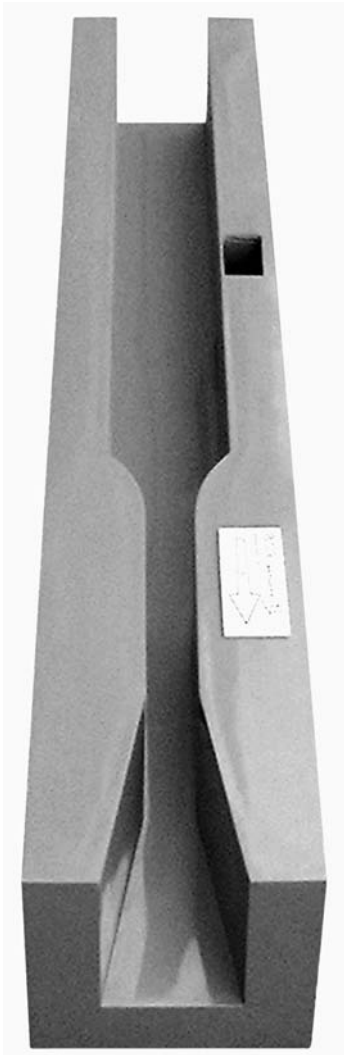


Flow rate measurement in open channel

VENTURI CHANNEL DEBITFLO



(DF20A)

- According to ISO 4359
- 10 ranges
- From 7 to 2500 m³/h
- Construction: composite material
- Easier civil engineering
- Options:
 - Complete measurement system
 - Logger and transmitter
 - Inserted channel in PE module

PRINCIPLE

Manufactured Venturi channels are dedicated for flow rate measurement in open flumes, and totalization on effluents. They are useful either on waste water, contaminated fluid even with solids/ particles or chemically aggressive.

Venturi channel is a channel with a width narrowing. Correlation exists between flow rate value and the height of upstream fluid when the difference of height between upstream and downstream is greater than 0.25 h.

Flow rate calculation:

$$Q = \left(\frac{2}{3}\right)^{3/2} \sqrt{g} C_v b e h_e^{3/2}$$

Q : Flow rate [m³/s]

C_v : (H_e / h_e)^{3/2}

b : Venturi width [m]

h : Effluent height [m]

The curve Q(h) is joined with each Venturi channel.

DESCRIPTION

In our standard models, you may choose between 4 types of instruments, all with an ISO 4359 Venturi, with or without approach and tranquilization flumes. They are manufactured in reinforced polyester fibreglass for flow rates from 2 to 2500 m³/h.

For the smallest flow ranges, we can provide a PE module allowing an easiest installation on site. For the greater flow rates we can provide just the Venturi channel, without approach and tranquilization flumes.



DF7A, complete open channel with PEHD integration housing

BAMO MESURES

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04-11-2009

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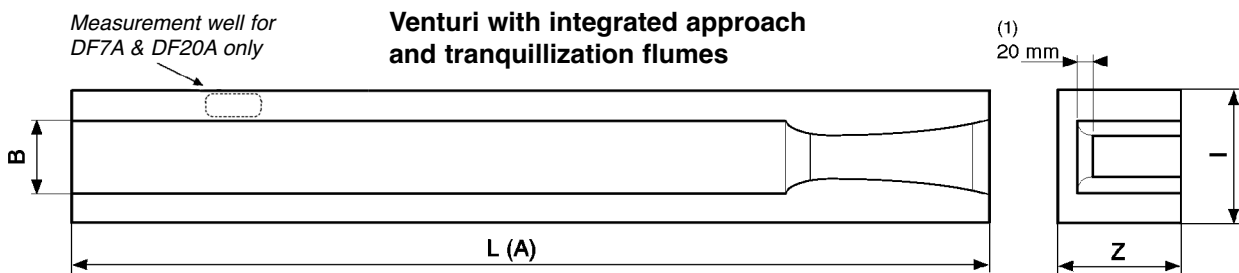
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CODE NUMBERS AND REFERENCES

Code	Model	Max flow rate Q l/s	Max flow rate Q m³/h	h max (mm)	Overflow Q m³/h	B (mm)	I (mm)	Z (mm)	L (A) (mm)	L (C) (mm)
755 600	DF7A	1,9	7	96	9,3	100	200	185	1260	-
755 602	AV07A	1,9	7,59	100	12	100	200	185	1260	-
755 610	DF20A	5,3	19	122	22,4	100	200	205	1350	-
755 612	AV25A	6,9	25	142	28,5	100	200	205	1350	-
755 620	DF100A	27,8	100	285	111	150	250	356	2414	-
755 630	DF250A	69,4	250	327	271	300	400	395	3583	1143
755 640	DF500A	138,9	500	398	548	450	550	470	4889	1495
755 650	DF1000A	277,8	1000	545	1070	550	650	620	6253	1919
755 660	DF1500A	416,7	1500	622	1621	650	750	705	7229	2161
755 670	DF2500A	694,4	2500	621	2679	1100	1200	700	10117	2804

*Note: smaller VENTURI DF7A, AV07A, DF20A and AV25A do not correspond to ISO 4359 on specified width of the throat < 100 mm.

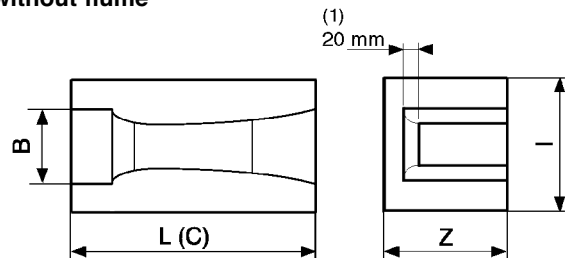
DF7A and DF20A: their upstream flumes have a 20 mm raised bottom with a sided well measurement (allows the use of a bubbling level transmitter).



DF1000A, DF1500A and DF2500A (length A) are delivered in three parts.

Venturi channel only, without flume

Code	Model
755 635	DF250C
755 645	DF500C
755 655	DF1000C
755 665	DF1500C
755 675	DF2500C



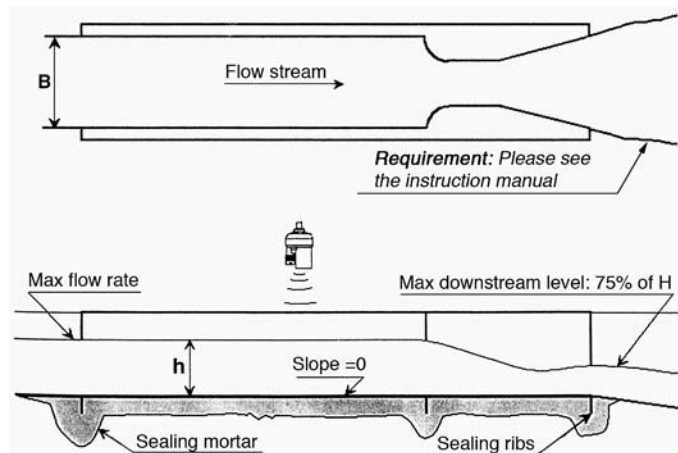
NOTES

According to requirements installation, the accuracy is $\pm 2\%$ or $\pm 3\%$ of the reading between the higher and lower limits specified for each channel.

The error between 0 and the minimal flow rate value corresponds to $\pm 2\%$ or $\pm 3\%$ of the lower flow rate value.

Venturi channels accept an overflow rate with no risk of overflowing.

The higher heights of fluids are rough values indicated for an easy model selection.



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