NIVOSONAR OPEN CHANNEL FLOW METERS

PROFESSION IS YOUR LEVEL





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GENERAL DESCRIPTION

The **NIVOSONAR GPA** flow measurement system enables flow measurements on **PARSHALL** flumes, gravitational sewers, brook channels, irrigation channels or any other open channels. The measurement system consists of an ultrasonic level transmitter and a measuring flume which is easy to install in new or existing channel structures. In order to provide wide application possibilities **PARSHALL** flumes are available to order in 9 different sizes with measurement range from 1 m³/h up to 6627 m³/h. The **PARSHALL** flume is a rigid structure, manufactured out of polypropylene with narrow tolerances to ensure high accuracy of metering, therefore during transport and installation great care should be taken to prevent the flume of getting deformed.



APPLICATION

With the **PARSHALL** flume applied as a reducing element, the stagnation pressure causes the liquid level to rise. This change in level is in proportion with the velocity of the liquid and the flow rate. **EasyTREK** ultrasonic level transmitter measures the change in level and transmits measurement data via HART communication to the **MultiCONT** multichannel process controller. **EasyTREK** transmitters can be remote programmed via HART by **MultiCONT** and data logging can be also realized besides displaying or transmitting measurement data on RS 485 line into PC.

ТҮРЕ		NIVOSONAR GPA								
		P2	Р3	P4	P5	P6	P7	P8	P9	
m ³ /h	0.936	1.872	2.808	5.472	8.1	10.476	15.84	20.88	31.32	
m ³ /h	22.392	54.36	196.56	604	1324.8	2152.8	3232.8	4359.6	6627	
cm	2.54	5.08	7.62	15.24	22.86	30.48	45.7	61	91.4	
cm	30	34	39	53	75	120	130	135	150	
cm	9.29	13.49	17.8	39.4	38.1	61	76.2	91.44	121.9	
cm	16.75	21.35	25.88	39.69	57.47	84.46	102.6	120.7	157.2	
cm	23	26.4	46.7	62	80	92.5	92.5	92.5	92.5	
cm	63.5	77.5	91.5	152.4	162.6	286.7	294.3	301.9	316.9	
cm	5	5	5	10	10	10	10	10	10	
cm	24.8	28.6	49.2	69.6	87.6	100.1	100.1	100.1	100.1	
cm	30.7	35.35	39.9	54	80	100	120	140	180	
kg	9	10.6	19.1	49	81	146	183	231	252	
	0.6	0.6	0.6	0.6	0.6	0.7	0.7	0.7	0.7	
	0.0609	0.1197	0.1784	0.354	0.521	0.675	1.015	1.368	2.081	
	1.552	1.553	1.555	1.558	1.558	1.556	1.560	1.564	1.569	
	PE m ³ /h cm cm cm cm cm cm cm cm cm kg	PE PI m³/h 0.936 m³/h 2.392 cm 2.54 cm 30 cm 3.0 cm 3.0 cm 3.0 cm 4.53 cm 2.34 cm 3.0 cm 24.8 cm 3.0 cm 0.0 cm 0.0 cm 0.0 cm 1.552	PE P1 P2 m³/n 0.936 1.872 m³/n 22.392 54.36 cm 22.392 54.36 cm 22.392 5.08 cm 2.54 5.08 cm 2.54 5.08 cm 3.0 34 cm 9.29 13.49 cm 16.75 21.35 cm 26.4 77.5 cm 63.5 77.5 cm 24.8 28.6 cm 24.8 28.6 cm 30.7 35.35 cm 9.0 10.6 cm 0.6.6 0.6 cm 0.6.6 0.6	PE P1 P2 P3 m³/n 0.936 1.872 2.808 m³/n 2.392 54.36 196.56 cm 2.54 5.08 7.62 cm 2.54 5.08 7.62 cm 3.04 3.94 3.94 cm 3.02 13.49 17.8 cm 9.29 13.49 17.8 cm 16.75 21.35 25.88 cm 23 26.4 46.7 cm 23 26.4 46.7 cm 23 26.4 46.7 cm 23 26.4 40.7 cm 5 5 5 cm 24.8 28.6 49.2 cm 30.7 35.35 39.4 cm 9 10.6 10.4 cm 0.6 0.6 0.4 cm 0.600 0.1197 0.784	PE I P2 P3 P4 m³/h 0.936 1.872 2.808 5.472 m³/h 0.936 1.872 2.808 5.472 m³/h 2.392 54.36 196.56 604 cm 2.54 5.08 7.62 152.44 cm 3.00 3.44 3.90 53.44 cm 9.29 13.49 17.8 39.44 cm 9.29 13.49 17.8 39.4 cm 16.75 21.35 25.8 39.4 cm 23 26.4 46.7 26.4 cm 55 75.5 39.9 35.4 cm 24.8 28.6 49.2 49.4 </td <td>PE NIVOSONAL P1 P2 P3 P4 P5 m³/n 0.936 1.872 2.808 5.472 8.1 m³/n 2.392 54.36 196.56 604 1324.8 cm 2.542 5.08 7.62 15.24 22.86 cm 2.54 5.08 7.62 15.24 22.86 cm 3.03 3.4 3.9 5.3 7.5 cm 3.03 3.4 3.9 5.3 7.5 cm 9.29 13.49 17.8 39.4 38.1 cm 9.29 13.49 17.8 39.4 38.1 cm 9.29 13.49 17.8 39.4 38.1 cm 16.75 21.35 25.88 39.49 57.4 cm 23 26.4 46.7 42.8 62.6 cm 5.5 5.5 10.0 10.1 cm 24.8 25.3</td> <td>PE I I P3 P4 P5 P6 m³/n 0.936 1.872 2.808 5.472 8.1 10.476 m³/n 2.392 54.36 196.56 604 1324.8 2152.8 m³/n 2.539 54.36 196.56 604 1324.8 2152.8 acm 2.54 5.08 7.62 152.4 22.86 30.48 acm 3.03 3.4 3.9 5.3 7.5 120.0 acm 9.29 13.49 17.8 39.4 38.1 61 acm 9.23 21.5 15.8 39.4 38.1 61 acm 63.5 7.75 91.5 162.4 162.6 <</td> <td>NIVOSONAL GPAPAP1P2P3P4P5P6P7m³/n0.9361.8722.8085.4728.110.47615.84m³/n2.39254.36196.5660413248215283232.8cm2.545.087.6215.2422.8630.4845.7cm3003439537551201300cm9.2913.4917.839.4938.16176.2cm16.7521.3525.8839.6957.4784.46102.6cm2326.446.7628092.592.5cm63.577.591.5152.4162.6286.7294.3cm55551010101010cm24.828.6839.954.4810.4102.1cm30.735.3539.954.480.4102.1cm30.735.3539.954.480.4100.1cm30.735.3539.954.480.4100.1cm30.735.3539.954.480.4100.1cm910.610.440.481134.4cm30.735.3539.954.480.4100.1cm40.410.414.4183.114.4134.1cm50.450.450.450.450.450.4</td> <td>IPI INTROPONATIONPA1PA2PA3PA4P5P6P7P8m³/h0.9361.8722.8085.4728.110.47615.8420.88m³/h2.39254.36196.566041324.82152.8323.84359.6cm2.5445.087.6215.2422.8630.4845.761cm3003443953.3755120130130cm9.2913.4917.839.438.16176.291.44cm16.7521.3525.8839.4957.4784.46102.6120.7cm23.326.4446.762.6286.729.43301.930.7cm63.577.591.55152.4162.6286.729.43301.9cm5510.1162.6286.729.43301.9cm63.577.591.55152.4162.6286.729.43301.9cm5510.110.110.110.110.1cm30.735.3539.954.480.610.010.010.1cm30.730.5539.954.480.610.610.110.1cm30.410.419.414.418.423.123.1cm55555510.110.1cm5555</td>	PE NIVOSONAL P1 P2 P3 P4 P5 m³/n 0.936 1.872 2.808 5.472 8.1 m³/n 2.392 54.36 196.56 604 1324.8 cm 2.542 5.08 7.62 15.24 22.86 cm 2.54 5.08 7.62 15.24 22.86 cm 3.03 3.4 3.9 5.3 7.5 cm 3.03 3.4 3.9 5.3 7.5 cm 9.29 13.49 17.8 39.4 38.1 cm 9.29 13.49 17.8 39.4 38.1 cm 9.29 13.49 17.8 39.4 38.1 cm 16.75 21.35 25.88 39.49 57.4 cm 23 26.4 46.7 42.8 62.6 cm 5.5 5.5 10.0 10.1 cm 24.8 25.3	PE I I P3 P4 P5 P6 m³/n 0.936 1.872 2.808 5.472 8.1 10.476 m³/n 2.392 54.36 196.56 604 1324.8 2152.8 m³/n 2.539 54.36 196.56 604 1324.8 2152.8 acm 2.54 5.08 7.62 152.4 22.86 30.48 acm 3.03 3.4 3.9 5.3 7.5 120.0 acm 9.29 13.49 17.8 39.4 38.1 61 acm 9.23 21.5 15.8 39.4 38.1 61 acm 63.5 7.75 91.5 162.4 162.6 <	NIVOSONAL GPAPAP1P2P3P4P5P6P7m³/n0.9361.8722.8085.4728.110.47615.84m³/n2.39254.36196.5660413248215283232.8cm2.545.087.6215.2422.8630.4845.7cm3003439537551201300cm9.2913.4917.839.4938.16176.2cm16.7521.3525.8839.6957.4784.46102.6cm2326.446.7628092.592.5cm63.577.591.5152.4162.6286.7294.3cm55551010101010cm24.828.6839.954.4810.4102.1cm30.735.3539.954.480.4102.1cm30.735.3539.954.480.4100.1cm30.735.3539.954.480.4100.1cm30.735.3539.954.480.4100.1cm910.610.440.481134.4cm30.735.3539.954.480.4100.1cm40.410.414.4183.114.4134.1cm50.450.450.450.450.450.4	IPI INTROPONATIONPA1PA2PA3PA4P5P6P7P8m³/h0.9361.8722.8085.4728.110.47615.8420.88m³/h2.39254.36196.566041324.82152.8323.84359.6cm2.5445.087.6215.2422.8630.4845.761cm3003443953.3755120130130cm9.2913.4917.839.438.16176.291.44cm16.7521.3525.8839.4957.4784.46102.6120.7cm23.326.4446.762.6286.729.43301.930.7cm63.577.591.55152.4162.6286.729.43301.9cm5510.1162.6286.729.43301.9cm63.577.591.55152.4162.6286.729.43301.9cm5510.110.110.110.110.1cm30.735.3539.954.480.610.010.010.1cm30.730.5539.954.480.610.610.110.1cm30.410.419.414.418.423.123.1cm55555510.110.1cm5555	



ACCURACY

Accuracy of NIVELCO's flow measurement system is depended on the proper installation. Under optimal circumstances 1.5 - 2 % accuracy can be achieved by proper installation and suitable laminar flow conditions.



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