

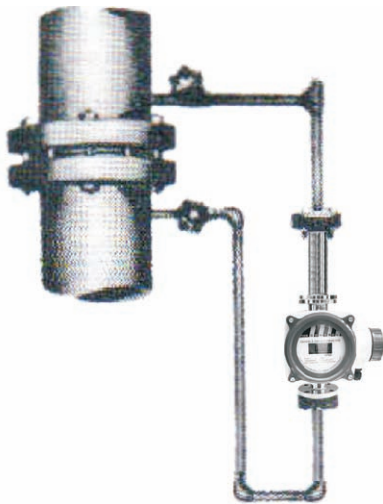
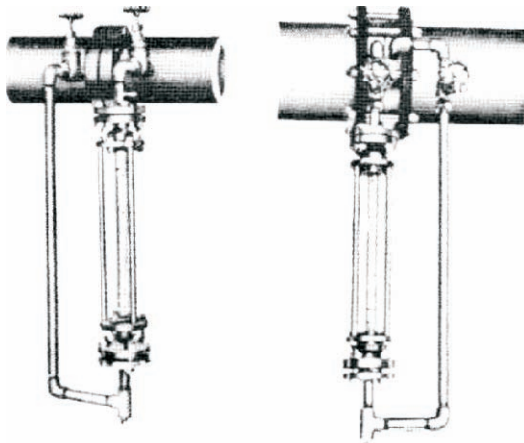
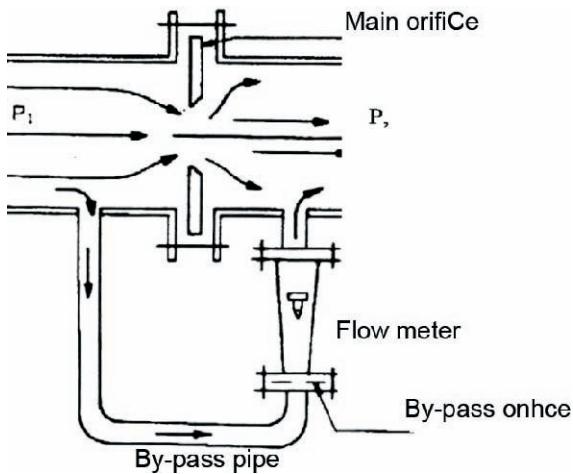
ORI FLOW METER

THE ORI-FLOW METER MEASURES FLOW BY INSERTING AN ORIFICE AT PART OF THE PIPING, GENERATING DIFFERENTIAL PRESSURE BEFORE AND BEHIND THE ORIFICE BY MEANS OF THE FLOW, AND EXTRACTING THIS DIFFERENTIAL PRESSURE BY A SUITABLE METHOD.

DIFFERENTIAL PRESSURE (P_1-P_2) OF MAIN ORIFICE AND THE FLOW Q HAVE SHOWN IN EQUATION GIVEN BELOW. THE FLOW IS PROPORTIONAL TO THE SQUARE ROOT OF THE DIFFERENTIAL PRESSURE.

$$Q = CF \sqrt{\frac{2g}{\rho} (P_1 - P_2)}$$

- Q : Volumetric flow
 C : Flow co-efficient
 F : Cross sectional area of orifice hole
 g : Acceleration of gravity
 P_1-P_2 : Differential pressure
 ? : Specific weight of fluid



The generated differential pressure is sent to a manometer or other differential pressure gauge and a differential flow meter can be formed by attaching a flow scale to this gauge. However, since the flow indication is a square root scale reading is difficult. Moreover, incase of remote transmission it is inconvenient because the evolution operation is performed to obtain linear relation.

Therefore if a by - pass pipe connecting the before and behind point of the main orifice is installed and the flow is branched to that pipe to overcome these disadvantage, that flow becomes proportional to the differential.

Capacity Guide Maximum m³/h of Water.

Main Pipe Size		Main Pipe Maximum Flow m/h (20°C Water)					
		Differential Pressure					
Inch	Millimeter	1000mmWC	1500 mmWc	2000mmWc	2500 mmWC	3000mmWC	500mmWC
2	50	67-19	82-23	9.4-27	10.5 - 30	11.5 - 34	15 - 42
2 ½	65	11-32	13-38	16-45	17 - 50	19 - 55	27 - 170
3	80	15-44	19-54	22-63	24 - 70	27 - 78	35 - 100
4	100	26-76	32-92	37-100	42 - 120	46 - 130	59 - 165
5	125	41-110	50-140	58-160	64 - 180	70 - 200	91 - 225
6	150	57-160	70-200	81-230	91 - 260	99 - 280	128 - 350
8	200	100-280	122-350	140-420	160 -450	170-500	220 - 610
10	250	150-440	190-540	220-630	240 - 700	270-780	340 - 930
12	300	220-640	270-780	310-900	350-1000	380-1100	490-1300
14	350	270-780	340-950	390-1100	430-1250	480-1350	610-1600
16	400	360-100	440-1200	510-1400	570-1600	630-1800	810-2100
18	450	460-1300	570-1600	650-1800	730-2100	800-2300	1040-2700
20	500	580-1600	710-2000	820-2300	910-2600	1000-2900	1300-3400

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