

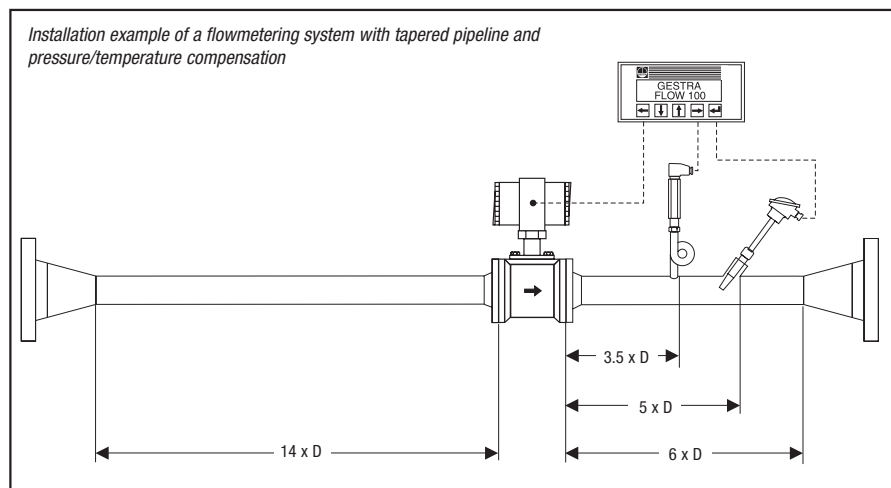
Principle of Measurement

The design is based on the Kármán vortex street principle using a body installed perpendicular to the axis of the pipe. The vortices generated in the flow stream produce pressure oscillations which are converted into electrical signals by a sensor. The output signal is then evaluated and processed in the flow computer.

Recommended steam flowrate \dot{m} in [kg/h] for Vortex flowmeter 83*)

Absolute pressure [bar]	DN 20	DN 25	DN 40	DN 50	DN 80	DN 100	DN 150	DN 200	DN 250	DN 300
1.0	30	45	120	180	480	750	1700	3000	4500	6700
1.4	40	65	165	250	650	1030	2300	4100	6400	9200
1.6	45	72	185	290	750	1150	2600	4650	7200	10500
1.8	50	80	210	320	830	1300	2900	5200	8100	11700
2.0	60	90	230	350	920	1430	3200	5700	8900	12900
2.5	70	110	280	440	1130	1700	4000	7050	11000	15900
3.0	85	130	335	520	1340	2100	4700	8400	13000	18500
4.0	110	170	440	680	1750	2750	6200	11000	17000	24500
5.0	135	210	540	850	2170	3400	7600	13500	21000	30500
6.0	160	250	645	1000	2550	4030	9050	16100	25000	36000
9.0	235	370	745	1450	3780	5900	13300	23500	37000	53000
11.0	285	440	950	1790	4580	7150	16100	28500	44000	64000
14.0	360	560	1150	2250	5780	9030	20300	36000	56000	81000
21.0	535	830	2140	3350	8550	13400	30100	53500	83000	120000
31.0	790	1230	3150	4930	12600	19700	44300	78800	123000	177000

*) For minimum and maximum flowrates see data sheet.



Steam-flow measurement system for constant saturated steam pressure

consisting of:
Vortex flowmeter type 83 WA and flow computer type Flow 20

Steam-flow measurement system for fluctuating saturated steam pressure (temperature compensated)

consisting of:
Vortex flowmeter type 83 WA, flow computer type Flow 100 and temperature sensor TRG 5-53

Steam-flow measurement system for fluctuating saturated steam pressure (pressure compensated)

consisting of:
Vortex flowmeter type 83 WA, flow computer type Flow 100 and pressure transmitter DRT with syphon and pressure gauge.

Steam-flow measurement system for superheated steam (temperature and pressure compensated)

consisting of:
Vortex flowmeter type 83 WA, flow computer type Flow 100, temperature sensor TRG 5-53 and pressure transmitter DRT with syphon and pressure gauge