

PRODUCTS - Control valves

## JET AUTOMATIC BOTTOM LOADING EQUIPMENT (JET A.B.L.E.)



- Effective overspill prevention
- Low capital and maintenance cost as gantries, platforms and swivel arms are not required
- No free fall of product
- Smooth valve closure to a preset fluid level
- Available with automatic vent actuation
- Minimum vehicle loading space required
- Simplicity of design and operation
- Type `C` complies with U.K. road traffic act (Road transport of dangerous substances)

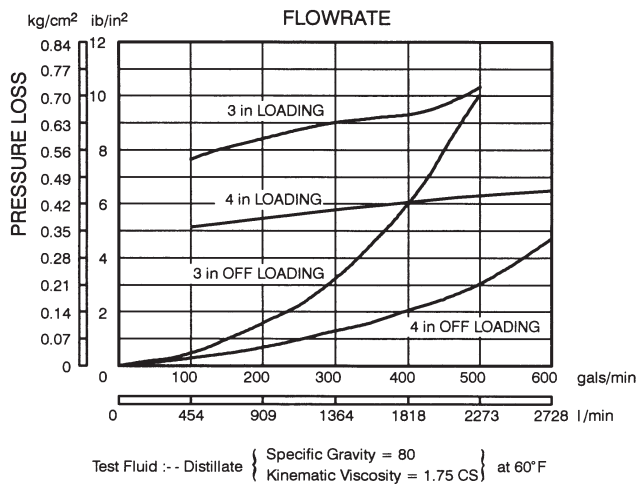
## Operation

On the basic unit tank loading is achieved by the application of line pressure to the inlet elbow. Product at line pressure passes through the off-loading boss and filter assembly to the upper side of the valve assembly. At the same time product passes through the centre of the valve and, via a 0.5-inch nylon pressure line, to the upper jet of the sensing unit. The jet, which is sustained by air drawn through the sensing tube, passes through the lower jet and applies pressure to the underside of the valve assembly via a 5/16-inch nylon return pressure line. Pressure on the underside of the valve assembly now overcomes pressure on the upper side and spring pressure forcing the valve to open.

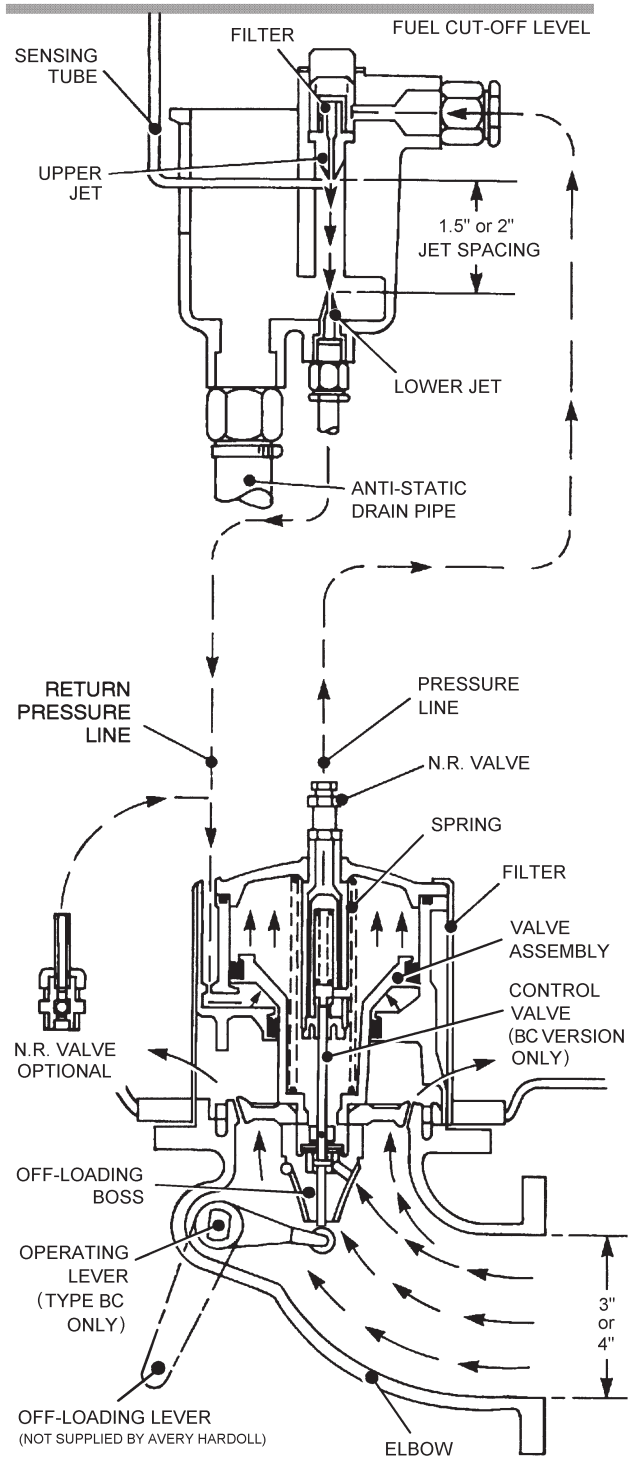
When the product level rises above the level of the lower jet the pressure to the underside of the valve is gradually reduced and therefore the valve starts to close until the sensing tube is covered and the valve is fully closed.

Type 'BC' foot valves will remain closed under input pressure. Controlled loading is achieved by operating the internal control valve using an external operating lever (not supplied). The same operating lever is used to open the foot valve for off loading.

Typical pressure loss characteristics of three-inch and four-inch JET ABLE foot valves.  
(Under loading and unloading conditions)



## SENSING UNIT



## STANDARD FOOT VALVE

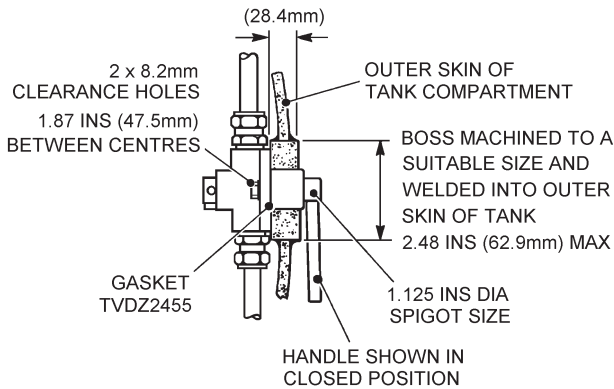
## Specification and dimensions

For further information refer to Avery-Hardoll publication TP0006.

## Installation dimensions

Dim.	Foot Valve				Sensing Unit	
	3"		4"		Ins.	mm.
A	4.50	114.3	5.0	127.0	3.80	96.8
B	5.62	143.3	6.75	171.4	3.75	95.2
C	4.87	123.7	6.40	162.6	2.68	67.5
D	3.25	82.5	4.5	114.3	2.48	63.0
E	2.12	53.9	2.31	57.2	-	-
F	7.37	187.3	8.25	209.7	-	-
G	7.37A/C	187.3A/C	8.25	209.7	-	-

## PRE-CHECK VALVE



## TANK COMPARTMENT

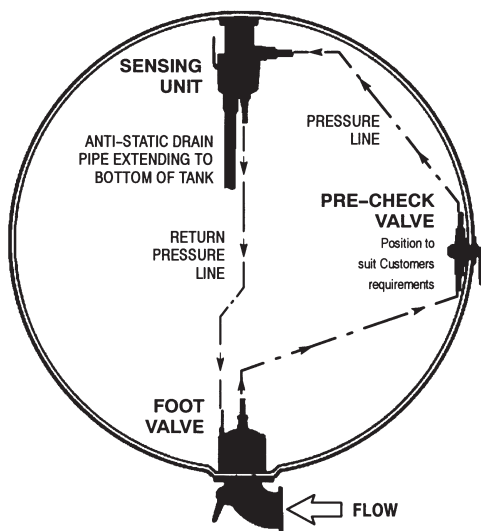


Diagram showing positions of units in tank compartment

## OPERATING PRESSURE

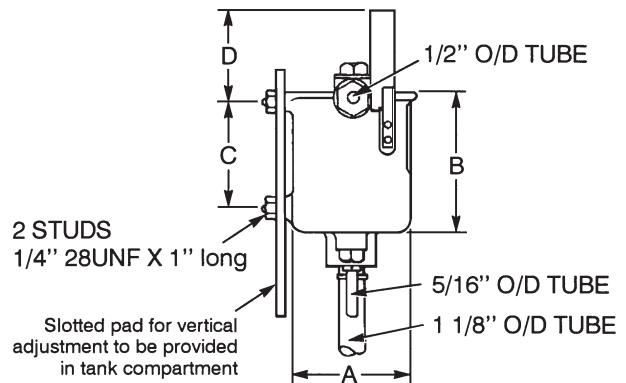
Minimum stall pressure of pump required to ensure that the correct fuel level cut off is reached :-

1.5-inch Jet spacing	-	1kg/sq cm (15 psi)
two-inch Jet spacing	-	1.75kg/sq cm (25 psi)

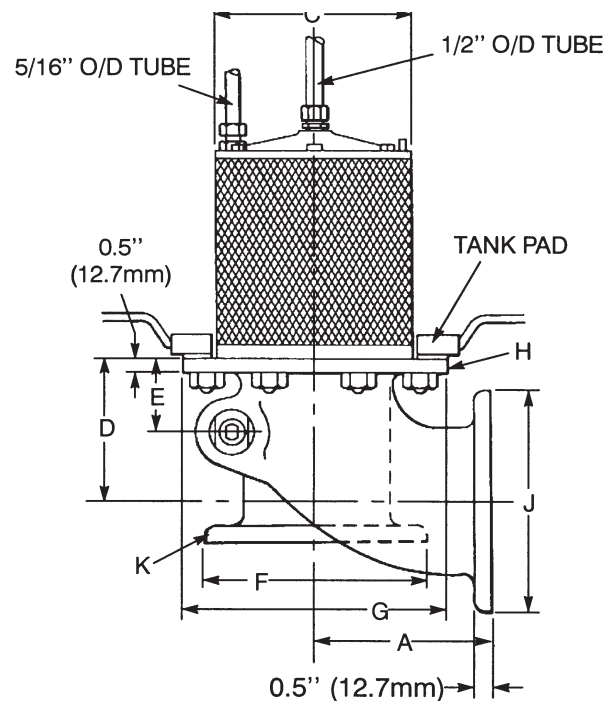
## WEIGHTS

Foot valve	three-inch	-	5 kg (11 lbs)
	four-inch	-	7.2kg(16lbs)
Sensing unit		-	1.3 kg (3 lbs)

## SENSING UNIT



## FOOT VALVE

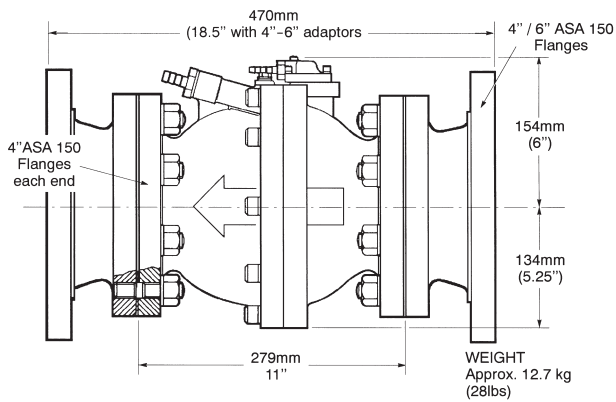


## Flange dimensions

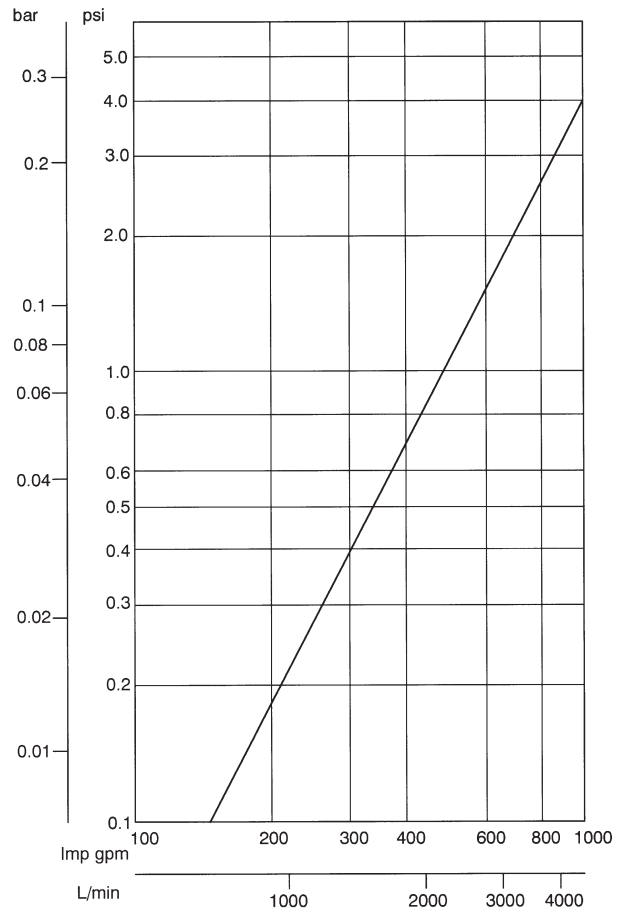
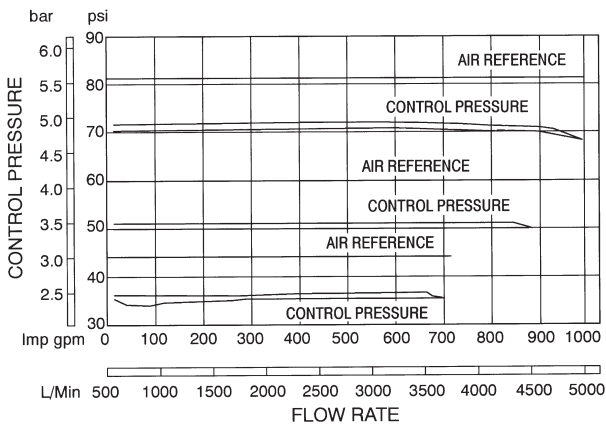
Dim.	Valve Size	No. of Holes	Hole Size		P.C.D.	
			Ins.	mm.	Ins.	mm.
H	3"	6	9/16"	14.2	6.25	158.7
	4"	8	9/16"	14.2	7.25	184.0
J	3"	8	7/16"	11.1	4.87	123.7
	4"	8	7/16"	11.1	5.87	149.0
K	3"	8	3/8" UNF	-	4.87	123.7
	4"	8	7/16"	11.1	5.87	149.0

Flange dimensions are to TTMA TP No. 28

## Specifications and dimensions



## OPERATING PRESSURE CONTROL



Pressure Rating Max. Working Pressure  
Max. Test Pressure  
Max. Flow Rate

12.1 bar (175 psi)  
19.0 bar (275 psi)  
4500 l/min  
1000 Imp.gpm  
1200 US gpm

Pressure Drop At Max. Flow Rate

0.28 bar (4 psi)

Pressure Control

± 0.14 bar (2 psi)

Air Reference Bias

0.7-0.8 bar (10-12psi)

DEADMAN

Opening Time Approx.

10.0 seconds (adjustable by

Closing Time Approx.

5.0 seconds fixed orifices)

Overshoot At Max. Flow Rate

190 Litres  
42 Imp. gall  
50 US gall

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