

**Pursuant to section 12 of  
the Weights and Measures Act 1985**

**Certificate No 2058/4 Revision 1**

Issued by:

**NMO**

In accordance with the provisions of section 12 of the Weights and Measures Act 1985, the Secretary of State for Business, Energy and Industrial Strategy has issued this UK national type-approval certificate to:

**Mitchell & Cooper  
136 - 140 Framfield Road,  
Uckfield  
East Sussex  
TN22 5AU,  
United Kingdom**

And hereby certifies as suitable for use for trade the following pattern of a 25 ml spirit measuring instrument.

The necessary data (principal characteristics, alterations, securing, functioning etc) for identification purposes and conditions (when applicable) are set out in the descriptive annex to this certificate.

Note: This certificate relates to the suitability of the equipment for use for trade only in respect of its metrological characteristics. It does not constitute or imply any guarantee as to the safety of the equipment in use for trade or otherwise.

This revision replaces previous versions of the certificate.

**Issue Date: 01 November 2018**

**Valid Until: 31 October 2028**



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*For and on behalf of the Head of Technical Services*

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## Descriptive Annex

### 1 INTRODUCTION

This pattern of a spirit measuring instrument is for use in dispensing fixed quantities of 25ml (Figure 1).

The instrument is supplied by an inverted bottle connected to its inlet and dispenses when a cross-arm, at the delivery point, is raised to its maximum. A transparent chamber displays the complete charging and discharging of the instrument

### 2 CONSTRUCTION (Figure 2)

#### 2.1 Mechanical

The instrument is constructed mainly from plastic. The springs are stainless steel and are used to return the air valve and the central spindle to the closed positions and to apply sealing pressure to the capacitor valve assembly.

The discharge tube is chrome plated brass and the measuring cup is made from polystyrene or SAN, the seals are nitrile or silicone rubber.

The central spindle is in four parts, the lower part is the delivery tube (01) which extends through the cup (02) and has an outlet seal (03) retainer (04) and capacitor (05). The capacitor is fitted with a stabilised disc valve assembly (06) which closes the inlet port during the dispensing operation.

The head (07) is provided with a shallow coned seating (08) to provide a positive sealing face for the capacitor disc valve assembly. Above the coned seating is an inlet divider (09) which assists the flow from the bottle when the measuring chamber recharges.

The capacitor has a rim (10) beneath the valve assembly which actuates the air valve (11) to admit air into the cup as the instrument discharges.

The upper end of the delivery tube is recessed to accept an O ring (12) fitted above the cross bore (13). A wiper seal (14) is positioned below the cross bore. The lower end of the delivery tube is enlarged to retain a screwed collar (15) which threads into the operating arm (16). The delivery tube and operating arm form a mating cone drip retainer.

The delivery tube is returned to the closed position by a spring (17) acting between the spindle collar (18) and the wiper seal collar (19), the mechanism being enclosed by the hood (20).

The top and bottom surfaces of the cup are slightly angled to allow complete charge and discharge of liquid when the instrument is not mounted perfectly vertical.

The cup has a top flange (21) which is clamped against the sealing ring (22) by a chromed brass locking ring (23).

#### 2.2 Legends

The capacity legend, 25 ml, is durably marked on the sight glass. The characters are a minimum of 5 mm high.

The manufacture's name, Mitchell & Cooper, or legend M&C and address, or the name of the supplier, may be on a label around the hood.

The certificate number and manufacturer's name, or legend, are durably moulded onto the top surface of the head plate.

### 2.3 Sealing and Stamping

The stamp is applied to a seal encasing a knot of nylon monofilament looped through the locking ring (23) and head (07) effectively sealing the instrument against interference.

## 3 OPERATION

With the instrument fully charged with liquid the operating arm is pushed upwards. The seal of the capacitor disc valve makes positive contact with the coned seating in the head thus preventing the ingress of further liquid. The O ring of the dispense tube remains in the bore of the cup at this stage. Further movement causes the rim on the capacitor to open the air valve, and uncovers the cross bores allowing the liquid to discharge. Maximum movement is achieved when the top of the capacitor makes contact with the underside of the disc valve. The cross bores do not completely clear the cup base to allow complete discharge. On completion of the dispense the operating arm is released, the downward movement operates the sequence in the reverse order. Liquid refills the instrument venting air into the bottle.

## 4 AUTHORISED ALTERNATIVES

4.1 Having fixed quantities of 35 ml and 50 ml, the increased volume is obtained by fitting a larger cup. The quantity legend marked onto the measure is amended accordingly.

4.2 Having a plastic spacer ring between the outlet seal (03) and the delivery tube (01).

4.3 Having the screwed collar (15) and operating arm (16) replaced by a single moulding which is a snap-on fit onto the delivery tube (01). The action of the operating arm is unchanged. The operating arm may have two or three arms, and may also be chrome plated.

4.4 Having the cup (02) ultrasonically welded to the head (07) to form a tamperproof, no-repairable assembly which does not require sealing. The sealing ring (22) is therefore omitted. The screwed ring (23) is manufactured in plastic and is retained for cosmetic purposes only. The stamp is applied, by hot blocking process, to the side of the cup and should not obscure the view of the measuring chamber, when showing the instrument to be fully charged or discharged.

4.5 Having a spindle (01) made from injection moulded acetol plastic with increased bore size and two oval outlet ports.

4.6 Having a non-resettable, mechanical, digital number-of dispenses counter mounted on the front of the unit but not obscuring the measuring chamber. The height of the digits is approximately 4 mm. This indication is for management purposes only. The counter mechanism is mounted within a re-designed hood (20) and is operated by the spindle collar (18) each time a delivery is initiated. A 5-digit number or logo may be impressed on the side of the counter.

4.7 Having an alternative mounting bracket (figure 3a) which attaches to the top of the measure enabling it to be wall mounted. The Certificate number shall be marked on the mounting bracket as shown in figure 3b.

4.8 Having an alternative legend for the supplier: Famos GmbH Germany.

## 5 RECOMMENDED TEST

Due to the surface tension it is possible that, on occasions, the instrument will not fill correctly when using water as the test liquid. This problem does not occur when using any of the prescribed spirits. Providing that the instrument fills correctly, the dispensed measure should be within statutory limits irrespective of the liquid used.

**6 ILLUSTRATIONS**

- Figure 1 25 ml measuring instrument
- Figure 2 General arrangement
- Figure 3a Alternative mounting bracket
- Figure 3b Location of Certificate number

**7 CERTIFICATE HISTORY**

DATE	COMMENT
09 March 1998	Certificate 2058/4 first issued.
29 April 2008	Certificate 2058/4 first renewal.
01 November 2018	Certificate 2058/4 Revision 1. Second renewal. The Revision is a consolidation of the text in Certificate 2058 and Amendments 1, 3-8, 10 & 11.



**Figure 1** 25 ml measuring instrument

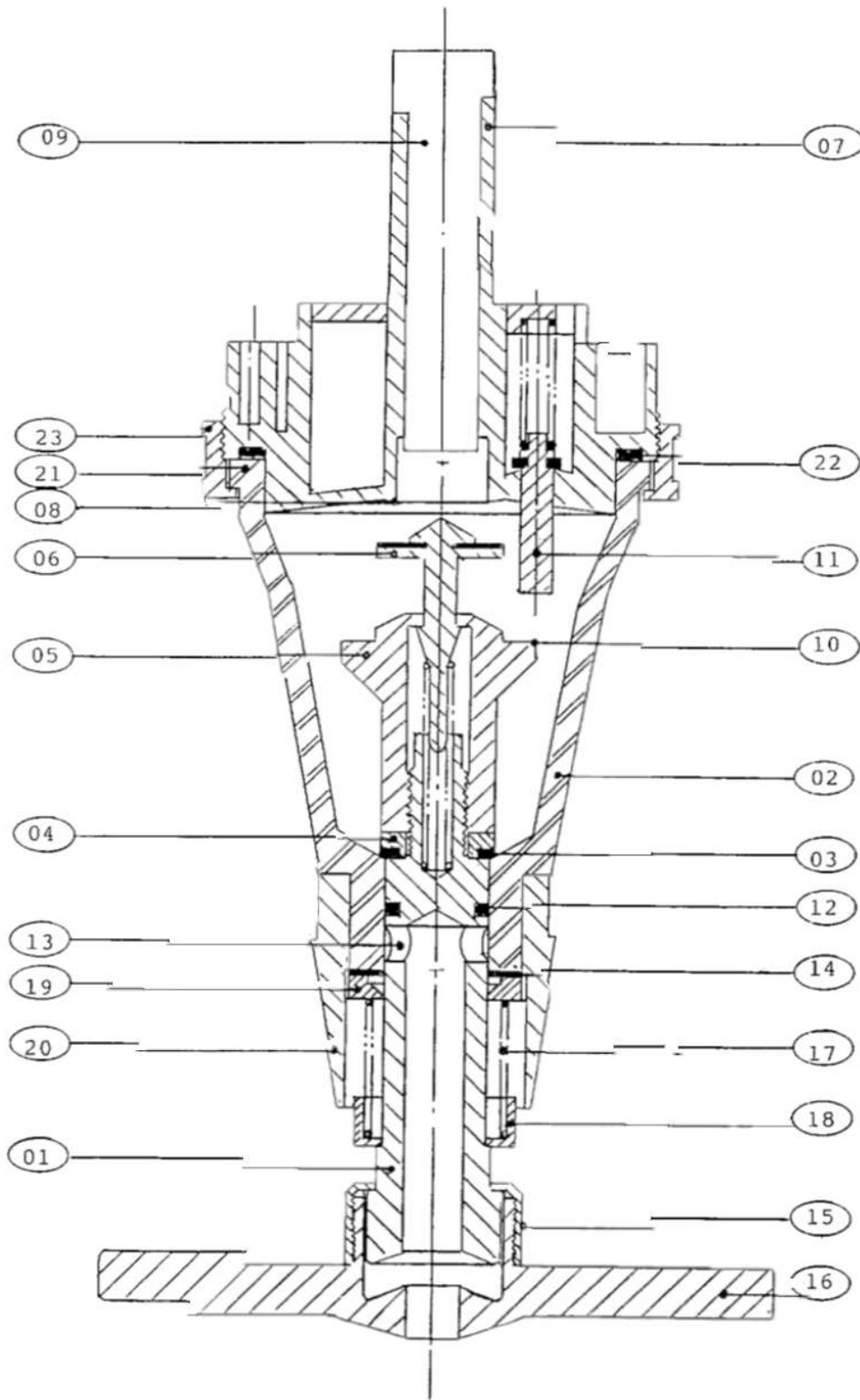
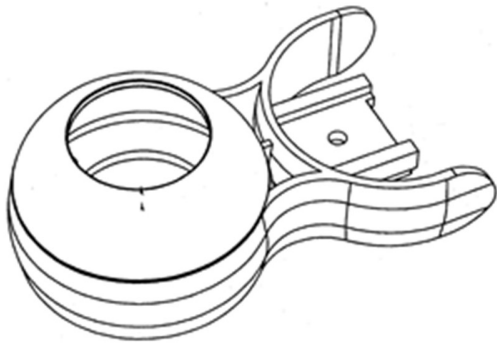
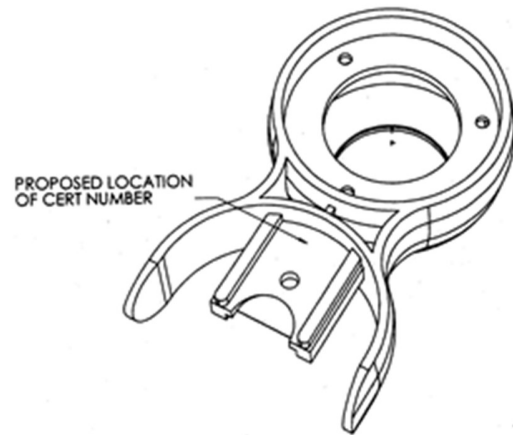


Figure 2 General arrangement



**Figure 3a**    **Alternative mounting bracket**



**Figure 3b**    **Location of Certificate number**