

国际贸易实务(双语版)

Chapter 6

Quantity of Commodity



Teaching Plan 1

Teaching Contents

1. Section One Calculating Units of the Goods Quantity
2. Section Two Methods of calculating quantity by weight

Teaching time: Two-class hour (90 minutes)

Learning Objectives

1. Understand the main systems of weights and measures
2. Master the definition and importance of the quantity of commodity
3. Master the units and methods of calculating the quantity of commodity

Important Points:

1. The main systems of weights and measures
2. The units and methods of calculating the quantity of commodity

Difficult Points:

The methods of calculating the quantity of commodity

Teaching Methodology:

Questions and Answers; Presentation; Group discussion; Case analysis

Teaching Aids:

PPT, blackboard, multimedia classroom



Definition and implication of quantity of commodity

Without knowing the certain amount of commodities, it is impossible to decide how much the buyer should pay the seller, how much material should be prepared and how many people should be arranged for production. The exact calculation of the volume promotes the conclusion of the deal and helps to negotiate for a more favorable price. Therefore, it is critical to have a clear idea of the quantity of the trade goods and have the pertinent clause well stipulated in the contract.

Definition and implication of quantity of commodity

Quantity of commodity refers to the weight, number, length, volume, area, capacity, etc. which are expressed by different measuring units. It is one of the key and essential conditions in international trade. In international buying and selling, the buyer and seller must take agreed quantity of goods as the foundation for performance of the contract.

Quantity of goods not only concerns the volume of the specific transaction, but also influences the completion of the task of import and export, the implementation of the company's foreign policies and fulfillment of the operational goals.





“United Nations Convention on Contracts of International Sales of Goods” clearly requires that the quantity of goods delivered should be identical to that required in the contract, otherwise the buyer is entitled to accept or reject all or part of that portion of goods excessive in quantity, and/or to claim against the seller if the quantity is found to be less than that required in the contract.

Section One Calculating Units of the Goods Quantity

The systems of weights and measures

Units of weights and measures are quite complicated in that different country uses different measuring systems. Generally we have the Metric System, British System, the U.S. System and the International System of Units. The International System was developed and issued from Metric System by ISO (International Organization for Standardization).

The systems of weights and measures

It is the fact that in international trade different products have different features. Different countries may adopt different systems of weights and measures. Units and ways of quantity calculation are also varied. To understand the different systems of weights, units of weights and measures is fundamental and significant to those who engaged in foreign trade.



The systems of weights and measures

© The Metric System

The Metric System is a Decimalized System of measurement based on the fundamental units of measure for length, volume and mass.

Primary units under this system are **meter** (M), **liter** (L) **gram** (G). **metric ton** (M/T), **kilometer** (km), and so on.

This system is widely used by European countries and many other countries.

decimalized

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The systems of weights and measures

© **The British System**

It was a system adopted by the British Commonwealth. (Entering the EU, in the course of the European integration, Britain gave up the British System and now employs the Metric System.) There were several systems of units, each containing units for properties such as length, volume, weight, and time.

The systems of weights and measures

© **The U.S. system**

Primary units of the U.S. System are the same as the British System, i.e. pound and yard. But they are different in some derived units. For example, while the British System's long ton, L/T equals to 2200 pounds, the U.S. System's short ton, S/T equals to 2000 pounds.

1 pound = 0.454 kilogram

1 kg = 2.205 lb

The systems of weights and measures

© the International System of Units

The International System is published by International Standard Metrical Organization, and is based on the Metric System. In 1960, the International System of Units was proposed as a replacement for the Metric System.

Its primary units include length (meter, m), mass (kilogram, kg), time (second, s), temperature (Kelvin, K), electric current (ampere, D), amount of substance (mole, mol), and luminous intensity (candela, cd).



The systems of weights and measures

The Metric System, the U.S. System and the International System are widely adopted in international trade.

According to the Metrology Law of the People's Republic of China, "the International System of Units (SI) is China's legal system.

Units under the International System and those systems decided by the government are statutory units of weights and measures". As a result, the statutory units of weights and measures should be adopted in our export trade. As to attend to what is customary for trade in some foreign countries, the Metric System, and the U.S. System can also be adopted.



Units to measure commodity

Usually, seven kinds of units are used to measure the quantity of the commodity. They are weight, volume, numbers, length, area, capacity and packages.

Which units are used to measure the quantity depends on the features and natures of the products as well as packing style, transportation conditions and trade practice. Some examples are demonstrated as below.



1. Weight

In international trade, quantity of commodity is commonly decided by weight. Commodities such as agricultural products and by-products, mineral products and manufactured products are all measured by weight. Metrical units which are used to show weight include gram, kilogram, metric ton, long ton, short ton, pound, ounce etc. areas follows.

The Metric System: 1 metric ton = 1000 kilograms
= 1000,000 grams

1 metric ton = 1000 kgs = 0.984 long ton = 1.1023 short ton

The British System: 1 long ton = 2240 pounds = 35840 ounces

The US System: 1 short ton = 2000 pounds = 32000 ounces



2. Number

Commodities such as manufactured goods, particularly the daily-consuming goods, light industrial products, mechanical products and some local products are often measured by number. Metrical units which are used to show number include: **piece, pair, set/copy, dozen, lock/roll, etc.**

3. Length

Length is used to measure commodities such as mental cord, silk, textile products. Metrical units which are used to show length include **kilometer, meter, centimeter, etc.**



长度换算(length)

Metric System 公制		Chinese System 中国市制	Britain/American System 英美制		
Meter 米	Centimeter 厘米	Chi 尺	Yard 码	Foot 英尺	Feet 英寸
1	100	3	1.094	3.2808	39.3701
0.01	1	0.03	0.0109 4	0.03281	0.3937
0.3333	33.33	1	0.3646	1.094	13.123
0.9144	91.44	2.743	1	3	36
0.3048	30.48	0.9144	0.3334	1	12
0.0254	2.54	0.0762	0.0278	0.0833	1

4.Area

Area is often used for glass plate, carpet, wire entanglements, plastics such as plastic tarps, plastic floorboards, etc. Metrical units which are used to show area include **square yard, square meter, square foot, square inch, etc.**

1 square meter = 1.1956 square yards = 10.7639 square feet

5.Capacity

Capacity is mostly adopted for grain, a portion of fluid, gas, petroleum, etc. Metrical units which are used to show capacity include **liter, gallon, bushel, etc.** Here is a list of the most often used units of capacity and their conversion between different systems.

1 British gallon = 4.546 liters = 1.201 American gallons

1 American gallon = 3.785 liters = 0.833 British gallon



面积换算 (Area)

Metric System 公 制		Britain/American System 英 美 制			Chinese System 中国市制
Squaremeter 平方米	Square Centimeter 平方厘米	Square Yard 平方码	Square feet 平方英尺	Square foot 平方英寸	Square Chinese meter 平方尺
1	10000	1.196	10.7639	1550	9
0.0001	1	0.00012	0.00108	0.155	0.0009
0.8361	8361	1	9	1296	7.525
0.0929	929	0.1111	1	144	0.836
0.00065	6.45	0.00077	0.00694	1	0.0058
0.111	1111	0.133	1.196	172.2	1

容积换算 (Capacity)

Metric System 公制	Chinese System 中国市制	Britain System 英制	American System 美制
Liter 升	Chinese Liter 升	Britain Gallon	American Gallon
1	1	0.22	0.264
4.546	4.546	1	1.201
3.785	3.785	0.833	1

6. Volume

Volume is usually adopted for timber, natural gas, chemical gas, etc. Metrical units which are used to show volume include **cubic yard, cubic meter, cubic foot**, etc.

1 cubic meter = 1.308 cubic yards = 35.315 cubic feet

7. Package

It is often used in the packing of cement, cotton, tin food and so on, such as bag, carton, case, bale. etc.



体积换算 (volume)

Metric System 公 制		Britain/American System 英 美 制			Chinese System 中国市制
Cubic-meter 立方米	Cubic centimeter 立方厘米	Cubic yard 立方码	Cubic Feet 立方英尺	Cubic foot 立方英寸	Cubic Chinese Meter 立方尺
1	1000000	1.303	35.3147	61024	27
0.000001	1	0.0000013	0.00004	0.06102	0.000027
0.7636	764555	1	27	46656	20.643
0.02832	28317	0.037	1	1728	0.7646
0.000016	16.387	0.00002	0.00058	1	0.00044
0.037	37037	0.0484	1.308	2260	1

China's Legal Units of Measures

■ 长度单位 **Units of Length**

微米 micron, 毫米 millimetre, 厘米 centimetre,
分米 decimetre, 米 metre, 千米 kilometre,

■ 面积单位 **Units of Area**

平方毫米 square millimetre,
平方厘米 square centimetre,
平方分米 square decimetre,
平方米 square metre,
平方公里 square mile

China's Legal Units of Measures

■ 体积单位 **Units of Volume**

立方毫米 cubic millimetre,
立方厘米 cubic centimetre,
立方分米 cubic decimetre,
立方米 cubic metre

■ 重量单位 **Units of Weight**

毫克 milligram, 厘克 centigram,
分克 decigram, 克 gram, 千克 kilogram, 吨 ton

■ 容量单位 **Units of Capacity**

毫升 millilitre, 厘升(公勺) centilitre, 升 litre,
千升 kilolitre



Because of the stable packing, it is easy to calculate quantity of the commodities by pieces. On the other hand, large sum of goods, bulk goods and goods without packing or merely in simple packing are usually calculated by weight. In international trade, a lot of products are measured by weight. According to general commercial practices and rules, the following are the methods which are employed to calculate quantity by weight.





Section Two Methods of calculating quantity by weight

(1) Main methods employed to calculate weight

◎ Gross weight

Gross weight refers to the weight of the cargo itself plus the tare, i.e., the weight of the cargo plus the weight of the packing material

◎ Net weight

Net weight means the weight of the product itself. The tare is not included. Net weight is pursued by means of the gross weight minus the tare. Net weight is the most widely used method to calculate weight.

According to international rules and practices, weight is calculated by net weight unless otherwise stated in the contract.





Section Two Methods of calculating quantity by weight

Some products, unit value of which is comparatively lower (such as rice kept in a sack, agricultural products and by-products such as silkworm, etc.) can be weighted only when they are packed. In this case, the “gross weight” is used as basis for deciding the price and the weight of the trade goods. It is thus called “**gross for net**”. The so-called “gross for net” actually is gross weight (weight of the goods and the tare). Because the method for calculating weight can bring influence to the price and money paid to the seller, when the volume and price are decided, it is necessary to state “gross for net” clearly in the sales contract. For example, “Chinese Horse Bean, 100 t, in new single gunny bags, gross for net”.





Section Two Methods of calculating quantity by weight

Net weight of the goods refers to the weight of the commodity alone, while the tare is not counted in. There are situations when tare has to be counted. Four ways are used to calculate the tare of the goods.



Section Two Methods of calculating quantity by weight

- i. **By actual tare or real tare.** That is, the package of the whole consignment is weighed to have the total weight.
- ii. **By average tare.** When the package are in uniform size and have similar weight, we may select some of them and gain their average tare, then the total tare is gained by multiplying the average tare with the total number of the packages.
- iii. **By customary tare.** This is suitable for standardized packages. The weight of the package is known and widely accepted by the market, so it is unnecessary to weigh. Recognized weight of these standard packages is used as the customary tare to denote the weight of such packages.
- iv. **By computed tare.** That is the tare previously agreed upon by the seller and the buyer.



Thank You !