

GAS CHAMBER ORIFICE

MODEL GC01-P

INTRODUCTION

Special points of interest:

- Robust construction
- Non corrosive material
- Low bubble rate consumption
- Prolongs the life of the gas bottle
- Longer battery life by reducing the duty cycle operation of a gas purge compressor

**US DESIGN PATENT
No. D522.610**

The Hydrological Services Gas Chamber Orifice (GCO1) is designed to replace the standard orifice in a gas purge water level measurement system

The GCO1 permits the use of extremely low bubble rates with increased accuracy and near total reduction of lag between actual level rise and orifice pressure.

Bubble rates as low as 10 bubbles per minute can be used, thereby reducing gas consumption and prolonging the life of the gas bottle, or reducing the duty cycle operation of the compressor pump on our HS-55/45/40/35 bubbler water level measurement systems.

The main GCO1 chamber is constructed entirely of polyethylene with a copper coated

brass screen to deter aquatic growth, and is supplied fitted with a 2" barrel union to suit a standard 2" threaded pipe. The GCO1 has an in-built 1/4 inch NPT hex brass coupling and is supplied with 1/4 inch NPT male to 3/8 or 1/4 inch tube to suit customer requirements in relation to orifice line. The bottom of the chamber includes a revolving copper coated brass screen for cleaning purposes

The unit is designed to be fitted to existing installations preferably during low water condition.

Refer reverse side for results of comparative tests and installation details.



**GAS CHAMBER ORIFICE
MODEL GC01-P**

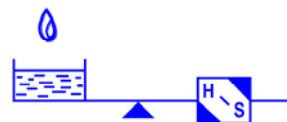
Inside this issue:

| | |
|---------------------------|----------|
| Special point of interest | 1 |
| Introduction | 1 |
| Advantages | 2 |
| Installation | 3 |
| Installation | 4 |

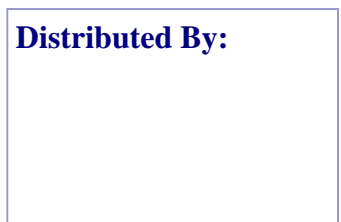
**Designed & Manufactured
By
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Advantages of GC01-P over standard GC01?

GC01-P

High impact resistant ; durable Polyethylene
 Revolving screen
 Non-corrosive
 Cost effective



GC01

Lower impact resistant ; thin copper dents easily
 Removable screen
 Requires insulation to stop corrosion
 Cost ineffectual

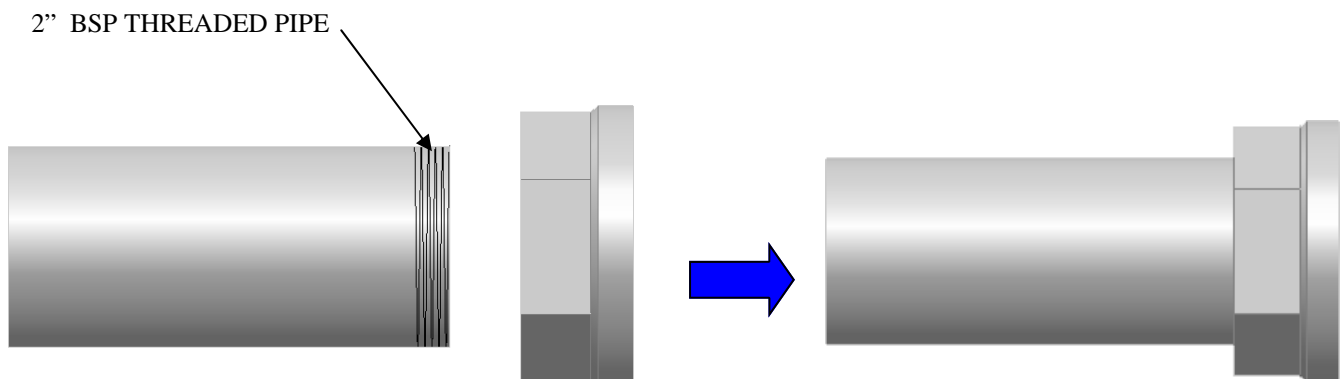
Performance

| Float Operated Encoder (Level in mm) | Standard Orifice 100 Bubble/Min | | Gas Chamber Orifice 100 Bubble/Min | |
|---|------------------------------------|------|---------------------------------------|-----|
| | Reading | Lag | Reading | Lag |
| 0 | 0 | — | 0 | — |
| 810 | 578 | 232 | 810 | 0 |
| 1700 | 1200 | 500 | 1700 | 0 |
| 2400 | 1540 | 860 | 2398 | 2 |
| 3600 | 2294 | 1306 | 3588 | 12 |

Installation

Step 1:

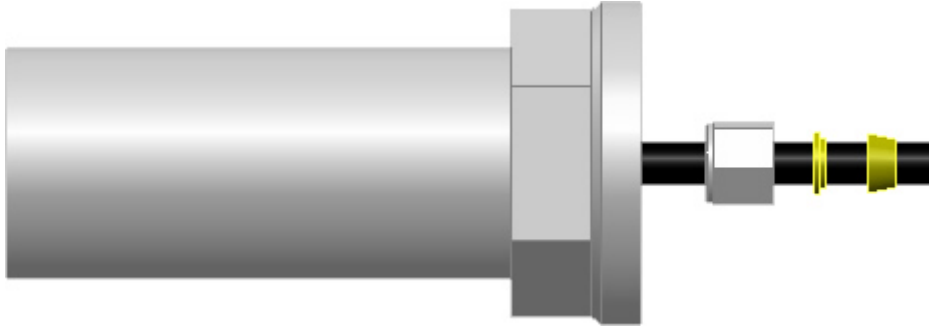
Secure male part of union onto 2" Galvanised pipe



Installation Cont's:

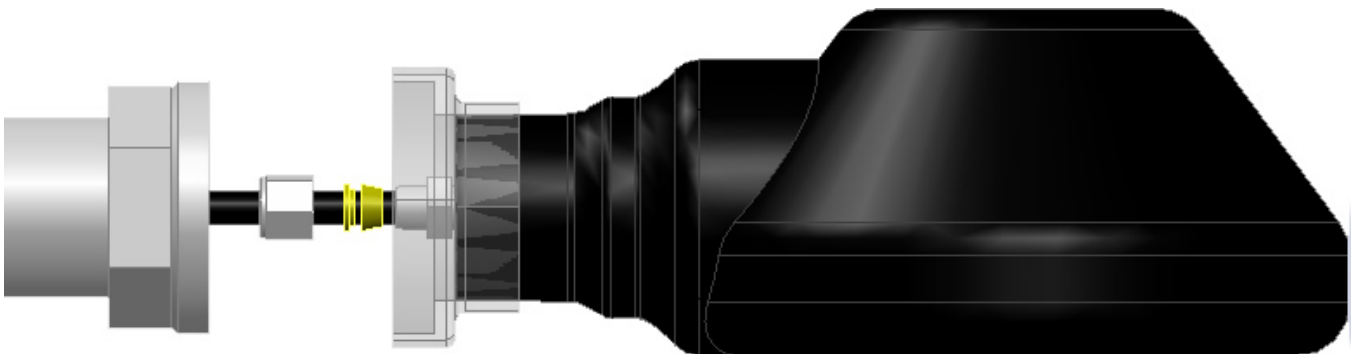
Step 2:

Feed the tube nut and the two ferrules into the river line as shown in figure below



Step 3:

Insert the river line tubing into the tube fitting on the rear of the GCO1 fitting as shown in figure below



Step 4:

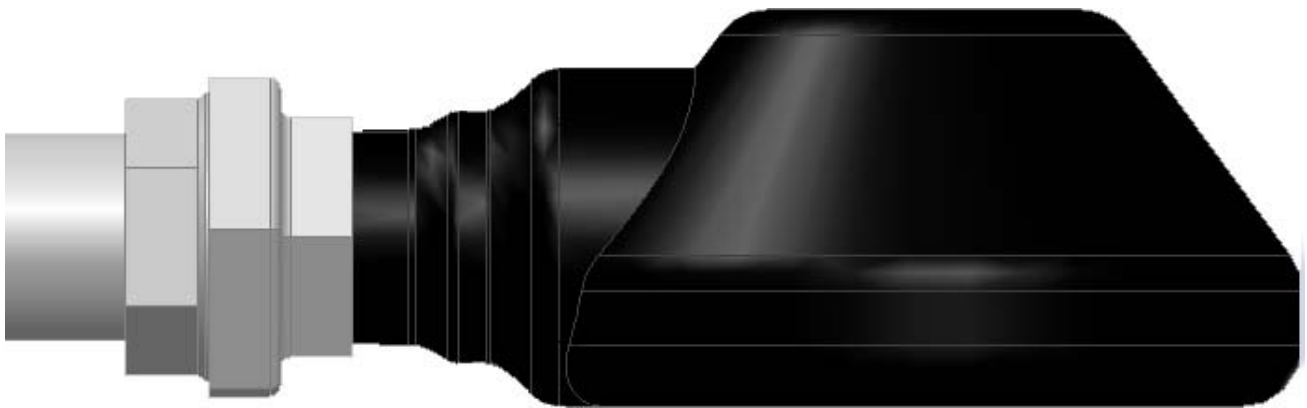
Tighten the tube nut to the GCO1 fitting as shown in figure below



Installation Cont's:

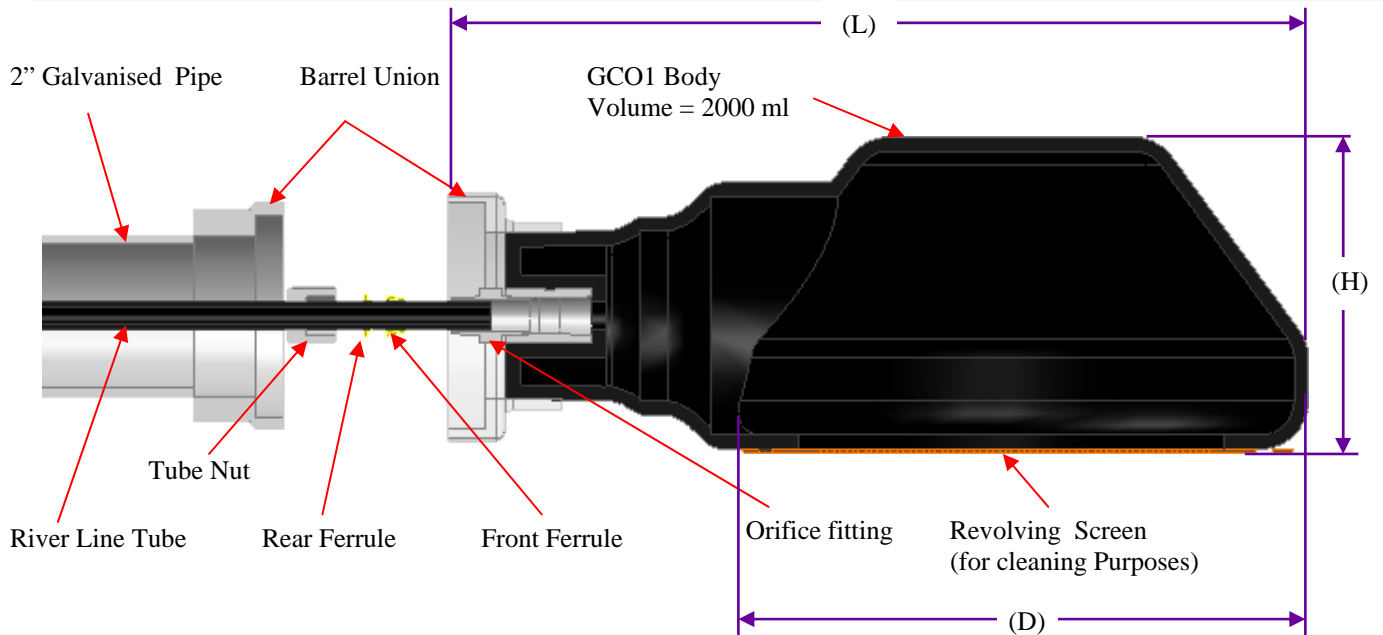
Step 5:

Place the GCO1 assembly onto the mounting pipe and tighten the barrel union as shown in figure below



Note: Ensure that the GCO1 is horizontally level as shown

Parts & Dimensions



| GCO1 DIMENSIONS | | |
|-----------------|-------------|-----------------|
| Dimension | Metric (mm) | Imperial (inch) |
| L | 285 | 11.2 |
| D | 210 | 8.3 |
| H | 110 | 4.3 |