

VOLTEX FLOW METER
CVM - 1000

FLOW COM

Model **CVM-1000** vortex flowmeter is new-generation product of vortex flowmeter. Compared with conventional vortex flowmeter, it is more convenient to operate. For example, one converter is suitavle to transducers of all drift diameters. It can constitute measuring control system with DCS etc, can also be used as measuring instrumentation for measuring control commercial and trading balancing. It has wide range of applica tion.

Feature

■ **Software configuration** : it can reach all configurations that are required by different measurements of different medium.

■ **Parameter setup** : it can set up parameters for measurements of different fluid mediums, such as coefficient of deviation of gas, coefficient of meter and rated value etc.

■ **Self-diagnostics** : making a diagnosis for range of set-up parameter, output signal, sending and acceptance of signal and trouble of CPU.

■ **Display function** : all parameters such as diagnostic code, flow quantity, general quantity and percentage ratio of flow quantity.

■ **Output** : pulse, 4~20mA DC

Specification

■ **Precision** : liquid : ± 1.0%
Gas and vapor : ± 1.0%FS (flow rate 35m/s)
± 1.5%FS (flow rate 35m/s~80m/s)

■ **Size** : 25, 40, 50, 80, 100, 150, 200, 250 and 300

■ **Range of medium temperature** : -25° C~+300°C

■ **Range of ambient temperature** : -25°C~+70°C

■ **Power source** : analog output : 18~45VDC
Pulse output : 14~30VDC

■ **Working pressure** : ≤2.5MPa

■ **Explode-proof** : Ex dⅡCT1~T6

■ **Classification of protection** : IP65

■ **Typical fluid example**

Range of Measurable Water Flow Rate
(At standard condition of 15° C, ρ=1000 kg/m³)

Nominal Size		Measurable Flow Rate in (m³ / h)	Range of Guarranted Accuracy Flow Rate in (m³ / h)
mm	inch		
15	1/2	0.30 up to 6	0.94 up to 6
25	1	0.65 up to 18	1.7 up to 18
40	1-1/2	1.3 up to 44	2.6 up to 44
50	2	2.2 up to 73	3.3 up to 73
80	3	4.3 up to 142	4.6 up to 142
100	4	7.5 up to 248	7.5 up to 248
150	6	17 up to 544	18 up to 544
200	8	34 up to 973	34 up to 973
250	10	60 up to 1506	60 up to 1506
300	12	86 up to 2156	86 up to 2156

Table 12 Range of Measurable Air Flow Rate at Selected Process Pressures

Nominal Size	Flow Rate Limits	Minimum and Maximum Measurable Flow Rate in Nm³/h									
		0 MPa	0.1 MPa	0.2 MPa	0.4 MPa	0.6 MPa	0.8 MPa	1 MPa	1.5 MPa	2 MPa	2.5 MPa
15 mm	min.	4.8(11.1)	6.7(11.1)	8.2(11.1)	10.5(11.1)	12.5	16.1	19.7	28.6	37.5	46.4
	max.	48.2	95.8	143	239	334	429	524	762	1000	1238
25 mm	min.	11.0(19.5)	15.5(19.5)	19.0(19.5)	24.5	29.0	33.3	40.6	59.0	77.5	96.9
	max.	149	297	444	739	1034	1329	1624	2361	3098	3836
40 mm	min.	21.8(30.0)	30.8	37.8	48.7	61.6	79.2	97	149	184	229
	max.	356	708	1060	1764	2468	3171	3875	5634	7394	9153
50 mm	min.	36.2(36.7)	51	62.4	80.5	102	131	161	233	306	379
	max.	591	1174	1757	2922	4088	5254	6420	9335	12249	15164
80 mm	min.	70.1	98.4	120	155	197	254	310	451	591	732
	max.	1140	2266	3391	5642	7892	10143	12394	18021	23648	29274
100 mm	min.	122	172	211	272	334	442	540	786	1031	1277
	max.	1990	3954	5919	9847	13775	17703	21632	31453	41274	51095
150 mm	min.	268	377	485	808	1131	1453	1776	2583	3389	4196
	max.	4358	8659	12960	21559	30163	38765	47365	68867	90373	111875
200 mm	min.	575	809	990	1445	2202	2599	3175	4617	6059	7501
	max.	7792	15482	23172	38549	53933	69313	84693	123138	161591	200046
250 mm	min.	1037	1461	1788	2308	3127	4019	4911	7140	9370	11600
	max.	12049	23939	35833	59611	83400	107181	130968	190418	249881	309334
300 mm	min.	1485	2093	2561	3303	4479	5756	7033	10226	13419	16612
	max.	17256	34286	51317	85370	119441	153499	187556	272699	357856	443017

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(1) At standard conditions STP (0°C. 1atm).
(2) Pressure listed is at process temperature of 0°C.
(3) Maximum flow rate is the lower of 80 m/s.
(4) Minimum values are determined from Table 5. The values in parenthesis show the minimum linear flow rates (Re = 20,000 or 40,000) when they are higher than the minimum measurable flow rate.

Table 13 Range of Measurable Saturated Steam Flow Rate at Selected Process Pressures

Nominal Size	Flow Rate Limits	Minimum and Maximum Measurable Flow Rate in kg/h									
		0.1 MPa	0.2 MPa	0.4 MPa	0.6 MPa	0.8 MPa	1 MPa	1.5 MPa	2 MPa	2.5 MPa	3 MPa
15 mm	min.	5.8(10.7)	7.0(11.1)	8.8(11.6)	10.4(12.1)	11.6(12.3)	12.8	15.3	19.1	23.6	28.1
	max.	55.8	80	129	177	225	272	390	508	626	748
25 mm	min.	13.4(18.9)	16.2(20.0)	20.5	24.1	27.1	30	36	41	49	58
	max.	169.7	247.7	400	548	696	843	1209	1575	1945	2318
40 mm	min.	26.5(29.2)	32	40.6	47.7	53.8	59	72	93	116	138
	max.	405	591	954	1310	1662	2012	2884	3759	4640	5532
50 mm	min.	44.0	53	67.3	79	89	98	119	156	192	229
	max.	671	979	1580	2170	2753	3333	4778	6228	7688	9166
80 mm	min.	84.9	103	130	152	171	189	231	300	371	442
	max.	1295	1891	3050	4188	5314	6435	9224	12024	14842	17694
100 mm	min.	148	179	227	267	300	330	402	524	647	772
	max.	2261	3300	5326	7310	9276	11232	16102	20986	25907	30883
150 mm	min.	324	392	498	600	761	922	1322	1723	2127	2536
	max.	4950	7226	11661	16010	20315	24595	35258	45953	56729	67624
200 mm	min.	697	841	1068	1252	1410	1649	2364	3081	3803	4534
	max.	8851	12918	20850	28627	36325	43976	63043	82165	101433	120913
250 mm	min.	1256	1518	1929	2260	2546	2801	3655	4764	5882	7011
	max.	13687	19977	32243	44268	56172	68005	97489	127058	156854	186978
300 mm	min.	1799	2174	2762	3236	3646	4012	5235	6823	8423	10041
	max.	19602	28609	46175	63397	80445	97390	139614	181960	224633	267772

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(1) Maximum flow rate is the lower of 80 m/s.
(3) Minimum values are determined from Table 5. The values in parenthesis show the minimum linear flow rates (Re = 20,000 or 40,000) when they are higher than the minimum measurable flow rate.

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