

MINTED BARS

This section illustrates the range of minted gold bars that are denominated in **grams, troy ounces, tolas, taels, bahts** and **chi**.

The manufacture of minted bars is a 20th century phenomenon.

BACKGROUND

Among LBMA-accredited refiners, **Argor-Heraeus** (Switzerland) is generally acknowledged as having made the first minted bars in 1952, when operating as Argor SA.

Most accredited refiners, which issue minted bars, only started producing them in the 1970s – following the formal abandonment of the Gold Standard in 1971 and the subsequent liberalisation of many national gold markets since that time. Previously, in most countries, only gold coins could be owned.

In recent years, more than 60 tonnes of minted bars have been produced annually by accredited and non-accredited manufacturers worldwide.

Minted bars are bought almost entirely for investment purposes, or as gifts in some countries. They are not normally bought for use in fabrication, although many over time may be sold back, melted down and then used for fabrication into jewellery and other products.

DENOMINATIONS

Gram

Minted bars in **grams** are available in 15 known **rectangular** weights: 0.3 g to 1000 g.

The most widely manufactured weights are 100 g, 50 g, 10 g and 5 g.

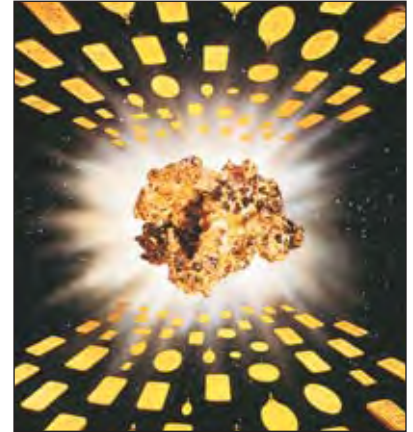
The smallest minted bar, known to be manufactured by an accredited refiner, is the rectangular 0.3 g bar issued by **PAMP** (Switzerland) in 2007.

Although gram-denominated minted bars are widely available in Europe, the Middle East and Asia, India is by far the largest market.

In India, many of the bars, manufactured domestically, are **round** in shape to accommodate a traditional demand for round gold investment products that are known as “coins”. Since 2002, several Indian banks have also issued “coins” and minted bars, most supplied from Switzerland.

PAMP (Switzerland) has manufactured an extensive range of gram-denominated **oval** minted bars since 1995. Several banks in India are now including oval bars in their range, since 2006.

Almost all gram-denominated minted bars and “coins”, manufactured by accredited refiners, have a millesimal purity of 999.9.



PAMP
Switzerland

Standard minted bars are manufactured in rectangular, round and oval shapes.



Valcambi (Switzerland) issued an innovative range of gram, ounce and tola bars with surface frosting in 2003.



Argor-Heraeus (Switzerland) has manufactured minted bars for more than 50 years.



Troy ounce

Minted bars in **ounces** are available in 4 known weights: 1 oz, 1/2 oz, 1/4 oz and 1/10 oz.

Most are manufactured in Switzerland.

During the 1980s, some millions of 1 oz bars were made for the international market, notably for the US.

Tola

Minted bars in **tolas** are available in 5 known weights: 1, 2, 3, 4 and 5 tola.

1 tola = 0.375 oz or 11.64 g.

Many minted tola bars, manufactured mainly in Switzerland, are sold to Indian Sub-Continent ex-patriates in the Middle East.

The bars are rectangular or round in shape to accommodate Indian demand for “coins”. Almost all have a millesimal purity of 999.9.

Tael

Minted bars in taels are available in 2 known weights: 5 and 1.

1 tael = 1.20337 oz

Most are manufactured by refiners in Switzerland.

Baht and Chi

Minted bars are also manufactured in other denominations:

Thailand In baht: 1 – 10 baht
1 baht = 15.244 g

Vietnam In chi: 0.5 – 10 chi
1 chi = 3.75 g (10 chi = 1 cay or 1 luong)



Tanaka (Japan) has minted bars for the Japanese market since the 1970s.



Commerzbank (Germany) issued a new range of minted bars in grams and ounces in 2010.

INDICATIVE RANGE - MINTED BAR WEIGHTS

Unit	Rectangular	Number
Gram	1000, 500, 250, 100, 50, 25, 20, 10, 5, 3, 2.5, 2, 1, 0.5, 0.3	15
Troy ounce	10, 5, 1, 1/2, 1/4	5
Tola	5, 4, 3, 2, 1	5
Tael	5, 1	2
Baht	10, 5, 2, 1	4
Chi	10, 5, 2, 1, 0.5	5
Round		
Gram	100, 50, 20, 10, 8, 7, 6, 5, 2.5, 2, 1, 0.5	12
Troy ounce	1, 1/2, 1/4, 1/10	4
Tola	5, 4, 3, 2, 1	5
Oval		
Gram	100, 50, 20, 10, 8, 5, 2.5, 1	8
Troy ounce	1, 1/2, 1/4	3
Total		68



PAMP (Switzerland) has manufactured customised minted bars for banks in India since 2002.



The table below provides information on a representative range of rectangular, round and oval minted bars manufactured in various weight denominations.

TECHNICAL DESCRIPTION

Country	Refiner or Brand	Weight	Fineness	Shape	Dimensions mm	First Issued*
Switzerland	Valcambi	1000 g	999.9	Rectangular	117 x 53 x 8.7	2008#
Germany	Heraeus	100 g	999.9	Rectangular	49.65 x 28.45 x 3.85	2001
Russia	Prioksky	50 g	999.9	Rectangular	36 x 21 x 4	1996
Indonesia	Logam Mulia	25 g	999.9	Rectangular	33.3 x 20 x 2.07	2006
Japan	Ishifuku	20 g	999.9	Rectangular	30 x 17 x 2	1979
Australia	The Perth Mint	10 g	999.9	Rectangular	25 x 15	2010
Spain	SEMPSA	5 g	999.9	Rectangular	22.5 x 13 x 1.02	1968
Indonesia	Logam Mulia	3 g	999.9	Rectangular	16.7 x 10 x 1.03	2006
Belgium	Umicore	2.5 g	999.9	Rectangular	24 x 14 x 0.5	2006
Switzerland	Cendres+Métaux	2 g	999.9	Rectangular	19 x 11.5 x 0.8	1987
Japan	Tanaka	1 g	999.9	Rectangular	14 x 9 x 0.41	1981
Switzerland	Argor-Heraeus	1 oz	999.9	Rectangular	40.4 x 23.3 x 1.75	1979
UAE	Emirates Gold	1/2 oz	999.9	Rectangular	31 x 18 x 1.53	1992
Switzerland	Argor-Heraeus	1/4 oz	999.9	Rectangular	23 x 14 x 1.3	1979
Switzerland	Valcambi	5 tola	999.9	Rectangular	47 x 27 x 2.7	2005
Switzerland	Valcambi	3 tola	999.9	Rectangular	41 x 24 x 2.2	2005
Switzerland	Valcambi	2 tola	999.9	Rectangular	31 x 18 x 2.4	2005
Switzerland	Valcambi	1 tola	999.9	Rectangular	25.3 x 15.2 x 1.7	2005
Switzerland	Argor-Heraeus	5 tael	999.9	Rectangular	65.1 x 30.1 x 5.3	1980
Thailand	Chin Hua Heng	10 baht	965	Biscuit	78 x 20 x 5	2006
Thailand	Chin Hua Heng	5 baht	965	Biscuit	45 x 20 x 5	2006
Thailand	Chin Hua Heng	1 baht	965	Biscuit	30 x 17 x 2	2006
Vietnam	PAMP	1 cay	999.9	Rectangular	41 x 24 x 1.70	1994
Vietnam	PAMP	5 chi	999.9	Rectangular	31 x 18 x 1.52	1994
Vietnam	PAMP	1 chi	999.9	Rectangular	23.3 x 14 x 0.83	1994
Switzerland	PAMP	50 g	999.9	Round	40 x 2.04	1995
Switzerland	PAMP	2 g	999.9	Round	18 x 0.4	1995
Switzerland	PAMP	1 oz	999.9	Round	40 x 1.27	1987
Switzerland	PAMP	1/10 oz	999.9	Round	18 x 0.63	1990
Switzerland	Valcambi	100 g	999.9	Round	45 x 3.9	2005
Switzerland	Valcambi	1/2 g	999.9	Round	10 x 0.45	2006
Switzerland	Valcambi	1 oz	999.9	Round	32 x 2.05	2005
Switzerland	Valcambi	5 tola	999.9	Round	38.61 x 2.95	2005
Switzerland	PAMP	50 g	999.9	Oval	45 x 30 x 2.46	1995
Switzerland	PAMP	20 g	999.9	Oval	45 x 30 x 0.98	1995
Switzerland	PAMP	8 g	999.9	Oval	26.8 x 16.5 x 1.16	1995
Switzerland	PAMP	1 oz	999.9	Oval	45 x 30 x 1.53	1995

Source: Refiners and issuers * In current dimensions. Some refiners have changed the marks on their bars, and some their company names, over time. # A new Valcambi-branded 1000 g bar.



EXAMPLES OF MINTED BARS

RECTANGULAR

GRAM



100 g
Heraeus
Germany



50 g
Novosibirsk
Russia



10 g
The Perth Mint
Australia



5 g
Tanaka
Japan

TROY OUNCE



1 oz
Argor-Heraeus
Switzerland



1/2 oz
Emirates Gold
UAE

TOLA



2 tola



1 tola

Valcambi
Switzerland

TAEL



5 tael
Argor-Heraeus
Switzerland
*Not actual size

BAHT



5 baht
Chin Hua Heng
Thailand

CHI



5 chi
PAMP
Switzerland



ROUND



5 tola



100 g
Valcambi
Switzerland



1 oz

OVAL



20 g



Obverse



Reverse



8 g

PAMP
Switzerland



MINTED BARS WITH DATAMATRIX CODES

Metalor (Switzerland) issued an innovative range of minted bars in 2011.

The company engraves on each bar not only a serial number but also a DataMatrix code, which offers the possibility of recording diverse information relating to the fabrication and origin of the bar.

1 oz



DECORATIVE DESIGNS ON REVERSE SIDES

Decorative designs on minted bars

The application of a decorative design to the reverse sides of minted bars is now common practice among many accredited manufacturers.

Some bars include repetition of the name or initials or the official stamp of the manufacturer or issuer.

Other bars include designs that have widespread appeal. For example, **PAMP** (Switzerland) often applies a representation of the “Roman Goddess of Fortune”. **Valcambi** (Switzerland) and **Emirates Gold** (UAE) often depict a rose. Some manufacturers have 50 or more standard designs that can be applied to bulk orders.

Kinebars®

Argor-Heraeus (Switzerland) is the only refiner worldwide to apply a KINEGRAM® as a decorative and security device to the reverse sides of selected minted bars. They are known as kinebars®.

KINEGRAM® technology applied to precious metals consists in the micro-stamping of a two-dimensional computer-generated image. The image of the KINEGRAM® is composed of invisibly small elementary areas of micro profiles which diffract illuminating light. The areas are used to compose lines and graphical elements. The overall image of the KINEGRAM® is generated by varying the angles of diffraction and the diffraction intensities.

Hologram bars

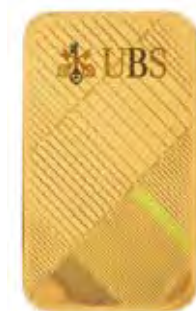
PAMP (Switzerland) pioneered the development and application of colourful 3-dimensional hologram designs as a decorative device for minted bars in 1990. These bars are popular in the Middle East. Many are manufactured as pendant bars.



Credit Suisse
Switzerland



Hologram
PAMP
Switzerland



Kinebar®
UBS
Switzerland

Argor-Heraeus has manufactured kinebars® since 1994.

PACKAGING



Valcambi
Switzerland



Argor-Heraeus
Switzerland

Some refiners seal minted bars in attractive packaging.

Refer to disclaimer on website: www.goldbarsworldwide.com

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