

PRODUCTS - Measurement

## STEEL CASE BULKMETER DM SERIES

The ultimate loading meter

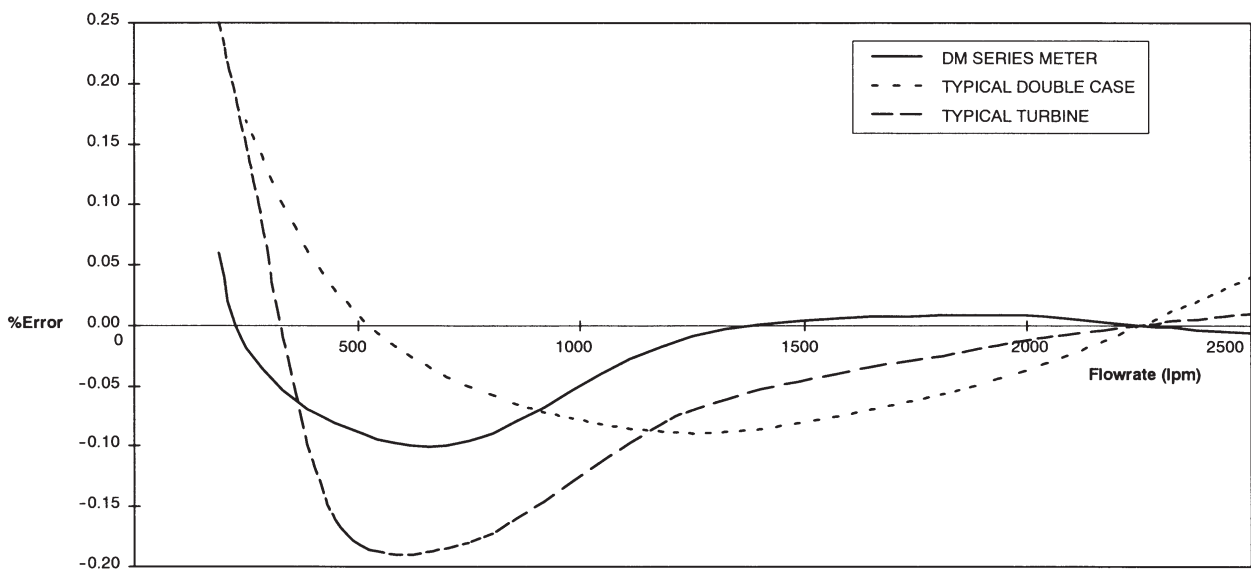


- Avery Hardoll accuracy in a steel meter
- Positive displacement performance at turbine economy
- Compact lightweight design
- Insensitive to pressure changes
- Free from installation effects

The Avery Hardoll Steel Bulkmeter is specifically designed to meet the rigorous demands of the modern tank truck loading depot. It provides the highest level of repeatability and accuracy combined with minimal down time for service, without the inconvenience and cost of double casing.

### ACCURACY

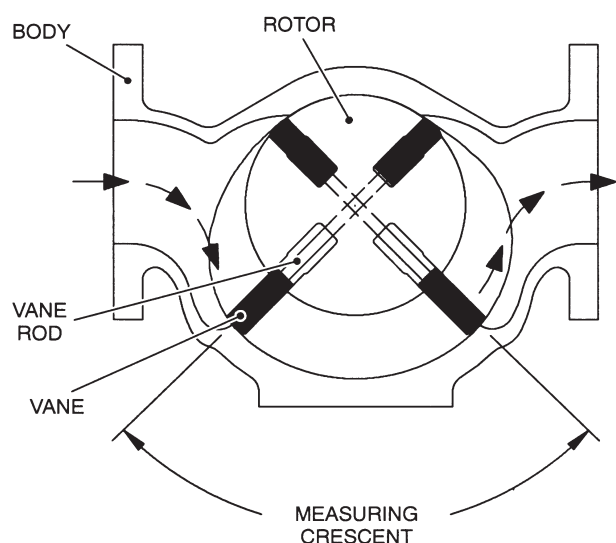
The positive displacement principle is the only accurate method of measuring liquid flow. No other technology e.g. turbine meters can achieve the same level of accuracy. This is particularly true in depot applications where flow rates, pressure and temperature can vary during a delivery. The Avery Hardoll Bulkmeter positively measures fluid volume with minimum scope for error and with minimal effect from pressure variations, temperature change or turbulence from near by valves or bends etc.

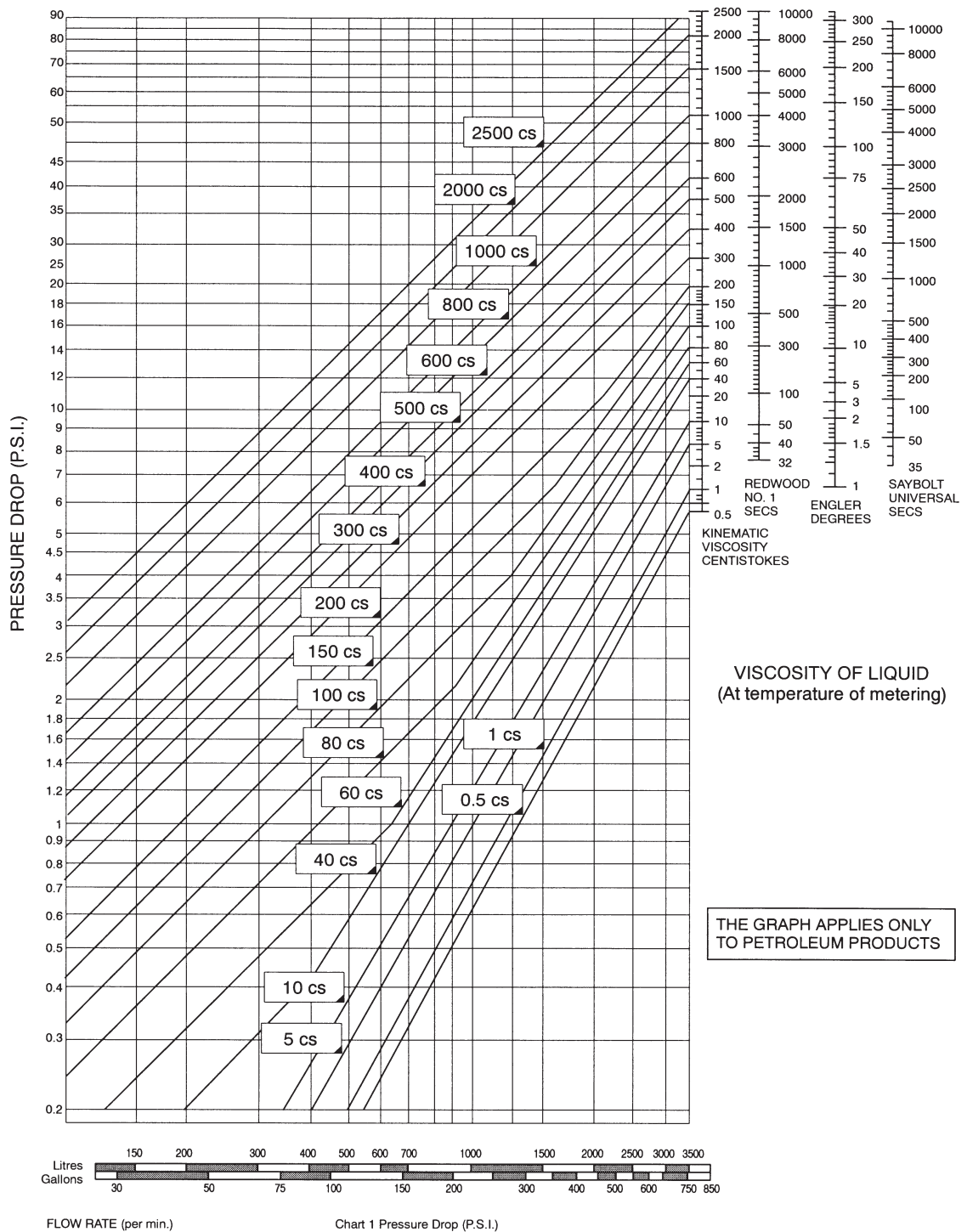


### OPERATION

The product enters the meter and causes the rotor to revolve by pressure on the vanes. The proximity of the rotor to the body forms an efficient seal, whilst the profile of the body ensures that the vanes are guided through the measuring crescent, where the volume of product is accurately measured.

An extension shaft driving through a pressure tight gland in the meter front cover, transmits the rotor revolutions either directly to a pulse transmitter or through gearing to a stepless mechanical calibrator driving the counter.





### VISCOUS PRODUCTS

Avery Hardoll bulk meters can be used on all petroleum products of all viscosities that are normally pumped. However there is obviously an increase in pressure drop with more viscous fuels which will, under normal circumstances, limit the maximum flow rate obtainable. It is recommended that the pressure drop through a bulk meter should not exceed 15 psi (1 bar), above which the load on the bearings will start to cause wear.

Consequently when using products with viscosities (at operating conditions) above 100 centistokes, it is necessary to reduce the maximum permitted flow rate. As a guide it is suggested that the pressure drop through the meter should not exceed 10 psi (0.7 bar) for continuous running at maximum speed or 15 psi (1 bar) for continuous running at half speed.

## ACCESSORIES

### MASTERLOAD:

Electronic meter controller - See data sheet 201

### MECHANICAL CALIBRATION:

With Veeder Root counters reading in a wide range of units

### PULSE TRANSMITTERS:

Accepts all pulse transmitters in common use

### PRESET VALVES:

Linkage or microswitch operated

### TICKET PRINTERS:

With or without identifiers, either zero or accumulative start

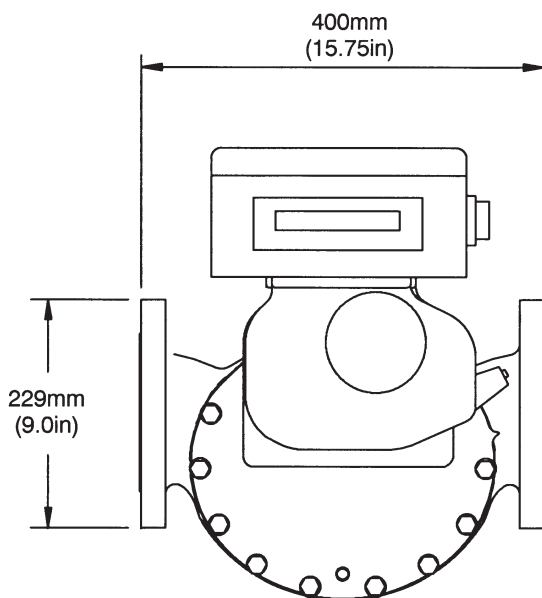
## MECHANICAL RATE OF FLOW INDICATORS

## SWIVEL

## EXTENDED COUNTER DRIVES

### STRAINER:

Essential to prevent damage to the meter and is available with 80, 100 and 120 mesh baskets, with either cast iron or cast steel body. Both basket and 'Y' type strainers are available.



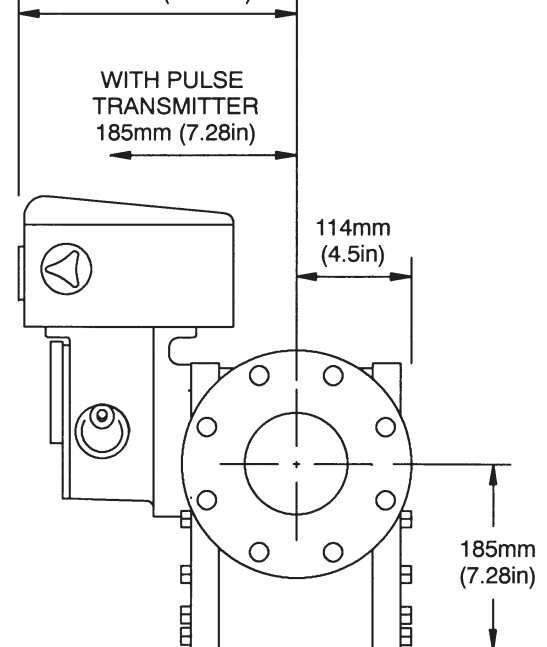
## CONSTRUCTION

BODY:	CARBON STEEL - ASTM 216 WCB
END COVERS:	CARBON STEEL
ROTOR:	ALUMINIUM ALLOY
VANES:	CARBON
BEARINGS:	NON CORRODIBLE STAINLESS STEEL
SEALS:	HIGH NITRILE or FLUOROCARBON

## SPECIFICATION

MAX FLOW RATE:	2500 lpm Continuous 3000 lpm Intermittent
FLANGES:	4" ANSI 150
MAX WORKING PRESSURE:	10.5 bar (150psi)
TEST PRESSURE:	21 bar (300psi)
TEMPERATURE RANGE:	-28° C TO 100° C
VOLUME PER REVOLUTION:	5.75 LITRES
TURN DOWN RATIO:	10:1
LINEARITY WITHIN:	+ 0.15%
REPEATABILITY BETTER THAN:	0.02%
WEIGHT (WITH TRANSMITTER):	70kg

### WITH MECHANICAL CALIBRATION MECHANISM 276mm (10.87in)



### Intrico Products Ltd

Unit 5, Harrison's Farm Estate  
Inglewhite Road, Goosnargh  
Preston  
Lancs  
PR3 2ED  
Tel : 01772 785295  
Fax : 01772 378646  
[sales@avery-hardoll.co.uk](mailto:sales@avery-hardoll.co.uk)

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