HORIZONTAL PROPELLER TYPE

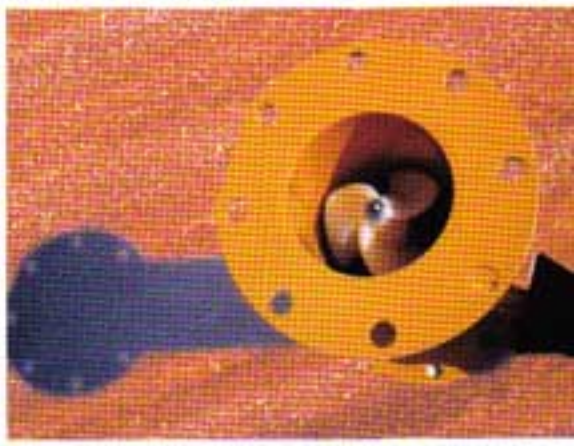
GEYSER FLOW METER

REYKJAVIK
ICELAND

Horizontal Propeller-Type Flow Meter

1. INTRODUCTION

With GEYSER horizontal propeller-type flow meter, there is a propeller facing up-stream as measuring element. The propeller is mounted concentrically with the meter tube. Struck by the force of flowing water on its angular blades, the propeller rotates at a velocity proportional to the velocity of water. The rotation is then transmitted through unique magnetic and mechanical systems to register assembly. As a result, the water's volumetric flow rate and accumulated volume are displayed clearly via an instantaneous indicator and a totalizer on the meter's dial.



ANGULAR BLADES OF PROPELLER

2. FEATURE

- large measuring range, high pressure rating, low pressure loss (Ref. Fig.1 HEADLOSS CURVE), steady performance of operation
- 6-digit otometer wheel direct-reading totalizer with cubic meter as measuring unit
- magnetic cup design instantaneous indicator with liters per second or gallons per minute as measuring unit
- concise design with many parts shared among different meter sizes (Ref. Table 1 LIST OF COMPOSITION PARTS), low maintenance and economical repair costs
- magnetic drive transmission assembly ensuring smooth and reliable operation and low transmission drag
- high meter accuracy and repeatability (Ref. Fig.2 ACCURACY CURVE) originated from advanced technology and good engineering
- easy removal and replacement with accuracy checking and field servicing purposes with calibrated and inter-changeable propeller and register assembly
- long-term accurate and reliable service ensured by strict quality control in production process
- all the main components to be made of durable materials
- solid and robust structure, flange end connection

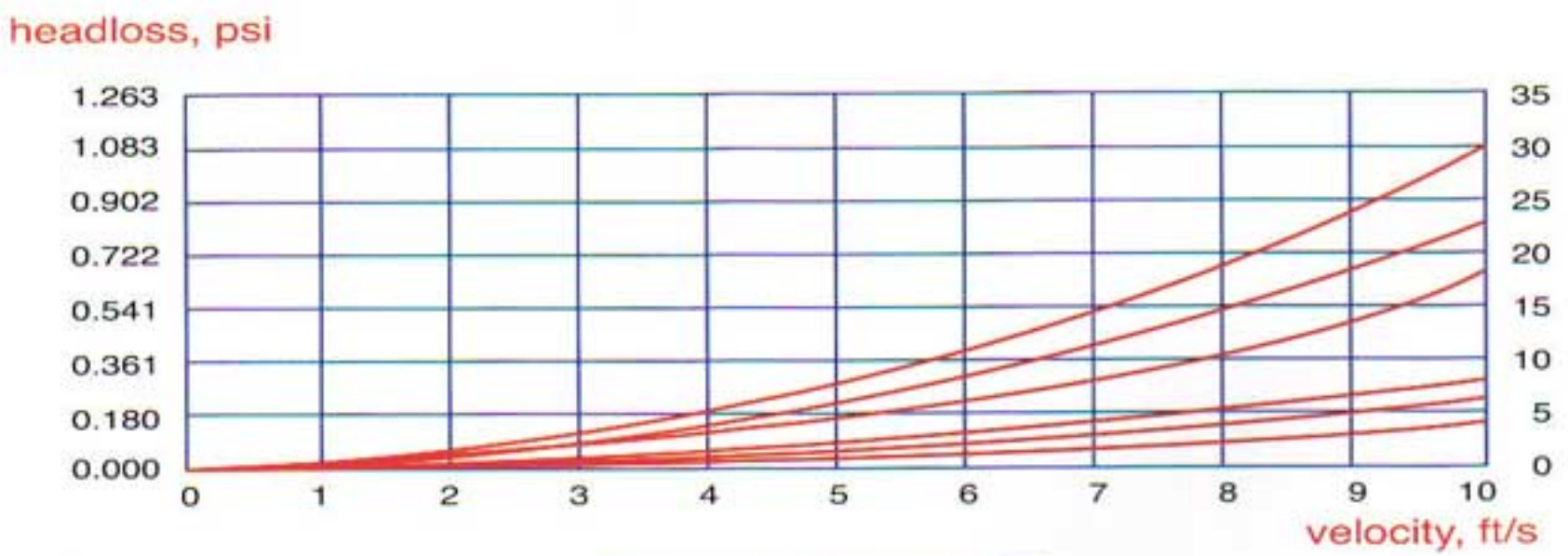


Fig.1 HEADLOSS CURVE

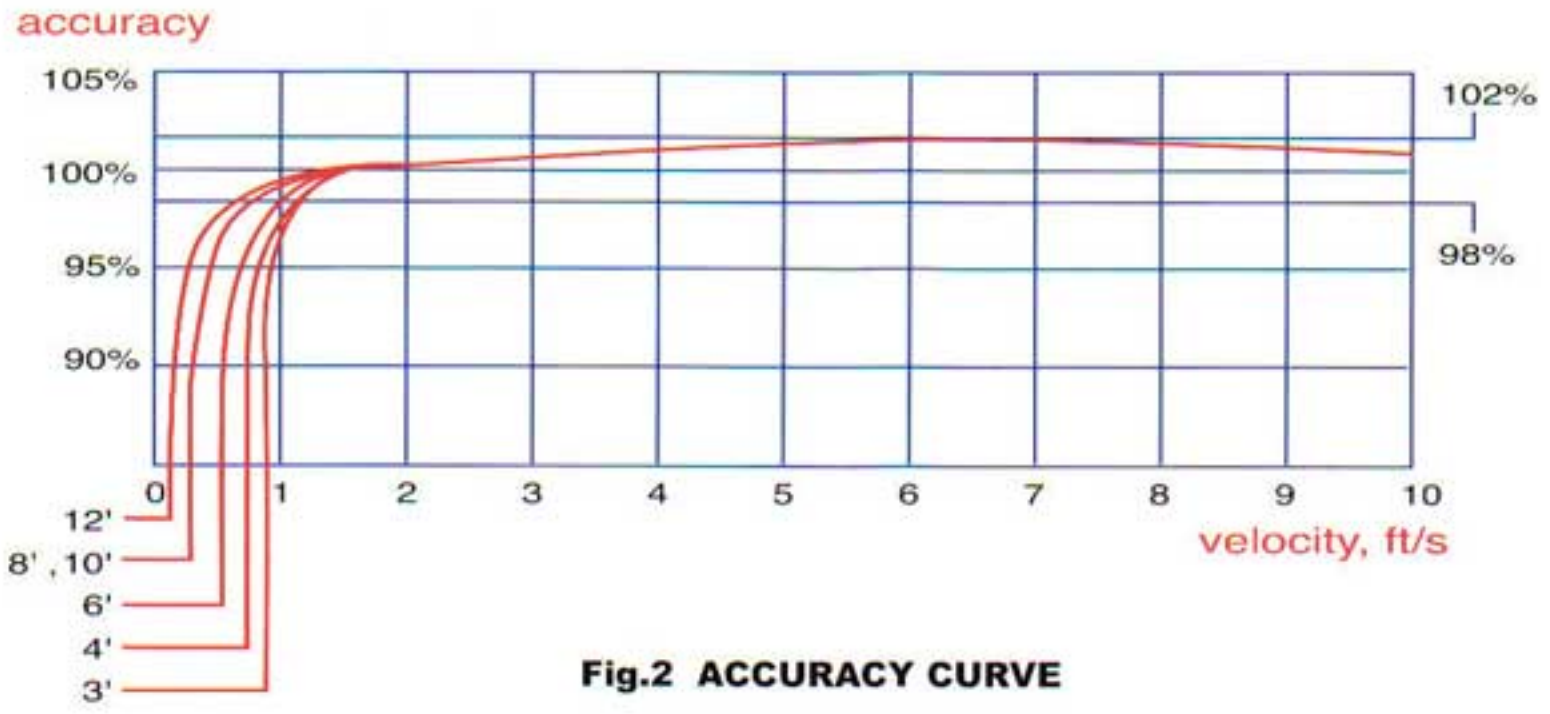


Fig.2 ACCURACY CURVE

3. COMPOSITION PARTS

Table 1 LIST OF COMPOSITION PARTS

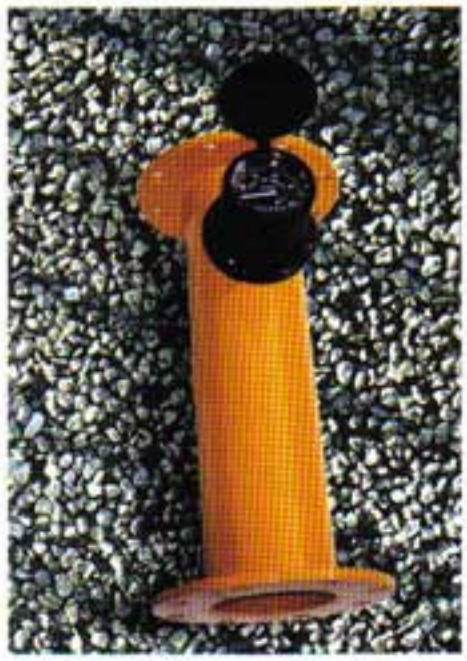
No.	Quantity	Description
1.*	1	meter tube with support ell
2.*	1	propeller
3.*	1	transmission assembly
4.	1	bottom guide bushing
5.	1	brass ring
6.*	1	rubber liner
7.	1	base plate
8.	7	cross panhead screw
9.	1	elastic straight pin
10.	1	cover of register box
11.	1	domed lens
12.	1	jam nut
13.*	1	register assembly
14.	1	screwed bushing

No.	Quantity	Description
15.	1	O sealing gasket
16.	1	top guide bushing
17.	1	O sealing ring
18.	1	register box
19.	1	sealing gasket
20.	1	cross panhead screw with seal-wire hole
21.	1	copper wire
22.	1	lead seal
23.*	1	flexible cable
24.	1	O sealing ring
25.	2	gasket
26.	1	link key
27.	1	gasket
28.	1	hex nut

Note: The parts marked " * " are different with different meter sizes.

4. MAIN SPECIFICATION

size available:	3" through 12"
flow rate applied:	40 ~ 2800 gpm
turndown:	10 : 1 or more
accuracy:	± 2%
repeatability:	± 0.25%



OVERALL APPEARANCE

5. STRUCTURE ILLUSTRATION

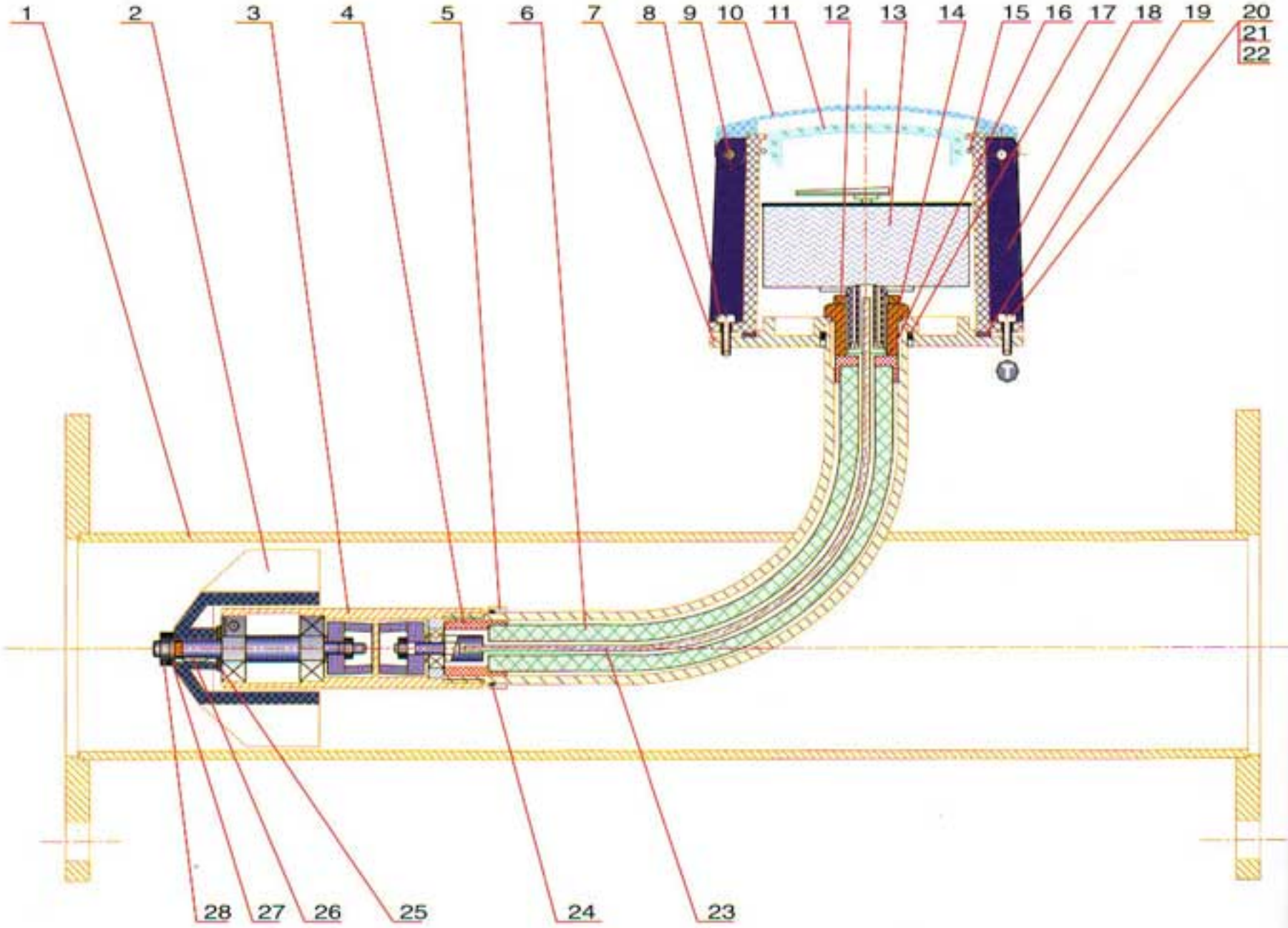


Fig.3 STRUCTURE ILLUSTRATION

6. NORMAL FLOW RATE LIMIT

unit of flow rate: gpm

meter size	3"	4"	6"	8"	10"	12"
min. flow rate	62	75	88	101	123	150
max. flow rate	300	594	1321	1783	2400	3368

7. OPERATION CONDITION

max. operation temperature: 160° F

max. operation pressure: 145 psi

8. OVERALL DIMENSION

Meter Size	Length	Height	End Connection Flange			
DN (inch)	L (inch)	H (inch)	D (inch)	D1 (inch)	Bolt Hole Number	Bolt Hole Diameter (inch)
3	18	14 1/2	7 1/2	6	4	3/4
4	20	14 1/2	9	7 1/2	8	3/4
6	22	15 1/2	11	9 1/2	8	7/8
8	24	17	13 1/2	11 3/4	8	7/8
10	25	18	16	14 1/4	12	1
12	26	19 1/2	19	17	12	1

Ref. Fig.4 DIMENSION ILLUSTRATION

D: outer diameter of end connection flange

D1: diameter of bolt hole circle of end connection flange

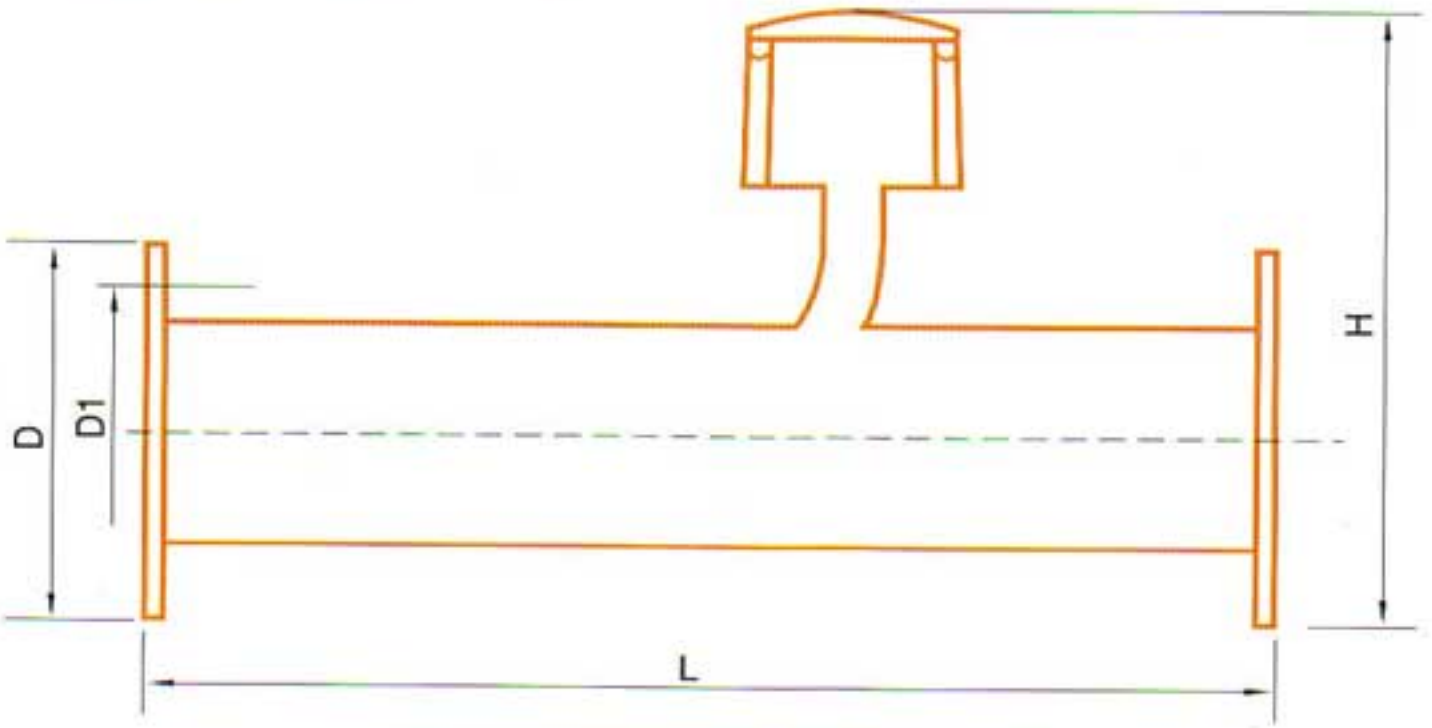


Fig.4 DIMENSION ILLUSTRATION

9. HOW TO ORDER PRODUCT

Please provide the following information in details when ordering GEYSER propeller-type flow meters:

1. application situation
2. nominal diameter of water supply pipe
3. max. & min. flow rate
4. max. operation pressure
5. max. operation temperature

PACKING BOX FOR METER

10. APPLICATION

GEYSER horizontal propeller-type flow meter is primarily intended for main water supply measurement. It can be especially used to measure the flow rates of water containing little impurities that might clog other regular types of flow meters. In general, this kind of meter is suitable for wide applications of agricultural, municipal & industrial measurement purposes such as central water supply system, water and some types of simple wastewater management, raw water intake, truck loading and discharge, agricultural irrigation system, golf course and park water management, multi-stage pump actuation and control, valve actuation and control, commercial nurseries, etc.

DIAL PRESENTATION

SOME METER DIAL RANGES:

DN 100mm

11. INSTALLATION INSTRUCTION

Standard installation is horizontal mount. Before installing, or adjusting or removing any meter, be sure the system has depressurized completely. Never attempt to remove a meter under pressure. Be careful when lifting meters. Meters can cause serious injury if dropped or lifted incorrectly. GEYSER propeller-type flow meters should be installed a minimum of five diameters downstream of any obstruction such as elbow, valve, pump and change in pipe diameter. Meanwhile, downstream run should be at least one diameter of straight pipe length after the meter.

Before starting a system, make sure all connections are properly secured. After the proper installation of meter, the water supply pipe and meter should be filled with water by slowly opening the inlet valve and allowing trapped air to be released slowly. Rapid expulsion of large slugs of entrained air should be avoided because of possible damage to the meter's internal measuring mechanism and interference in the accuracy of the meter's performance.

Under ordinary conditions, it is essential that all meters be periodically checked so as to ensure reliable meter measurement.

12. WARRANTY

If correctly mounted, properly operated and maintained, the warranty of quality of GEYSER propeller-type flow meter remains valid for one (1) year. During the warranty period, if any meter or any part thereof is found to be defective because of our design, materials, workmanship or any of our act or omission, GEYSER will at its option repair or replace the meter or the part free of charge. However, it should be noted that removing the lead seal from any meter that is still under warranty could void this warranty.

DN 150mm

DN 200mm