centron® SP Series Surface Pipe, with its unique high strength threaded joint, makes it the choice for corrosive oil field and other demanding fluid transport applications requiring low to high pressure 1–1/2 to 6 inch pipe. NOV Fiber Glass Systems' Quality System is certified to API Specification Q1 and ISO 9001, assuring customers of the highest quality products in the industry. Centron offers two standard resin systems. The Centron anhydride/epoxy system delivers trouble free service in the vast majority of oilfield fluids to 150° F (65.5°C). The Centron aromatic amine/epoxy system provides service over a wide pH range up to temperatures of 210°F (99°C). Both systems may be hot oiled to 225°F (106°C) for periods of time up to 24 hours at pressures not to exceed 50% of the ambient temperature static pressure rating

JOINING SYSTEM

- Multiple seal for high reliability — threads and O-ring
- Coarse threads (4 threads per inch) — no cross threading — high-strength. No thrust blocks required
- Patented non-galling, carbon fiber reinforced composite threads available
- Make-up to specified torque and position
- No special tools required for installation

FEATURES

- Balanced filament wound construction using only the highest quality raw materials and modern manufacturing equipment
- Centron's complete line of fittings and adapters have the same safety factors as the pipe and are manufactured with the same high quality raw materials to provide complete reliability throughout the pipeline system.

ADVANTAGES

- About 1/4 the weight of steel
- Assemble in any weather—no adhesive required
- Superior flow characteristics
- Coarse threads—no cross threading
- Excellent corrosion resistance
- Exceptional pressure capabilities
- Low installation costs
- Low paraffin and scale build-up. For additional protection, an enhanced paraffin resistance option is available.

NOV Fiber Glass Systems manufactures a complete line of fiberglass surface pipe, line pipe, tubing, casing and associated fittings. See your distributor or call NOV Fiber Glass Systems for all your fiberglass tubular product needs.

SP Series - Fiberglass Epoxy Integral Joint Surface Pipe

Physical Specifications

Nominal Size		Series/Static Pressure Rating @		Nominal O.D.		Nominal I.D.		Nominal Wall Thickness		Nominal Box O.D.		Weight	
in	mm	150°F	65°C	in	mm	in	mm	in	mm	in	mm	lbs./ft	kg/m
1 ½	40	SP 1250		1.76	44.7	1.6	40.6	0.080	2.0	2.8	71.1	0.36	0.53
		SP 1500		1.79	45.5	1.6	40.6	0.095	2.4	2.9	73.7	0.43	0.64
		SP 2000		1.86	47.2	1.6	40.6	0.130	3.3	3.0	76.2	0.60	0.89
		SP 2500		1.94	49.3	1.6	40.6	0.170	4.3	3.2	81.3	0.75	1.11
		SP 3000		2.01	51.0	1.6	40.6	0.205	5.2	3.4	86.4	0.96	1.42
		SP 3500		2.08	52.8	1.6	40.6	0.240	6.1	3.6	91.4	1.14	1.71
2	50	SP 1000		2.11	53.6	1.95	49.5	0.080	2.0	3.1	78.7	0.43	0.64
		SP 1250		2.15	54.6	1.95	49.5	0.100	2.5	3.2	81.3	0.52	0.77
		SP 1500		2.19	55.6	1.95	49.5	0.120	3.0	3.3	83.8	0.63	0.94
		SP 2000		2.27	57.6	1.95	49.5	0.160	4.0	3.5	88.9	0.87	1.29
		SP 2500		2.36	59.9	1.95	49.5	0.205	5.2	3.7	94.0	1.11	1.65
		SP 3000		2.45	62.2	1.95	49.5	0.250	6.3	3.9	99.1	1.39	2.06
2 ½	65	SP 800		2.64	67.1	2.48	63.0	0.080	2.0	3.7	94.0	0.54	0.81
		SP 1000		2.68	67.1	2.48	63.0	0.100	2.5	3.8	96.5	0.65	0.97
		SP 1250		2.73	69.3	2.48	63.0	0.125	3.2	3.9	99.1	0.83	1.23
		SP 1500		2.78	70.6	2.48	63.0	0.150	3.8	4.1	104.1	1.01	1.51
		SP 2000		2.89	73.4	2.48	63.0	0.205	5.2	4.3	109.2	1.38	2.06
		SP 2500		2.99	75.9	2.48	63.0	0.255	6.5	4.6	116.8	1.81	2.70
3	75	SP 3000		3.10	78.7	2.48	63.0	0.310	7.9	4.9	124.5	2.21	3.30
		SP 800		3.17	80.5	2.98	75.7	0.095	2.4	4.4	111.8	0.73	1.09
		SP 1000		3.22	81.8	2.98	75.7	0.120	3.0	4.5	114.3	0.94	1.41
		SP 1250		3.28	83.3	2.98	75.7	0.150	3.8	4.7	119.4	1.20	1.79
		SP 1500		3.34	84.8	2.98	75.7	0.180	4.6	4.8	121.9	1.47	2.18
		SP 2000		3.47	88.1	2.98	75.7	0.245	6.2	5.1	129.5	2.01	2.99
4	100	SP 2500		3.59	91.2	2.98	75.7	0.305	7.7	5.5	139.7	2.56	3.82
		SP 3000		3.72	94.5	2.98	75.7	0.370	9.4	5.8	147.3	3.14	4.68
		SP 500		4.14	105.2	3.98	101.1	0.080	2.0	5.3	134.6	0.86	1.28
		SP 800		4.23	107.4	3.98	101.1	0.125	3.2	5.6	142.2	1.31	1.95
		SP 1000		4.30	109.2	3.98	101.1	0.160	4.0	5.7	144.8	1.70	2.53
		SP 1250		4.38	111.2	3.98	101.1	0.200	5.0	5.9	149.9	2.16	3.22
5	125	SP 1500		4.46	113.3	3.98	101.1	0.240	6.1	6.1	154.9	2.57	3.83
		SP 500		5.04	128.0	4.85	123.2	0.095	2.4	6.2	157.5	1.25	1.86
		SP 800		5.16	131.0	4.85	123.2	0.155	3.9	6.5	165.1	1.99	2.97
		SP 1000		5.24	133.1	4.85	123.2	0.195	5.0	6.7	170.2	2.47	3.68
		SP 1250		5.33	135.4	4.85	123.2	0.240	6.1	7.0	177.8	3.17	4.73
		SP 1500		5.43	137.9	4.85	123.2	0.290	7.4	7.2	182.9	3.81	5.68
6	150	SP 500		6.65	168.9	6.4	162.6	0.125	3.2	8.2	208.3	2.08	3.09
		SP 800		6.81	173.0	6.4	162.6	0.205	5.2	8.5	215.9	3.41	5.09
		SP 1000		6.90	175.3	6.4	162.6	0.250	6.3	8.8	223.5	4.32	6.44

1. Pipe Ratings are based on currently available long-term and other test data. In all cases, chemical compatibility must be considered along with all other known operating conditions in selecting the proper piping system for a given service.
2. Joint length: 29.5 feet (9.0 M).
3. Make-up length 29.12 feet (8.87 M).
4. For 4" and 6" sizes, higher pressure ratings are available with SPH thread.

SP Series - Fiberglass Epoxy Integral Joint Surface Pipe

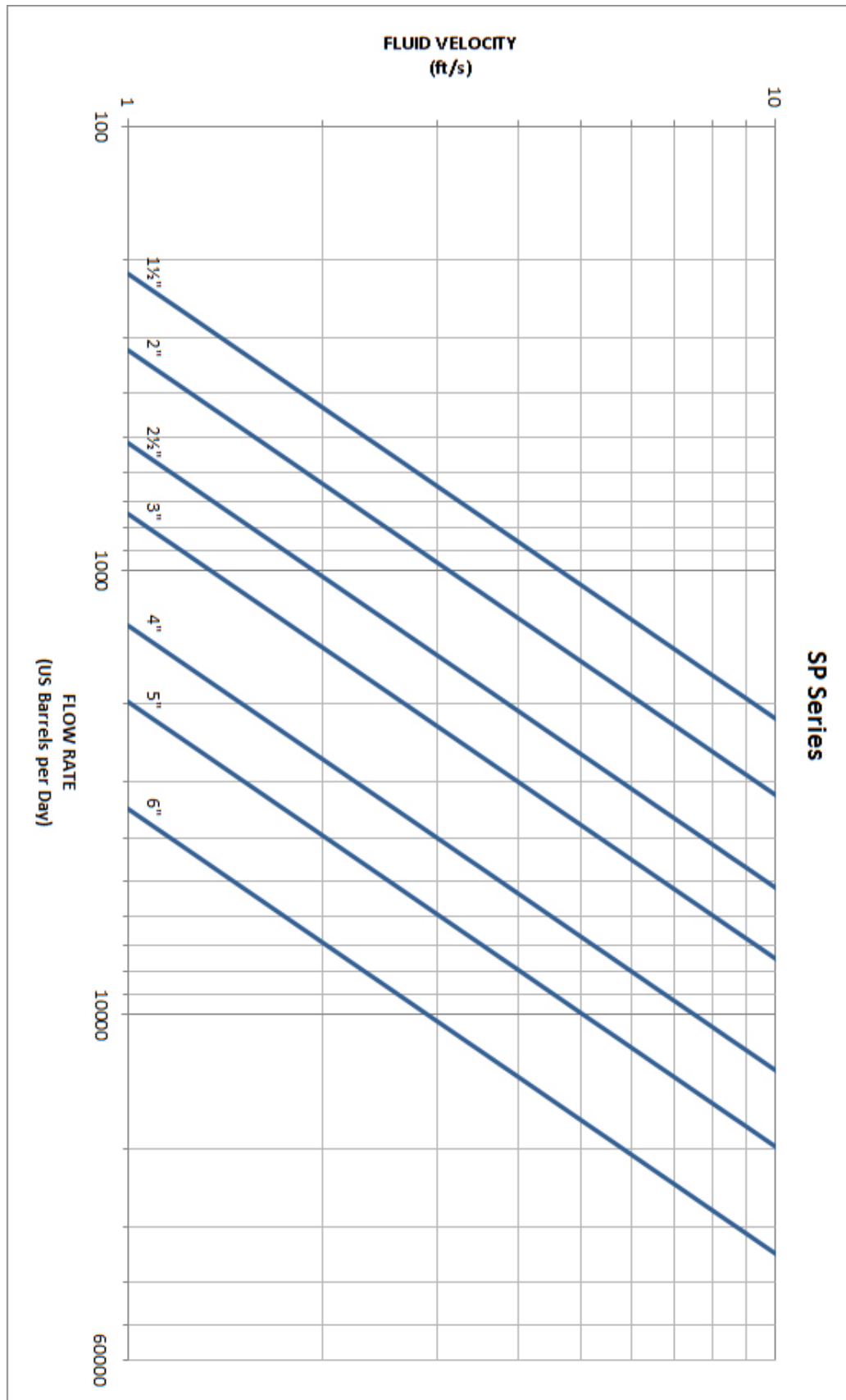
Nominal Size		Series/Static ¹ Pressure Rating		Minimum Bend Radius		Offset per joint		Support Spacing		Axial Thread Load		Ultimate External Collapse Pressure		Minimum ² Box O.D.	
		150°F	65°C	ft	m	in	m	ft	m	lbs	kg	psi	MPa	in	mm
1 ½	40	SP 1250		88	26.8	61	1.5	8	2.44	35,000	15,900	751	5.2	2.47	62.7
		SP 1500		89	27.1	60	1.5	8	2.44	35,000	15,900	1,196	8.2	2.50	63.5
		SP 2000		93	28.3	58	1.5	8	2.44	35,000	15,900	2,731	18.8	2.56	65.0
		SP 2500		96	29.3	56	1.4	8	2.44	35,000	15,900	4,630	31.9	2.62	66.5
		SP 3000		100	30.5	54	1.4	8	2.44	35,000	15,900	8,000	55.2	2.69	68.3
		SP 3500		103	31.4	52	1.3	8	2.44	35,000	15,900	11,705	80.7	2.75	69.9
2	50	SP 1000		105	32.0	51	1.3	8	2.44	45,000	20,400	436	3.0	2.79	70.9
		SP 1250		107	32.6	50	1.3	8	2.44	45,000	20,400	700	4.8	2.82	71.6
		SP 1500		109	33.2	50	1.3	8	2.44	45,000	20,400	1,174	8.1	2.86	72.6
		SP 2000		113	34.4	48	1.2	9	2.74	45,000	20,400	2,581	17.8	2.93	74.4
		SP 2500		117	35.7	46	1.2	9	2.74	45,000	20,400	4,630	31.9	3.01	76.5
		SP 3000		121	36.9	44	1.1	9	2.74	45,000	20,400	7,707	53.1	3.09	78.5
		SP 3500		152	46.3	43	1.1	9	2.74	45,000	20,400	11,106	76.6	3.17	80.5
2 ½	65	SP 800		132	40.2	41	1.0	9	2.74	58,000	26,300	223	1.5	3.45	87.6
		SP 1000		133	40.5	40	1.0	9	2.74	58,000	26,300	360	2.5	3.49	88.6
		SP 1250		136	41.5	40	1.0	10	3.05	58,000	26,300	687	4.7	3.53	89.7
		SP 1500		138	42.1	39	1.0	10	3.05	58,000	26,300	1,148	7.9	3.58	90.9
		SP 2000		143	43.6	38	1.0	10	3.05	58,000	26,300	2,509	17.3	3.67	93.2
		SP 2500		149	45.4	36	0.9	10	3.05	58,000	26,300	4,723	32.6	3.77	95.8
		SP 3000		154	46.9	35	0.9	10	3.05	58,000	26,300	7,393	51.0	3.87	98.3
		SP 3500		159	48.5	34	0.9	10	3.05	58,000	26,300	10,666	73.5	3.97	100.8
3	75	SP 800		158	48.2	34	0.9	10	3.05	70,000	31,700	185	1.3	4.09	103.9
		SP 1000		160	48.8	34	0.9	10	3.05	70,000	31,700	368	2.5	4.14	105.2
		SP 1250		163	49.7	33	0.8	10	3.05	70,000	31,700	698	4.8	4.19	106.4
		SP 1500		166	50.6	32	0.8	10	3.05	70,000	31,700	1,161	8.0	4.24	107.7
		SP 2000		172	52.4	31	0.8	11	3.35	70,000	31,700	2,528	17.4	4.36	110.7
		SP 2500		178	54.3	30	0.8	11	3.35	70,000	31,700	4,514	31.1	4.47	113.5
		SP 3000		184	56.1	29	0.7	11	3.35	70,000	31,700	7,124	49.1	4.59	116.6
4	100	SP 500		207	63.1	26	0.7	12	3.66	90,000	40,800	58	0.4	5.07	128.8
		SP 800		211	64.3	26	0.7	12	3.66	90,000	40,800	184	1.3	5.15	130.8
		SP 1000		214	65.2	25	0.6	12	3.66	90,000	40,800	377	2.6	5.20	132.1
		SP 1250		218	66.4	25	0.6	12	3.66	90,000	40,800	711	4.9	5.28	134.1
		SP 1500		222	67.7	24	0.6	12	3.66	90,000	40,800	1,112	7.7	5.35	135.9
5	125	SP 500		252	76.8	21	0.5	13	3.96	100,000	45,300	54	0.4	5.90	149.9
		SP 800		257	78.3	21	0.5	13	3.96	100,000	45,300	198	1.4	6.00	152.4
		SP 1000		261	79.6	21	0.5	13	3.96	100,000	45,300	356	2.5	6.07	154.2
		SP 1250		266	81.1	20	0.5	13	3.96	100,000	45,300	690	4.8	6.16	156.5
		SP 1500		270	82.3	20	0.5	13	3.96	100,000	45,300	1,109	7.6	6.25	158.8
6	150	SP 500		332	101.2	16	0.4	15	4.57	130,000	59,000	47	0.3	7.75	196.9
		SP 800		339	103.3	16	0.4	15	4.57	130,000	59,000	189	1.3	7.88	200.2
		SP 1000		344	104.9	16	0.4	15	4.57	130,000	59,000	360	2.5	7.97	202.4

1. Quasi-steady

2.. Absolute minimum outside diameter that can be factory ground and still maintain static pressure rating.

Flow Rate vs. Fluid Velocity

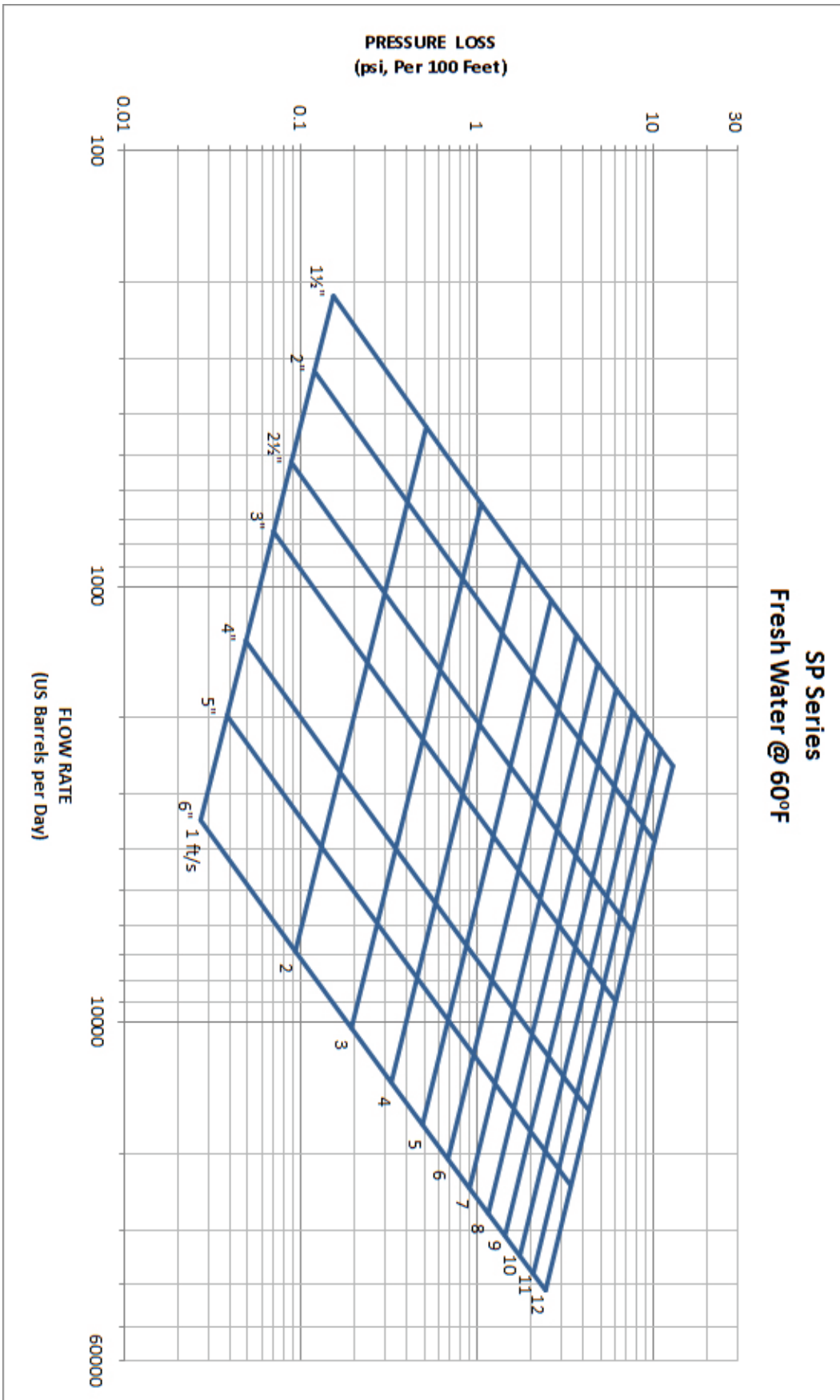
INTEGRAL JOINT SURFACE PIPE AND TUBING



Note: If flow velocity is to be more than 12 ft./sec. contact FGS

Fresh Water Pressure Loss @ 60°F (16°C)

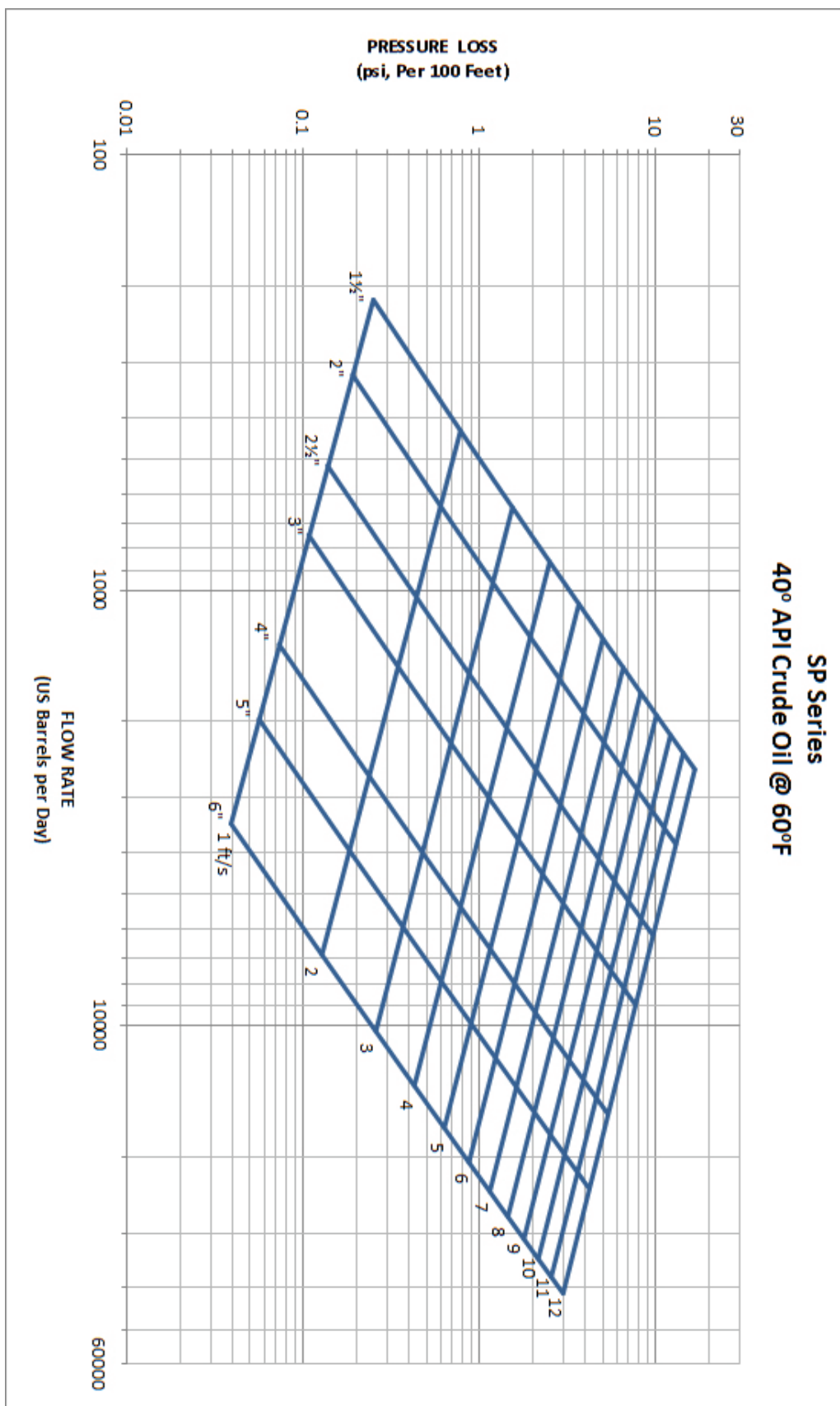
INTEGRAL JOINT SURFACE PIPE AND TUBING



Note: If flow velocity is to be more than 12 ft./sec. contact FGS

40° API Crude Oil Pressure Loss @ 60°F (16°C)

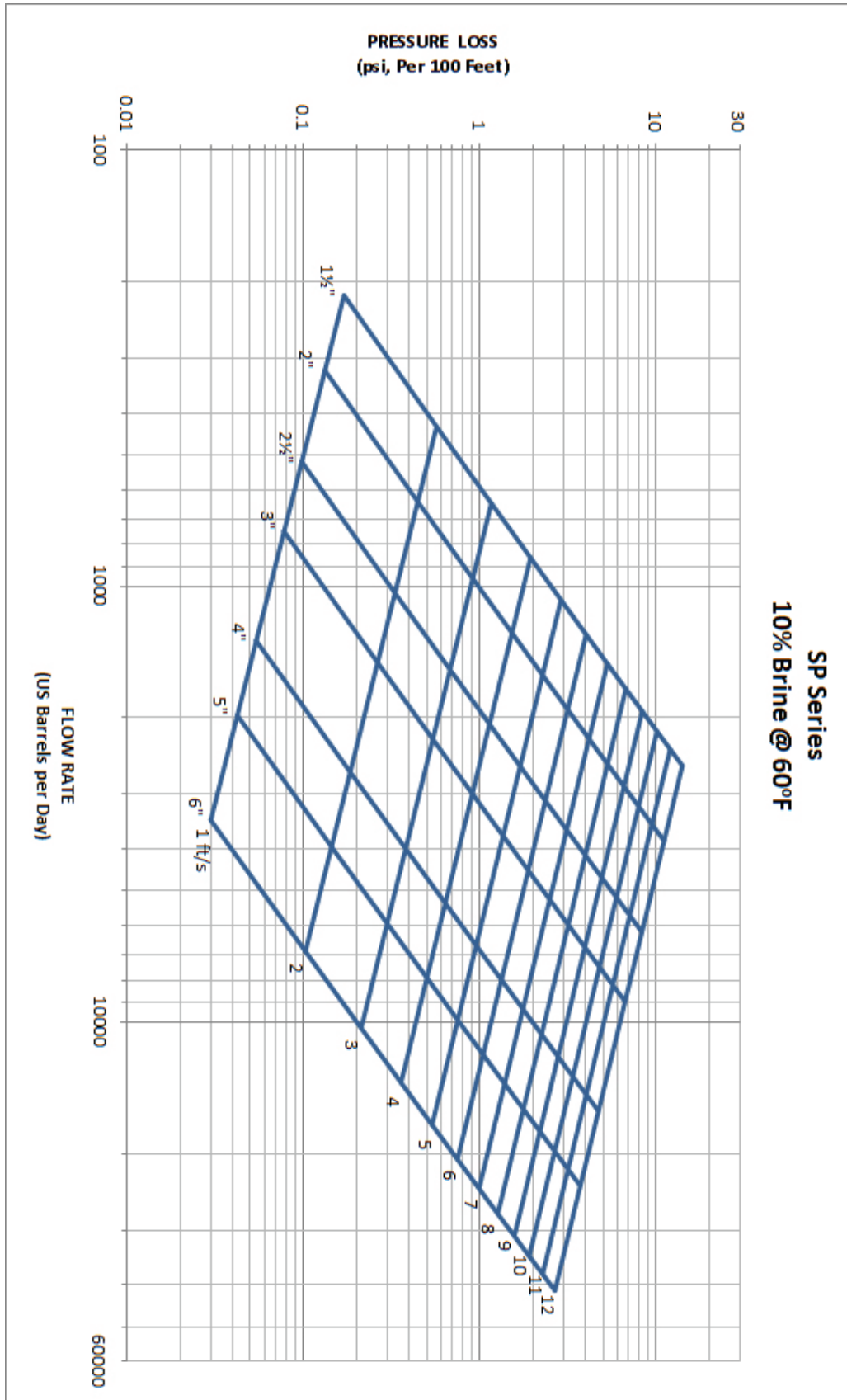
INTEGRAL JOINT SURFACE PIPE AND TUBING



Note: If flow velocity is to be more than 12 ft./sec. contact FGS

10% Brine Pressure Loss @ 60°F (16°C)

INTEGRAL JOINT SURFACE PIPE AND TUBING



Note: If flow velocity is to be more than 12 ft./sec. contact FGS

General Technical Data

Pipe Capacity					
Size		Inside Diameter		Capacity	
in	mm	in	mm	bbbl/1000 ft	m ³ /km
1½	40	1.60	40.6	2.5	1.3
2	50	1.95	49.5	3.7	1.9
2½	65	2.48	63.0	6.0	3.1
3	80	2.98	75.7	8.6	4.5
4	100	3.98	101.1	15.4	8.0
5	125	4.85	123.2	22.9	11.9
6	150	6.40	162.6	39.8	20.8



15LR-0007
15HR-0003



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