COUNCIL DIRECTIVE

of 24 June 1975

on the approximation of the laws of the Member States relating to continuous totalizing weighing machines

(75/410/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;

Having regard to the Opinion of the European Parliament (1);

Having regard to the Opinion of the Economic and Social Committee (2);

Whereas in the Member States both the construction and the methods of control of continuous totalizing weighing machines attached to conveyor belts 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 No 71/316/EEC (3) 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, as amended by the Act of Accession (4), 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 fabrication and operation of continuous totalizing weighing machines must satisfy in order to be freely imported, marketed and used after having undergone the requisite inspections and having been provided with the required marks and symbols,

HAS ADOPTED THIS DIRECTIVE:

Article 1

This Directive applies to continuous totalizing weighing machines attached to conveyor belts.

These machines are defined in Chapter I, Section 2 of the Annex.

Article 2

Those continuous totalizing weighing machines which may bear EEC marks and symbols 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 refuse, prohibit or restrict the placing on the market or entry into service of continuous totalizing weighing machines bearing the EEC pattern approval symbol, or EEC initial verification mark.

Article 4

1. Member States shall put into force the laws, regulations or 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 ensure that the texts of the main provisions of national law which they adopt in the field covered by this Directive are communicated to the Commission.

Article 5

This Directive is addressed to the Member States.

Done at Luxembourg, 24 June 1975.

For the Council

The President

G. FITZGERALD

(1) OJ No C 2, 9. 1. 1974, p. 63.
(2) OJ No C 8, 31. 1. 1974, p. 6.
(3) OJ No L 202, 6. 9. 1971, p. 1.
(4) OJ No L 73, 27. 3. 1972, p. 14.

ANNEX

CHAPTER I

DEFINITIONS AND TERMINOLOGY

1. CLASSIFICATION OF WEIGHING MACHINES ACCORDING TO THEIR METHOD OF OPERATION

1.1. **Automatic machines**

Machines accomplishing a weighing operation without intervention by an operator and setting in motion an automatic process characteristic of the machine.

1.2. **Non-automatic machines**

Machines which require the intervention of an operator during the weighing process, especially to deposit on and/or remove the loads from the load receptor of the machine and also to determine the result.

2. DEFINITION

Continuous totalizing weighing machines of the belt conveyor type are automatic weighing machines which determine the mass of a product in bulk without systematic subdivision, the movement of the belt being uninterrupted.

For the purposes of this Annex, these weighing machines shall be abbreviated to 'belt weighers'.

3. TERMINOLOGY

3.1. **General**

In so far as they are not contrary to Sections 2 and 3 of this Annex, Sections 1 and 2 of the Annex to Council Directive No 73/360/EEC [1] of 19 November 1973 on the approximation of the laws of the Member States relating to non-automatic weighing machines, apply to the belt weighers dealt with in this Directive.

3.2. **Classification**

3.2.1. *According to the method of totalizing*

3.2.1.1. By addition:

belt weighers on which the totalizing device carries out the addition of successive partial loads, each of which corresponds to a given distance travelled by the belt.

3.2.1.2. By integration:

belt weighers on which the totalizing device carries out the integration with respect to time of the product of the load per unit length and the speed of the belt.

3.2.2. *According to the type of load receptor*

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[1] OJ No L 335, 5. 12. 1973, p. 1.

3.2.2.1. With weigh table:

belt weighers on which only one part of the conveyor forms the load receptor, called the 'weigh table'.

3.2.2.2. With belt conveyor included:

belt weighers on which the entire belt conveyor forms the load receptor.

3.3. **Components**

3.3.1. *Main components*

3.3.1.1. Belt conveyor:

device intended for conveying the product by means of a belt resting on rollers turning about their axes.

3.3.1.1.1. Carrying rollers:

rollers by means of which the conveyor belt is supported on the fixed frame.

3.3.1.1.2. Weighing rollers:

rollers by means of which the conveyor belt is supported on the load receptor of the weighing unit.

3.3.1.2. Weighing unit:

all or part of a non-automatic weighing machine or any other device providing information on the mass of the load to be measured.

3.3.1.3. Belt displacement transducer:

device on the conveyor supplying either information corresponding to the displacement of a defined length of the belt or information proportional to the speed of the belt.

3.3.1.3.1. Displacement sensing device:

that part of the displacement transducer permanently linked to the belt.

3.3.1.4. Totalization device:

device carrying out the addition of partial loads or the integration of the product of the load per unit length and the speed of the belt from information supplied by the weighing unit and the displacement transducer.

3.3.1.5. Totalization indicating device:

device receiving information from the totalization device and indicating the mass of the load conveyed.

3.3.1.5.1. General totalization indicating device (without zero-resetting device):

device indicating the overall total of the mass of all the totalized loads.

3.3.1.5.2. Partial totalization indicating device (with zero-resetting device):

device indicating the mass of totalized loads over a limited period.

3.3.1.5.3. Supplementary totalization indicating device:

totalization indicating device with a scale interval greater than that of the general totalization indicating device, and intended to indicate the total mass of a load transported over a fairly long period of operation. These devices may be fitted with a zero-resetting device.

3.3.1.5.4. Test totalization indicating device:

device with a smaller scale interval than that of the general totalization indicating device, and intended for test purposes.

3.3.1.6. Zero-setting device:

device enabling zero totalization to be obtained over a whole number of revolutions of the empty conveyor;

the zero-setting device may be either non-automatic, semi-automatic or automatic.

3.3.1.6.1. Zero totalization indicating device (zero indicator):

indicating device separate from the totalization indicator fitted to the zero-setting device and allowing zero-setting to be checked when the belt is not loaded.

3.3.1.6.2. Non-automatic zero-setting device:

device allowing observation, setting to zero and checking of zero-setting by the operator.

3.3.1.6.3. Semi-automatic zero-setting device:

3.3.1.6.3.1. device allowing, on manual command, the automatic setting to zero of the belt weigher, or

3.3.1.6.3.2. device indicating, on manual command, the value by which it is necessary to adjust the zero-setting device.

3.3.1.6.4. Automatic zero-setting device:

device allowing the belt weigher to be set to zero, without intervention by the operator, after the belt has been operating empty.

3.3.2. *Ancillary components*

3.3.2.1. Instantaneous load indicating device:

device indicating the mass of the load acting on the weighing unit at any given time.

3.3.2.2. Flowrate indicating device:

device indicating the instantaneous flowrate either as the mass of the product conveyed in unit time or as a percentage of the maximum flowrate.

3.3.2.3. Operation checking devices:

devices enabling certain functions to be checked, and intended in particular:

— either to simulate the effect of a constant load with the belt empty (zero checking device with additional mass),

— or to compare two integrations of a load per unit length over the same time interval,

— or to indicate that the maximum load or maximum flowrate have been exceeded,

— or to draw the attention of the user to a fault in the operation of the belt weigher and in particular in the electrical components.

3.3.2.4. Flowrate regulating device:

device intended to ensure a programmed flowrate.

3.3.2.5. Preselection device:

device enabling the feed to the conveyor to be stopped when the totalized load has reached a preselected value.

3.3.2.6. Displacement simulator:

auxiliary verification device used in tests on the belt weigher without its conveyor and intended to simulate displacement of the belt.

4. METROLOGICAL CHARACTERISTICS

4.1. Totalization scale interval

Value, expressed in units of mass equal to:

— in the case of continuous (analogue) indication the smallest subdivision of the scale of totalized mass: (d_t),

— in the case of discontinuous (digital) indication, the difference between two consecutive values of the totalized mass (d_{td}).

4.2. Scale interval (d_o) of the zero totalization indicating device (zero indicator)

The value of the scale interval (d_o) of the zero totalization indicating device, expressed in units of mass, equals:

— in the case of continuous (analogue) indication, the smallest subdivision of the scale of the zero totalization indicating device,

— in the case of discontinuous (digital) indication, the difference between two consecutive values of the zero totalization indicating device.

4.3. Weigh length (L)

Distance between the axes of the weighing rollers at the extremities of the weigh table increased by the half-distances between the axes of each of these rollers and those of the nearest carrying rollers of the conveyor.

4.4. Weighing cycle

Group of operations relating to each addition of partial load at the end of which the elements of the totalization device have returned for the first time to their initial position or state.

4.5. Maximum capacity (max) and minimum capacity (min) of the weighing unit

4.5.1. *Maximum capacity*

Maximum instantaneous net load on the conveyor belt which the weighing unit is intended to weigh.

4.5.2. *Minimum capacity*

Value of the net load below which the use of the weighing results may cause an excessive relative error in the totalization result.