

L.N. 409 of 2002

THE METROLOGY ACT
ACT NO. XXV OF 2002

Medium Accuracy Weights Regulations, 2002

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

1. (1) These regulations may be cited as the Medium Accuracy Weights Regulations, 2002. Citation and commencement.

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

2. For the purpose of these regulations, all the definitions in the Malta Standards Authority Act shall apply. Definitions. Cap. 419

3. (1) These regulations apply to medium accuracy weights of the following nominal values: Scope.

- rectangular bar weights of 5, 10, 20 and 50 kg;
- cylindrical weights of 1, 2, 5, 10, 20, 50, 100, 200 and 500g and 1, 2, 5 and 10kg.

(2) The weights which may bear the Authority marks and symbols are described and illustrated in Annexes I-IV. They shall not be subject to the pattern approval by the Authority; they shall be subject to the initial verification by the Authority.

(3) The placing on the market or entry into service of medium accuracy rectangular bar or cylindrical weights bearing the EEC initial verification mark may not be refused, prohibited or restricted.

ANNEX I

RECTANGULAR BAR WEIGHTS

1. Shape, constituent material and method of manufacture .
 - 1.1. Parallel-piped shape with a rigid non- projecting handle for gripping.
 - 1.2. Material used:
 - 1.2.1. Body of the weight: grey cast iron
 - 1.2.2. *Type 1*: handle of seamless steel tubing of standard diameter
Type 2: handle of cast iron, integral with the body of the weight.
2. Adjustment cavity
 - Type 1*
 - 2.1. Internal cavity made up of the interior of the tubular gripping handle.
 - 2.2. The cavity is closed by a screw-plug of drawn brass or by a brass plug in the form of a smooth disc. The screw-plug has a screwdriver slot and the smooth disc has a central lifting hole.
 - 2.3. The plug is sealed by a lead pellet driven into an internal circular groove or into the thread of the tube.
 - Type 2*
 - 2.4. Internal cavity cast in one of the uprights of the weight and opening on the upper surface of this upright.
 - 2.5. The cavity is closed by a small mild steel plate.
 - 2.6. The plate is sealed by a lead pellet driven into a recess as shown in Annex II
3. Adjustment
 - 3.1. After adjustment of the new weight by means of lead shot, two thirds of the total volume of the cavity remains empty.

4. Positioning of the EEC initial verification mark
 - 4.1. The final EEC verification mark is stamped on the lead seal of the adjustment cavity.
5. Marking and distinctive symbols
 - 5.1. The indications stating the nominal value of the weight, and the manufacturer's identification mark, appear on the upper surface of the central part of the weight, either indented or in relief.
 - 5.2. The nominal value of the weight is indicated in the forms:
5kg, 10kg, 20kg, 50kg.
6. Dimensions and tolerances
 - 6.1. The dimensions to be complied with for the different weights are laid down in Annex II (dimensions in millimetres).
 - 6.2. The tolerances applicable to the various dimensions are the normal manufacturing tolerances.
7. Maximum permissible errors

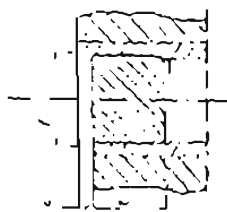
Nominal Value	Maximum permissible errors in milligrammes on initial verification
5 Kg	+ 800 - 0
10 Kg	+ 1600 - 0
20 Kg	+3200 - 0
50 Kg	+8000 - 0

8. Surface finish
 - 8.1. If necessary, weights are protected against corrosion by a suitable coating resistant to wear and impact.

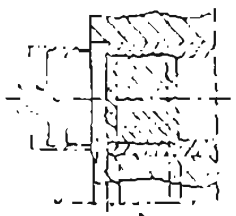
ANNEX II

RECTANGULAR BAR WEIGHTS

Detail H



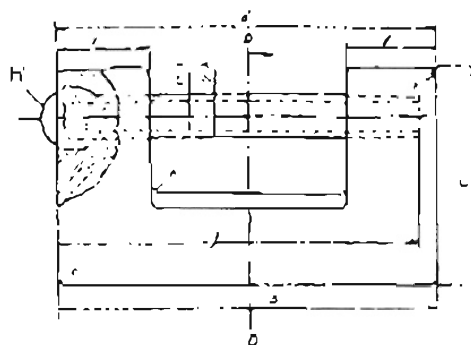
1st variant of detail H



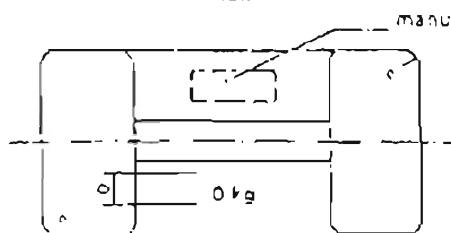
2nd variant of detail H



Elevation

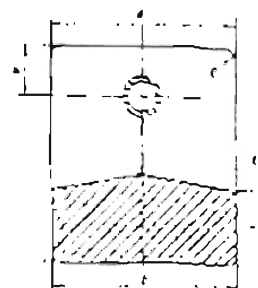


Plan



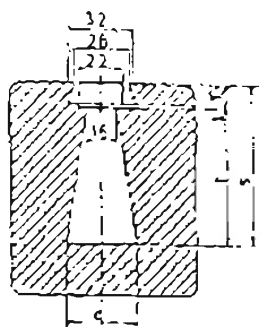
manufacturer's identification mark

Cross-section DD

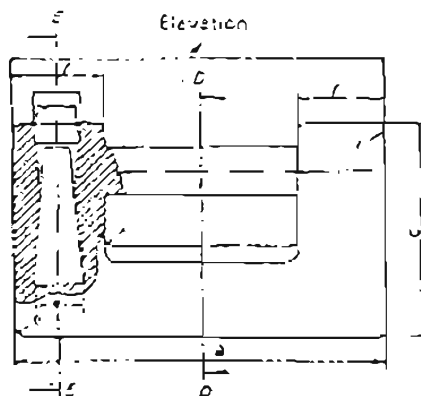


Type 1

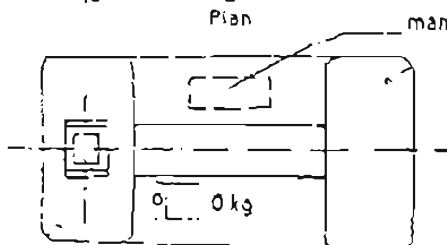
Cross-section EE



Elevation

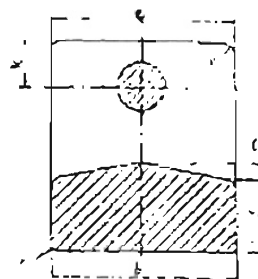


Plan



manufacturer's identification mark

Cross-section DD



Type 2

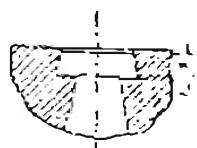


Table of dimensions in millimetres, ISO/R 261 threads

Nom Value	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r	s	t	u	v	w	x	y	z	A	B
5kg	150	75	84	152	77	36	13	20	12	145	18	30	6	5	12	19	16	55	66	M16x1.5	1	2	14	18	16.5	16	5	1.5
10kg	180	95	109	193	97	46	25	20	12	185	25	38	8	6	16	25	35	70	31	M16x1.5	1	2	14	18	16.5	16	5	1.5
20kg	230	115	139	234	117	61	30	32	24	220	30	52	12	8	20	29	50	95	106	M27x1.5	2	3	21	30	27.5	27	8	1.5
50kg	310	155	192	314	157	83	40	32	24	300	40	74	16	10	25	40	70	143	159	M27x1.5	2	3	21	30	27.5	27	8	1.5

Dimensions a and b, and also b and e, may be reversed.

ANNEX III

CYLINDRICAL WEIGHTS

1. Shape, constituent material and method of manufacture
 - 1.1. Cylindrical shape with a flat knob for gripping.
 - 1.2. Material used: any material with a density of 7 to 9.5 g/cm³, of a hardness at least equal to that of cast brass, not less resistant to corrosion and not more friable than grey cast iron, and with a surface comparable to that of grey cast iron in a mould of fine sand.

Grey cast iron may not be used for weights of a nominal value of less than 100g.
 - 1.3. The method of manufacture to be appropriate to the material chosen.
2. Adjusting cavity
 - 2.1. Internal cylindrical cavity with a larger diameter in the top part of the cavity.
 - 2.2. The cavity is closed by a screw plug of drawn brass or by a brass plug in the form of a smooth disc. The screw plug has a screwdriver slot and the smooth disc has a central lifting hole.
 - 2.3. The plug is sealed by a lead cap driven into a circular groove cut out in the wider part of the cavity.
 - 2.4. Weights of 1, 2, 5, and 10g do not have an adjustment cavity.
 - 2.5. An adjustment cavity is optional for those of 20 and 50g.
3. Adjustment
 - 3.1. After adjustment of the new weight by means of lead shot, two-thirds of the total volume of the cavity remains empty.
4. Positioning of the EEC initial verification mark
 - 4.1. The final EEC verification mark is stamped on the lead seal of the adjustment cavity.
 - 4.2. Weights without adjustment cavities are stamped on the base.
5. Markings and distinctive symbols

- 5.1. The indications stating the nominal value of the weight, as well as the manufacturer's identification mark, appear on the upper surface of the head of the weight, either indented or in relief.
- 5.2. The nominal value of the weight may be indicated on the body of weights of from 500g to 10kg.
- 5.3. The nominal value of the weight is indicated in the form:
1g, 2g, 5g, 10g, 20g, 50g, 100g, 200g, 500g, 1kg, 2kg, 5kg, 10kg.
6. Dimensions and their tolerances
- 6.1. The dimensions to be complied with for the different weights are laid down in Annex IV (dimensions in millimetres).
- 6.2. The tolerances applicable to the various dimensions are the normal manufacturing tolerances.
7. Maximum permissible errors

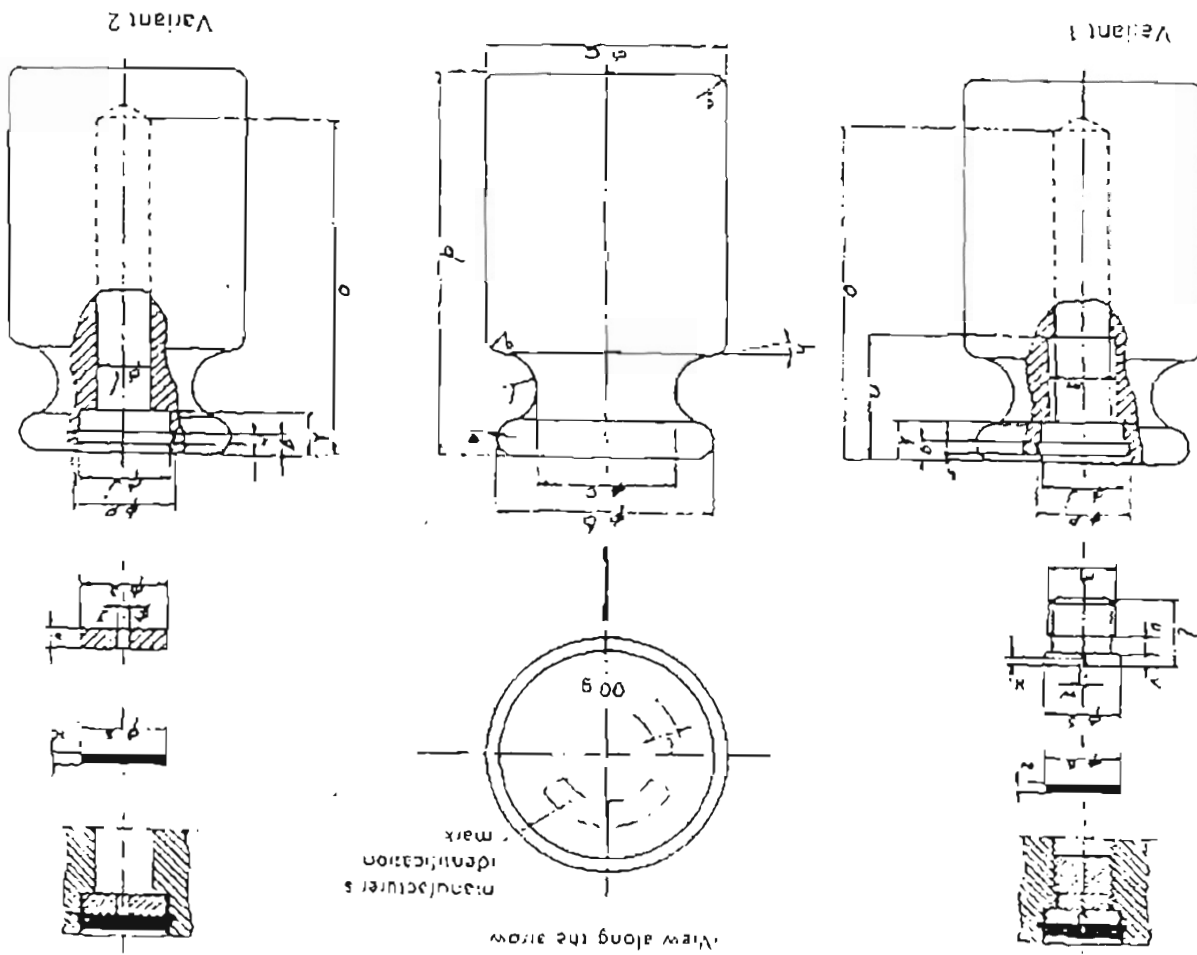
Nominal Value	Maximum permissible errors in milligrammes on initial verification
1g	+ 5 - 0
2g	+ 5 - 0
5g	+ 10 - 0
10g	+ 20 - 0
20g	+ 20 - 0
50g	+ 30 - 0
100g	+ 30 - 0
200g	+ 50 - 0
500g	+ 100 - 0
1kg	+ 200 - 0
2kg	+ 400 - 0
5kg	+ 800 - 0
10kg	+ 1600 - 0

8. Surface Finish

- 8.1. If necessary, weights are protected against corrosion by a suitable coating resistant to wear and impact; they may be polished.

ANNEX IV

CYLINDRICAL WEIGHTS



Nom. value	a	B	C	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r	s	t	u	v	w	x	y	z
1g	6	5.5	3		0.5	0.9	0.5		1																	
2g	6	5.5	3		0.5	0.9	0.5		1																	
5g	8	7	4.5		0.7	1.25	0.5		1																	
10g	10	9	6		1.0	1.5	0.5		1																	
20g	13	11.5	7.5		1	1.8	0.5	10°	1.5																	
20g	13	11.5	7.5		1	1.8	0.5	10°	1.5																	
50g	18	16	10		1.5	2.5	1	10°	2																	
50g	18	16	10		1.5	2.5	1	10°	2																	
100g	22	20	13		2	3.5	1	10°	2																	
200g	28	25	16		2.25	4	1.5	10°	3.2																	
500g	38	34	22		3	5.5	1.5	10°	3.2																	
1kg	48	43	27		4	7	2	10°	5																	
2kg	60	54	36		5	9	2	10°	5																	
5kg	80	72	48		6.5	12	2	10°	10																	
10kg	100	90	58		8.5	15	3	10°	10																	