

Platon Gapmeter Type GMT

ALL METAL MAGNETICALLY COUPLED FLOWMETER

Gapmeters Type GMT are metal tube Variable Area (VA) flowmeters with magnetically coupled indicators for the flow measurement of liquids and gases. They have been designed for arduous industrial service where glass tube instruments would be unsuitable.

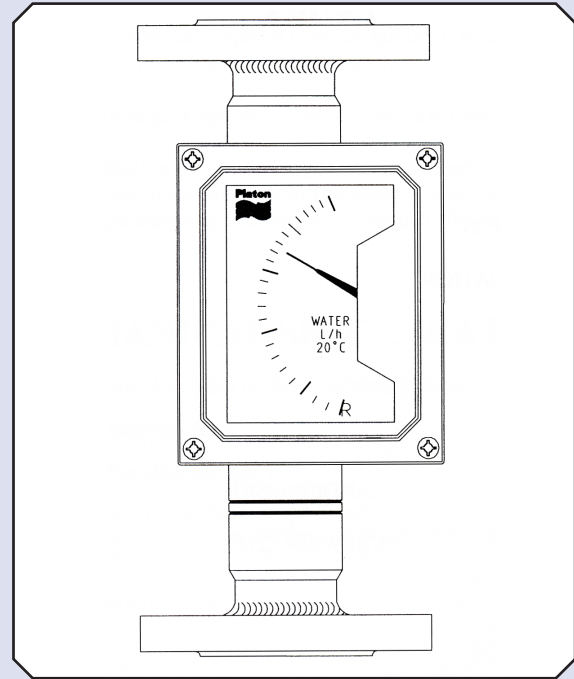
The rugged design of these instruments allows for their use in a range of applications including chemical, petrochemical, pharmaceutical and water treatment industries.

The measuring element consists of two precision components - the float and the tapered tube.

The float position within the internally tapered tube is established when the upward flow forces are balanced by that of gravity acting upon the float.

This position is translated through a magnetic coupling, into a pointer position on the scale (see Figure 1 overleaf).

The instruments are calibrated for the customers process fluid and conditions. If these change from the original specification, the calibration will be affected. Gas calibration will be affected by changes in temperature and pressure, whilst liquid calibrations will be affected by temperature changes only.



MECHANICAL SPECIFICATION

Body	- 316 Stainless Steel or brass (screwed only)
Internals	- 316 Stainless Steel
Float	- 316 Stainless Steel or PVC
Connections	- Standard instrument flanges ANSI B16.5, 150, 300lb & BS EN1092-1 PN16, PN40.
	- Screwed to BSPP or NPT standards
Flow Orientation	- Vertically upwards
Temp Rating	- 200°C
Pressure Rating	- Stainless Steel body 100 bar @ 20°C or Flange Rating (whichever is lower). Brass body 75 bar @ 20°C
Scale Length	- 100mm
Accuracy	- ±2% FSD
Hysteresis	- 0.5% FSD
Dashpot Damper	- Fitted to gas units only
Housing	- Polyester coated aluminium alloy (BS1490 LM25M)
	- Weatherproofed to IP65

Note: All specifications listed above are for standard configuration instruments only.

INSTALLATION

1. Remove all packaging from the flowmeter body.
2. The instrument should be examined for any transit damage prior to installation in the pipework.
3. The cover should be fitted to exclude ingress of dirt and moisture presence on the indicator mechanics.
4. The upstream and downstream pipe bores should be the same nominal size as the instrument. Straight pipe lengths of five diameters upstream and two diameters downstream should be provided.
5. Ensure the instrument is installed vertically in the pipework with the direction of flow upwards.
6. Before the meter is installed, the pipeline should be cleared of any foreign matter likely to inhibit the performance of the meter. A 50 micron filter should be fitted upstream of the meter, if particles larger than this might be present in the flow.
7. Ensure that any ferro-magnetic material is clear of the instrument by 100mm minimum.

MAINTENANCE

The instrument should not normally require any attention, but if any problems occur check the following:

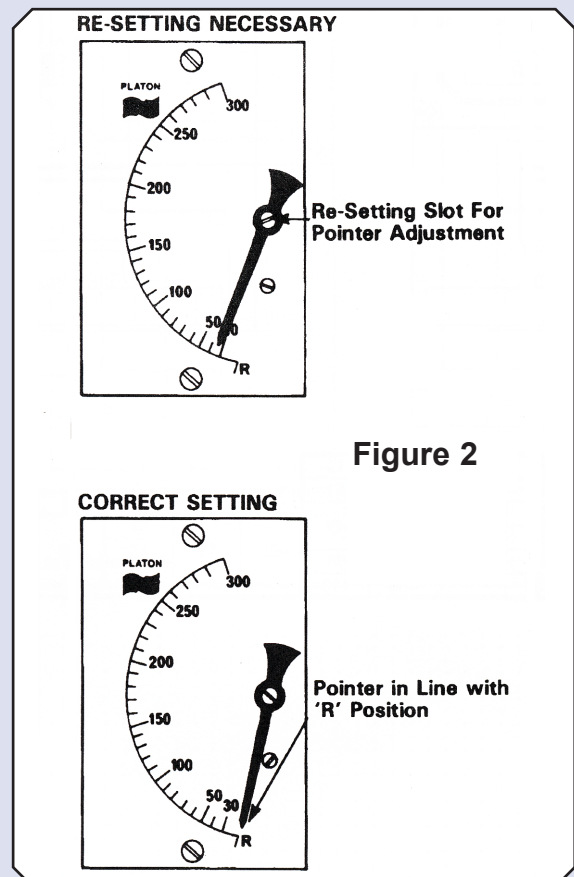
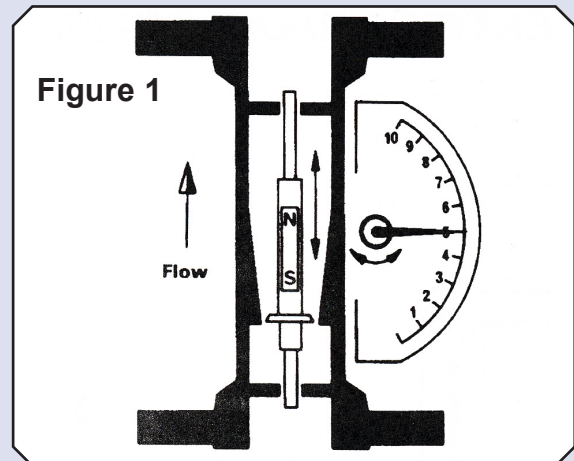
First, ensure the instrument is vertical and when the flow is at zero, the pointer is at rest ('R') position.

If the pointer is not aligned with the 'R' position, do not adjust the pointer before verifying:

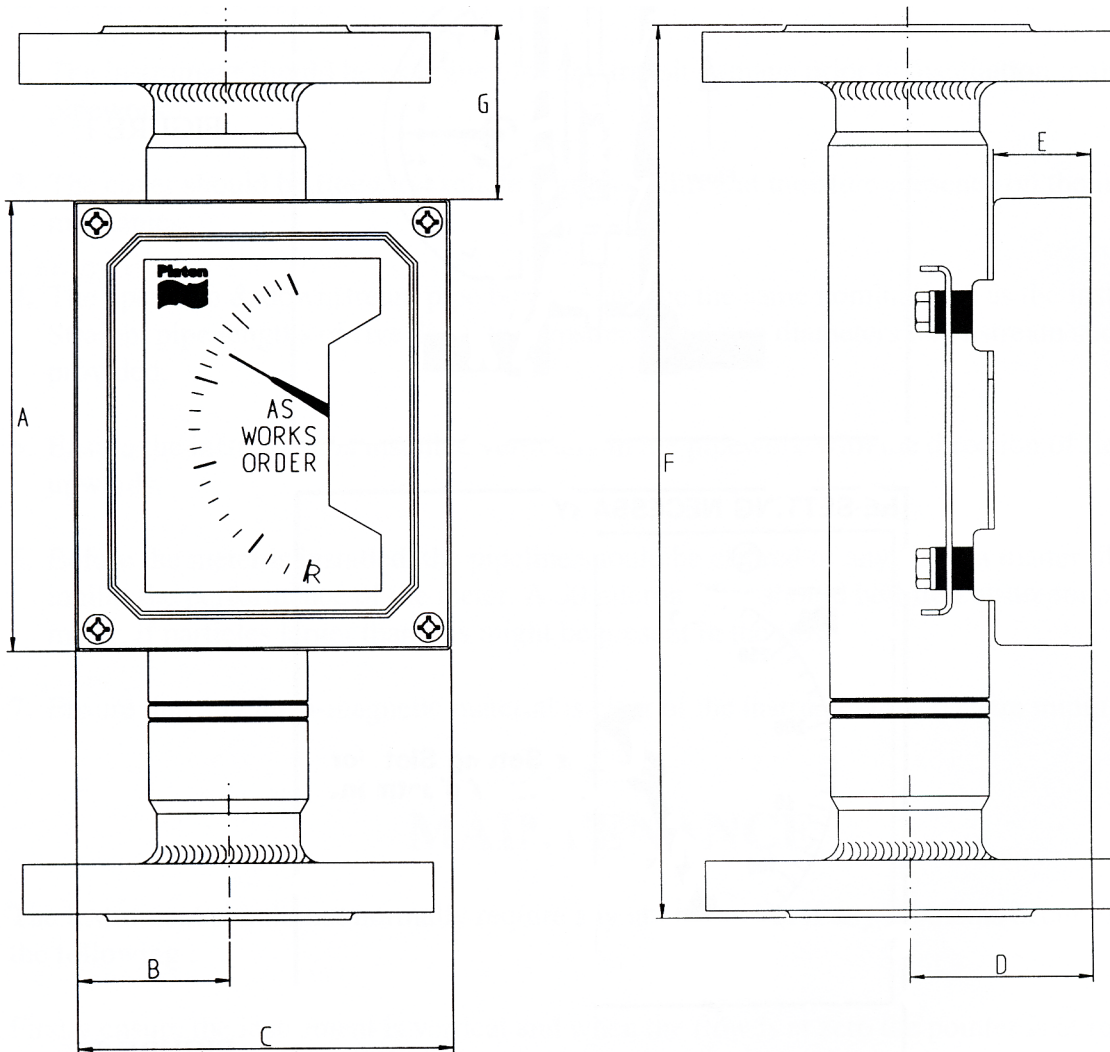
- a) By internally inspecting the flowmeter body, check that the float is at rest on the bottom stop and is not obstructed by any process debris.
- b) That the pointer moves over the full scale of 100mm. It is possible to deflect the metering disc by pushing the float with a suitable brass bar or other non-magnetic material. There should be approximately 50mm movement of float travel for FSD of the needle.
- c) That the bolts securing the body to the indicator are tightened.

- d) That any ferro-magnetic material is clear of the instrument by 100mm minimum.

Only then should the pointer be adjusted. This is achieved by locating a screw driver in the slot on the top of the pointer and by hand, gently rotating the pointer until it is pointing at the rest ('R') position (see Figure 2). This adjustment must be carried out with the flowmeter in the correct vertical orientation.



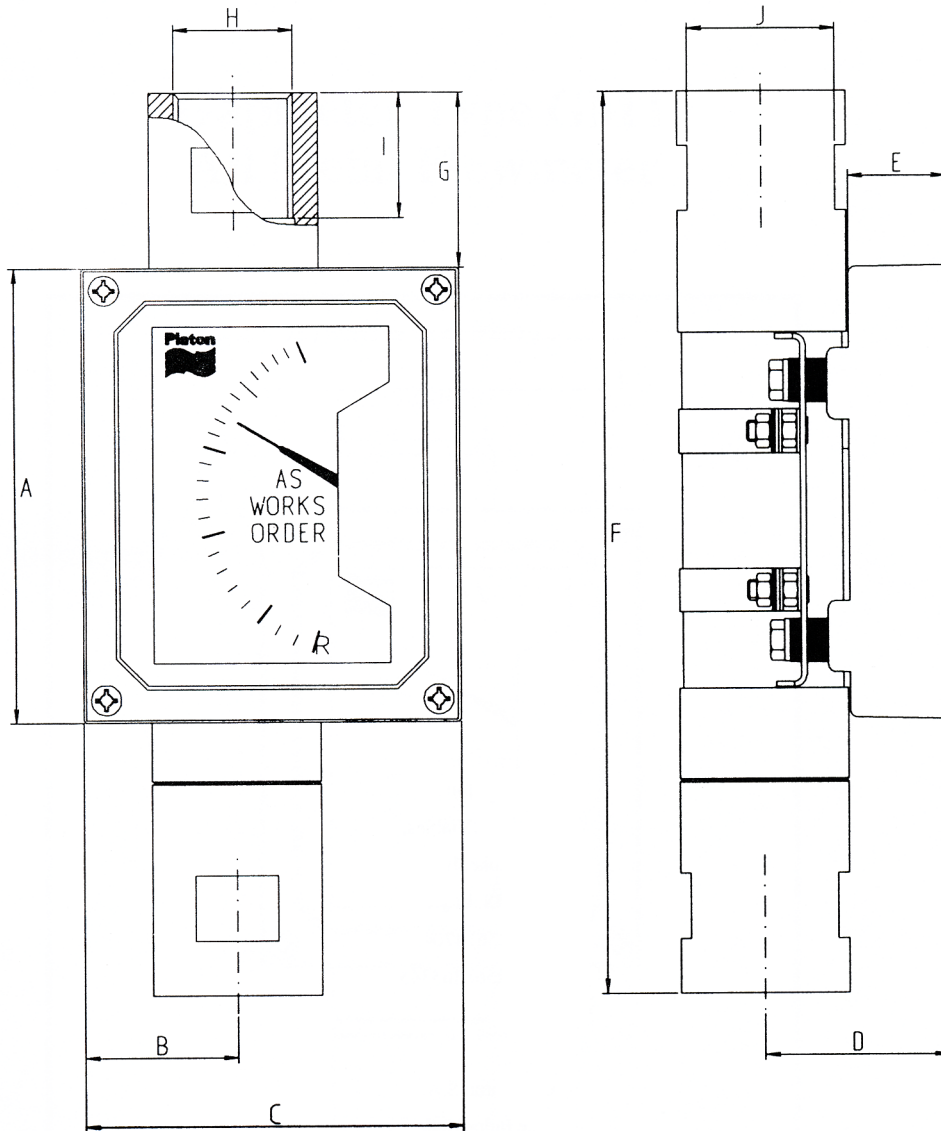
GMT FLANGED - CERTIFIED DRAWING NO. C27/1



* = Available as PTFE Lined Models.

	A	B	C	D	E	F	G
15		51		48			51
25*		45		51		250	
50*	126		106	66	27		49
80		42		87		300	75
100		39		100		400	113

GMT SCREWED - CERTIFIED DRAWING NO. C27/5



Dimensions in 'mm'/Unless Otherwise Stated/NOT TO SCALE

	A	B	C	D	E	F	G	H	I	J
15		51		48			51	1/2"	27	26
25	126	45	106	51	27	250		1"	34	41
50		42		66			49	2"	27	60



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