
STANLEY®

Security Factbook

Secure it with

STANLEY®

STANLEY®

FUN FACTS BIKE LOCKS

Construction of Padlocks

PADLOCKS LIFE WITHOUT LOCKS

TSA TEST STANDARDS

History

No 1

4.000 years ago, the oldest padlock was made by the Egyptians.



History

No 2

The first locks
were made out of **wood**.



History

No 3

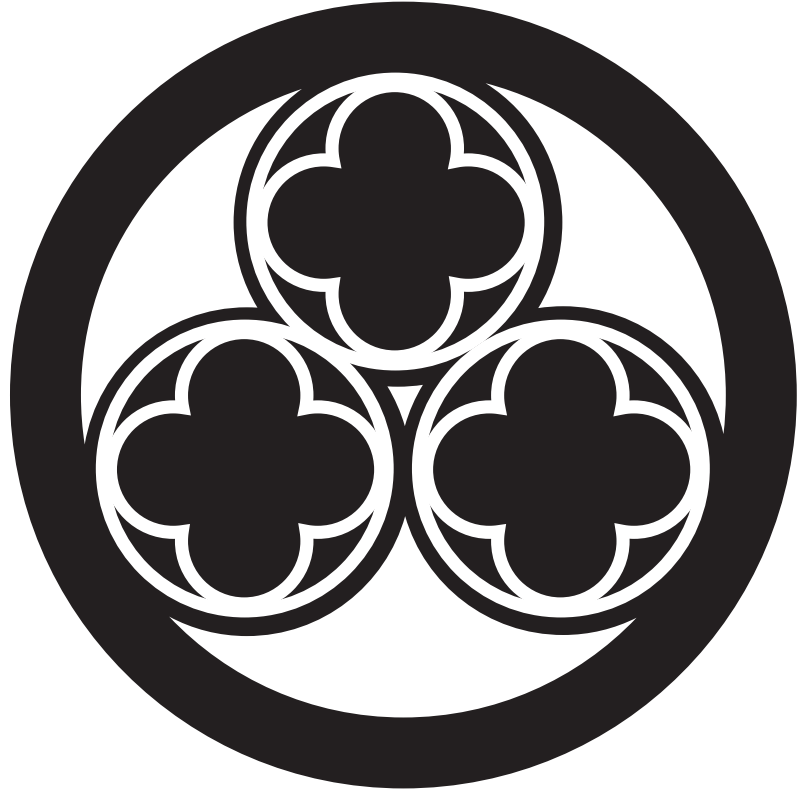
Metal locks were introduced in the 9th century BC in Britain.



History

No 4

During the Renaissance, the designs of locks were heavily influenced by Gothic architecture.



History

No 5

In ancient times, before padlocks were invented, people used different methods to protect their belongings...

...back then, houses were not entered through a door on the ground, but rather through a roof hatch where a ladder had to be brought down to give someone access.

The only disadvantage:

someone always had to stay home!



Love locks



No 6

Love Locks symbolize everlasting love and are attached to bridges, fences, gates, etc. The key is thrown into the river as a romantic gesture.



Love locks



No 7

First love padlock was found in Rome in 2006 after the protagonist of an Italian bestseller hung a padlock on the Ponte Milvio.

113 Facts | Fun facts

Love locks

No **8**

45 tons is the weight of approximately 1 million love padlocks in France on the Pont des Arts.

Love locks



No 9

In Germany, the first love locks were detected in Cologne in 2008.

113 Facts | Fun facts

Famous love lock places



N^o 10



No 11



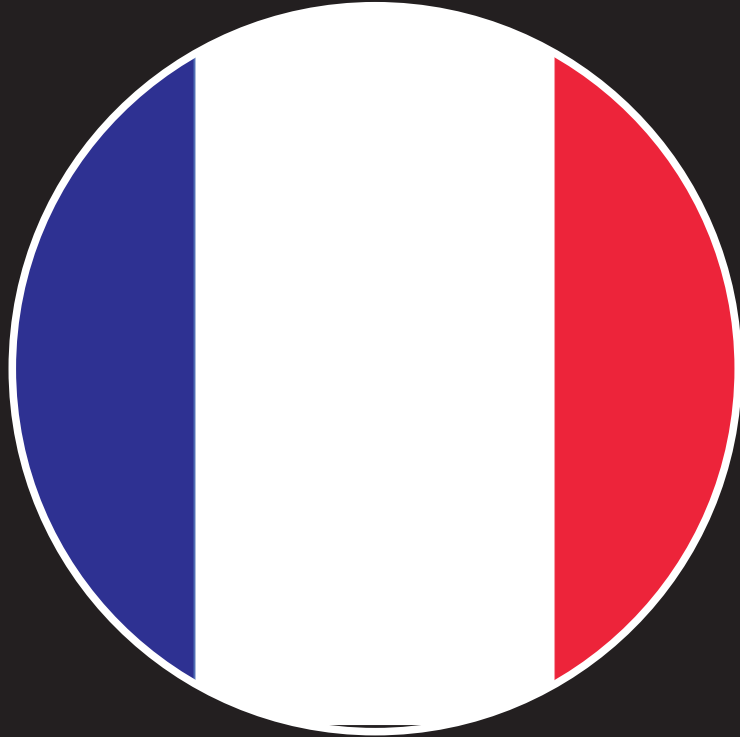
The “Ceremony Of The Keys” has been held every night for at least 700 years at the Tower of London as it is locked up for the night to secure the Crown Jewels.

No 12



The 16th-century Russian Tsar Ivan Vasilyevich, also known as Ivan The Terrible, is said to have locked his wife in her room when he went to war.

No 13



From an early stage,
King Louis XVI was an
avid locksmith, which became
a life-long hobby.

No 14



A parrot in England picked a lock in November of 2014. The parrot was named Magic, and he escaped from his cage and then from the car in which he was being transported.

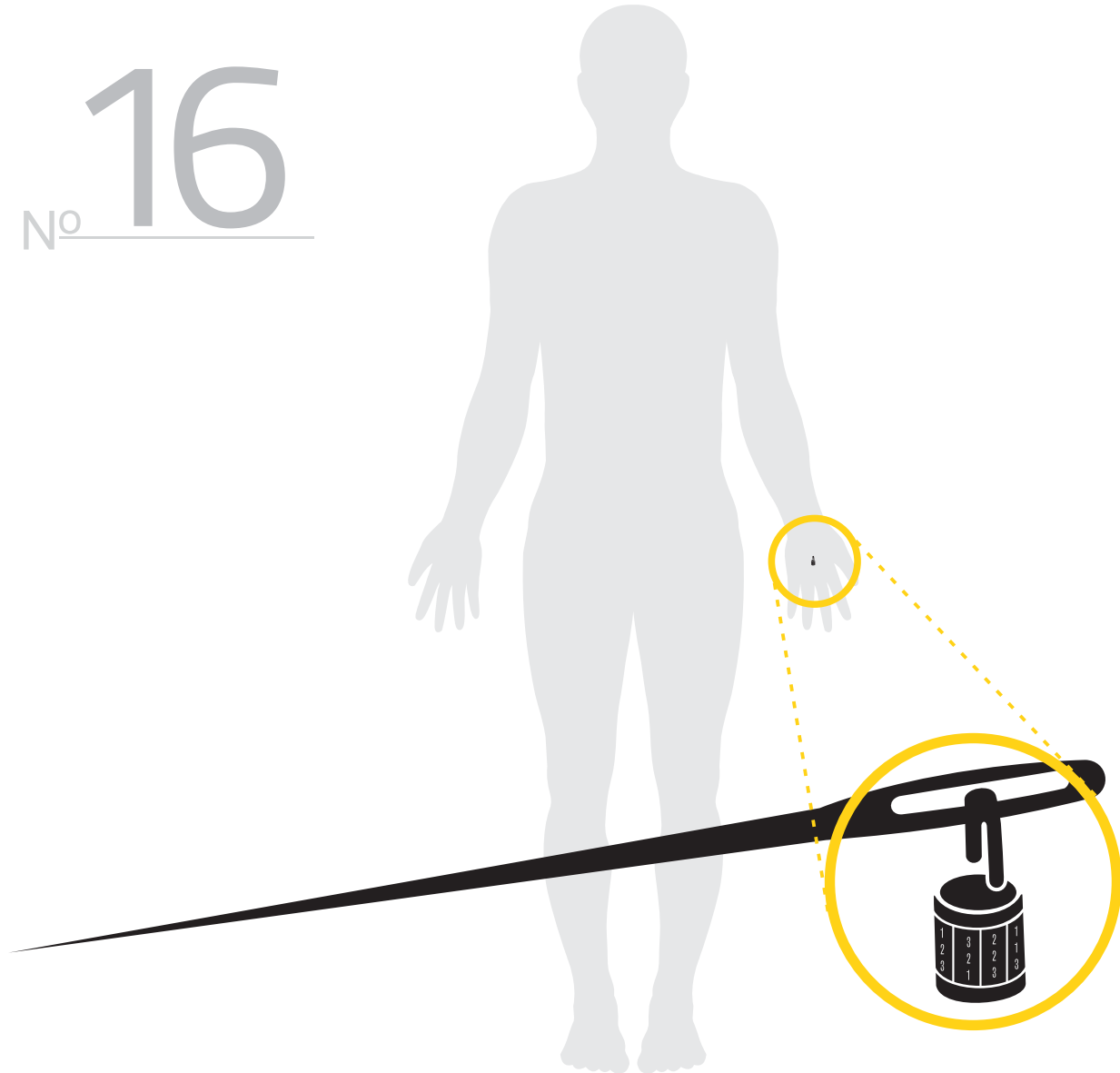
No 15



Catherine The Great of Russia not only utilized elaborate modern locks and keys, but collected them as well.

The world's smallest lock

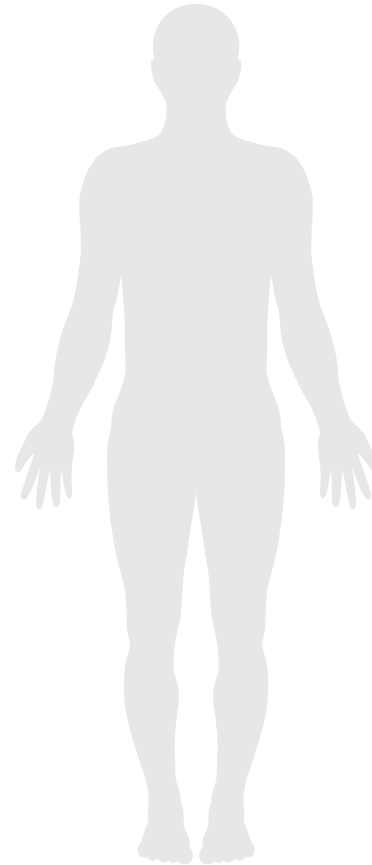
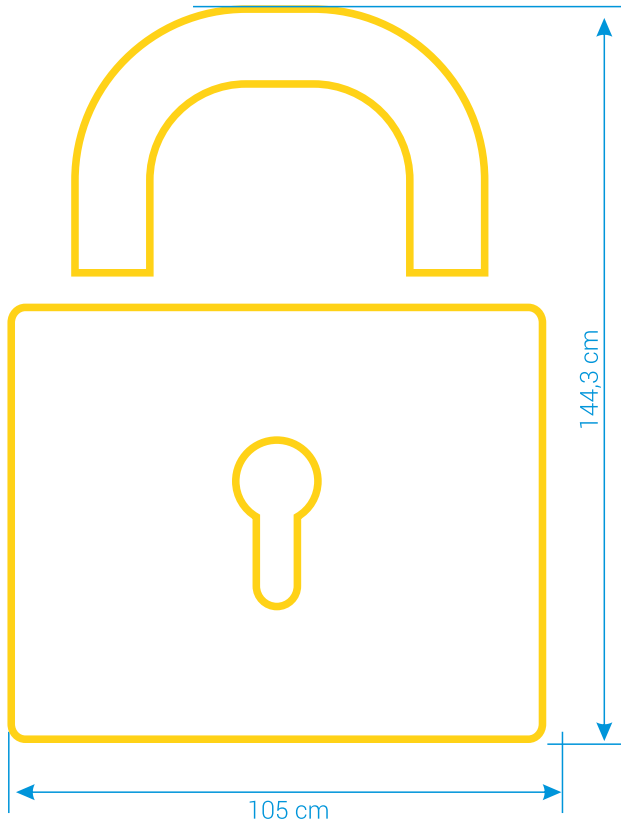
No 16



The world's biggest lock

No **17**

Weight: 415.5 kg
Which is equivalent to
12.221 pieces of
Stanley padlocks
(Solid Brass 20mm Std. Shackle)



Padlocks as jewelry

Nº 18



Padlocks can be stylish as well – like styling accessories.



Unwanted jewelry

No 19



There is a new "sport" where people secretly run up to people with ear tunnels, place a lock into the tunnel, lock it, and run away. That leaves the person with unwanted jewelry and no way to open the lock in his ear tunnel.

No 20



Very valuable and individually manufactured locks protect the Marienschrein in the cathedral of Aachen.

Every 7 years, when the content of the shrine is revealed, the lock is opened and stored in the treasury vault of the cathedral and is replaced by a new lock for the next 7 years.

The content of the shrine, The Four Great Relics

- "Marienkleid", or tunic of the Virgin
- "Lendentuch", or Loin cloth of Christ, worn during the Crucifixion
- "Windel Jesu", swaddling clothes of the baby Jesus
- "Johannestuch", the cloth that preserved the head of John the Baptist

There are many different kinds of padlocks

No **21**



Solid Brass
Chrome Plated



Solid Brass
Armored



Solid Brass
Bayonette



Solid Brass



Barrel Brass



Brass
Combination



24/7 Solid
Brass Padlock



24/7 Laminated
Padlocks



24/7 Shrouded
Padlock + HASP

Questions to find the right padlock



Which item do you want to secure and how valuable is it?

If the item is not so valuable you can use a padlock with a lower security level. If the item is valuable you should buy a padlock with a higher security level.

For bike locks, a rule of thumb is that you should spend 5-10% of the original price of the bike.

No 22

Questions to find the right padlock



No 23

For which application do
you need the padlock?

Define the usage of your padlock – indoor, outdoor, or travel - high security or low security. Check to make sure the shackle will fit into the item you would like to secure.

Questions to find the right padlock



What is the right padlock and shackle size?

The shackle size depends on the usage of the padlock. To pass through hasps and fittings with a long distance, a long shackle is required. Additionally the diameter and material of the shackle are further points to take into consideration for better security. Please pay attention to the shackle diameter to ensure that it fits into the desired hole for locking.

No 24

Questions to find the right padlock



No 25



What type of body should I choose?

The purpose of the padlock body is to protect the lock system against attacks. The main body types are Solid Brass, Laminated Steel, and Armored Encased Brass.

Solid Brass: Brass is a soft metal that is easy for producers to machine, thereby giving it a lower price for customers. But these padlocks are susceptible to drill attacks and usually have sharp corners which can scratch surfaces and objects they touch.

Laminated Steel: The body of this type is designed from separate thin steel plates which are riveted together. Low production costs enable low prices for the customers.

Armored Encased Brass: The brass body is encased in hardened steel for better protection against drilling attacks, thereby giving it a higher security level.

Questions to find the right padlock



N^o 26



Are there special requirements concerning the lock system/mechanism?

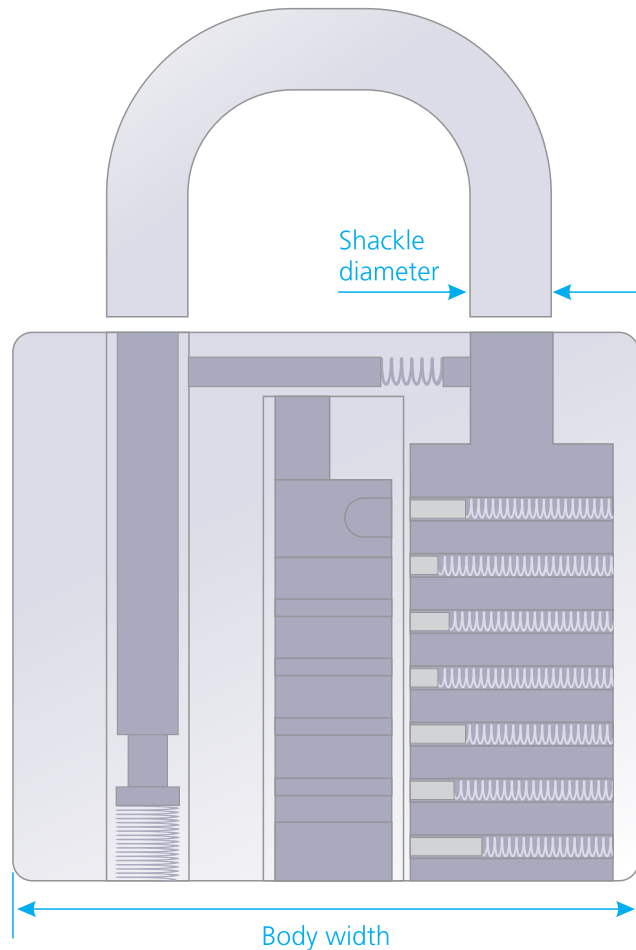
If you need multiple padlocks that can be locked and unlocked with a single key, you should use "Keyed Alike" padlocks.

If many people would like to share one padlock, you can use a combination padlock. The advantage is that you do not need many keys for lots of people. Please notice that most combination padlocks are suitable for applications with a lower security level.

No 27

Determining the size of a padlock

- A padlock is always determined by its body width in millimeters.
- For example, Solid Brass 20mm is a padlock with a body width of 20mm.



No 28

- The Padlock **PINS**
- Number of Pins varies from **3-6**.
The more Pins you have,
the higher the security level.
- Different types of Pins:



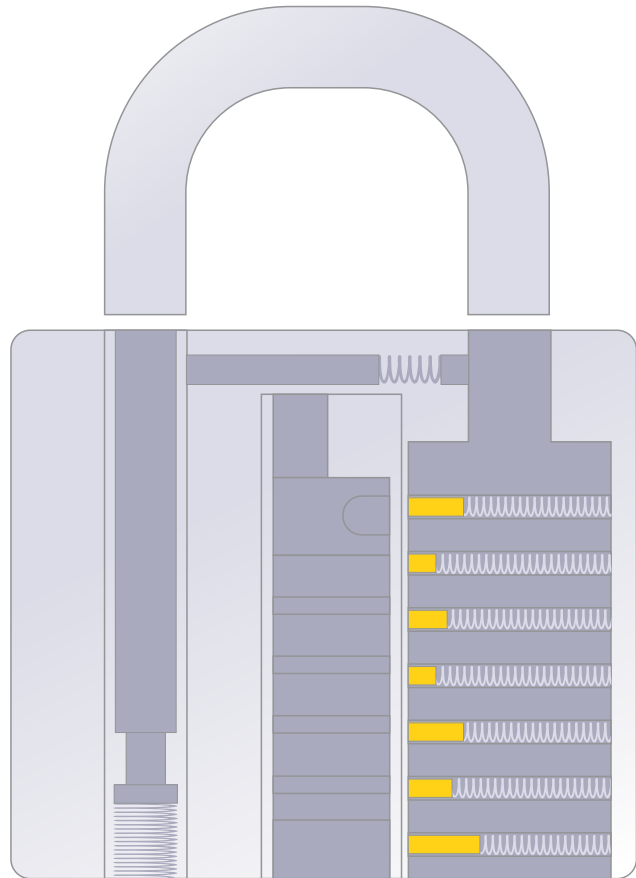
Mushroom Pin



Spool Driver Pin

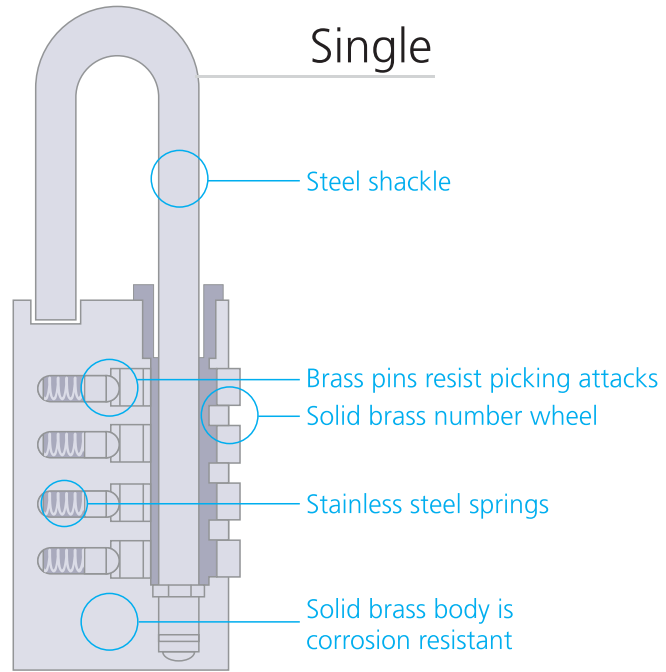


Serrated Driver Pin

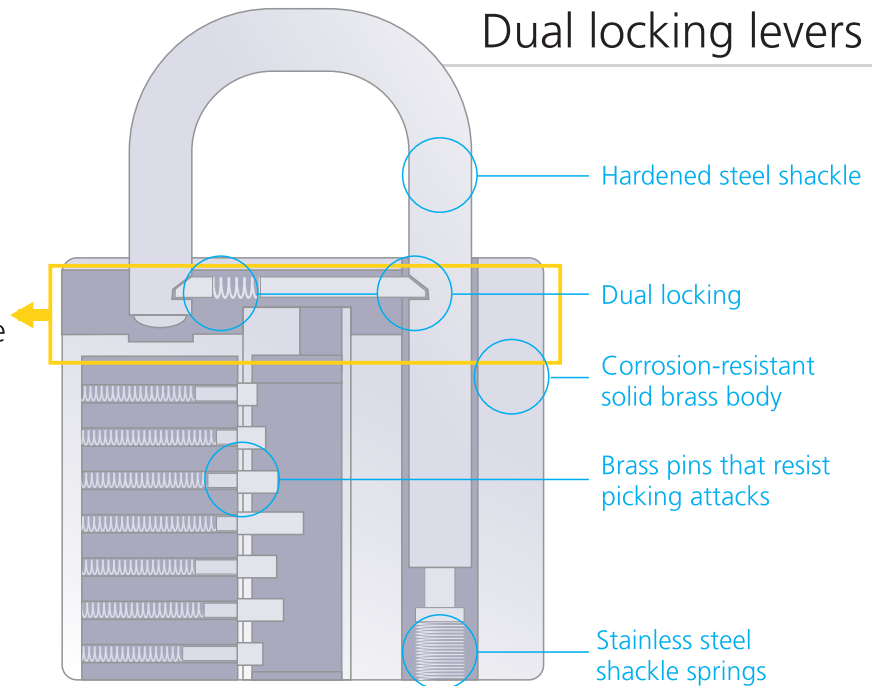




No 29

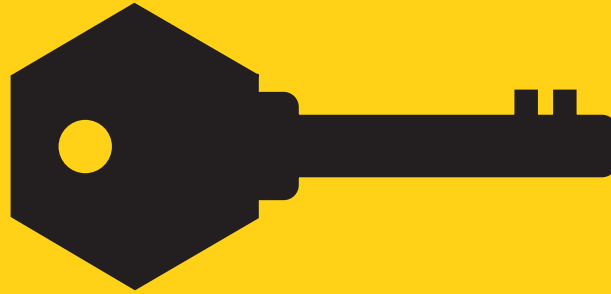


The dual locking levers mechanism makes sure that the shackle does not come out when the padlock is locked. It gives higher security.



Key padlocks

No 30

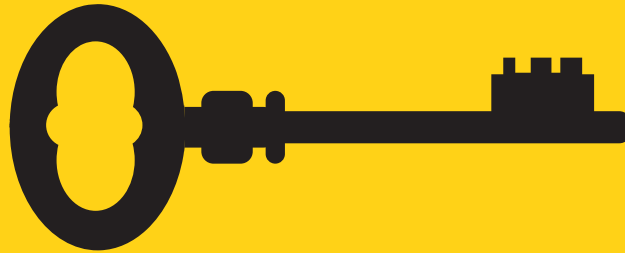


Are key copies possible?

Yes. You can generate copies of your existing key in locksmith or security shops.

Key padlocks

No 31

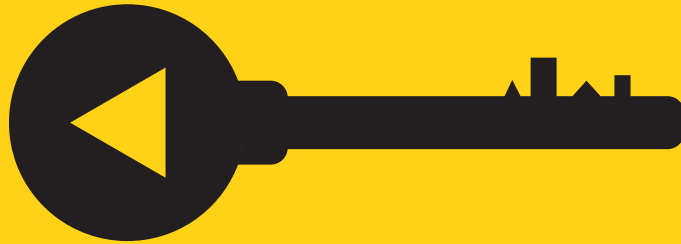


What can I do if I have lost all keys for my padlock?

If you have lost all keys for your padlock it is not possible to make key copies to unlock the padlock.

Key padlocks

No 32



What does
"Keyed Alike" mean?

"Keyed Alike" means that you can lock and unlock several padlocks with a single key.

Key padlocks

No 33



Is there a possibility to get an additional new padlock that works with my already existing key?

No. If you want to operate more padlocks with a single key, please purchase multiple pack "Keyed Alike" padlocks.

Key padlocks

No 34



Is there an option to have padlocks that are operable with a single key?

Yes. Please purchase multiple pack "Keyed Alike" padlocks that can be locked and unlocked with a single key.

Combination locks

No 35



A combination lock is a type of locking device in which a sequence of numbers or symbols is used to open the lock – without using a key.

Types range from inexpensive three-digit luggage locks to high-security safes.

Multiple-dial locks

No 36



Main Usage:

bicycle locks, luggage locks and on briefcases.

Mechanism

The lock is secured by a pin with several teeth on it which hook into the rotating discs. When the notches in the discs align with the teeth on the pin, the lock can be opened.

Single-dial locks

No 37



Main Usage:

lockers, tool boxes, and safes.

Mechanism

Customarily, a lock of this type is opened by rotating the dial clockwise to the first numeral, counterclockwise to the second, and so on in an alternating fashion until the last numeral is reached. The cams typically have an indentation or notch, and when the correct combination is entered, the notches align, allowing the latch to fit into them and open the lock.

Single-dial locks

No 38



Main Usage:

luggage locks, bike locks, padlocks, cable locks, and commercial locks.

Mechanism

Letter combination locks differ from traditional combination locks in that they have letters on the dials instead of numbers.

The five-ring WordLock contains 10 letters per ring.

Facts about combination padlocks

No **39**



Are combination padlocks
safer than key padlocks?

No. For a higher security you should
use a key padlock, because the
lock mechanism is stronger.

Facts about combination padlocks



N^o 40

How do you change the security combination number on a new indoor or Travelmax combination padlock?

If you want to change the code you simply need to:

- Unlock the padlock
- Rotate the shackle 180°, press it downward, and turn the numbers to your new desired combination
- Pull the shackle upwards, turn it back towards the closed position, and press down on the shackle to lock the padlock.

Facts about combination padlocks



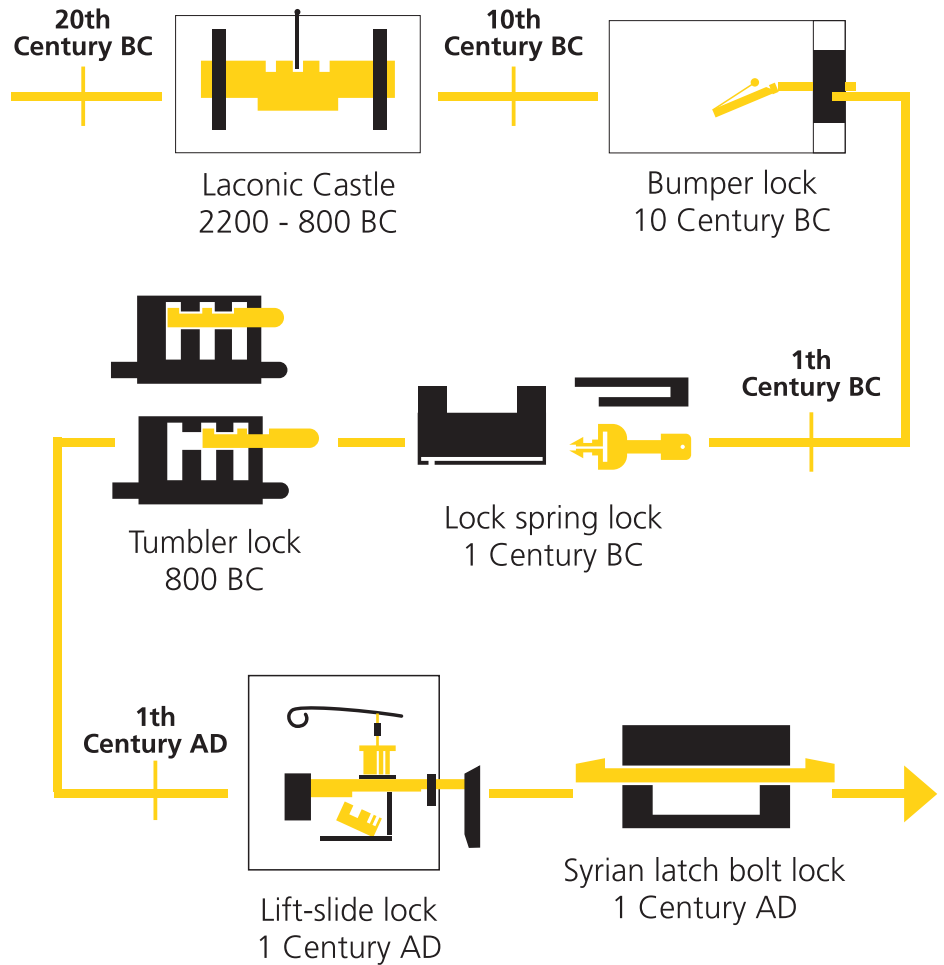
N^o 41



What can I do if I have forgotten the combination of my padlock?

It is only possible to open the padlock with the correct combination. If you do not remember your personal defined code, you will need to destroy the padlock to open it.

No 42
01

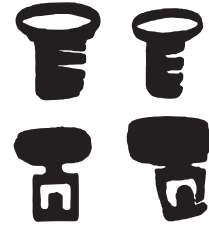


No 42
02

2th
Century



The Roman Masks
lid lock 2 Century



Roman ring keys
1-3 century AD

5th
Century



Snap lock
18 Century

2th
Century AD



KEY HOLE
Wood iron lock
Early Middle Ages

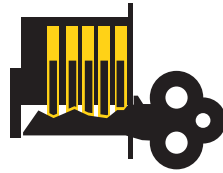
18th
Century



Tumbler lock
1778

No 42
03

19th
Century



Yale lock 1865



Ward lock
19 Century

20th
Century



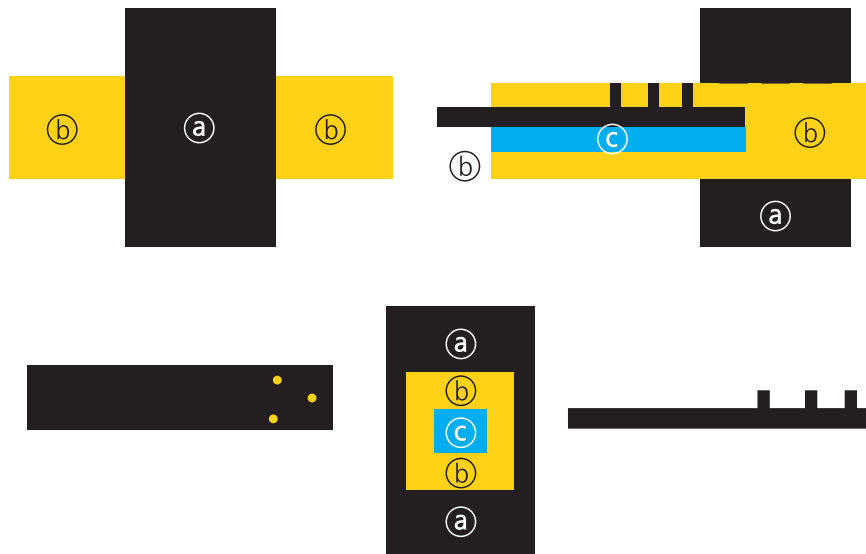
How the first locks worked

No 43



The mechanism of the Tumbler Lock

The pegs at the bit end of the key correspond to the bars, or the tumblers, in the bolt. When inserted, the pegs lifted the tumblers so that the bolt could be retracted and the door or gate could be opened.

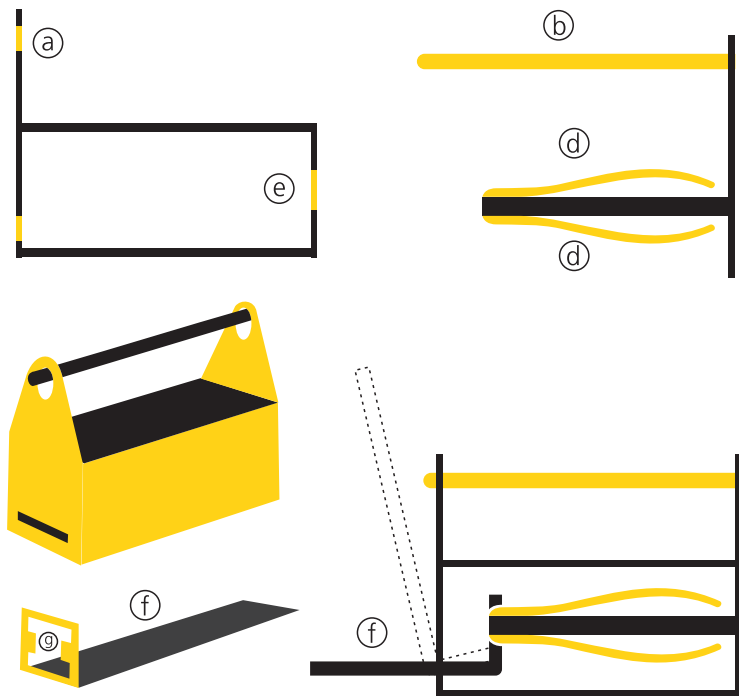


How the first locks worked

No **44**

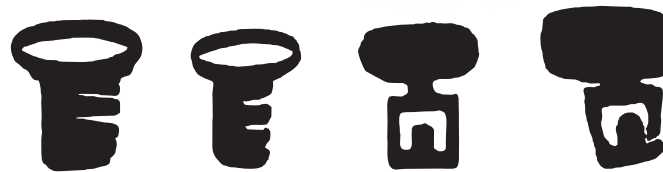
The shackle or hasp, which was separate from the body, carried on its lower side a pair of spreading springs, which entered a hole in the end of the body when the two pieces were being put together. When the shackle was pressed in fully, the springs which during the operation had been gradually closed up, spread out inside the body and so held the two pieces together. To take them apart, the springs, which were simply flexible barbs, had to be compressed. This was done in some locks by a key which was turned after being pushed through a hole in the body.

The mechanism of the „Sperrfederschloss“ locking spring lock



Roman Ring Keys – a predecessor of the wedding ring?

No 45

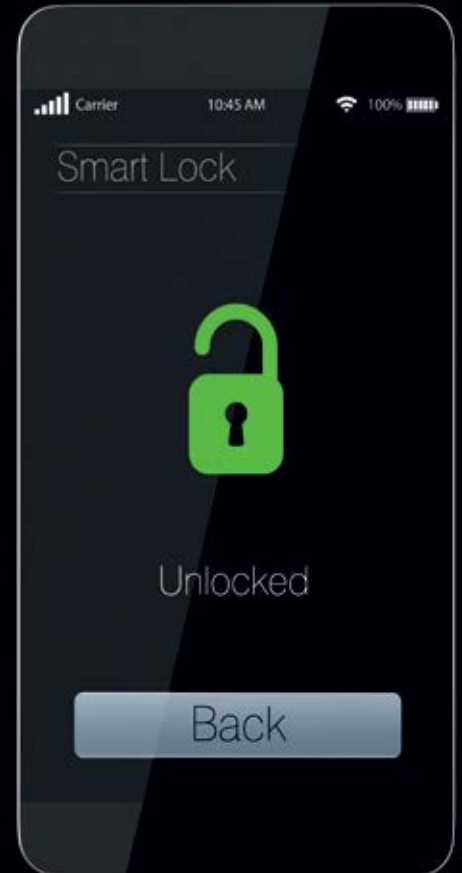


According to Roman law it was not allowed that women possess the keys to the house until they got married. Thus, some cultural scientists suppose that these rings were a symbol of partnership, similar to the wedding ring.

The future of locks

No 46

- Smart locks
- Wireless locking
- Fingerprint locks
- Retinal IDs access
- Etc.



No 47



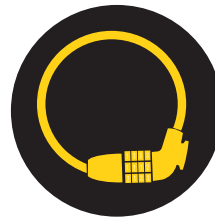
Every **5 minutes** a bike
is stolen in Europe.

Statistics of stealing in Europe

No **48**



25%
of bicycle theft
is reported



36%
use cable
locks



1-2%
of arrests for
theft lead to
a conviction



18%
use a U-Lock



40%
use more than
1 type of
protection



646€
average value
of a stolen bike



38%
don't lock
their bikes



1 in 2
people have
their bike
stolen



No 49

DID YOU KNOW...

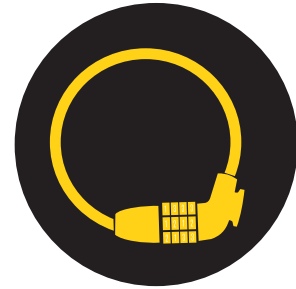
Your Insurance will **not pay** for your loss if you **did not secure** your bike, home, or fence with a lock, or if the lock was **too weak** for the value of the possessions.

For example: A **bike lock** should cost about **10%** of the value of your bike

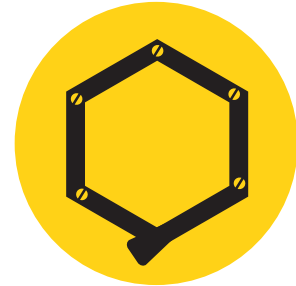
So if your bike is about **\$1 000**,
the lock should be around **\$100**

4 different types of bike locks

Cable /
Chain Locks



Foldable
Locks



Loop
Locks

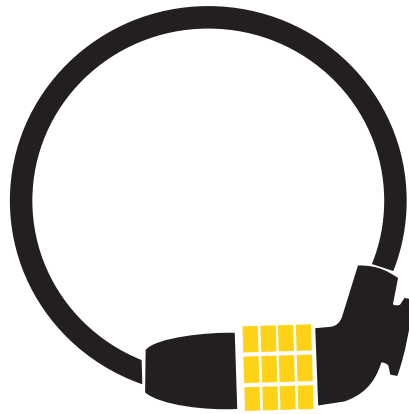


U-Shaped
Locks



No 50

Cable / Chain locks



- very flexible
- cheap
- lightweight



- less safe
- easier to cut
- heavy

No 51

Foldable locks



No 52



- safe
- flexible
- small



- heavy
- more expensive

U-Shaped locks



No 53



- very safe
- robust
- stabile



- heavy
- not very flexible
- more expensive

Loop locks



- lightweight
- convenient



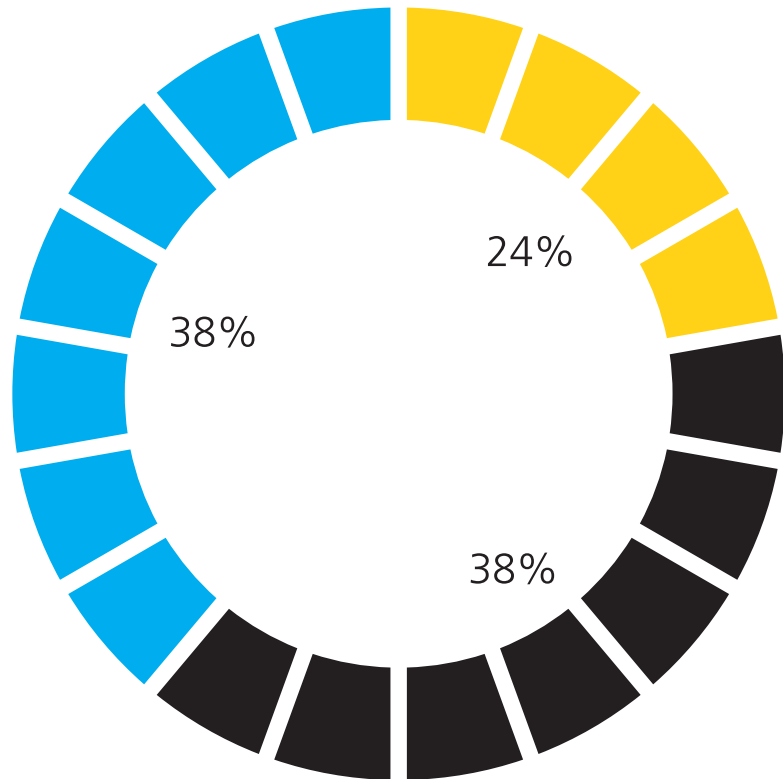
- very unsafe
(bike can still be carried away)

No 54

Comparison of price, practicality and security



Nº **55**
U-locks



 Security

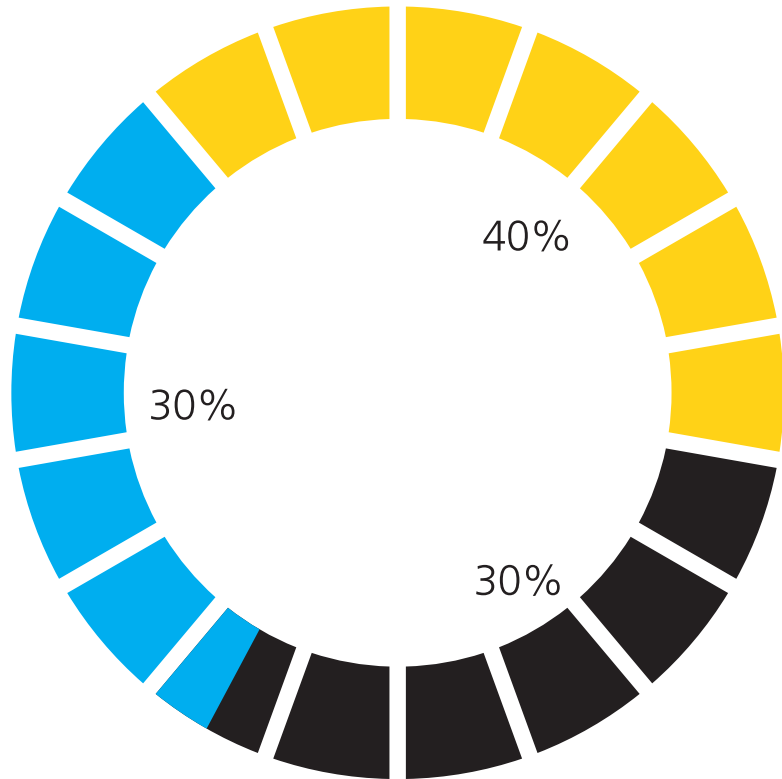
 Good price

 Practicality

Comparison of price, practicality and security



No **56**
Chain locks



 Security

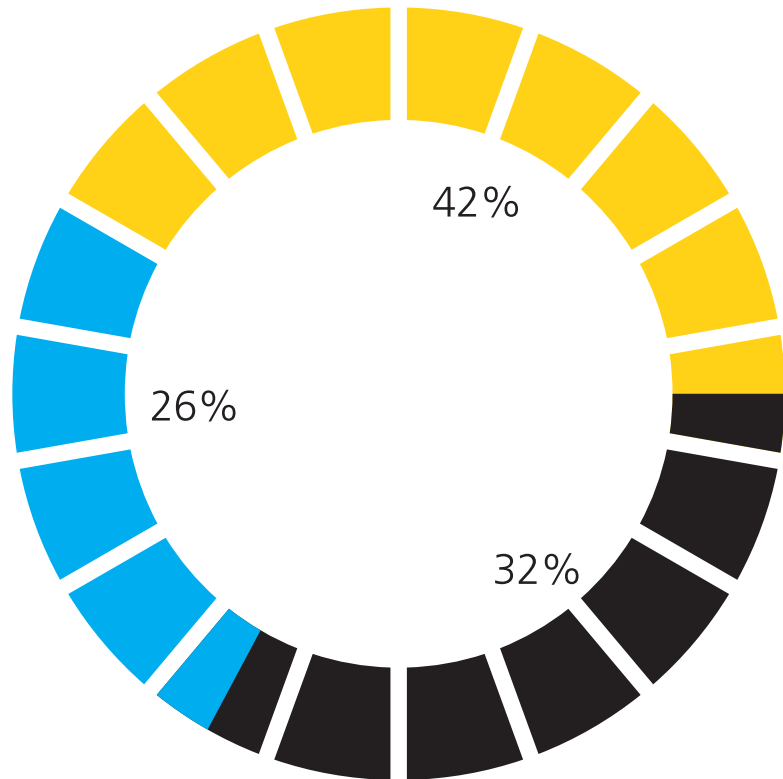
 Good price

 Practicality

Comparison of price, practicality and security



Nº **57**
Folding
locks



 Security

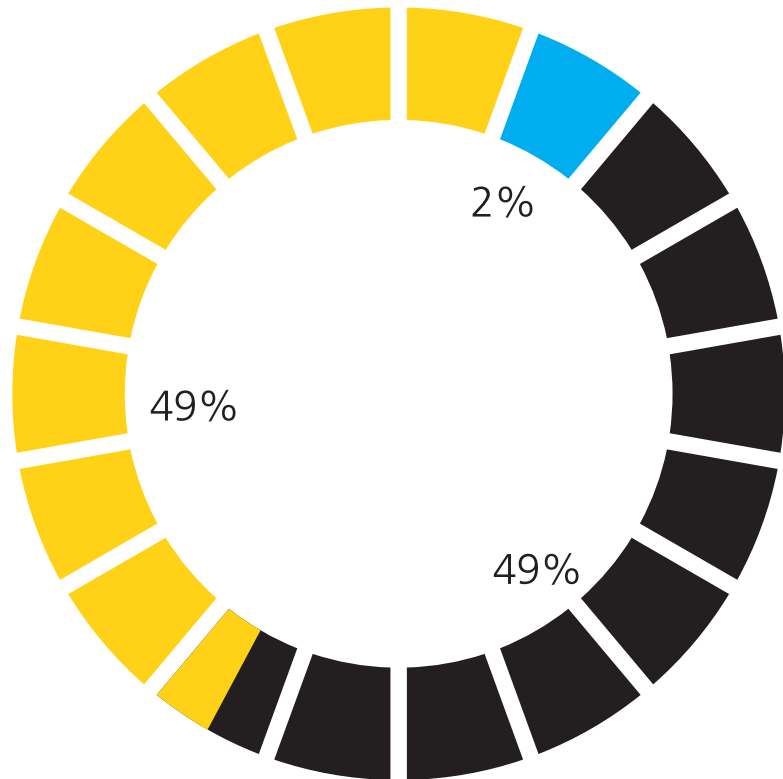
 Good price

 Practicality

Comparison of price, practicality and security



Nº **58**
Cable locks



 Security

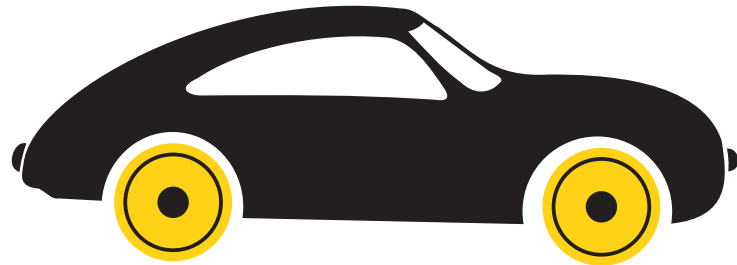
 Good price

 Practicality

The Number of Cars and Bikes Worldwide

No **59**

~ 500
MLN



~ 1BLN

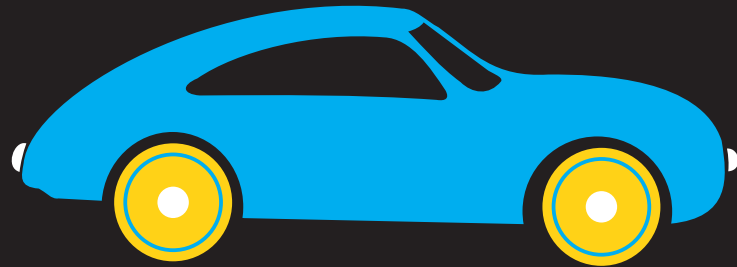


The number of cars and Bikes in Germany

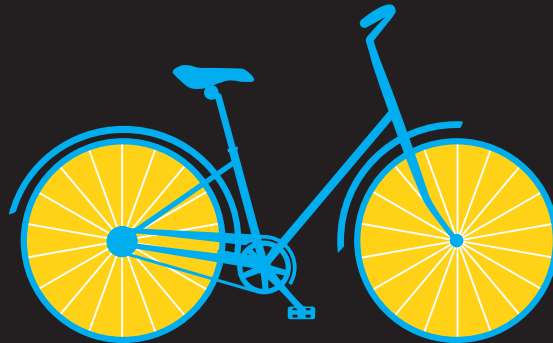


No **60**

45,1
MLN



72
MLN



Did you know...

No 61



2.000 € health-care costs can be saved per year per capita by cycling for 75 minutes per week.

Did you know...

No 62



800 calories are burned on average per hour of cycling.

Did you know...

No 63



27% of Germans have had their bike stolen at least once.

Did you know...

No 64



9,6% of bike robbery cases got solved in Germany (2014).

Did you know...

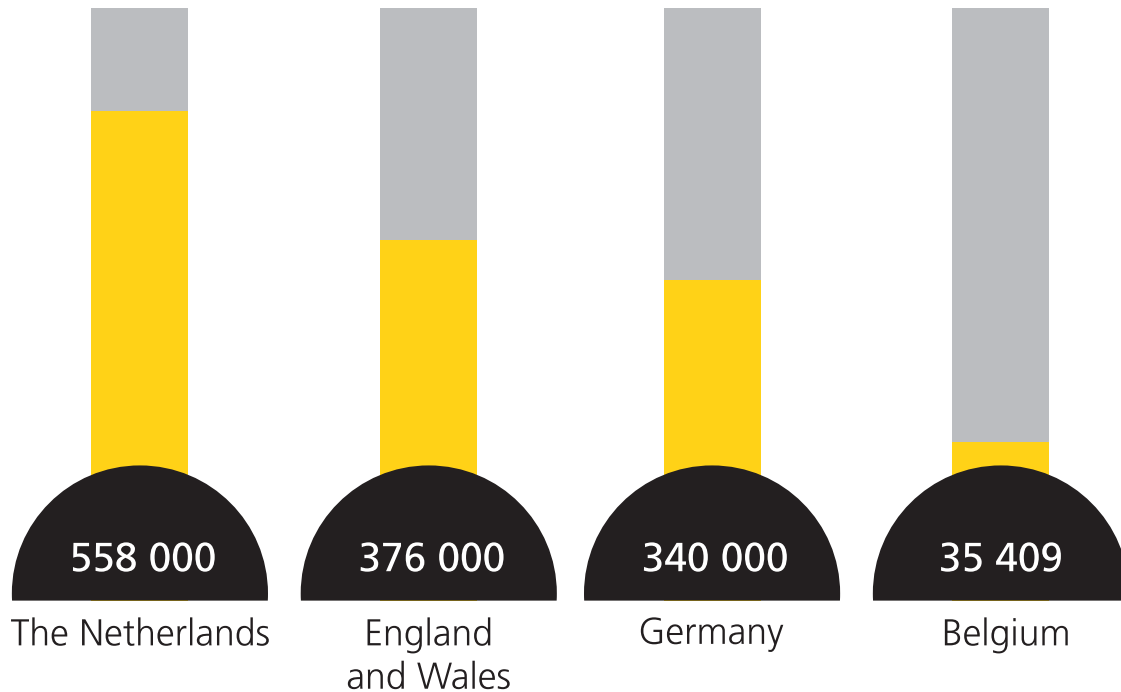
No 65



268,8 km/h is the fastest speed ever reached on a bike (1995, Fred Rompelberg).

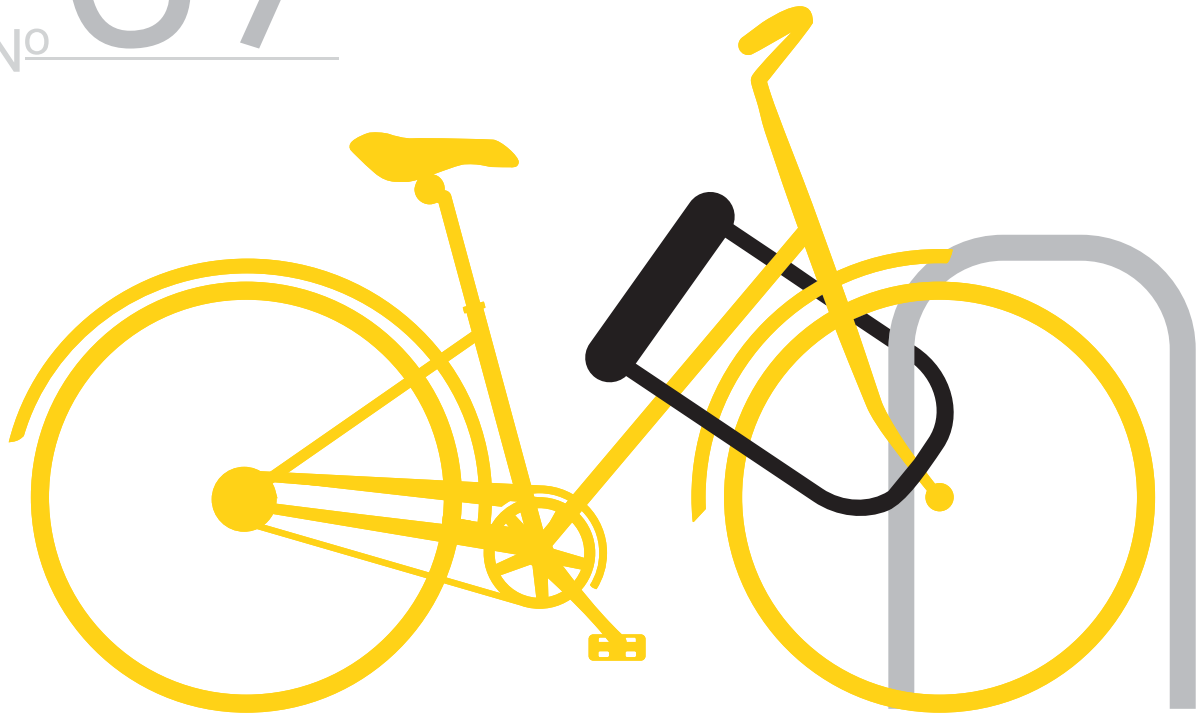
Bike theft

No 66



Security tips

No 67



Ensure both your tire and frame are securely locked.

Security tips

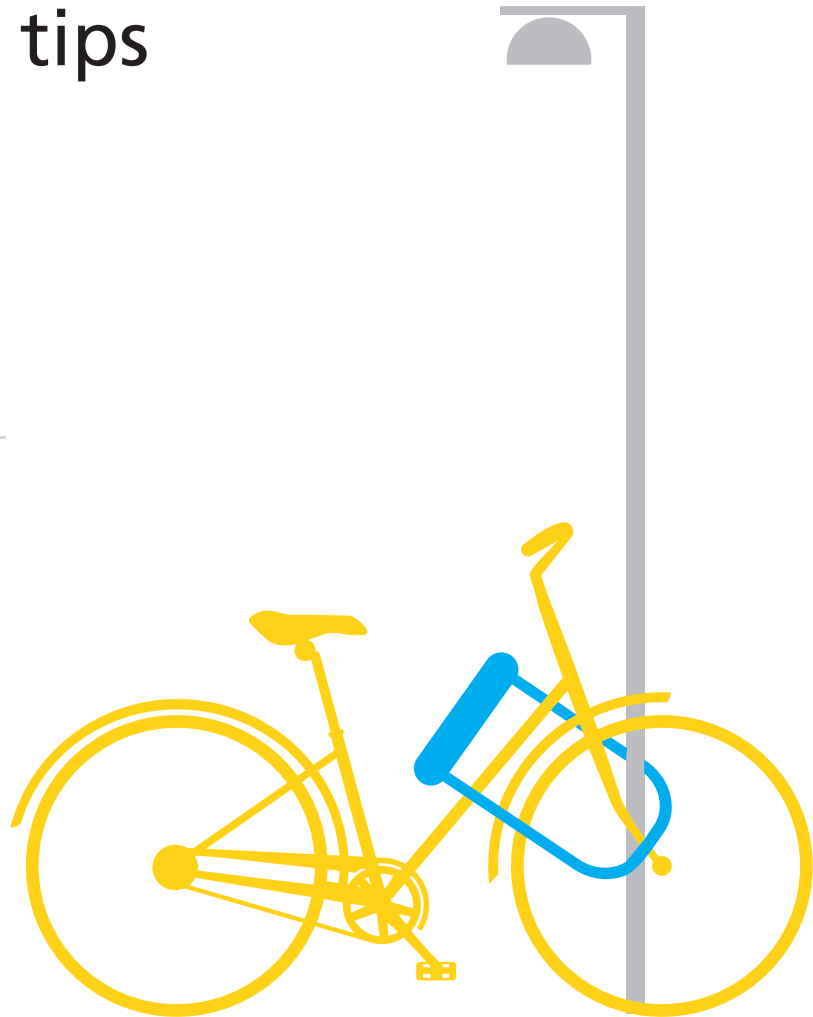
N^o 68



When securing your bike for longer periods of time, use the quick release function to remove the front tire and lock it together with the frame and the back tire, securing both to a fixed object such as street light or secure fence.

Security tips

No 69



Lock your bike to a fixed object such as streetlight or secure fence. To make sure the lock is secured properly, pull your bike away from the lock to create a small amount of pressure.

Security tips

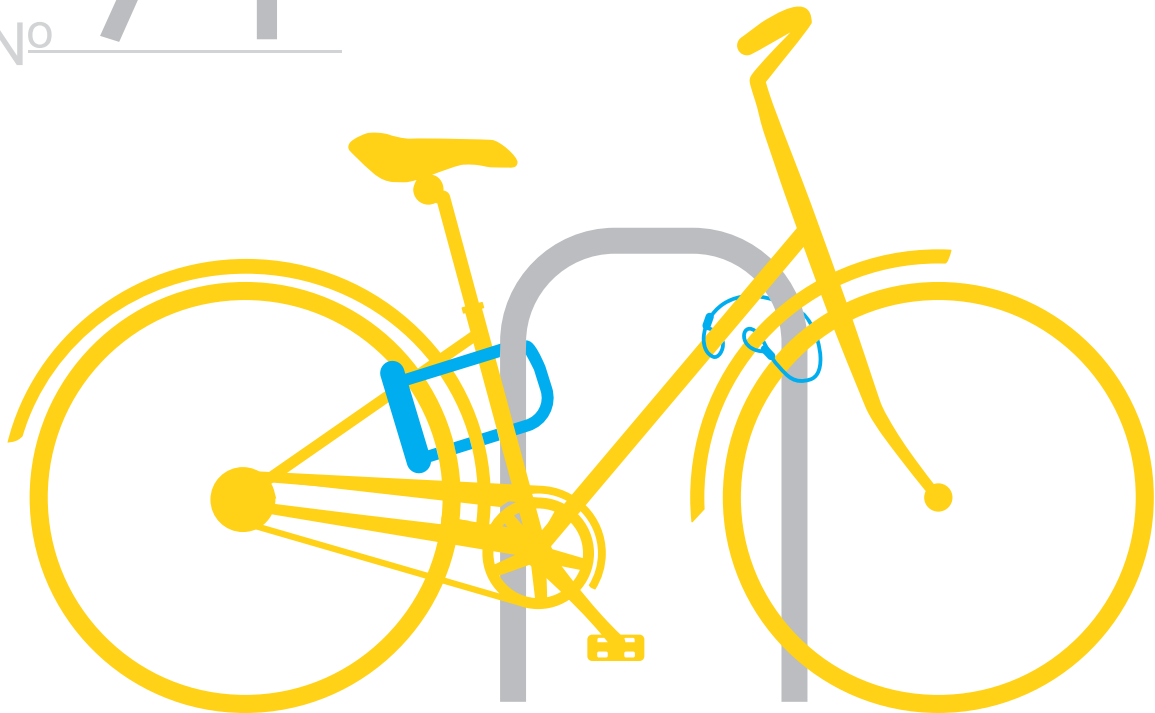
No 70



Choose busy storage locations with high visibility where thieves are less likely to operate.

Security tips

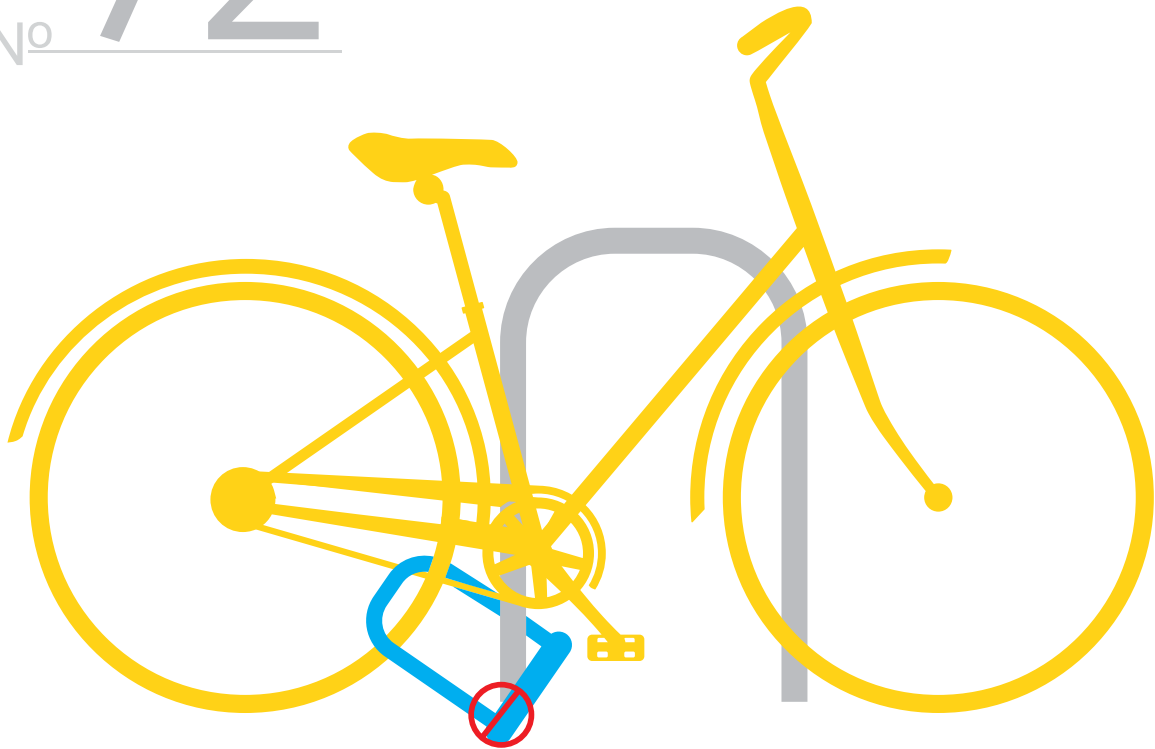
No 71



It is best to use a two-lock method, such as a U-lock & cable lock, to maximize security when locking your bike.

Security tips

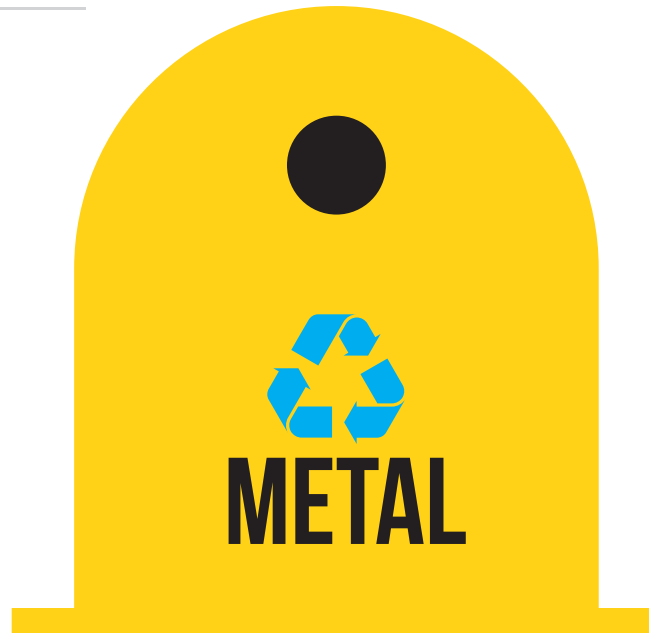
No 72



The bike lock should not touch the ground, so thieves cannot benefit from creating leverage to break the lock.

Did you know...

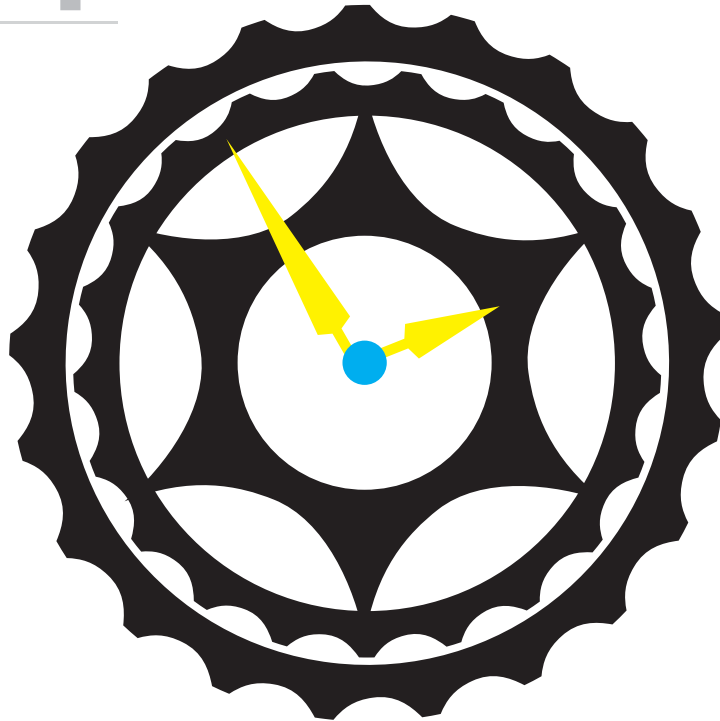
No 73



Old bike locks, vinyl coated or not, can be thrown into the garbage for scrap metal so they can be recycled.

Did you know...

No 74



Some artist recycle their bike for wall clocks, money belts or jewelry.

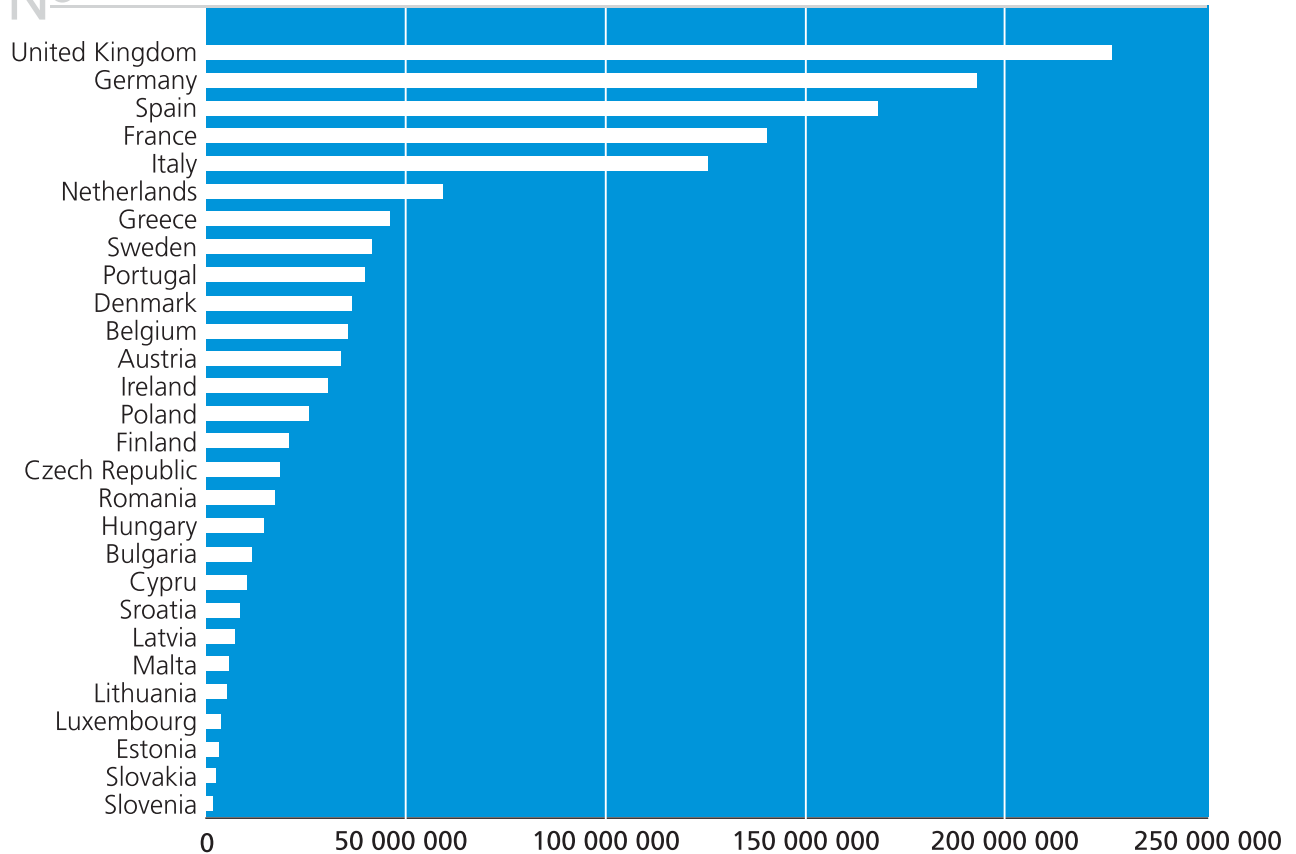
Did you know...

Total amount of
air passengers in
Europe in 2014
879 million.

No **75**

Overview of EU-28 air passenger transport by Member States in 2014 - passengers carried (in 1000)

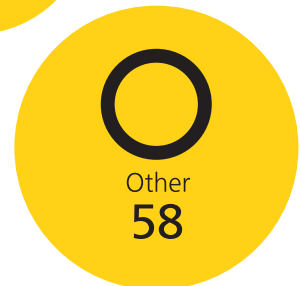
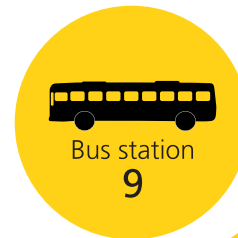
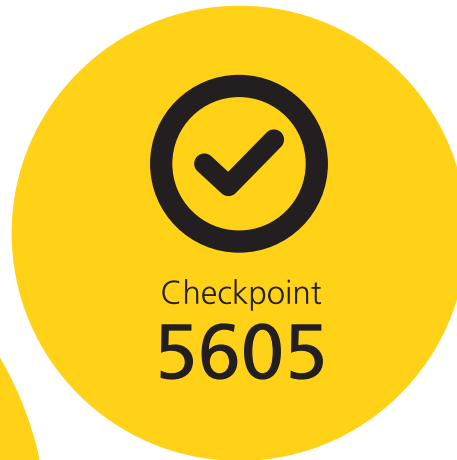
No 76





A CNN analysis of passenger property loss in the US from 2010 to 2014 shows **30,621** claims of missing valuables, mostly packed in checked luggage:

No **77**





No 78



Mark your bags Make it stand out from the rest: a sticker or ribbon – anything that makes a mix-up less likely. This will prevent the intentional — and unintentional — handling and opening of your property.



No 79



Place carry-on bags upside down

When you place your carry-on bag in the overhead compartment, turn it upside down so that the bag rests on the outer pocket (which often contains valuables)

This makes it nearly impossible to un-zip that pocket.

No 80



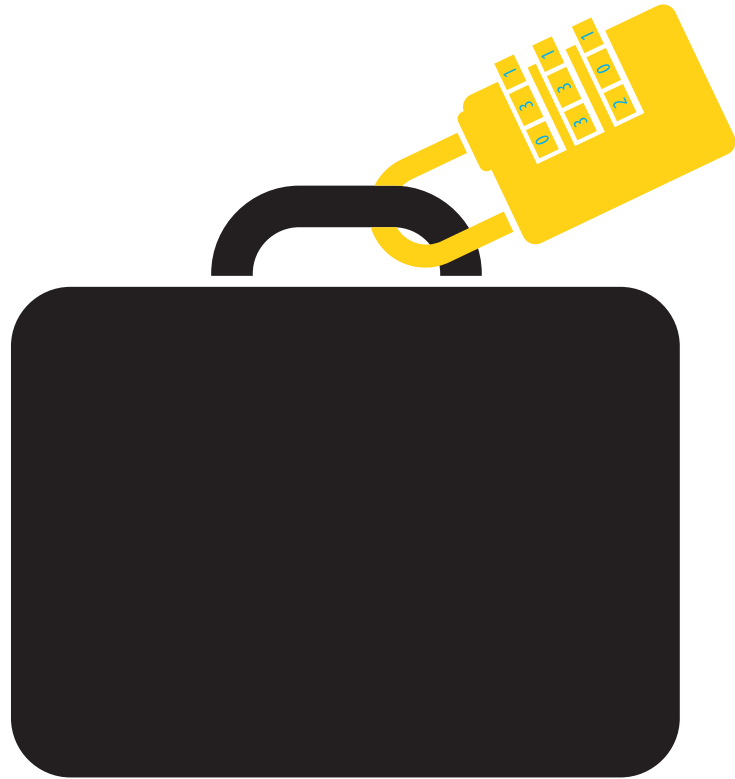
Watch your seat Be careful when storing your bag under the seat in front of you; don't face any pockets forward, or the passenger in front of you may walk off with your goods. Also, never leave anything of value on your seat when you leave it to go to the lavatory or to take a stroll.



Walk it through If there is a long security line, your bags may clear the X-ray scanner before you make it through the metal detector. Wait until you are ready to walk through the machine before releasing your purse, wallet, or laptop to the conveyor belt.

Fact: More items go missing in the security line than from any other place at the airport.

No 82



Lock your carry-on bag The easiest way to protect your carry-on bag is to lock your bag so it cannot be accessed while you are sleeping or going to the airplane lavatory.

No 83



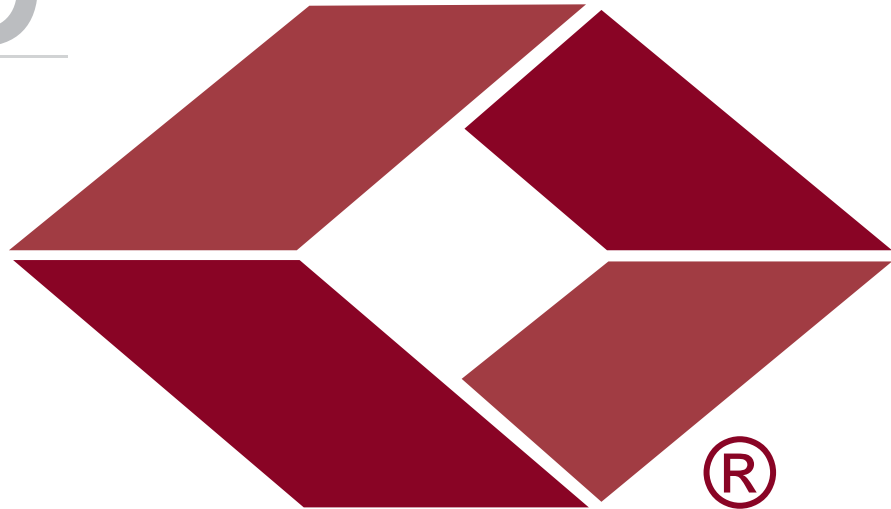
TSA = Travel Sentry®
Approved

No 84



Every TSA lock has a special identification mark which allows international security administration to open the baggage without destroying lock.

Nº 85



To open the TSA lock a special key is used by the screening agents to open it.

Nº 86



At every airport the international agencies are able to open the locks and re-lock them after inspection.

No 87



Which padlock should I use for traveling?

For traveling you should use a TSA (Travel Sentry Approved) padlock. If you use a padlock that is not Travel Sentry Approved, you are taking a chance that the airport security will destroy the lock during their security check.

No 88



What is the meaning of TSA?

TSA (Travel Sentry Approved) is the international standard for Travel Security. TSA padlocks can be opened and re-locked with a special key by international security administration at every airport.

No 89



Is there a chance that "non airport security people" can get the "general key" for TSA locks?

No. Only airport security people have access to the general key to open and re-lock the TSA (Travel Sentry Approved) padlocks.

Trustworthy test standards for padlocks

No 90



Standards Worldwide

American Standard:
ASTM F883-09

Trustworthy test standards for padlocks

No 91



British Standards
European Standard:
BS EN 123320: 2001

Trustworthy test standards for padlocks

No 92



**Australian
Standard**

Australian Standards:
AS 4145.4: 2002

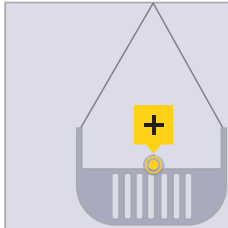
Nº 93



Padlocks accompany us in very many different situations of our life

No 94

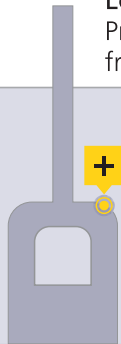
Lockable crib:
Prevents child from falling out of its bed



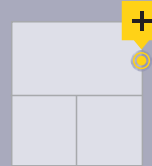
Door lock:
Guarantees privacy



Lock for fireplace:
Prevents fire from spreading



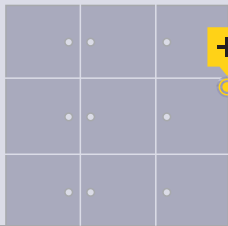
Window locks:
Keeps out bad weather and burglars



Bike lock:
Secures bike when unwatched



Lockable closet:
Prevents children from reaching dangerous items, e.g. medicine



Suitcase:
Lock protects luggage while travelling



Front door lock:
Protects all belongings within the house



We need locks...



No **95**



...during sport.



...when travelling.



...in school or at the gym.



...at work.



...on vacation.



...at home.

We need locks...

No 96



...sometimes even for people
with a sweet tooth.

No 97



Dead-bolts



Knob Locks



Lever Handle Locks



Cam Locks



Rim/ Mortise Locks



Euro Profile Cylinders



Wall Mounted Locks



Inter- changeable
Core Cylinders



Furniture Locks



Vending/
T-Handle Locks



Jimmy Proof
Deadbolts



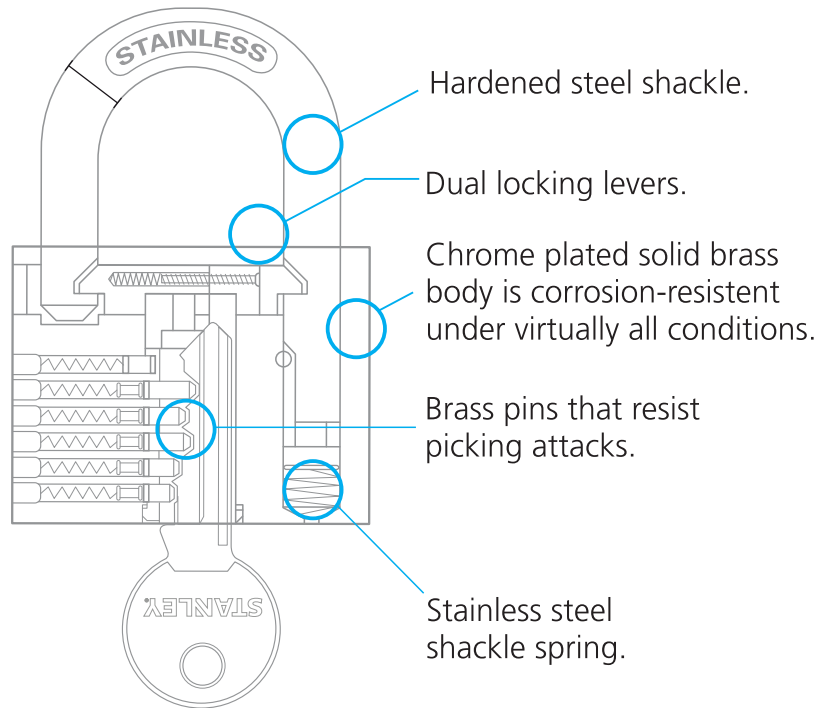
Rim Latch Locks



Key In Knob
Cylinders

Solid Brass Chrome Plated

No 98



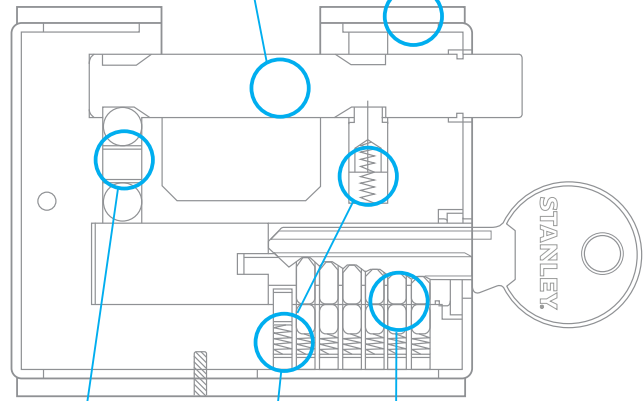
Solid Brass Armored

No 99



Hardened steel transverse bar that resists sawing and cutting attacks.

Hardened steel case to provide maximum security.



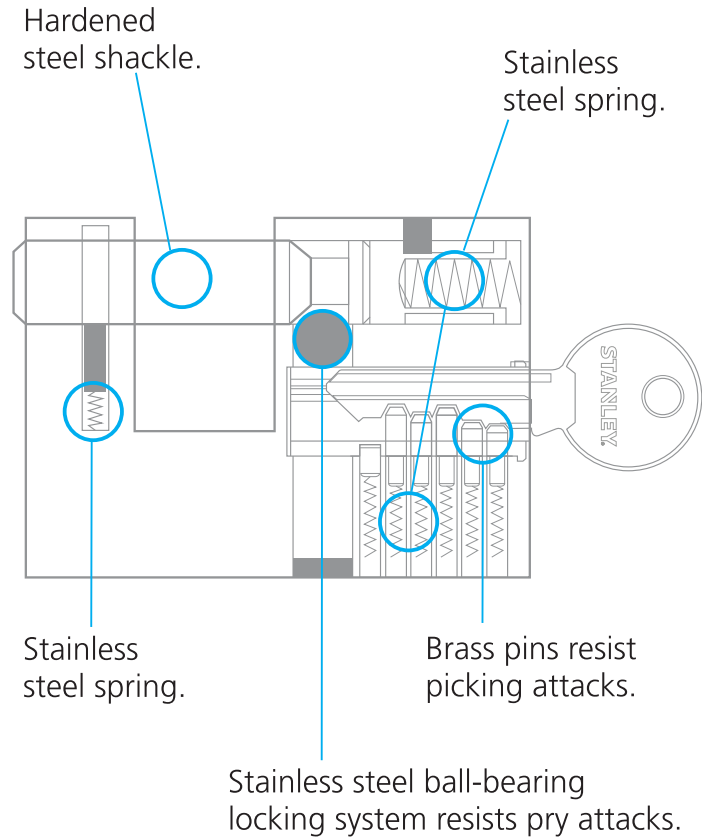
Dual stainless steel ball bearing locking system resists pry attacks.

Brass pins resist picking attacks.

Stainless steel springs.

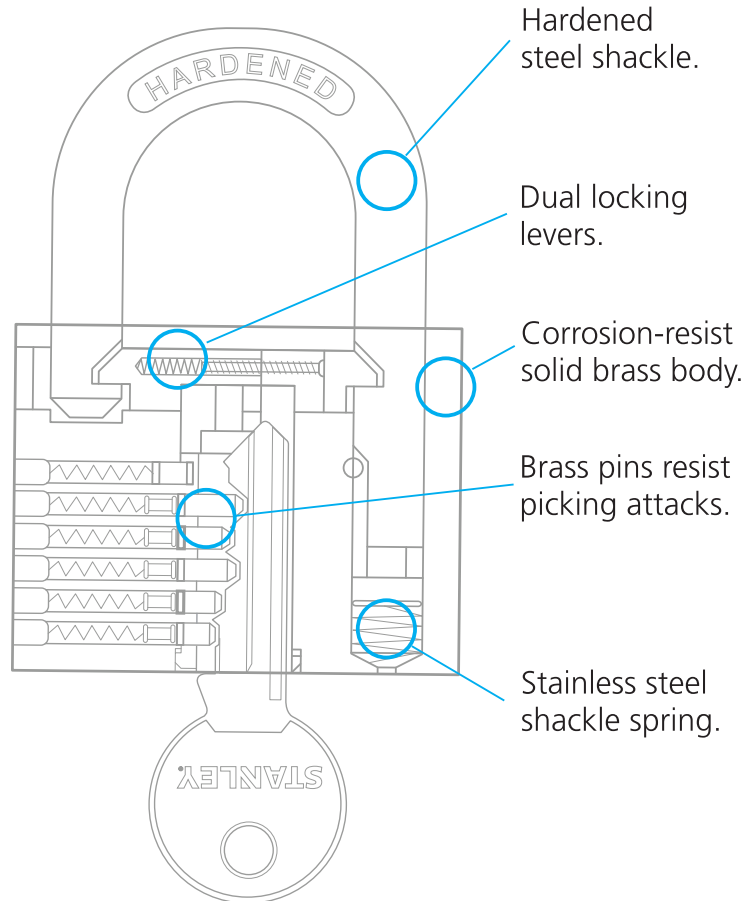
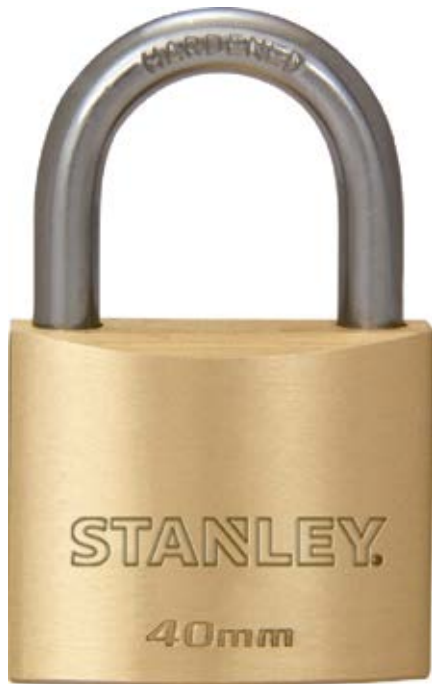
Solid Brass Bayonette

No 100



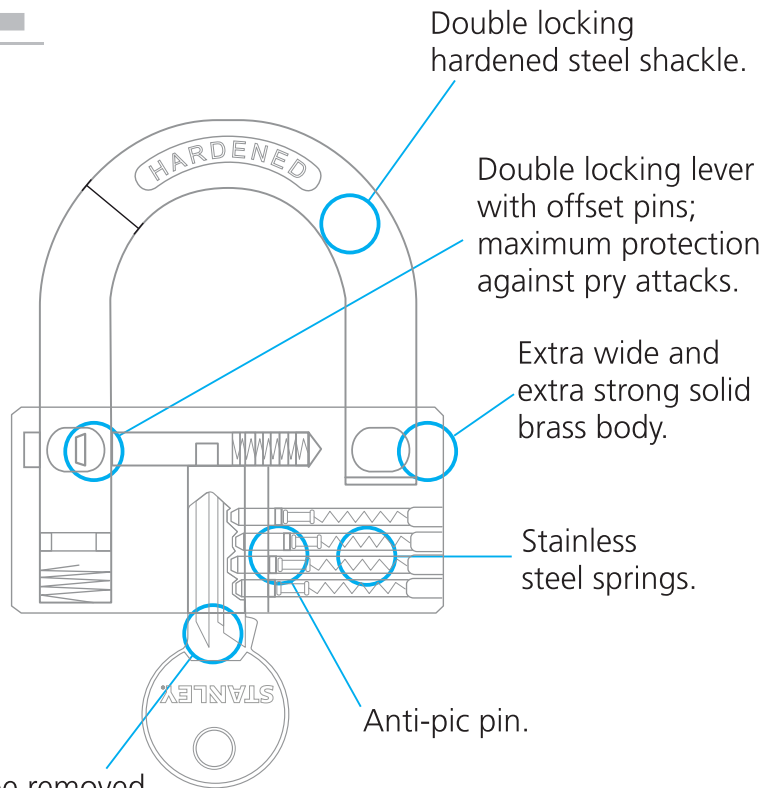
Solid Brass

No 101



Barrel Brass

No 102



Double locking hardened steel shackle.

Double locking lever with offset pins; maximum protection against pry attacks.

Extra wide and extra strong solid brass body.

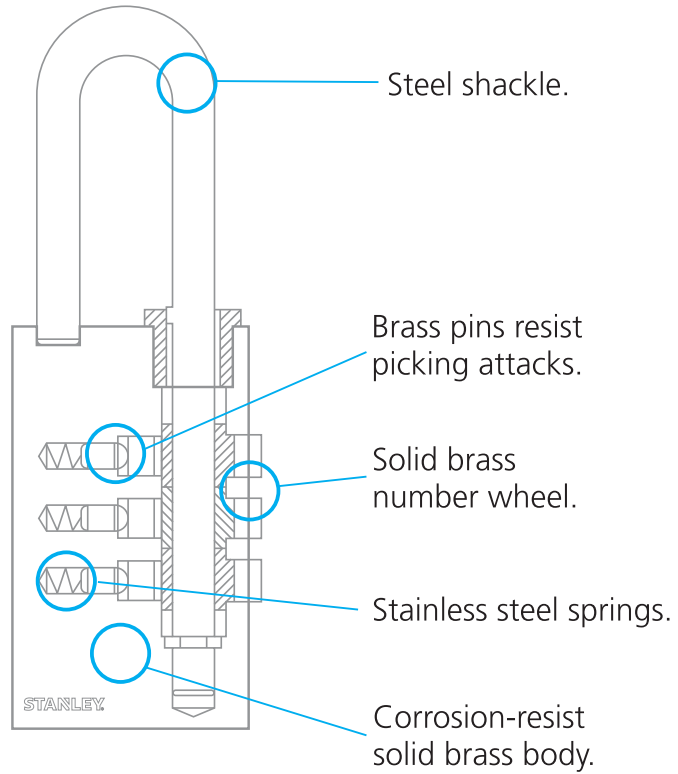
Stainless steel springs.

Anti-pic pin.

Key can be removed only in closed position.

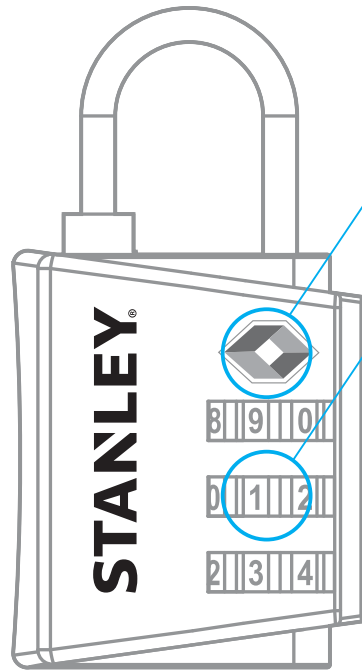
Brass Combination

No 103



TSA Padlock

No 104



TSA approved luggage padlocks.

Available in key version or with 3 or 4 digits – up to 9999 unique combinations.

Available with special features such as security indicator (shows when airport security people opened the padlock), writable body (for individualization), with flexible vinyl - coated steel cable or keyed alike multipac.

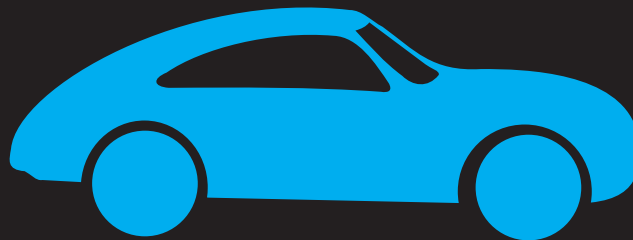
Bike vs. Car

No 105



THIS ONE RUNS ON FAT AND SAVES YOUR MONEY

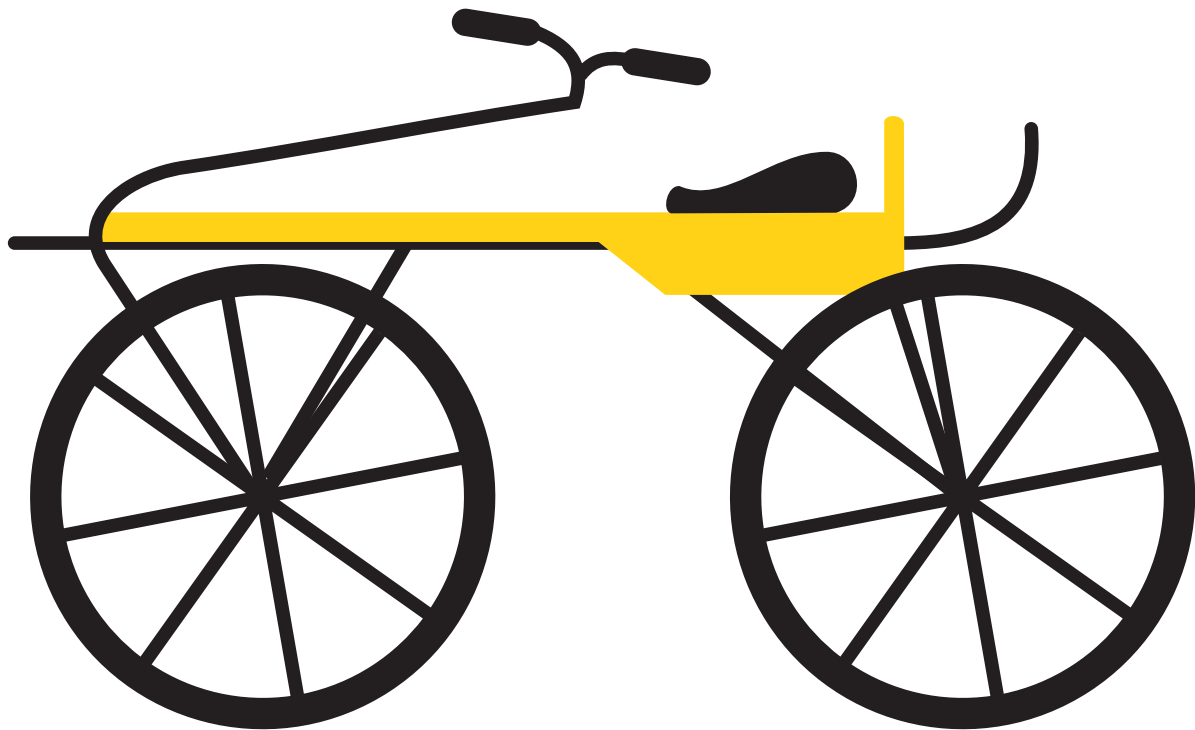
THIS ONE RUNS ON MONEY AND MAKES YOU FAT



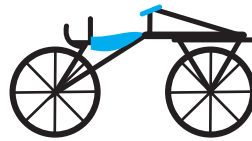


No 106

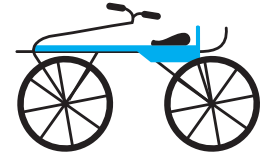
Bikes celebrate their 200th birthday in 2017.
The basic principle is still the same:
Two wheels, a saddle and muscle power.



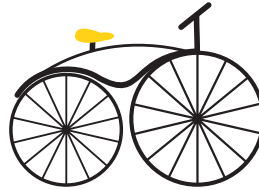
No 107
01



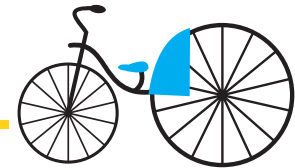
1817



Draisine Bicycle
1818



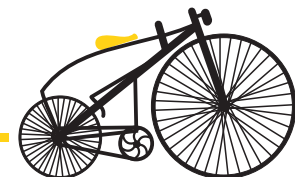
Velocipede
1861



Draisine with treadles
1830



High Wheel
1870



Lawson's chain bicycle
1879

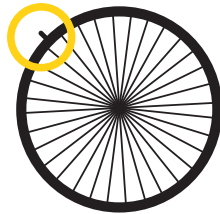
No 107
02



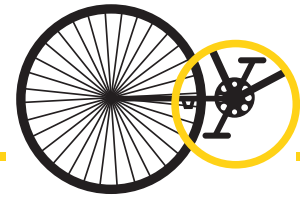
„Rover Safety“ Bicycle
1885



First motorcycle
by Gottlieb Daimler
1885



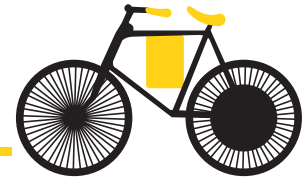
Dunlop's inflatable tires
1888



Back-pedal brake
1889

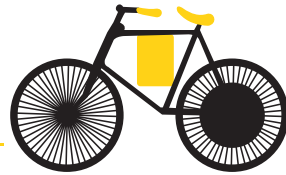


Tandem Velocipede
1891

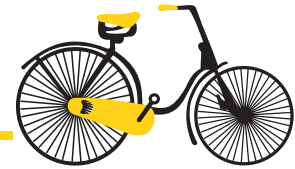


First battery
powered bicycle
1895

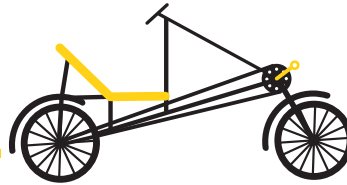
Nº 107
03



First battery
powered bicycle
1895



Kids bicycle
1920



Recumbent Bicycle
1930



Bicycle quick - release



Bicycle cruiser
1933



Racing bicycle
1960

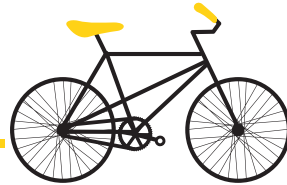
Nº 107
04



Bonanza / BMX Bicycle
1968



Folding Bicycle
1970



Mountain Bike
1977



Bicycle cruiser
1987



Pedelec
1992

113 Facts

The longest bike

No 108

The longest bicycle was
built in Australia in 2015



← 41,42m →

113 Facts

The tallest bike

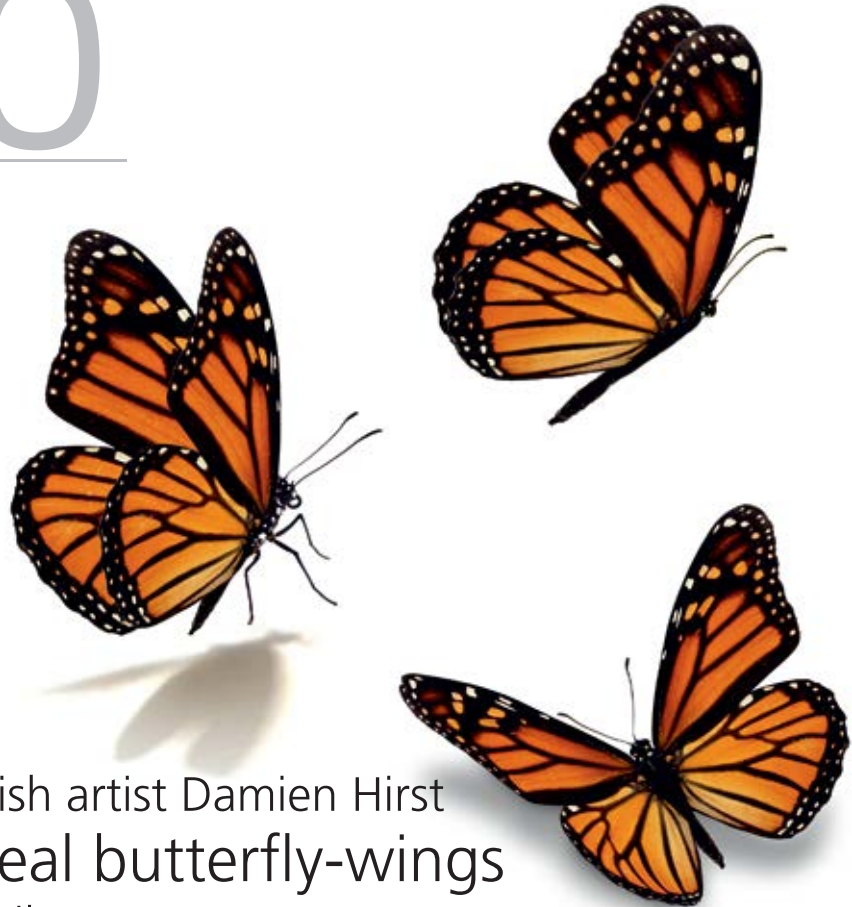
No 109

- Built in 2017
- 8 m high



The most expensive bicycle sold

No 110



- Created by British artist Damien Hirst
- Decorated by real butterfly-wings
- Owned by US-biker Lance Armstrong
- Sold in 2009: 318.000 Pounds / 354.000€

The most expensive bike in the world

No 111



- Made with 24-karat gold
- The emblem includes 600 black diamonds and 500 golden sapphires
- Valued at \$1.000.000 US \$

Tips to buy a Pedelec



No 112



Try it:

You should to try your Pedelec before you buy it as so you can „feel“ the interaction of rider and bike.

Weight

An E-bike’s weight can be up to 30 kilos. This may be too much for the bicycle carrier on your car. Check this before you buy.

Battery

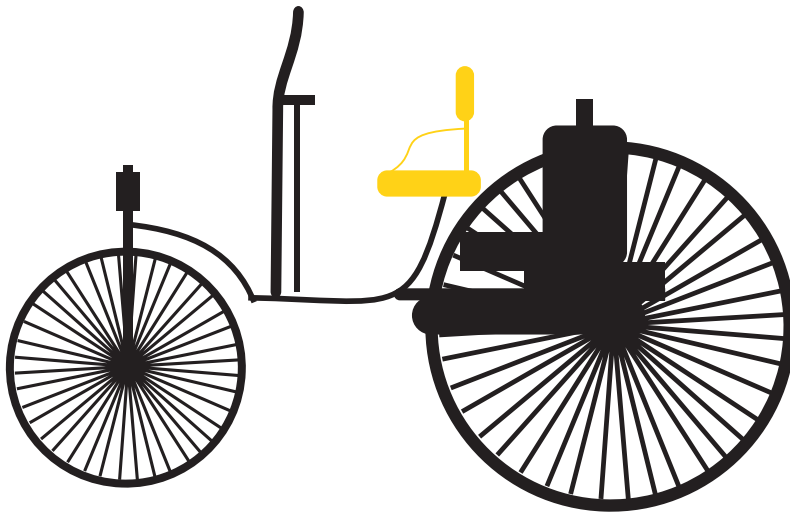
How much capacity you need depends on your needs. Usually you can ride between 30 to 80 kilometers per charge, but the greater the battery capacity the more you need to charge the battery afterwards.

Brakes:

Because if the higher speed of Pedelecs you are will need have reliable brakes. Best choice are hydraulic rim brakes or disc brakes.

Carl Benz and the Bicycle

No 113



- Carl Benz bought an old „Tretkurbelrad“ made out of wood and iron wheels.
- He liked the idea of independence (no horse, no railways) and fast movement.
- But he made some changes:
 - 2 wheels are were just not enough
 - He wanted his means of transportation be as comfortable as a droshky carriage with a machine doing all the work.
- 1885 Carl Benz introduced the first “gas velociped” powered engines.