L.N. 402 of 2002

THE METROLOGY ACT
ACT NO. XXV OF 2002

Ancillary Equipment for Volumetric Meters Regulations, 2002

IN exercise of the powers conferred by article 19 of the Metrology Act, the Malta Standards Authority has made the following regulations:–

Commencement and Citation.

1. (1) The title to these regulations is the Ancillary Equipment for Volumetric Meters Regulations, 2002.

(2) These shall come into force on such date or dates as the Authority may by notice in the Gazette appoint and different dates may be so appointed for different purposes and different provisions of the regulations.

Definitions. Cap 419.

2. All the definitions of the Malta Standards Authority Act shall apply.

Scope.

3. These regulations apply to the ancillary equipment for volumetric meters for liquids other than water which is specified in the Annex hereof.

Ancillary equipment for volumetric meters which may bear EEC marks etc

4. (1) Ancillary equipment for volumetric meters which may bear the EEC marks and symbols are described in the Annex.

(2) This ancillary equipment shall be subject to EEC pattern approval and they shall be submitted to EEC initial verification at the same time as the meters with which they are associated.

ANNEX

CHAPTER I

ZEROISING MECHANISM FOR VOLUME INDICATORS

1.1 A zeroising mechanism is an arrangement which returns the indicator to zero either by a manual operation or by an automatic system.

1.2 The zeroising mechanism must not affect the result of a measurement.

1.3 When the zeroising operation is begun, it must be impossible to indicate a new measured quantity until the zeroising operation has been completed.

1.4 The requirements of items 1.2 and 1.3 are not mandatory:

1.4.1 for indicators the dial of which bears the legend 'Direct sale to the public is forbidden' or another equivalent restriction of use;

1.4.2 for pointer-type indicators mounted on meters whose maximum rate of flow does not exceed 1200 litres per hour; if the meters are intended for trading purposes it must be impossible to increase the amount indicated manually.

1.5 On indicators having a continuous movement, after each zeroising operation the permissible difference with respect to zero must be not greater than one half of the maximum permissible error on the minimum delivery marked on the dial of the indicating mechanism, but must not exceed one-fifth of the value of the scale interval.

On indicators having a discontinuous movement, the indication must be zero exactly.

CHAPTER II

TOTALISING VOLUME COUNTERS

2.1 An indicator with a zeroising mechanism may be fitted with one or more counters which, after totalising, show the different volumes recorded in succession by the indicator.

2.2 Counters must not incorporate a zeroising mechanism.

2.3 Counters may only be of the straight line type.

2.4 Counters may only be so positioned that they are concealed.

2.5 The unit in which the total volume is expressed (or its symbol) must be indicated and it must comply with the requirements of the Volumetric Meters for Liquids other than Water Regulations, 2002.

2.6 The scale interval of the first element of each counter must be in the form 1 x 10^n, 2 x 10^n or 5 x 10^n authorised volumetric units, n being a whole positive or negative number, or zero. It must be equal to or greater than the scale interval of the first element on the indicator with zeroising mechanism.

2.7 If the indication on the counters and those of the indicator with zeroising mechanism can be simultaneously, the figures on the counters must have dimensions not greater than half the corresponding dimensions of the figures on the indicator with zeroising mechanism.

CHAPTER III

MULTIPLE VOLUME INDICATING MECHANISMS[1]

3.1. The indicating mechanism may have several dials. Furthermore, one or more simultaneous repeater indicating mechanisms may be linked with it.

3.2 The scale intervals on the various indicators may have different values but the minimum delivery must be the same throughout and must be established as a function of the scale interval which results in the largest value for this delivery.

3.3 The requirements of these regulations and those of dealing with meters for liquids other than water apply to each indicator and to each dial.

3.4 The indication on the different dials of the indicator or indicators must not differ by more than the maximum permissible error on the minimum delivery marked on the dial or dials.

CHAPTER IV

PRICE COMPUTING MECHANISMS

4.1 Straight-line volume indicators having a zeroising mechanism may be supplemented by a straight-line computed-price indicator have a zeroising mechanism, whole unit price is the price for the unit of volume used to indicate the volume measured.

4.2 The unit price must be adjustable. The unit price selected must be displayed.

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[1] Remote indication by non-mechanical means will be dealt with in Regulations to be published at a later stage.

4.3 The mechanisms for selecting and displaying the unit price must be connected to the price indicator in such a way that the price corresponding to a measurement must always be equal to the product of the selected and displayed unit price and the indicated volume.

4.4 The requirements relating to volume indicators given in these regulations on meters for liquids other than water, as well as the provisions of Chapters I, II and III of this Annex, must be applied, by analogy to computed-price indicators, with the exception of item 1.5 relating to the zeroising mechanism.

4.5 The monetary unit employed, or its symbol, must appear on the dial of the computed-price indicator.

4.6 The dimensions of the figures on the computed-price indicator must not exceed those of the figures on the volume indicator.

4.7 The zeroising mechanisms for the price indicator and for the volume indictor must be so designed that the operation of the mechanism on either of the two indicators automatically returns the other indicator to zero

4.7.1 The computed price of a quantity equal to the maximum permissible error on the minimum delivery marked on the dial of the indicating mechanism must be not less than one-fifth of the value of the scale interval, but not less than the price corresponding to an interval of two millimetres on the scale of the first element on the price indicator, where the movement of this element is continuous. However, this interval of one-fifth of the value or of two millimetres need not correspond to a value of less than

1 euro cent

4.7.2 The price of a quantity equal to the maximum permissible error on the minimum delivery marked on the dial of the indicating mechanism must be equal to at least two intervals on the scale where movement of the first element on the price indicator is discontinuous.

However, the scale interval need not be less than the monetary value specified in item 4.8.1.

4.8 The difference, under normal working conditions, between the price indicated and the price computed on the basis of the unit price and of the indicated quantity, must not exceed the price of the quantity equal to the maximum permissible error on the minimum delivery marked on the dial of the indicating mechanism.

However, this difference need not be less than twice the monetary value specified in item 4.8.1.

4.9 On indicators having a continuous movement, after each return to zero, the permissible difference with respect to zero must be not greater than one half the

price of the quantity equal to the maximum permissible error on the minimum delivery marked on the dial of the indicating mechanism, but must not exceed one-fifth of the value of the scale interval.

However, this difference need not be less than the monetary value specified in item 4.8.1.

On indicators having a discontinuous movement, the indication must be zero exactly.

CHAPTER V

PRINTING MECHANISMS

5 A numerical quantity-printing mechanism may be connected to the indicator of a meter.

5.1 The value of the printed scale interval must be in the form 1×10^n, 2×10^n or 5×10^n authorised volumetric units, ^{n} being a whole positive or negative number, or zero.

5.2 The value of the printed scale interval must not be greater than the maximum permissible error on the minimum delivery marked on the dial of the indicating mechanism.

5.3 The value of the printed scale interval must be marked on the printing mechanism.

5.4 The printed quantity must be expressed in one of the authorised volumetric units.

The figures, the unit used or its symbol and any decimal point, where necessary, must be printed by the mechanism on the ticket.

5.5 The printing mechanism may print information regarding the delivery such as: serial number date, place of measurement, nature of the liquid.

5.6 The mechanism may be designed in such a way that the printing may be repeated. In this case, the printed records must fully agree and carry the same serial number.

5.7 If the quantity is determined by the difference between two printed value, one of which may be expressed as zero, it must not be possible for the ticket to be withdrawn from the mechanism while the meter is measuring a quantity.

5.8 With the exception of the case referred to in item 5.8, the printing mechanism must have a zeroising mechanism combined with that of the indicator.

5.9 The difference between the quantity indicated and the quantity printed must not exceed the value on one printed scale interval.

5.10 The printing mechanism may print, in addition to the measured quantity, either the price for that quantity or this price and the unit price. It may also print the price to be paid only, where the printing mechanism is connected to an indicating mechanism for quantities and computed prices, in the case of direct sale to the public.

The figures, the monetary unit employed or its symbol and any decimal point, where necessary must be printed by the mechanism on the ticket. The printed figures for prices must not have dimensions greater than those of the printed figures for the measured quantity.

5.11 The value of the printed-price scale interval must be in the form 1×10^n, 2×10^n or 5×10^n monetary units, n being a whole positive or negative number, or zero.

This value must not exceed the price of the quantity equal to the maximum permissible error on the minimum delivery marked on the dial of the indicating mechanism.

However, the value of this scale interval need not be less than one of the monetary values specified in item 4.8.1.

5.13.1 If the meter is fitted with a price indicator the difference between the price indicated and the printed price must not exceed the value of the printed scale interval.

5.13.2 If the meter is not fitted with a price indicator, the difference between the printed price and the price calculated from the indicated quantity and the unit price must satisfy the conditions laid down in item 4.9.

CHAPTER VI

PRE-SETTING MECHANISMS[2]

6.1. Meters may be fitted with pre-setting mechanisms.

Pre-setting mechanisms are devices which permit the selection of the quantity to be measured and which automatically stop the flow of liquid when the selected quantity has been measured.

6.2 The selected quantity is displayed by means of a device with a scale and datum line or on a numerical device.

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[2] Self-service prepayment equipment will be covered by other Regulations.

6.3 Where pre-setting can be carried out by means of several independent controls, the value of the scale interval for one control must equal the pre-setting range of the control for the next smallest decade.

6.4 Pre-setting mechanisms may be so arranged that repetition of the selected quantity does not require a new setting of the controls.

6.5 Where the displayed figures of the pre-setting mechanisms are separate from the indicator figures, and if it is possible to see them simultaneously, the former must have dimensions not greater than three-quarters of the corresponding dimensions of the latter.

6.6 The indication of the selected quantity may, during measurement, either remain unaltered or return progressively to zero.

6.7 The difference found under normal working conditions between the selected quantity and the quantity indicated at the end of the measuring operation must not exceed one half of the maximum permissible error on the minimum delivery.

6.8 The selected quantities and the quantities indicated by the indicator must be expressed in the same unit. The latter (or its symbol) must be marked on the pre-setting mechanism.

6.9 The value of the smallest scale interval of the pre-setting mechanism must not be less than the value of the scale interval on the first element of the indicator.

6.10 Pre-setting mechanisms may incorporate a device for the rapid stopping of the flow of liquid where necessary.

6.11 Where a pre-setting mechanism incorporates a device for regulating the reduction of the rate of flow at the end of the measurement, a sealing device must be provided, if the latter is necessary to prevent any alteration of the setting adopted.

6.12 The requirements in items 6.7 and 6.11 do not apply if a printing mechanism (Chapter V) is associated with the meter to permit the issuing of a printed ticket or if, in the case of direct sales to the public, the pre-setting mechanism is concealed.

6.13 Meters with price indicators may also be fitted with a price pre-setting mechanism. In this case, the flow of liquid is stopped at the moment where the amount delivered corresponds to the selected price. The requirements in items 6.1 and 6.12 apply.

CHAPTER VII

SEALING

7.1 Sealing devices must be provided to prevent the removal of ancillary equipment and access to components which permit adjustment of the calibration.

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