II

(Acts whose publication is not obligatory)

COUNCIL

COUNCIL DIRECTIVE

of 5 December 1978

on the approximation of the laws of the Member States relating to automatic checkweighing and weight grading machines

(78/1031/EEC)

THE COUNCIL OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Economic Community, and in particular Article 100 thereof,

Having regard to the proposal from the Commission (1),

Having regard to the opinion of the European Parliament (2),

Having regard to the opinion of the Economic and Social Committee (3),

Whereas in the various Member States construction and methods of control of checkweighing and weight grading machines are subject to mandatory provisions which differ from one Member State to another and consequently hinder trade in such instruments; whereas it is therefore necessary to approximate these provisions;

Whereas Council Directive 71/316/EEC of 26 July 1971 on the approximation of the laws of the Member States relating to common provisions for both measuring instruments and methods of metrological control (4), as last amended by Directive 72/427/EEC (5), has laid down the EEC pattern approval and EEC initial verification procedures; whereas, in accordance with that Directive, it is necessary to lay down the technical requirements which the manufacture and operation of checkweighing and weight grading machines must satisfy in order to be imported, marketed and freely used after having undergone the requisite inspections and having been provided with the required marks and signs,

HAS ADOPTED THIS DIRECTIVE:

Article 1

This Directive applies to automatic checkweighing and weight grading machines. These instruments are defined in Section 1 of the Annex.

Article 2

Those checkweighing and weight grading machines which may bear EEC marks and signs are described in the Annex.

They shall be subject to EEC pattern approval and shall be submitted for EEC initial verification.

Article 3

No Member State may prevent, prohibit or restrict the placing on the market or entry into service of automatic

(1) OJ No C 54, 8. 3. 1976, p. 44.
(2) OJ No C 125, 8. 6. 1976, p. 43.
(3) OJ No C 197, 23. 8. 1976, p. 13.
(4) OJ No L 202, 6. 9. 1971, p. 1.
(5) OJ No L 291, 28. 12. 1972, p. 156.

checkweighing and weight grading machines bearing the EEC pattern approval sign or EEC initial verification mark on grounds concerning their metrological characteristics.

Article 4

1. Member States shall bring into force the laws, regulations and administrative provisions needed in order to comply with this Directive within 18 months of its notification and shall forthwith inform the Commission thereof.

2. Member States shall communicate to the Commission the text of the main provisions of national law which they adopt in the field covered by this Directive.

Article 5

This Directive is addressed to the Member States.

Done at Brussels, 5 December 1978.

For the Council

The President

M. LAHNSTEIN

ANNEX

CHAPTER I

DEFINITIONS AND TERMINOLOGY

1. GENERAL DEFINITIONS

Automatic checkweighing machines and weight grading machines subdivide articles into two or more subgroups according to the mass of these articles.

1.1. **Checkweighing machines**

Machines which subdivide articles the mass of which varies on either side of a pre-determined value called the nominal mass.

The function of a checkweighing machine is to subdivide the articles into two or more subgroups according to the value of the difference between their mass and the nominal mass.

1.2. **Weight grading machines**

Machines which subdivide articles of different mass for which there is no predetermined nominal mass.

The function of the weight grading machine, hereinafter called 'grading machine', is to classify the articles into several subgroups, each characterized by a given mass range.

1.3. This Directive does not apply to automatic price-computing and ticket-printing weighing machines and egg grading machines.

Additional provisions will be drawn up later for automatic checkweighing machines fitted with electronic devices, which for the time being are ineligible for EEC pattern approval.

2. TERMINOLOGY

2.1. **Classification according to method of checkweighing or weight grading**

2.1.1. Machines which subdivide the articles into distinct groups separately leaving the machine.

2.1.2. Machines which subdivide the articles by applying to each article a distinctive mark which identifies the group to which it belongs.

2.1.3. Machines which count the articles in each group without separation.

2.1.4. Machines which give a visual or audible signal for each article in a group without separation.

2.2. **Classification according to method of operation**

2.2.1. Continuous checkweighing and grading machines.

Machines with continuous movement of the loads.

The movement of the loads on to the load receptor is continuous and the information regarding mass is provided during this movement.

2.2.2. Discontinuous checkweighing and grading machines.

Machines with discontinuous movement of the loads.

The movement of the loads on to the load receptor is discontinuous and the information regarding mass is provided when the load is at rest.

2.3. **Component devices**

2.3.1. Measuring system.

2.3.1.1. Weighing unit.

Device providing information on the mass of the load to be checkweighed or graded. This device may consist of all or part of a non-automatic weighing machine.

It comprises a load receptor, an equilibrium mechanism, and possibly an indicating device showing for instance the value of the mass of the load or the difference between this value and a reference value, in units of mass.

2.3.1.2. Triggering device.

Device which gives the order to provide the information regarding mass.

2.3.1.3. Processing device.

Device which converts the data from the weighing unit into a signal and processes this signal to give a checkweighing or grading order.

2.3.1.4. Indicating device.

Device which gives at least one of the following items of information:

— the mass of the checkweighed or graded load,

— the difference between this mass and a reference value,

— the subgroup to which the checkweighed or graded load belongs.

2.3.2. Load conveyor.

Device to move the loads on to and off the load receptor.

It may form part of the weighing unit.

2.3.3. Setting device.

Device for fixing the limits of mass of the subgroups.

2.3.4. Sorting device.

Device by means of which the loads are automatically divided into physically separate subgroups. This device need not form part of the machine.

2.3.5. Correction device (servo feed-back device).

Device which, in the light of the checkweighing results, automatically corrects the setting of the machine making up the loads upstream from the checkweighing machine.

2.3.6. Counter.

Device indicating the number of loads which have moved on to the load receptor (movement counter) or indicating the number of the loads in each of the subgroups (division counters).

2.4. **Standard test load**

Standard test load is the load by means of which the standard zone of indecision (U_s) is tested under the conditions laid down in 7.2.1.1.

2.5. **Metrological characteristics**

2.5.1. Nominal set point.

Value expressed in units of mass, preset by the operator by means of the setting device in order to establish the limit between consecutive subgroups.

2.5.2. Actual set point.

Value in units of mass in respect of which two different decisions may be taken for the same load, each having the same probability.

2.5.3. Setting range.

Range within which a nominal set point can be adjusted for a given nominal value of mass of the loads.

2.5.4. Setting interval (width of a subgroup).

Interval, expressed in units of mass, between consecutive nominal set points.

2.5.5. Setting error.

Difference between the value of the nominal and the actual set point.

2.5.6. Weight category.

Subgroup of loads which fall within a given range of mass. With 'n' set points the whole range of loads, from zero to infinity, is divided into (n + 1) weight categories.

2.5.7. Minimum capacity.

Value of load below which the machine may not be able to identify and classify the load correctly in the subgroup to which it belongs.

2.5.8. Zone of indecision.

Range, expressed in units of mass, in which the decision of the machine is indeterminate.

2.5.8.1. Standard zone of indecision (U_s).

Range claimed by the manufacturer and expressed in units of mass, within which the machine may make two different decisions for a standard test load and a given speed of operation.

2.5.8.2. Nominal zone of indecision (U_n).

Range claimed by the manufacturer and expressed in units of mass, within which the machine may make two different decisions for a given product and speed of operation.

2.5.8.3. Actual zone of indecision (U_a).

Range ascertained by the metrological service and expressed in units of mass, within which the machine may make two different decisions for a standard test load or a given product and speed of operation.

Its conventional value is equal to 6σ (from -3 to $+3\sigma$), σ being equal to the standard deviation.

2.5.9. Checkweighing or grading rate (speed of operation).

Number of loads checkweighed or graded per unit of time.

2.5.10. Load length.

Length of load measured in the direction in which it is moving.

2.5.11. Weighing time.

Time elapsed between the moment when the load is completely on the load receptor and the moment when the information regarding the mass is provided.

2.5.12. Response time.

Time elapsed between the moment when the load is completely on the load receptor and the moment at which the instantaneous response of the weighing unit differs from the final response by less than U_n.