TRANSPORTATION CONVERSION TABLES AND CALCULATIONS AIR FREIGHT

Physical Weight

From	To	Multiply by
Metric Ton (Ton)	Kilos (Kg)	1000
Kilos (Kg)	Metric Ton (Ton)	0.001
Pounds (Lb)	Metric Ton (Ton)	0.000453592
Metric Ton (Ton)	Pounds (Lb)	2204.62
Kilos (Kg)	Pounds (Lb)	2.20462
Pounds (Lb)	Kilos (Kg)	0.453592

Linear Measure

From	To	Multiply by
Centimeters (cm)	Inches (in)	0.393701
Inches (in)	Centimeters (cm)	2.54
Feet (ft)	Meters (m)	0.3048
Meters (m)	Feet (ft)	3.28084
Centimeters (cm)	Meters (m)	0,01
Meters (m)	Centimeters (cm)	100

Air Freight Dim Factors

From Centimeters to Volume Kilos	From Inches to Volume Pounds	From Inches to Volume Kilos
6000	166	366
7000	194	428

Temperature

From	To	Multiply by
Fahrenheit (F)	Celsius (C)	(F-32) x 5/9
Celsius (C)	Fahrenheit (F)	(Cx9/5) + 32

Air Freight Weight/Volume Equivalents

1 Ton = 6 m³
1,000 Kg = 6 m³
1 m³ = 167 Kg

Dimensional weight, also called dim weight or volume weight, is used because the space a package takes on aircraft may cost more than the physical weight of the package. For every shipment dimensional weight is compared to the physical weight, and the greater of two is used to determine the shipment cost. IATA standard dimensional weight is based on 6,000 cubic centimeter per one physical kilogram and calculated as follow:

length (cm) x width (cm) x height (cm) / 6,000 = volume kilos.

International transportation rates are predominantly expressed in metric measure. For countries in which English Standard measure is more commonly used, the same dimensional weight formula is used, but with different factors or divisors. Using inches, the same volume weight can be expressed as either volume pounds by using a divisor of 166 or as volume kilos using a divisor of 366.

Example: 9 pallets, each 150Kg and 122cm x 101.6cm x 127cm
(English Standard Measure, each 330.7Lb and 48in x 40in x 50in)

9 pallets x (122cm x 101.6cm x 127cm) / 6,000 = 2,361 volume kilos
9 pallets x 150 Kg = 1,350 physical kilos
or
9 pallets x (48in x 40in x 50in) / 366 = 2,361 volume kilos
9 pallets x 150 Kg = 1,350 physical kilos
or
9 pallets x (48in x 40in x 50in) / 166 = 5,205 volume pounds
9 pallets x 330.7 Lb = 2,976 physical pounds

The chargeable weight of the nine pallets is expressed as either 2,361 chargeable kilos or 5,205 chargeable pounds. To verify the accuracy of the calculations: 2,361 volume kilos x 2.2046 = 5,205 volume pounds.

In some trades, particularly in the US domestic air freight market, the more commonly used dimensional factor is based on 7,000 cubic centimeters per one physical kilogram. Volume weight is calculated using the same formula, but with different factors of 7,000 , 194 or 428 per the table provide above.

Typically, large air freight cargos are expressed as tons referring to the higher of either physical metric tons or volume metric tons. One metric ton = 1,000 kilograms, therefore the example cargo would be referred to as just under 2 1/2 tons.