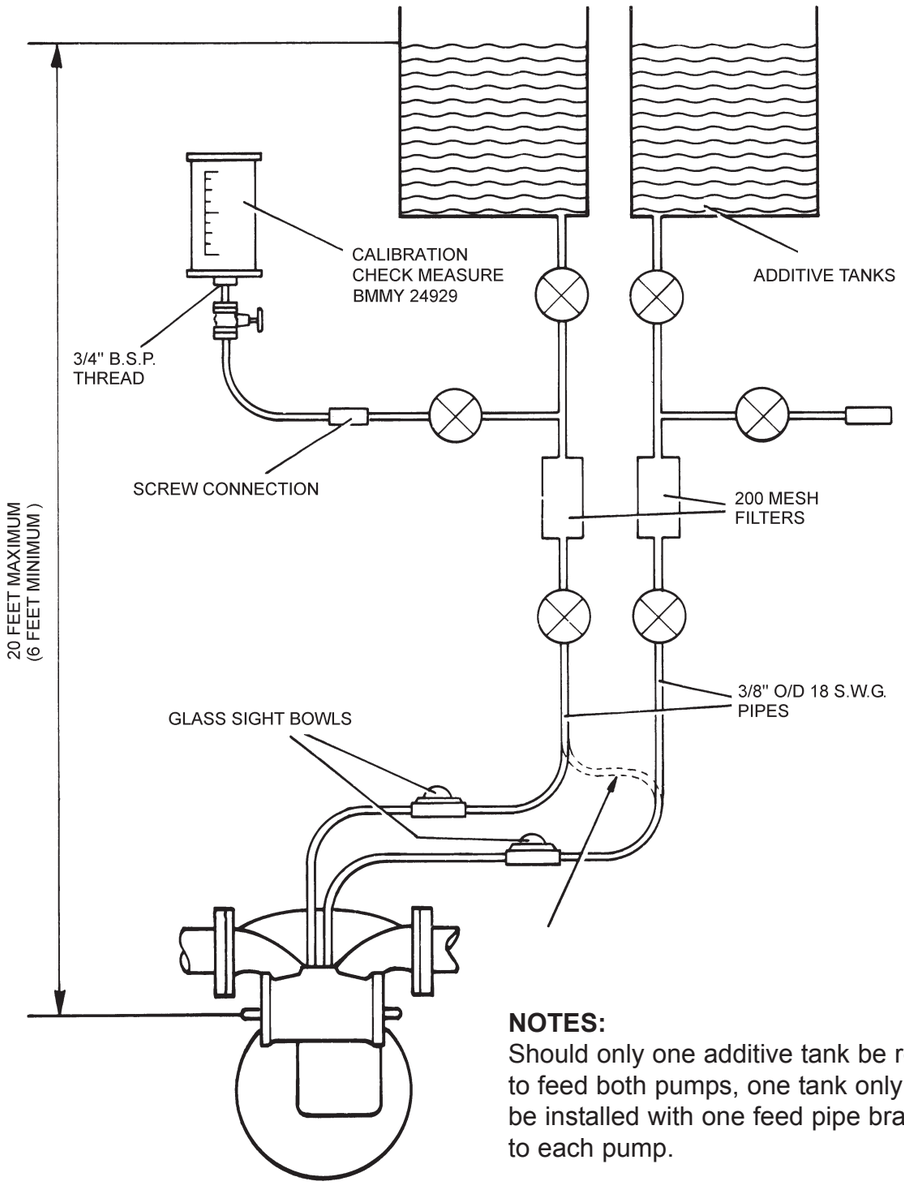
Typical Installation Diagram



NOTES:
Should only one additive tank be required to feed both pumps, one tank only would be installed with one feed pipe branching to each pump.

Additive to line differential should not exceed 80 p.s.i. (5.62 kg/cm^2).
Selection levers omitted for clarity.

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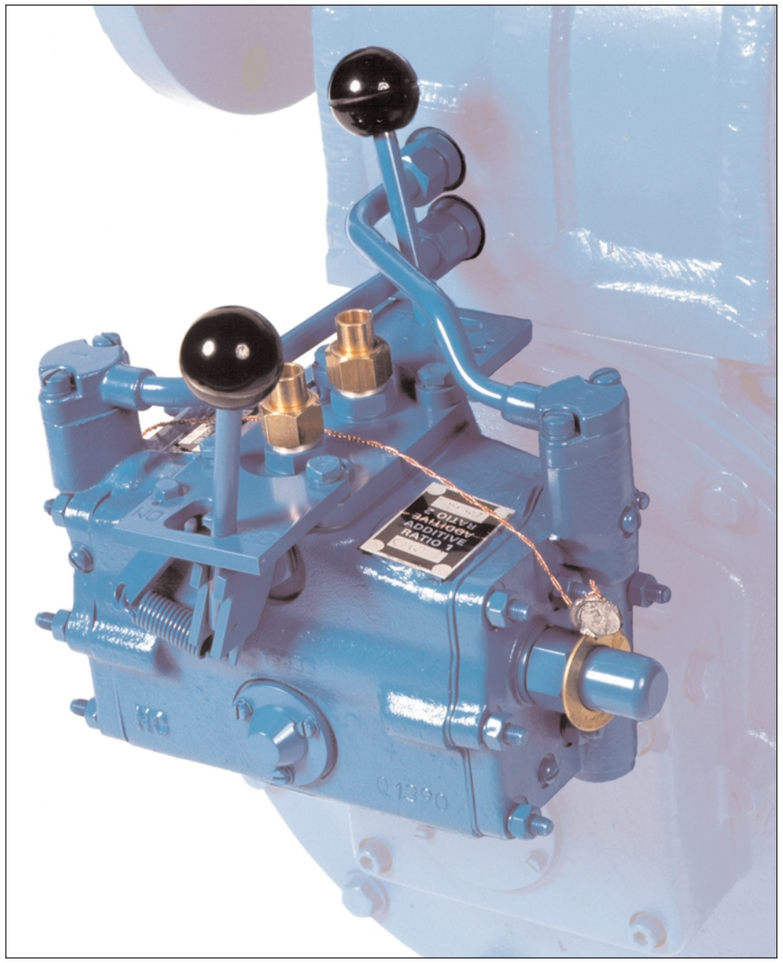
AUTOMATIC - ADDITIVE INJECTORS



- Accurate flow measurement
- Accurate additive injection
- Self contained unit
- Simple on-site additive adjustment
- No power hook-up needed

Introduction

Avery Hardoll bulkmeters are installed at bulk oil distribution terminals and on aviation refuelling vehicles throughout the world to accurately measure and record product being loaded into tankers for distribution by road, rail and sea. When it is necessary to add small amounts of chemicals into the product being metered then an additive injection mechanism may be fitted.

The additive mechanism forms an integral part of the bulkmeter and is driven directly from the rotor spindle, ensuring accurate volume related injection at the desired percentage. The additive is injected directly into the inlet side of the meter manifold ensuring the additive and product are thoroughly mixed and that both are metered. The unit is self contained and needs no additional pump or control system.

Description

The additive mechanism comprises a body mounted on the rear cover of the meter containing either one or two reciprocating pumps. The pumps can be used to inject two different additives at the same time, or one additive at twice the percentage.

It is also possible to inject three or four additives at the same time by having a second mechanism on the front of the meter. In this case the meter would not have a counter, and simply be an injection mechanism.

The pumps may be automatic and operate continuously whenever the meter is running or may be fitted with either one or two operating levers to allow the additive to be shut off when not required.

The type of additive mechanism may be specified using the coding in table 1.

Table 1- Configuration

CODE	PUMP No.1	PUMP No.2	CONTROLS
A1	Fitted	Fitted	No controls
A2	Blanked Off	Fitted	No Controls
A3	Fitted	Fitted	Two Control Levers (One to each pump)
A4	Blanked Off	Fitted	One Control Lever
A5	Fitted	Fitted	One Control Lever (Controlling two pumps)

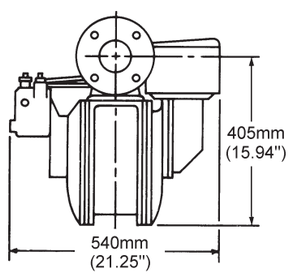
Additive Percentages

STROKE ADJUSTMENT	SINGLE CAPSULE METER	DOUBLE CAPSULE METER	TRIPLE CAPSULE METER
WITH ONE PISTON			
MAX. MIN.	0.24 0.03	0.12 0.015	0.08 0.01
WITH TWO PISTONS (Same Additive)			
MAX. MIN.	0.48 0.06	0.24 0.03	0.16 0.02

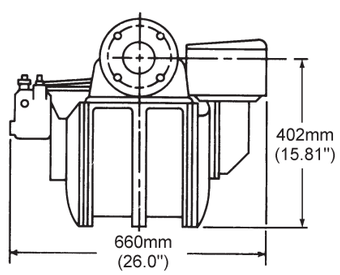
Any percentage between the maximum and minimum shown for a particular pump may be obtained by regulating the adjusting screw. If lower percentages of additive than the quoted minima are required, the additive may be premixed with product at a suitable ratio to achieve this.

General Dimensions

SINGLE BULKMETER
(BM 950)



DOUBLE BULKMETER
(BM 550)



TRIPLE BULKMETER
(BM 750)