

# G01G

## Weighing (sorting by weighing B07C5/16)

### Definition statement

*This subclass/group covers:*

- Weighing devices and methods are apparatus and methods for determining the mass of an object by the use of constant and homogenous gravitational acceleration.
- Particularly apparatus and methods wherein the mass of an object is determined by balancing its gravitational mass with another known gravitational mass ([G01G 1/00](#)).
- Particularly apparatus and methods wherein the mass of an object is determined by measuring its weight. The weight is the absolute value of the gravitational force exerted on the object.
- The gravitational force determined by measuring the shear or tensile deformation of a solid state member ([G01G 3/00](#)).
- The gravitational force determined by measuring pneumatic or hydraulic pressure or using buoyancy ([G01G 5/00](#)).
- The gravitational force determined by balancing with electromagnetic or electrostatic forces ([G01G 7/00](#)).
- Particularly apparatus and methods wherein the mass of an object is determined by ways not otherwise provided for ([G01G 9/00](#)).
- Exceptionally apparatus and methods wherein the mass of an object is determined by measuring its inertial mass.
- Measurement of inertial mass is restricted to microbalances such as quartz crystal microbalances (QCM) ([G01G 3/165](#)), electronic weighing devices for postal parcels and letters ([G01G 19/005](#)) and weighing devices for incorporation in vehicles wherein the vehicle mass is dynamically estimated ([G01G 19/086](#)).
- Exceptionally apparatus and methods wherein the mass of a known substance is determined by measuring its density by using electromagnetic radiation ([G01G 9/005](#)).
- Apparatus and methods using weighing devices and methods of groups [G01G 1/00-G01G 9/00](#) with the exceptions of subgroups [G01G 19/005](#) and [G01G 19/086](#):
- Particularly apparatus and methods adapted for measuring the mass or mass flow of a continuous stream of objects or material.
- Comprises conveying means such as belts, worms/augers or vibratory

means as well as mass flow controlling means and/or integrating means to transform a mass flow to a mass ([G01G 11/00](#)).

- Particularly apparatus and methods adapted for generating a batch of identical objects/homogenous material of predetermined mass.
- Comprises pooling means such as integrated dischargeable chutes or hoppers for forming a batch of identical objects/homogenous material and means for controlling its mass ([G01G 13/00](#)).
- Particularly apparatus and methods adapted for check-weighing and/or correcting of batches of identical objects/homogenous material pre-dispensed into transportable containers such as bottles.
- Comprises dispensing means for forming a batch of identical objects/homogenous material inside the transportable container and means for checking and/or correcting its mass ([G01G 15/00](#)).
- Particularly apparatus and methods adapted for determining the mass of objects/material of special form or property such as pharmaceuticals, fiber, pulp, fluids, gases or animals ([G01G 17/00](#)).
- Particularly apparatus and methods for determining mass adapted for postal parcels and letters, vehicles, suspended loads, humans, as well as combinatorial weighing, weighing apparatus combined with domestic appliances and weighing apparatus for determining an other quantities such as a price or caloric content from the mass of an object ([G01G 19/00](#)).
- Particular constructional details of any apparatus or method using a weighing device or method ([G01G 21/00](#)).
- Auxiliary means ensuring correct conduction of mass measurements, indicating means such as displays and recording means such as databases or paper records ([G01G 23/00](#)).

### **Relationship between large subject matter areas**

Measuring of forces is classified in groups [G01L 1/00](#) and [G01L 5/00](#). The borderline between subclass [G01G](#) and subclass [G01L](#) should be determined based on whether the features relevant for classification are focussed on the force sensor or on the weighing device.

Packaging articles is classified in subclass [B65B](#) whereas apparatus for conveying articles are classified in subclass [B65G](#). The borderline between subclass [G01G](#) and subclasses [B65B](#), [B65G](#) should be determined on whether the features relevant for classification are focused on packaging/conveying or on weighing.

### **References relevant to classification in this subclass**

*This subclass/group does not cover:*

Determining weight by measuring volume	<a href="#">G01F</a>
Measuring gravitational fields or waves, or gravimetric prospecting using balances	<a href="#">G01V 7/08</a>
Ratio control of two or more flows by sensing weight of individual components	<a href="#">G05D 11/04</a>
Testing of coins by weight	<a href="#">G07D 5/04</a>

Measuring mass flow of a fluid or a fluent solid material	<a href="#">G01F 1/76</a>
Coin-freed apparatus for controlling dispensing of fluids, semi-liquids or granular material from reservoirs by weight	<a href="#">G07F 13/04</a>

### **Informative references**

*Attention is drawn to the following places, which may be of interest for search:*

Packaging, bottling and sorting according to weight.	<a href="#">B65B 1/00</a> , <a href="#">B65B 3/00</a> , <a href="#">B67C 3/00</a> , <a href="#">B07C 5/00</a> , <a href="#">B07B 13/00</a>
Indicating devices for soil-shifting machines	<a href="#">E02F 9/26</a>
Bearings	<a href="#">F16C</a>
Shock-absorbers	<a href="#">F16F</a>
Measuring forces	<a href="#">G01L 1/00</a>
Measurement of several components of forces	<a href="#">G01L 5/16</a>
Control of flow	<a href="#">G05D 7/00</a>

Data processing equipments	<a href="#">G06F 19/00</a>
Counting	<a href="#">G06M</a>

## Synonyms and Keywords

In patent documents the following words "scale", "balance", and "weighing device" are often used as synonyms.

## G01G 1/00

### Weighing apparatus involving the use of a counterweight or other counterbalancing mass

#### Definition statement

*This subclass/group covers:*

Weighing devices and methods wherein the mass of an object is determined by balancing its gravitational mass with another known gravitational mass.

These comprise mostly vertically hinged pendulum weighing devices with integrated counterweights and balances with a mostly horizontally hinged beam adapted to support removable counterweights.

The main difference between both kinds of weighing devices is given by the way the measurement of mass is established

Within pendulum weighing devices the deflection angle of the pendulum is translated to a mass measurement.

Within weighing devices with a horizontally hinged beam mass measurement is performed by balancing with a collection of known masses or by considering the distance of the counterweight towards the hinge.

For pendulum weighing devices counterweights might also be adapted to be arranged with a variable distance towards the hinge in order to switch to different ranges of mass.

## G01G 3/00

### Weighing apparatus characterised by the use of elastically-deformable members, e.g. spring balances

#### Definition statement

*This subclass/group covers:*

Weighing devices and methods wherein the mass of an object is determined

by measuring the shear or tensile deformation of a solid state member due to the weight of the object.

Exceptionally inertial mass instead of heavy mass is measured by microbalances such as quartz crystal microbalances (QCM) in [G01G 3/165](#).

Microbalances comprise a substrate that is stimulated to vibration. The substrate changes its characteristic frequency once an object of a certain mass is adsorbed. The object's mass is determined by the frequency shift.

Substrates may consist of quartz crystals such as piezoelectric material that is actively stimulated to vibration by an AC voltage. These microbalances are commonly referred to as quartz crystal microbalances (QCM).

Substrates may also consist of micromachined material such as silicon. Stimulation to vibration is commonly performed by interlocking combs that are charged by opposing AC voltage.

Further details of subgroups

[G01G 3/13](#);

This subgroup comprises only passive piezo-electric weighing elements, wherein active deformation due to the weighing force is generating a voltage within the piezo-electric weighing elements.

Therefore this subgroup does not comprise piezo-electric resonators as used within quartz crystal microbalances.

[G01G 3/165](#);

This subgroup comprises all active piezo-electric weighing elements, meaning that a voltage is applied to the piezo-electric weighing element in order to cause a deformation of this element.

Examples are piezo-electric resonators used within quartz crystal microbalances.

## References relevant to classification in this group

*This subclass/group does not cover:*

Weighing devices and methods wherein the mass of an object is determined by measuring the electrical properties of an elastically-deformable capacitive element.	<a href="#">G01G 7/06</a>
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Analysing materials by weighing by absorbing or adsorbing components	<a href="#">G01N 5/02</a>
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of material	
For determining moisture content	<a href="#">G01N 5/025</a>
Analysing materials by weighing by removing a component and weighing the remainder	<a href="#">G01N 5/04</a>
For determining moisture content	<a href="#">G01N 5/045</a>
Investigating density or specific gravity of materials using variation of the resonant frequency of an element vibrating in contact with the material submitted to analysis	<a href="#">G01N 9/002</a>

### Informative references

*Attention is drawn to the following places, which may be of interest for search:*

Measuring force by elastic deformation	<a href="#">G01L 1/04</a>
Measuring force by elastic deformation by helical springs	<a href="#">G01L 1/042</a>
Measuring force by elastic deformation by leaf springs	<a href="#">G01L 1/044</a>
Measuring force by elastic deformation by spiral springs	<a href="#">G01L 1/046</a>
Measuring force by elastic deformation by torsional deformable elements	<a href="#">G01L 1/048</a>
Measuring force by measuring variations of frequency of stressed vibrating elements	<a href="#">G01L 1/10</a>
Measuring force by measuring variations of frequency of stressed vibrating elements with optical excitation or measuring of vibrations	<a href="#">G01L 1/103</a>
Measuring force by measuring	<a href="#">G01L 1/106</a>

variations of frequency of stressed vibrating elements, the constructional details thereof	
Measuring force by using properties of piezo-resistive materials	<a href="#">G01L 1/18</a>
Measuring force by using properties of piezo-resistive materials by measuring variations of frequency of vibrating piezo-resistive material	<a href="#">G01L 1/183</a>
Measuring force by using properties of piezo-resistive materials by measuring variations of frequency of vibrating piezo-resistive material using optical excitation or measuring of vibrations	<a href="#">G01L 1/186</a>
Measuring forces by measuring Ohmic resistance	<a href="#">G01L 1/20</a>
Measuring forces by measuring Ohmic resistance using resistance strain gauges	<a href="#">G01L 1/22</a>
Measuring force by measuring variations in optical properties	<a href="#">G01L 1/24</a>

### **Glossary of terms**

*In this subclass/group, the following terms (or expressions) are used with the meaning indicated:*

QCM	quartz crystal microbalance
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### **G01G 5/00**

**Weighing apparatus wherein the balancing is effected by fluid action**

### **Definition statement**

*This subclass/group covers:*

Weighing devices and methods wherein the mass of an object is determined by measuring pneumatic or hydraulic pressure or using buoyancy resulting from the weight of the object.

## Informative references

Attention is drawn to the following places, which may be of interest for search:

Measuring forces by hydraulic or pneumatic means	<a href="#">G01L 1/02</a>
Measuring forces by hydraulic or pneumatic counterbalancing forces	<a href="#">G01L 1/083</a>
Measuring steady or quasi-steady pressure in a fluid by means not provided for in <a href="#">G01L 7/00</a> or <a href="#">G01L 9/00</a>	<a href="#">G01L 11/00</a>
Devices or apparatus for measuring two or more pressure values simultaneously	<a href="#">G01L 15/00</a>
Testing or calibrating of apparatus measuring fluid pressure	<a href="#">G01L 27/00</a>
Measuring steady or quasi-steady pressure in a fluid by mechanical means	<a href="#">G01L 7/00</a>
In the form of elastically deformable gauges	<a href="#">G01L 7/02</a>
In the form of pistons	<a href="#">G01L 7/16</a>
Using liquid as a pressure sensitive medium	<a href="#">G01L 7/18</a>
Measuring steady or quasi-steady pressure in a fluid by electrical or electro-mechanical means	<a href="#">G01L 9/00</a>

## G01G 7/00

Weighing apparatus wherein the balancing is effected by

**magnetic, electromagnetic, or electrostatic action, or by means not provided for in the preceding groups**

**Definition statement**

*This subclass/group covers:*

Weighing devices and methods wherein the mass of an object is determined by balancing with electromagnetic or electrostatic forces or

wherein the mass of an object is determined by measuring the electrical properties of an elastically-deformable capacitive element.

**Informative references**

*Attention is drawn to the following places, which may be of interest for search:*

Measuring force by using electrostatic or electromagnetic counterbalancing forces	<a href="#">G01L 1/086</a>
Measuring force by measuring variations of magnetic properties	<a href="#">G01L 1/12</a>
Measuring forces by measuring variations in capacitance or inductance	<a href="#">G01L 1/14</a>
Measuring forces by measuring variations in capacitance or inductance by using capacitors	<a href="#">G01L 1/142</a>

Places in relation to which this group is residual (with regard to the balancing in the weighing apparatus):

Weighing apparatus involving the use of a counterweight or other counterbalancing mass	<a href="#">G01G 1/00</a>
Weighing apparatus characterised by the use of elastically-deformable members, e.g. spring balances	<a href="#">G01G 3/00</a>
Weighing apparatus wherein the balancing is effected by fluid action	<a href="#">G01G 5/00</a>

## Glossary of terms

*In this subclass/group, the following terms (or expressions) are used with the meaning indicated:*

PID	Proportional-Integral-Derivative feedback loop control mechanism
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## G01G 9/00

### Methods or apparatus for the determination of weight not otherwise provided for

#### Definition statement

*This subclass/group covers:*

Apparatus and methods wherein the mass of an object is determined by ways not otherwise provided for.

Particularly determining the mass of a known substance by measuring its density using electromagnetic radiation.

#### References relevant to classification in this group

*This subclass/group does not cover:*

Examples of places where the subject matter of this group is covered when specially adapted, used for a particular purpose, or incorporated in a larger system:

Apparatus and method for weighing material of filamentary or sheet form	<a href="#">G01G 17/02</a>
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Weighing apparatus involving the use of a counterweight or other counterbalancing mass	<a href="#">G01G 1/00</a>
Weighing apparatus characterised by the use of elastically-deformable members, e.g. spring balances	<a href="#">G01G 3/00</a>
Weighing apparatus wherein the balancing is effected by fluid action	<a href="#">G01G 5/00</a>
Weighing apparatus wherein the balancing is effected by magnetic,	<a href="#">G01G 7/00</a>

electromagnetic, or electrostatic action, or by means not provided for in the preceding groups	
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### Informative references

*Attention is drawn to the following places, which may be of interest for search:*

Investigating density or specific gravity of materials by observing the transmission of wave or particle radiation through the material	<a href="#">G01N 9/24</a>
Investigating or analysing material by the use of wave or particle radiation by transmitting radiation through the material and measuring the absorption	<a href="#">G01N 23/06</a>

## G01G 11/00

### Apparatus for weighing a continuous stream of material during flow; Conveyer-belt weighers

#### Definition statement

*This subclass/group covers:*

Apparatus and methods adapted for measuring the mass or mass flow of a homogenous continuous stream of objects or material.

Comprises typically conveying means such as belts, worms/augers or vibratory means as well as mass flow controlling means and/or integrating means to transform a mass flow to a mass.

#### References relevant to classification in this group

*This subclass/group does not cover:*

Measuring volume flow or mass flow of fluid or fluent solid material	<a href="#">G01F 1/76</a>
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### Informative references

Attention is drawn to the following places, which may be of interest for search:

Controlling flow of solid materials by electrical means	<a href="#">G05D 7/0605</a>
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## **G01G 13/00**

**Weighing apparatus with automatic feed or discharge for weighing-out batches of material (for weighing a continuous stream G01G11/00; check-weighing G01G15/00; for fluids G01G17/04; apportioning by weight materials to be mixed G01G19/22; combinatorial weighing G01G19/387)**

### **Definition statement**

*This subclass/group covers:*

Apparatus and methods adapted for generating a batch of identical objects/homogenous material of predetermined mass.

Comprises typically pooling means such as integrated dischargeable chutes or hoppers for forming a batch of identical objects/homogenous material and means for controlling its mass.

### **Relationship between large subject matter areas**

[G01G 13/00](#) and its subgroups are related to packaging fluent solid material by controlling or determining the quantity by weighing classified in [B65B 1/32](#), [B65B 1/34](#) and [B65B 1/46](#). The borderline should be determined on whether the features relevant for classification are focused on packaging/conveying or on weighing.

### **References relevant to classification in this group**

*This subclass/group does not cover:*

For weighing a continuous stream	<a href="#">G01G 11/00</a>
Check-weighing	<a href="#">G01G 15/00</a>
For weighing fluids	<a href="#">G01G 17/04</a>
Weighing apparatus or methods adapted for apportioning materials by weighing prior to mixing them	<a href="#">G01G 19/22</a>
Weighing apparatus or methods adapted for combinatorial weighing,	<a href="#">G01G 19/387</a>

i.e. selecting a combination of articles whose total weight or number is closest to a desired value	
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## **G01G 15/00**

**Arrangements for check-weighing of materials dispensed into removable containers (packaging aspects B65B; [N: electric measuring arrangements involving comparison with a reference value G01R17/00])**

### **Definition statement**

*This subclass/group covers:*

Apparatus and methods adapted for check-weighing and/or correcting of batches of identical objects/homogenous material pre-dispensed into uniform transportable containers such as bottles.

Typically comprises dispensing means for forming a batch of identical objects/homogenous material inside the uniform transportable container and means for checking and/or correcting its mass

### **Relationship between large subject matter areas**

[G01G 15/00](#) and its subgroups are related to packaging fluent solid material by controlling or determining the quantity by weighing classified in [B65B 1/32](#), [B65B 1/34](#) and [B65B 1/46](#). The borderline should be determined on whether the features relevant for classification are focused on packaging or on weighing.

They are also related to packaging plastic material, semi-liquids, liquids or mixed solids and liquids by controlling or determining the quantity by weighing classified in [B65B 3/28](#). The borderline should be determined on whether the features relevant for classification are focused on packaging or on weighing.

They are further related to bottling liquids or semiliquids with provisions for metering the liquids introduced by weighing classified in [B67C 3/202](#). The borderline should be determined on whether the features relevant for classification are focused on bottling or on weighing.

Lastly, they are related to sorting according to weight classified in [B07C 5/16](#), Grading or sorting solid materials by dry methods according to weight [B07B 13/08](#). The borderline should be determined on whether the features relevant for classification are focused on sorting or on weighing.

## **G01G 17/00**

## Apparatus for or methods of weighing material of special form or property (determining weight by measuring volume G01F)

### Definition statement

*This subclass/group covers:*

Apparatus and methods adapted for determining the mass of objects/material of special form or property such as pharmaceuticals, fiber, pulp, fluids, gases or stock.

Weighing of pharmaceuticals is classified in [G01G 17/00](#).

### References relevant to classification in this group

*This subclass/group does not cover:*

Automatic feeding devices for stock or game with mechanisms for delivery of measured doses by weight	<a href="#">A01K 5/0283</a>
Feeding fibres to machines that are regulated in response to changes in volume or weight of fibres fed	<a href="#">D01G 23/06</a>
Indicating or measuring liquid level or level of fluent solid material by measurement of weight	<a href="#">G01F 23/20</a>

## G01G 19/00

**Weighing apparatus or methods adapted for special purposes not provided for in the preceding groups [N: (electric measuring arrangements involving comparison with a reference value G01R17/00)]**

### Definition statement

*This subclass/group covers:*

Apparatus and methods for determining mass adapted for postal parcels and letters, vehicles, suspended loads, humans, as well as combinatorial weighing, mixing, weighing apparatus combined with domestic appliances and weighing apparatus for determining another quantities such as a price or caloric content from the mass of an object.

Further details of subgroups

[G01G 19/002](#), [G01G 19/005](#), [G01G 19/4148](#);

Weighing devices and methods for postal parcels and letters in which a postal rate is determined are classified in [G01G 19/4148](#). All other weighing devices and methods for postal parcels and letters are classified in [G01G 19/002](#) or [G01G 19/005](#).

[G01G 19/03](#), [G01G 19/035](#);

Weighing apparatus and methods for weighing during motion

That are not wheeled ([G01G 19/022](#), [G01G 19/024](#), [G01G 19/045](#), [G01G 19/047](#)),

That are not adapted for measuring the mass or mass flow of a homogenous continuous stream of objects or material ([G01G 11/00](#)) and

That are not adapted for check-weighing batches of identical objects/homogenous material pre-dispensed into uniform transportable containers ([G01G 15/00](#)).

That are not adapted for combinatorial weighing with a single weighing device ([G01G 19/387](#)).

Typically comprises conveyor belt weighing devices for separately weighing objects in succession such as fruits, parcels or end-products.

### **Relationship between large subject matter areas**

Franking apparatus [G07B 17/00661](#). The borderline should be determined on whether the features relevant for classification are focused on franking or on weighing.

Cash registers with control of supplementary check-parameters such as weight or number of articles [G07G 1/0054](#). The borderline should be determined on whether the features relevant for classification are focused on cash registers or on weighing.

Packaging fluent solid material or plastic material, semi-liquids, liquids or mixed solids and liquids by weighing [B65B 1/32](#), [B65B 1/34](#), [B65B 1/46](#) and [B65B 3/28](#), [B65B 37/18](#). The borderline should be determined on whether the features relevant for classification are focused on packaging or on weighing.

Bottling liquids or semi-liquids with provisions for metering the liquids introduced by weighing [B67C 3/202](#) or sorting according to weight classified in [B07C 5/16](#). The borderline should be determined on whether the features relevant for classification are focused on bottling or on weighing.

Diagnostic measurement of body composition by electrical impedance, e.g. tissue hydration or fat content [A61B 5/0537](#), diagnostic measurement of load distribution on feet (Podology) [A61B 5/1036](#), diagnostic measurement means with transmission of measured data to processing or recording apparatus

[A61B 5/0002](#), weighing devices combined with diagnosing apparatus [A61B 5/107](#) and weighing cut product in combination with cutting [B26D 7/30](#). The borderlines should be determined on whether the features relevant for classification are focused on the respective diagnostic aspect or on weighing.

## References relevant to classification in this group

*This subclass/group does not cover:*

Walking-sticks combined with weighing appliances	<a href="#">A45B 3/08</a>
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Devices for connecting a tractor to an agricultural machine with means for weighing mounted on the tractor side	<a href="#">A01B 59/069</a>
Weighing devices specially adapted for threshing machines	<a href="#">A01F 12/50</a>
Devices signaling that patients are leaving their beds	<a href="#">A61G 12/00A</a>
Arrangements on vehicles	<a href="#">B60P 5/00</a>
Arrangements for adjusting wheel-braking force responsive to the vehicle weight with determination of control parameter for electronic regulation means to control breaking	<a href="#">B60T 8/172</a>
Arrangements for adjusting wheel-braking force responsive to the vehicle weight	<a href="#">B60T 8/18</a>
Characterized by load-detecting arrangements	<a href="#">B60T 8/1837</a>
Arrangements for detecting suspension spring load	<a href="#">B60T 8/1856</a>
With fluid output signal	<a href="#">B60T 8/1862</a>
With mechanical output signal	<a href="#">B60T 8/1868</a>
With electrical output signal	<a href="#">B60T 8/1875</a>

Incorporation of weighing devices in cranes	<a href="#">B66C 1/40</a> , <a href="#">B66C 13/16</a>
Safety devices for limiting or indicating lifting force adapted for forklift trucks	<a href="#">B66F 17/003</a>
Washing machines with arrangements for measuring or detecting the condition of laundry, e.g. by weight	<a href="#">D06F 39/003</a>
Control inputs to change speed or reverse gearing dependent on the weight of the machine, e.g. change in weight resulting from passengers boarding a bus	<a href="#">F16H 59/52</a>
Ratio control of two or more flows by sensing weight	<a href="#">G05D 11/04</a>
Electric ratio control of fluid or fluent material by sensing the weight of individual components	<a href="#">G05D 11/134</a>
Microwave ovens with weight sensors	<a href="#">H05B 6/6464</a>

Weighing apparatus involving the use of a counterweight or other counterbalancing mass	<a href="#">G01G 1/00</a>
Weighing apparatus characterised by the use of elastically-deformable members, e.g. spring balances	<a href="#">G01G 3/00</a>
Weighing apparatus wherein the balancing is effected by fluid action	<a href="#">G01G 5/00</a>
Weighing apparatus wherein the balancing is effected by magnetic, electromagnetic, or electrostatic action, or by means not provided for in the preceding groups	<a href="#">G01G 7/00</a>
Methods or apparatus for the determination of weight not otherwise	<a href="#">G01G 9/00</a>

provided for	
For weighing a continuous stream	<a href="#">G01G 11/00</a>
Weighing apparatus with automatic feed or discharge for weighing-out batches of material (for weighing a continuous stream <a href="#">G01G 11/00</a> ; check-weighing <a href="#">G01G 15/00</a> ; for fluids <a href="#">G01G 17/04</a> ; apportioning by weight materials to be mixed <a href="#">G01G 19/22</a> ; combinatorial weighing <a href="#">G01G 19/387</a> )	<a href="#">G01G 13/00</a>
Check-weighing	<a href="#">G01G 15/00</a>
Apparatus for or methods of weighing material of special form or property (determining weight by measuring volume <a href="#">G01F</a> )	<a href="#">G01G 17/00</a>

### Informative references

*Attention is drawn to the following places, which may be of interest for search:*

Accessories for angling	<a href="#">A01K 97/00</a>
Combination of handles with other devices	<a href="#">A45C 13/28</a>
Purses, bags, luggage or other receptacles	<a href="#">A45C 15/00</a>
Accessories for mixers for forming predetermined ratios of substances to be mixed by weighing the components	<a href="#">B01F 15/0445</a>
Regulating means for pneumatic resilient suspensions	<a href="#">B60G 17/0155</a>
Seats with passenger detection systems	<a href="#">B60N 2/002</a>
Triggering safety arrangements on vehicles for protecting passengers	<a href="#">B60R 21/015</a>

with means for detecting presence/position of passengers	
Control devices for dredgers or soil shifting machines	<a href="#">E02F 9/2025</a>
Indicating devices for dredgers or soil shifting machines	<a href="#">E02F 9/26</a>
Transducers converting variations in positions of members into fluid-pressure	<a href="#">F15B 5/00</a>
Devices for measuring tyre pressure	<a href="#">G01L 17/00</a>
Measuring force in general in ropes, cables, wires	<a href="#">G01L 5/04</a>
Measuring several components of force	<a href="#">G01L 5/16</a>
Determining position of center of gravity	<a href="#">G01M 1/122</a>
Measuring arrangements involving comparison with a reference value	<a href="#">G01R 17/00</a>
Program control systems in general	<a href="#">G05B 19/00</a>
Medical computer assisted diagnostic or treatment for prescription or delivery of diets	<a href="#">G06F 19/00M3P</a>
Franking apparatus	<a href="#">G07B 17/00</a>
Constructional details	<a href="#">G07B 17/00193</a>
Calculation of postage value	<a href="#">G07B 17/00362</a>
Traffic control systems for road vehicles using treadles built into the road	<a href="#">G08G 1/02</a>

**G01G 21/00**

## Details of weighing apparatus

### Definition statement

*This subclass/group covers:*

Particular weighing-specific constructional details of any apparatus or method with a weighing device.

### Informative references

*Attention is drawn to the following places, which may be of interest for search:*

Bearings per se	<a href="#">F16C</a>
Shock-absorbers per se	<a href="#">F16F</a>

## G01G 23/00

### Auxiliary devices for weighing apparatus

#### Definition statement

*This subclass/group covers:*

Auxiliary means ensuring correct conduction of mass measurements, indicating means such as displays and recording means such as databases or paper records.

#### Informative references

*Attention is drawn to the following places, which may be of interest for search:*

Testing or calibrating of apparatus measuring force, work, torque, mechanical power or mechanical efficiency	<a href="#">G01L 25/00</a>
Apparatus or method for measuring several components of force	<a href="#">G01L 5/16</a>