Flap-Flow Meter
TM INTRA/ TM PRIMA

Figure1 Mecon Flap Flow Meter for transparent liquids TM Intra

Figure 2 Mecon Flap Flow Meter for opaque liquids TM Prima

Application

The TM Intra/ TM Prima flap flow meter is used to check and display the flow of liquids in closed pipelines. The device can be optionally fitted with an inductive contact for remote transmission of switching points.

The main applications for the TM can be found in the following fields:

- Chemical industry
- Water, waste water
- Building installations

Special Features

- Extremely robust design
- Suitable for transparent and turbid liquids
- Vertical or horizontal installation
- Simple, maintenance-friendly design
- Liquid temperatures up to +250 °C (482 °F)
- Inductive contact for flow monitoring (option).

Design and Mode of Operation (Figure3)

The TM Intra / Prima operates according to the flap principle. The fitting (1) contains a measuring flap (2) which can be rotated around an axis (3). At rest (i.e. no flow), the flap closes the pipeline by its own weight. As soon as there is a flow, the flap is lifted depending on the flow velocity. The respective flow quantity can be read directly in transparent liquids from the position of the flap. The bottom edge of the flap is the reference edge.

In turbid or opaque liquids, the movement of the flap is transmitted by a magnet (5) mounted on the flap to an external mechanical pointer (8), and the flow is displayed on a scale. The scale and pointer are protected against external effects and contamination by a plexiglass or glass pane.

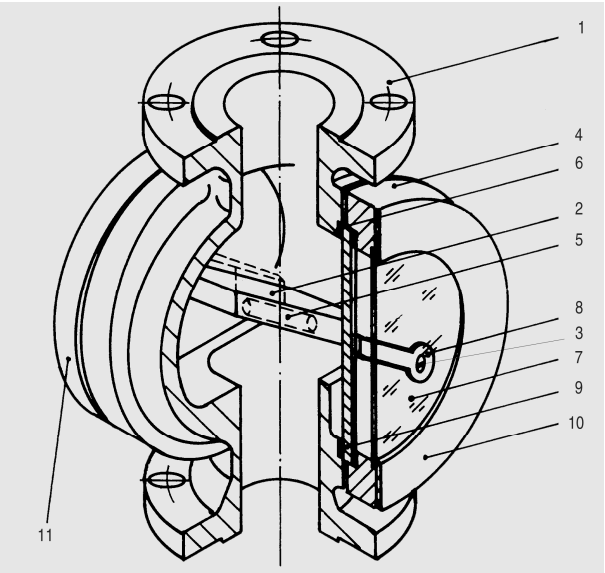
The scale has the standard dimension m3/h, and can be calculated for an application-specific medium and operating pressure/temperature if the density differs from 1 kg/l (62.43 lbs/cu.ft). Special scales are available at extra charge.

An inductive contact is triggered by a contact lug mounted on the pointer.

Please contact sales@tecmara.de for further information to this product.

Technical Data

TM Intra / TM Prima (Flap-Type Flow Meter)		
Liquid	min.	0.5 – 2.5 m³/h
	max.	15 - 160 m³/h
	min.	2.20 – 11.01 USgpm
	max.	66 - 704 USgpm
		transparent and non transparent
Pressure	max.	16 bar, 232 psi
Temperature	max.	150 °C, 302 °F TM Intra
	max.	+250 °C, 482 °F TM Prima
Accuracy		±5,0 % of full scale value
Installation position		vertical or horizontal
Flow direction		horizontal or vertical upwards
Connections		DN 25 - 150
		ANSI 1“ - 6“
Accessories		switching contacts only TM Prima
PED 97/23/EC	Cat.	Art. 3.3 (liquids of fluid group 1)



1 Fitting
2 Measuring flap
3 Flap axis
4 Pressure ring
5 Magnet [1]
6 Gasket
7 Plexiglass or glass pane[1]
8 Pointer[1]
9 Scale pane [1][2]
10 Front ring[1]
11 Dummy flange

[1] Only with SITRANS F I Prima.
[2] With Intra: glass pane.

Figure 3 flap flow meter, design