

## 50-316-C analog flow meter



### History and description

The Auper draft beer flow meter was designed in the early 1980's, at a time when Canadian breweries expressed a lot of concern about flow meters inserted in their customers beer tubing. The flow meters that had been installed in draft beer tubing until then were causing disturbance leading to excessive foaming at the beer tap.

To compensate, people tampered with the beer system settings to reduce the flow, often to half the normal flow rate to get less disturbance. This was the kind of scrutiny we were under when we started the project in 1983. After 2 years of R&D, the end result is a unique low-profile propeller that rotates in beer flowing through the flow meter without agitating the liquid as other propellers can do. The unique design of the assembly eliminates unnecessary spaces and cavities inside the flow meter that cause disturbance or cavitation that can stir the CO<sub>2</sub>. To beer, this flow meter looks like a piece of tubing. This makes a big difference with all carbonated beverages. Since 1985, thousands of these flow meters were sold and installed in beer systems through out the world and they were never known to be the cause of additional foaming in beer but were always known for their high accuracy.

The pulses generated are extremely stable within the specified flow rate range of each specific model.

The materials used in the fabrication have been selected because they are not affected by the strong chemicals used to clean and sanitize beer tubing. The propeller rotates over a free spinning passivated 316 stainless steel shaft to reduce friction. The propeller assembly will resist over speeding caused by compressed air/gas. Compressed air can be blown inside without risk of damage. This flow meter will provide many years of reliable service provided it is cleaned regularly following the normal draught beer dispense system cleaning schedule.

Analog flow meters offer distinct advantages over their digital counter parts:

- > Only two wires to connect with no polarities.
- > No electronic circuit to feed. It does not require power.
- > Will not be damaged if leads are shorted or if it is wired incorrectly.
- > Will not be damaged by electrical surges.



# DRAFT BEER AND BEVERAGE FLOW METER

## 50-316-C analog flow meter

### Specifications

**Body material and propeller:** Acetal copolymer known as POM (PolyOxyMethylene) (FDA approved material).

**Propeller Shaft:** L316 passivated stainless steel

**Magnet:** 3.5 mm X 3.5 mm x 1mm Electrodyne PlastAlloy (Strontium Ferrite-Rubber Composite). Meets European EN71 standard and is recognized by the toy industry as being safe for ingestion. This product is stable in all conditions. It has never deteriorated or shown any signs of alterations when used with water, beer, wine, carbonated water, alcohols of all kinds, cleaning chemicals and concentrates of soft drink and juice.

**O-rings:** 014 Buna 'N' (NBR) material which is FDA compliant and NSF61 compliant.

**Output signal:** 0 to 0.6 Volts Peak to peak

**Cable:** 7.65 M ( 25 ft) 2 wires No polarities

**Threads:** 5/8 BPT

**Tubing adapters:** Stainless steel or chrome plated barbed adapters for all tubing sizes / John Guest or DM push-in adapters with 5/8 BPT threads.

**Dimensions:** 2.85" (7.2 cm) L X 1.25" (3.175 cm) D

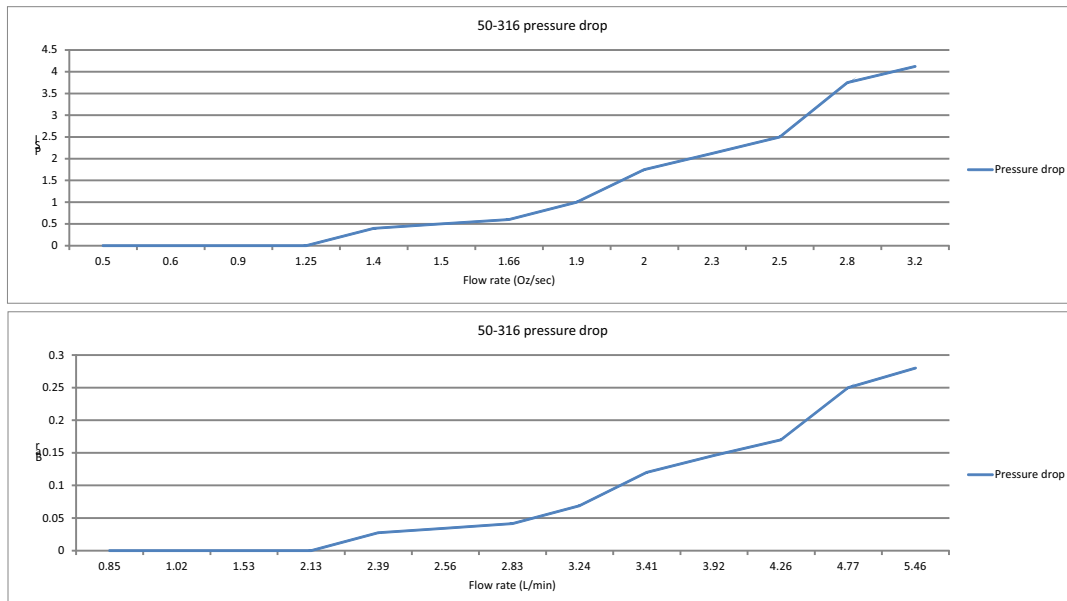
**Shipping weight:** Approx. 238 g

**Typical flow rate:** 2 Oz. /sec – 3.4 l. /min (56 ml/sec) (Typical draught beer dispensing flow rate)

**Minimum flow rate:** 0.5 Oz/sec – 0.8 l/min (15 ml/sec)

**Pulse/litre:** 640 Approx. / **Pulse /Ounce:** 17 Approx.

**Accuracy:** +/-2%





### Ordering information

**Barbed fittings** are specified using the inside diameter of the tubing the flow meter will be inserted into. For example, we specify a barbed adapter for 3/8 ( 9.5mm) ID tubing or for 3/16 (4.75 mm) ID tubing. These fittings are clamped on to seal the joint using SS hose clamps or Oetiker clamps. For applications in carbonated water, soft drink, liquor and draft wine, use stainless steel tailpieces only or John Guest adapters. Use chrome plated tailpieces for draft beer only.

**John Guest fittings (DM)** are push-in fittings that seal on the outside of the tubing. The JG fittings are therefore specified using the outside diameter of the tubing. Available JG fittings for tubing: 1/2" OD X 3/8" ID and 3/8" OD X 1/4" ID. The rubber washer is included with John Guest fittings.

### Check valve ( Part: 3/8SCV or 1/2SCV-BF)

Check valves should be installed before the flow meters on teed lines or manifolds. The check valve will prevent unwanted pressure drops caused by one of the other taps being used. Check valves are available for 3/8 OD tubing and 1/2 OD tubing.

Part No.	Description
30-100	Graduated cylinder 20 oz/ 600 ml
30-900	Empty keg detector (FOB)
3/8SCV	JG Check valve for 3/8 OD tubing
1/2SCV	JG Check valve for 1/2 OD tubing)
30-200	Soft neoprene washer
30-240	Clear plastic nut 5/8 BSP for flow meters
30-600	JG Tailpiece flat end 3/8X5/8 BSP
30-610	JG Tailpiece flat end 1/2X5/8 BSP
30-700-C	Tailpiece chrome plated for 3/16 (4-5mm) ID tubing
30-700-S	Tailpiece stainless steel for 3/16 (4-5mm) ID tubing
30-710-C	Tailpiece chrome plated for 1/4 (6-7mm) ID tubing
30-720-C	Tailpiece chrome plated for 5/16 (8-9mm) ID tubing
30-720-S	Tailpiece stainless steel for 3/8 (8-9mm) ID tubing
30-730-C	Tailpiece chrome plated for 3/8 (9-10mm) ID tubing

