

Technical Reference Section: Flow

Flow Range Charts (GPM)

Paddlewheel and Electromagnetic Sensors

+GF+ SIGNET Models 515, 525, 2517, 2536, 2540, 2550, 2560
 GPM Flow Rates for DN 15 to DN 450 (1/2 in. to 18 in.) pipe sizes

		MIN/MAX Flowrates in Gallons per minute (GPM)							
		Insertion Paddlewheel				Electromagnetic			
Pipe Size (in.)	Pipe Size (mm)	3-2536-XX 3-8512-XX	3-2540	P51530-XX 3-8510-XX	P525-X 3-2517	3-2550	3-2560		
Velocity Range		0.3 to 20 fps 0.1 to 6 m/s	0.3 to 20 fps 0.1 to 6 m/s	1 to 20 fps 0.3 to 6 m/s	1.6 to 20 fps 0.5 to 6 m/s	0.3 to 20 fps 0.1 to 6 m/s	0.3 to 20 fps 0.1 to 6 m/s		
0.5	d20/DN15	0.3 19	0.3 19	1 19	1.6 19	- -	0.3 19		
0.75	d25/DN20	0.5 34	0.5 34	1.7 34	2.7 34	- -	0.5 34		
1	d32/DN25	0.8 54	0.8 54	2.7 54	4.4 54	- -	0.8 54		
1.25	d40/DN32	1.4 94	1.4 94	4.7 94	7.4 94	- -	1.4 94		
1.5	d50/DN40	1.9 127	1.9 127	6.4 127	10.1 127	- -	1.9 127		
2	d63/DN50	3.2 210	3.2 210	10.6 210	16.8 210	3.2 210	3.2 210		
2.5	d75/DN65	4.5 300	4.5 300	15 300	24 300	4.5 300	4.5 300		
3	d90/DN80	7 461	7 461	24 461	37 461	7 461	7 461		
4	d110/DN100	12 794	12 794	40 794	63 794	12 794	12 794		
5	d140/DN125	19 1247	19 1247	63 1247	100 1247	19 1247	- -		
6	d160/DN150	27 1801	27 1801	91 1801	144 1801	27 1801	- -		
8	d225/DN200	47 3119	47 3119	156 3119	250 3119	47 3119	- -		
10	d280/DN250	74 4915	74 4915	246 4915	393 4915	74 4915	- -		
12	d315/DN300	105 6977	105 6977	349 6977	559 6977	105 6977	- -		
14	d400/DN350	127 8432	127 8432	422 8432	- -	- -	- -		
16	d450/DN400	166 11015	166 11015	551 11015	- -	- -	- -		
18	d500/DN450	210 13942	210 13942	698 13942	- -	- -	- -		

Based on Sch 40 metal pipe (ASTM); values will vary due to pipe material, size, and schedule

Vortex Sensors

+GF+ SIGNET Models 7000 and 7001
 GPM Flow Rates for DN 15 to DN 50 (1/2 in. to 2 in.) pipe sizes

		GPM											
		0.5 to 4 meters/sec 1.64 to 13.12 feet/sec				0.4 to 4 meters/sec 1.31 to 13.12 feet/sec				0.3 to 4 meters/sec 0.98 to 13.12 feet/sec			
Velocity Range		Pipe Size (in.)	Pipe Size (mm)	Pipe Size (in.)	Pipe Size (mm)	Pipe Size (in.)	Pipe Size (mm)	Pipe Size (in.)	Pipe Size (mm)	Pipe Size (in.)	Pipe Size (mm)	Pipe Size (in.)	Pipe Size (mm)
Sensor Materials		0.5 Min Max	d20/DN15 Max	0.75 Min Max	d25/DN20 Max	1 Min Max	d32/DN25 Max	1.25 Min Max	d40/DN32 Max	1.5 Min Max	d50/DN40 Max	2 Min Max	d63/DN50 Max
PVDF		1.32	10.48	2.36	18.94	3.11	31.12	5.60	55.89	7.07	94.24	11.30	150.64
PP		1.32	10.48	2.36	18.94	3.11	31.12	4.79	47.86	5.68	75.74	9.15	122.03
PVC Sch 80		1.13	8.42	2.02	15.25	2.63	25.21	4.94	47.86	5.11	66.35	8.61	112.36
PVC Metric		1.39	11.21	2.49	19.93	3.36	33.67	5.42	54.23	6.28	83.71	10.10	134.66

See page 206 for Flow Range Charts for sizes DN 80 to DN 100 (3 in. to 4 in.)

Technical Reference Section: Flow

Flow Range Charts (LPM)

Paddlewheel and Electromagnetic Sensors

+GF+ SIGNET Models 515, 525, 2517, 2536, 2540, 2550, 2560
LPM Flow Rates for DN 15 to DN 450 (1/2 in. to 18 in.) pipe sizes

		MIN/MAX Flowrates in Liters per minute (LPM)						
		Insertion Paddlewheel				Electromagnetic		
Velocity Range	Pipe Size (in.)	Pipe Size (mm)	3-2536-XX 3-8512-XX	3-2540	P51530-XX 3-8510-XX	P525-X 3-2517	3-2550	3-2560
			0.3 to 20 fps 0.1 to 6 m/s	0.3 to 20 fps 0.1 to 6 m/s	1 to 20 fps 0.3 to 6 m/s	1.6 to 20 fps 0.5 to 6 m/s	0.3 to 20 fps 0.1 to 6 m/s	0.3 to 20 fps 0.1 to 6 m/s
0.5	d20/DN15		1	1	4	6	-	1
			72	72	72	72	-	72
0.75	d25/DN20		2	2	6	10	-	2
			129	129	129	129	-	129
1	d32/DN25		3	3	10	17	-	3
			204	204	204	204	-	204
1.25	d40/DN32		5	5	18	28	-	5
			356	356	356	356	-	356
1.5	d50/DN40		7	7	24	38	-	7
			481	481	481	481	-	481
2	d63/DN50		12	12	40	64	12	12
			795	795	795	795	795	795
2.5	d75/DN65		17	17	57	91	17	17
			1136	1136	1136	1136	1136	1136
3	d90/DN80		26	26	91	140	26	26
			1745	1745	1745	1745	1745	1745
4	d110/DN100		45	45	151	238	45	45
			3005	3005	3005	3005	3005	3005
5	d140/DN125		72	72	238	379	72	-
			4720	4720	4720	4720	4720	-
6	d160/DN150		102	102	344	545	102	-
			6817	6817	6817	6817	6817	-
8	d225/DN200		178	178	590	946	178	-
			11805	11805	11805	11805	11805	-
10	d280/DN250		280	280	931	1488	280	-
			18603	18603	18603	18603	18603	-
12	d315/DN300		397	397	1321	2116	397	-
			26408	26408	26408	26408	26408	-
14	d400/DN350		481	481	1597	-	-	-
			31915	31915	31915	-	-	-
16	d450/DN400		628	628	2086	-	-	-
			41692	41692	41692	-	-	-
18	d500/DN450		795	795	2642	-	-	-
			52770	52770	52770	-	-	-

Based on Sch 40 metal pipe (ASTM); values will vary due to pipe material, size, and schedule

Vortex Sensors

+GF+ SIGNET Models 7000 and 7001
LPM Flow Rates for DN 15 to DN 50 (1/2 in. to 2 in.) pipe sizes

Velocity Range	LPM											
	0.5 to 4 meters/sec 1.64 to 13.12 feet/sec				0.4 to 4 meters/sec 1.31 to 13.12 feet/sec				0.3 to 4 meters/sec 0.98 to 13.12 feet/sec			
	Pipe Size (in.)	Pipe Size (mm)	Pipe Size (in.)	Pipe Size (mm)	Pipe Size (in.)	Pipe Size (mm)	Pipe Size (in.)	Pipe Size (mm)	Pipe Size (in.)	Pipe Size (mm)	Pipe Size (in.)	Pipe Size (mm)
Sensor Materials	0.5	d20/DN15	0.75	d25/DN20	1	d32/DN25	1.25	d40/DN32	1.5	d50/DN40	2	d63/DN50
	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
PVDF	4.98	39.66	8.94	71.70	11.76	117.78	21.18	211.56	26.76	356.70	42.78	570.18
PP	4.98	39.66	8.94	71.70	11.76	117.78	18.12	181.14	21.48	286.68	34.62	461.88
PVC Sch 80	4.29	31.86	7.63	57.73	9.97	95.43	18.70	181.14	19.35	251.12	32.57	425.29
PVC Metric	5.28	42.42	9.42	75.42	12.72	127.44	20.52	205.26	23.76	316.86	38.22	509.70

Technical Reference

See page 206 for Flow Range Charts for sizes DN 80 to DN 100 (3 in. to 4 in.)

Technical Reference Section: Flow

Flow Range Charts (GPM and LPM)

In-line Rotor and Turbine Sensors

+GF+ SIGNET Models 2000, 2100, and 2507
GPM and LPM Flow Rates

Model and Size:	Description	GPM		LPM	
		Min	Max	Min	Max
3-2000-1X	Micro Flow - Low	0.030	0.700	0.110	2.600
3-2000-2X	Micro Flow - High	0.300	3.200	1.130	12.110
3-2100-XL and -31 Kits	Turbine Low - 1/2" Tubing	0.100	1.000	0.380	3.800
3-2100-XL and -32 Kits	Turbine Low - 3/8" Tubing	0.100	1.000	0.380	3.800
3-2100-XL and -33 Kits	Turbine Low - 1/4" Tubing	0.100	1.000	0.380	3.800
3-2100-XL and -34 thru -38 Kits	Turbine Low - 1/2" Pipe	0.100	1.000	0.380	3.800
3-2100-XL and -40 Kit	Turbine Low - 1/2" Flare	0.100	1.000	0.380	3.800
3-2100-XL and -41 Kit	Turbine Low - 3/8" Flare	0.100	1.000	0.380	3.800
3-2100-XL and -42 Kit	Turbine Low - 1/4" Flare	0.100	1.000	0.380	3.800
3-2100-XH and -31 kits	Turbine High - 1/2" Tubing	0.800	10.000	3.000	38.000
3-2100-XH and -34 thru -38 Kits	Turbine High - 1/2" Pipe	0.800	10.000	3.000	38.000
3-2100-XH and -40 kit	Turbine High - 1/2" Flare	0.800	7.000	3.000	27.000
3-2507.100-2V	Mini-Flow - 2mm Insert	0.106	0.740	0.500	2.800
3-2507.100-3V	Mini-Flow - 3mm Insert	0.198	1.123	0.750	4.250
3-2507.100-4V	Mini-Flow - 4mm Insert	0.330	1.585	1.250	6.000
3-2507.100-6V	Mini-Flow - 6mm Insert	0.792	3.170	3.000	12.000

Vortex Sensors

+GF+ SIGNET Model 7002
GPM and LPM Flow Rates for DN 80 (3 in.) sensors

At this velocity:		the flow rate will be:		and the current output will be:	and the frequency output will be:	
m/s	ft/s	lpm	gpm			
0	0	0	0	4.00 mA	0 Hz	Below 0.2 m/s, the output is 4.0 mA
0.1	0.33	28.64	7.57	4.00 mA	1.9 Hz	
0.2	0.66	57.28	15.13	4.80 mA	4.6 Hz	
0.5	1.64	143.2	37.83	6.00 mA	12 Hz	
1	3.28	286.4	75.67	8.00 mA	23 Hz	
1.5	4.92	429.6	113.5	10 mA	35 Hz	
2	6.56	572.8	151.33	12.00 mA	47 Hz	
2.5	8.2	716	189.17	14.00 mA	58 Hz	
3	9.84	859.2	227	16.00 mA	70 Hz	
3.5	11.48	1002.4	264.83	18.00 mA	82 Hz	
4	13.12	1145.6	302.67	20.00 mA	93 Hz	
Beyond 4 m/s, the current output is 20.00 mA						

+GF+ SIGNET Model 7002
GPM and LPM Flow Rates for DN 100 (4 in.) sensors

At this velocity:		the flow rate will be:		and the current output will be:	and the frequency output will be:	
m/s	ft/s	lpm	gpm			
0	0	0	0	4.00 mA	0 Hz	Below 0.2 m/s, the output is 4.0 mA
0.1	0.33	43.4	11.47	4.00 mA	1.9 Hz	
0.2	0.66	86.8	22.93	4.80 mA	3.8 Hz	
0.5	1.64	217	57.33	6.00 mA	9.4 Hz	
1	3.28	434	114.66	8.00 mA	19 Hz	
1.5	4.92	651	171.99	10 mA	28 Hz	
2	6.56	868	229.33	12.00 mA	38 Hz	
2.5	8.2	1085	286.66	14.00 mA	47 Hz	
3	9.84	1302	343.99	16.00 mA	56 Hz	
3.5	11.48	1519	401.32	18.00 mA	66 Hz	
4	13.12	1736	458.65	20.00 mA	76 Hz	
Beyond 4 m/s, the current output is 20.00 mA						