



CREATIVE™ engineering

maker Girl



20 in 1 MODELS

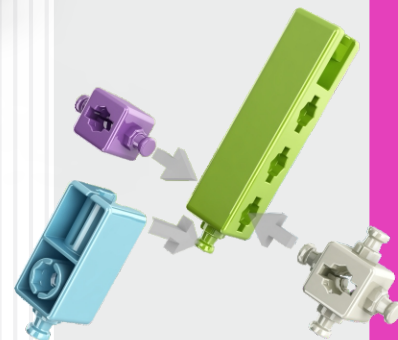
2
models

printed
instructions
(included)



18
models

online
3D instructions



⊕ SNAP-FIT SYSTEM



3D INTERACTIVE INSTRUCTIONS

- BUILD
- PLAY
- LEARN
- INVENT

STEM



ENABLED

7+

Appropriate
Ages



Building
Instructions

3

Years
Warranty



Extraction Tool
For easy disassembly
of small parts

Theory

The History of Automotives

Cars, also called “automobiles” were first invented and perfected in France and Germany in the late 1800's. Americans however quickly came to dominate the automotive industry in the first half of the twentieth century. Henry Ford innovated mass-production techniques that became the industry standard. Ford, General Motors and Chrysler emerged as the “Big Three” auto companies by the 1920's.



The History of Motorcycles

The history of motorcycles begins in the second half of the 19th century. Motorcycles are descended from the "safety bicycle", a bicycle with front and rear wheels of the same size and a pedal crank mechanism to drive the rear wheel. A motorcycle was often called a bike, motorbike, or cycle which was a two or three-wheeled motor vehicle.

Car historical record



The Liebherr T 282C is the ultimate monster in automotive at the moment! It is the size of a house and its engine gives 3650hp. It weighs 252 tons and can carry up to 400 tons.



The worst traffic jam happened in Beijing, China in August 2012. The cars had formed a line of 100km long and took them 12 days to clear out.



The price of a Lamborghini Veneno reaches €3.5 million. It's a limited edition designed for the 50 year celebration of the company. The Veneno is made of expensive carbon fibers, it has a motor of 6.5 liters that gives it a power of 750hp, an acceleration of 0 -100km in just 2.8 seconds and a top speed of 355km.



Did you know?

The most sophisticated cars so far are hybrids that combine fuel burning technology with electricity. These cars have two engines. They have an internal combustion engine that works with oil and gasoline, but also a small electric motor running on rechargeable batteries. During braking, energy is stored into the batteries, which can be used later by the motor in order to save fuel.



Hybrid cars are the future for saving energy

Types of Motorcycles



Sport Bike

Optimized for high speeds and acceleration. They feature higher foot pegs and a longer reach to the handlebars, which is beneficial when riding into the wind at higher speeds. But, at lower speeds, sport bikes can be tiring because they put more weight on a rider's hands and wrists.



Cruiser

The riding position places the feet forward and the hands are relatively up high, so that the spine is erect or it leans back slightly. During low speeds, cruisers are more comfortable than other styles, but riding for long periods on a freeway can lead to fatigue from pulling back on the handlebars to resist the force of the wind against the rider's chest.



Did you know?

The first motorcycle built by Gottlieb Daimler in 1885 was a motorized wooden bicycle with two small auxiliary wheels. There was a tri-clutch because its lined saddle was like a horse saddle. The vehicle was a carriage rather than a motorized vehicle. This first motorcycle was considered to be modern at the time.



The inventor of the motorbike

Equipment you need to ride a motorcycle

Helmet

The most important equipment you need to have to ride a motorcycle is a helmet. There are a lot of advantages choosing to ride with a helmet. The most significant advantage when you wear a helmet is to protect your head and stay alive. There are six types of helmets such as full face, modular, open face, half helmet, off-road, dual-sport and people choose whatever they want.



Leather Gloves

The second most important piece of equipment is gloves. Gloves are able to protect your hands if you fall off the motorcycle. Without gloves, there is nothing to protect your hands, so you can break or even lose your fingers. They also protect your hands against the wind if you get weatherproof gloves or you can find gloves that are more aimed towards keeping you cool in the summer months.



Motorcycle Jacket

A motorcycle jacket is a piece of safety gear, mainly because it keeps you warm in the cool weather and you also look cool to others. However, wearing a jacket might increase your temperature and cause you to sweat a little, but if you do end up in a crash, you will be thanking yourself since your skin will stay intact due to its thick textile.



Motorcycle Boots

Another part of motorcycle gear is motorcycle boots. Motorcycle boots look great, but they also provide you with traction and protect the small bones in your feet in the case of a crash. The main rules when it comes to motorcycle footwear are to make sure they are strong and they offer protection over the ankle.



Car Safety



Seat belts

The three point seat belt was part of the basic car equipment of the Volvo company in 1959. The use of the seat belt became obligatory in all seats in 1993. Seat belts significantly minimize injuries. Research has shown that in frontal impacts, if the back seat passengers do not wear a seat belt, they are ejected and crash on the front seat passengers, increasing the death risk of the front passengers five times.



Airbags

The airbags are a passive safety system. During an impact, the airbags protect the passengers from violent collisions. Ford started offering car models with the option of airbag installation in 1971. Since there was no response from the buyers, their production stopped. In 1980, Mercedes brought the airbags back in the models of the S-class series. Other companies followed in Europe, Japan and America.



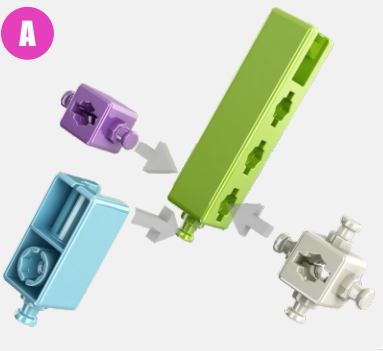
Brakes

The most significant discovery in the evolution of disc brakes is the use of the Anti-lock Braking System (ABS). The system prevents the blocking of the wheels during braking, thus making the car stop in less time. It also gives the driver the opportunity to change the course of the car. Research has shown that ABS minimizes the impact chance in cars by 18%.



Building Tips

A

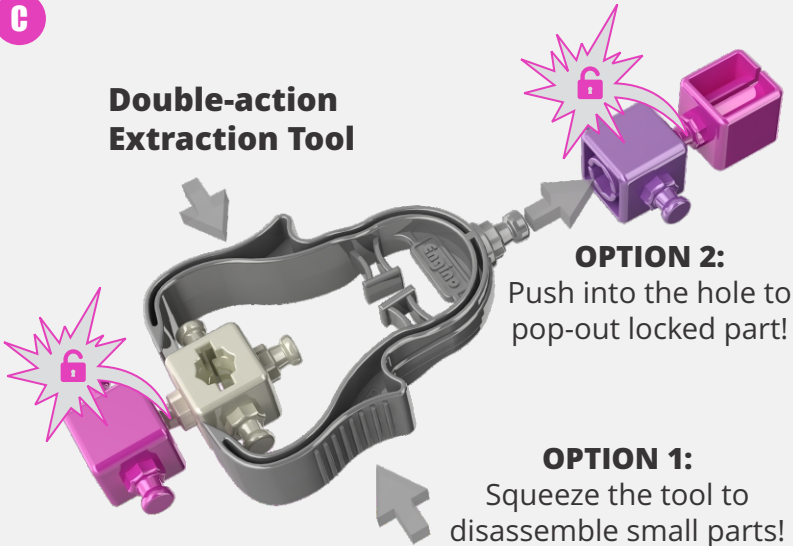


B



C

Double-action Extraction Tool



OPTION 2:

Push into the hole to pop-out locked part!

OPTION 1:

Squeeze the tool to disassemble small parts!

Free App

A

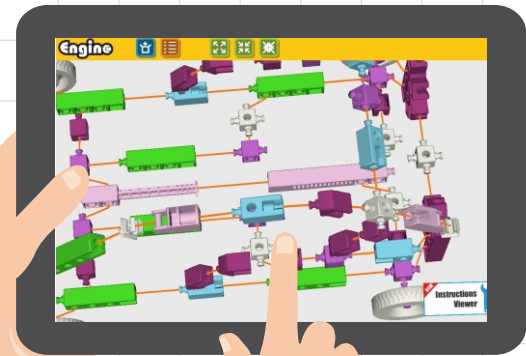
Use your PC or tablet and go to the following link for more models:

www.engo.com/instructions/ce202mg-a

B

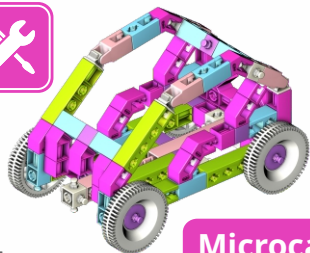
Download the app to discover step-by-step instructions in 3D view!

Engino kidCAD (3D Viewer) app:





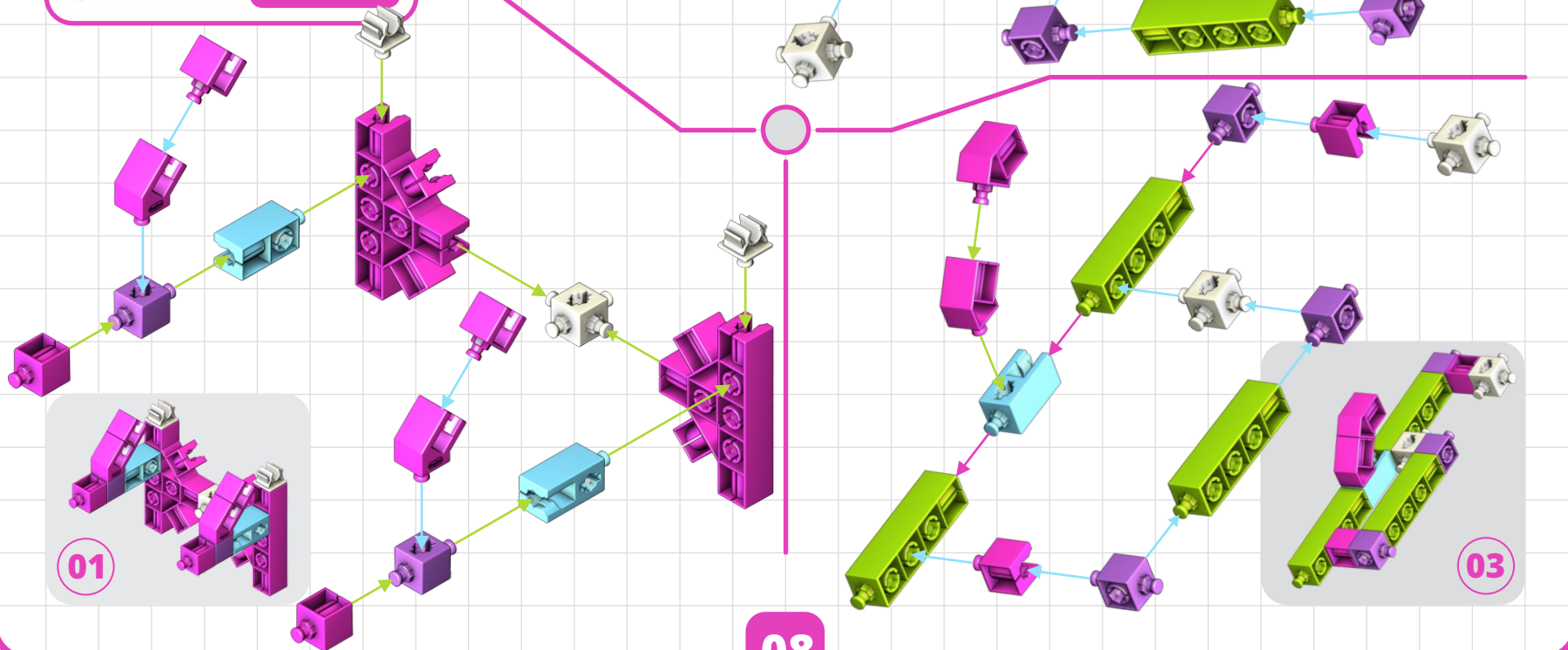
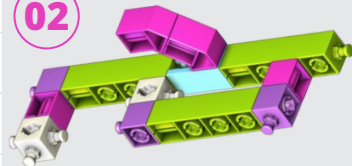
Building Instructions



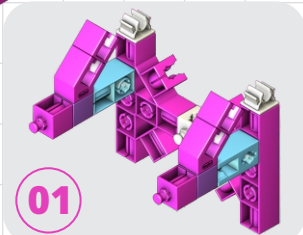
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Microcar

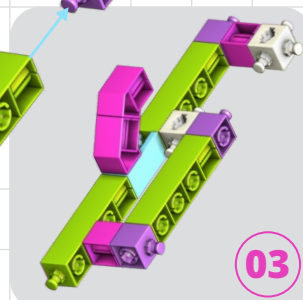
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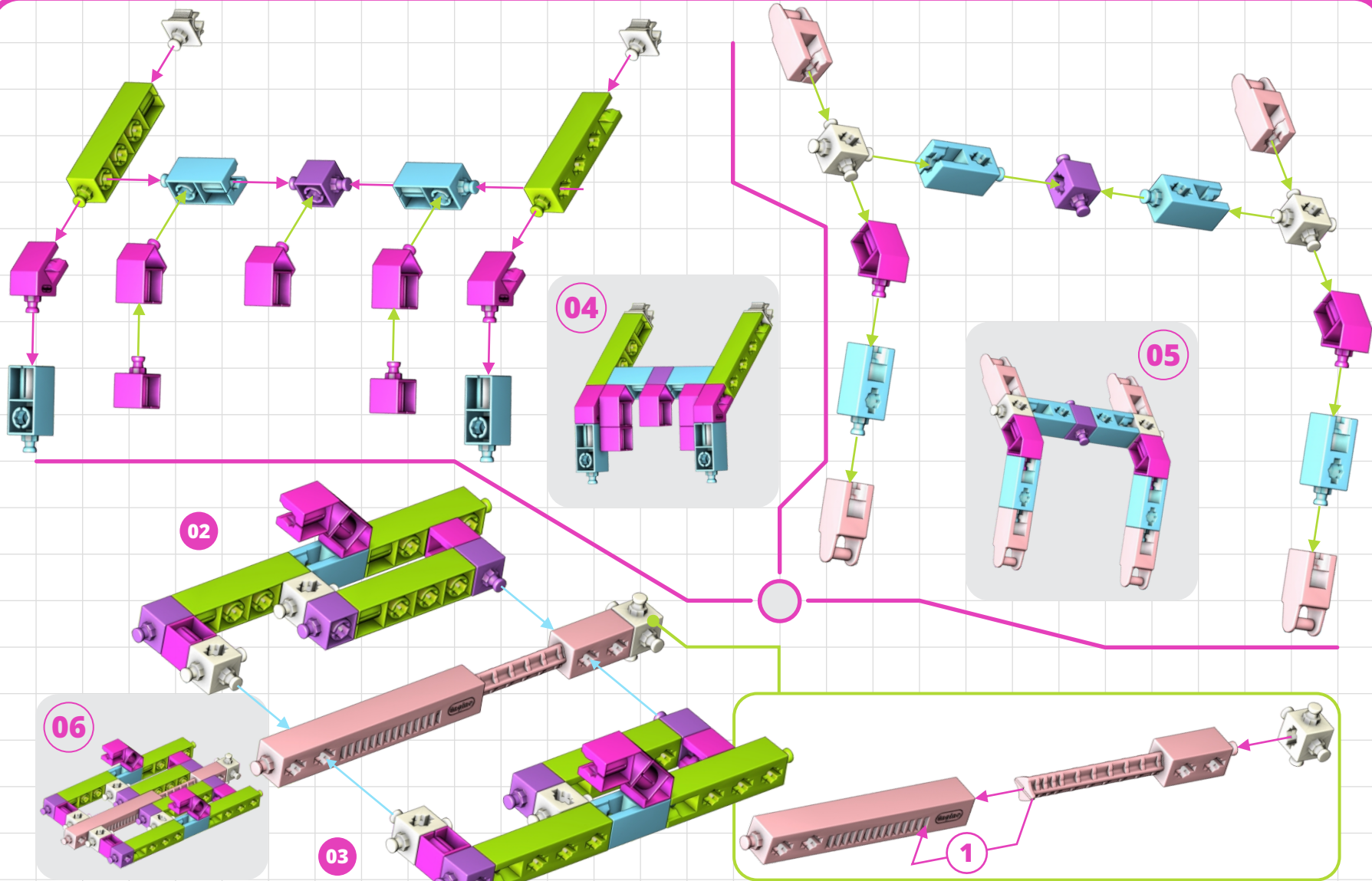


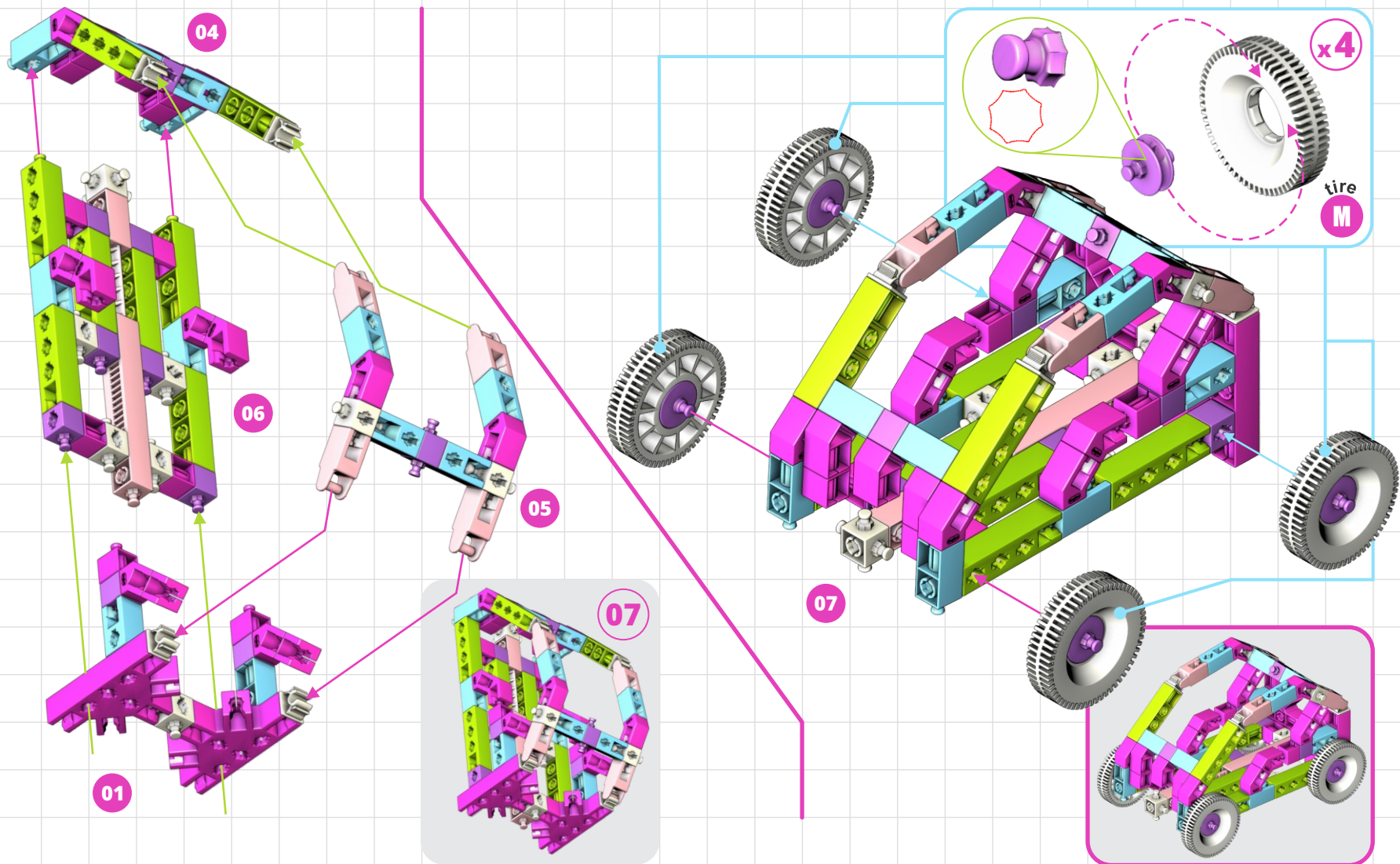
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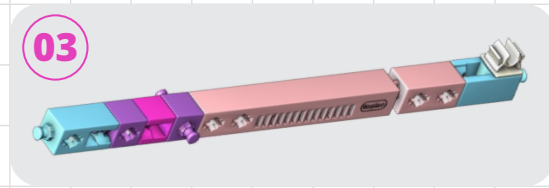
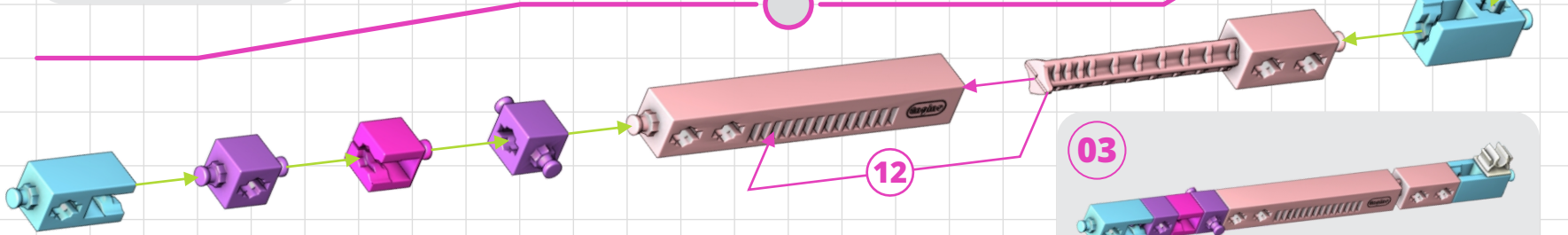
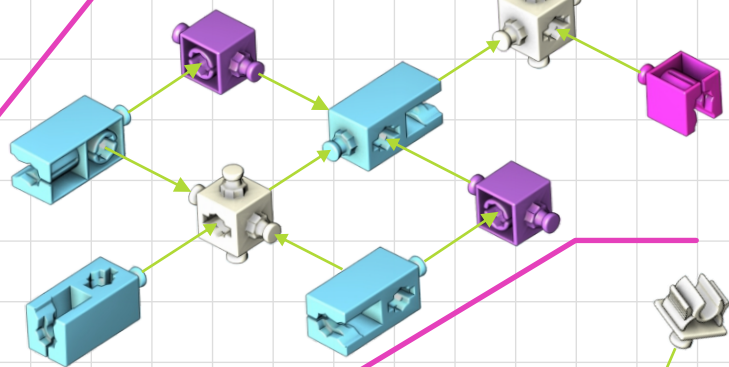
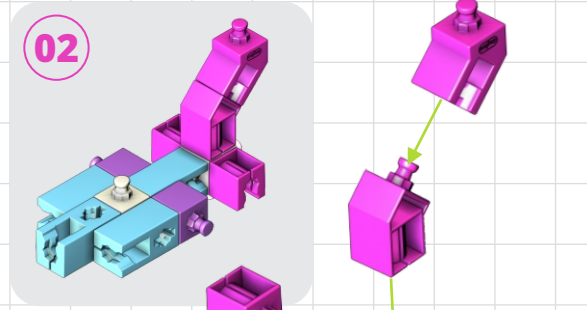
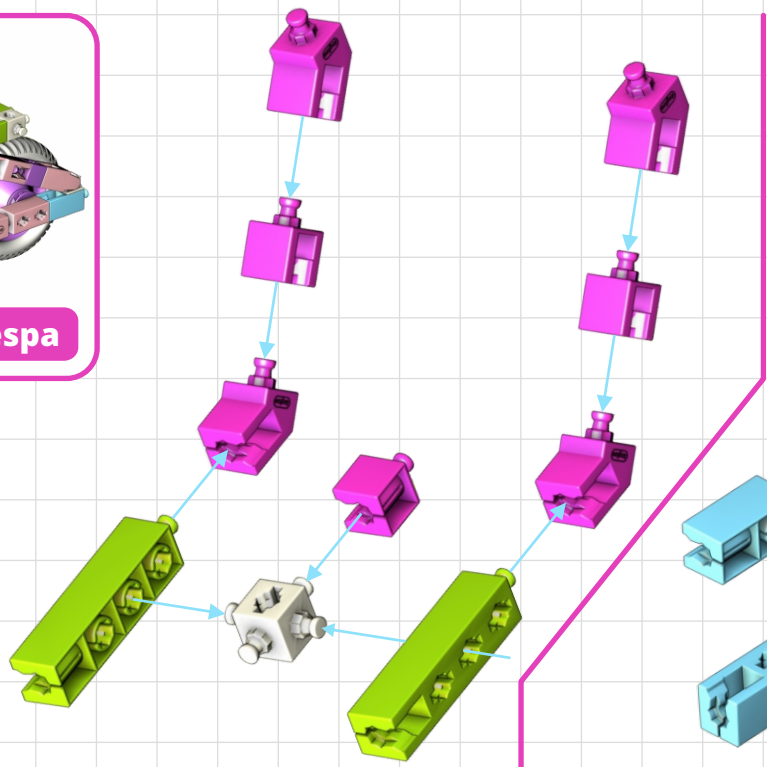
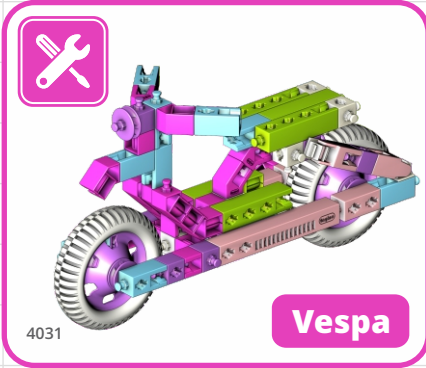


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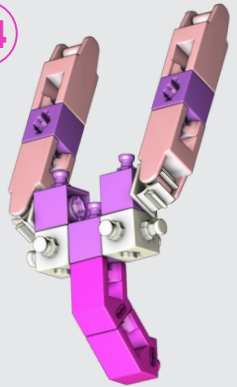




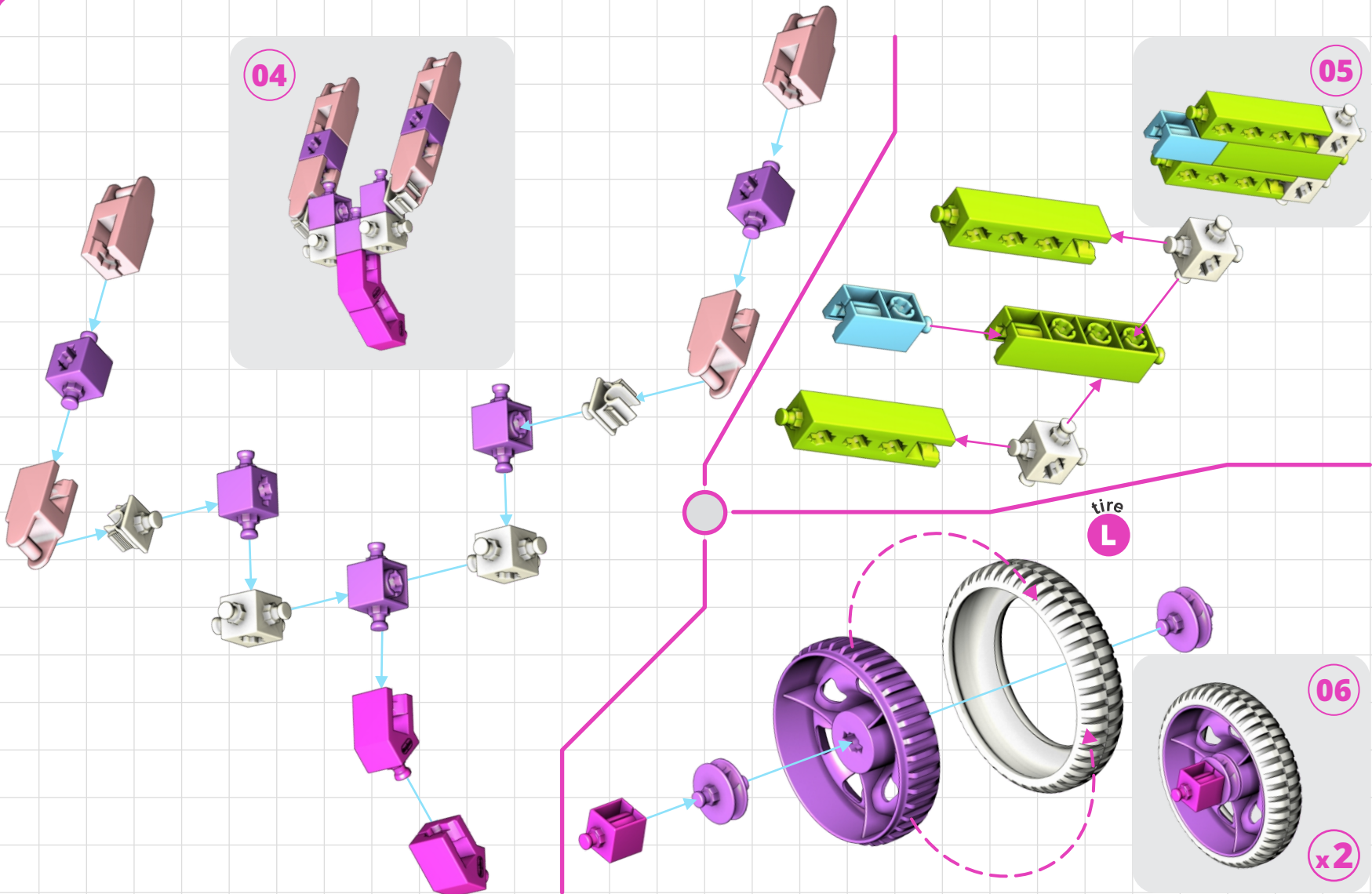
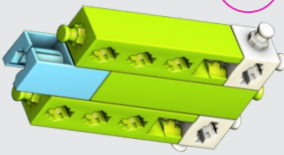




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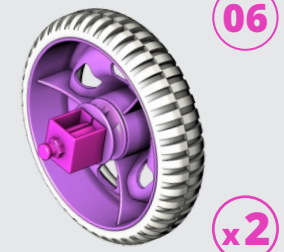


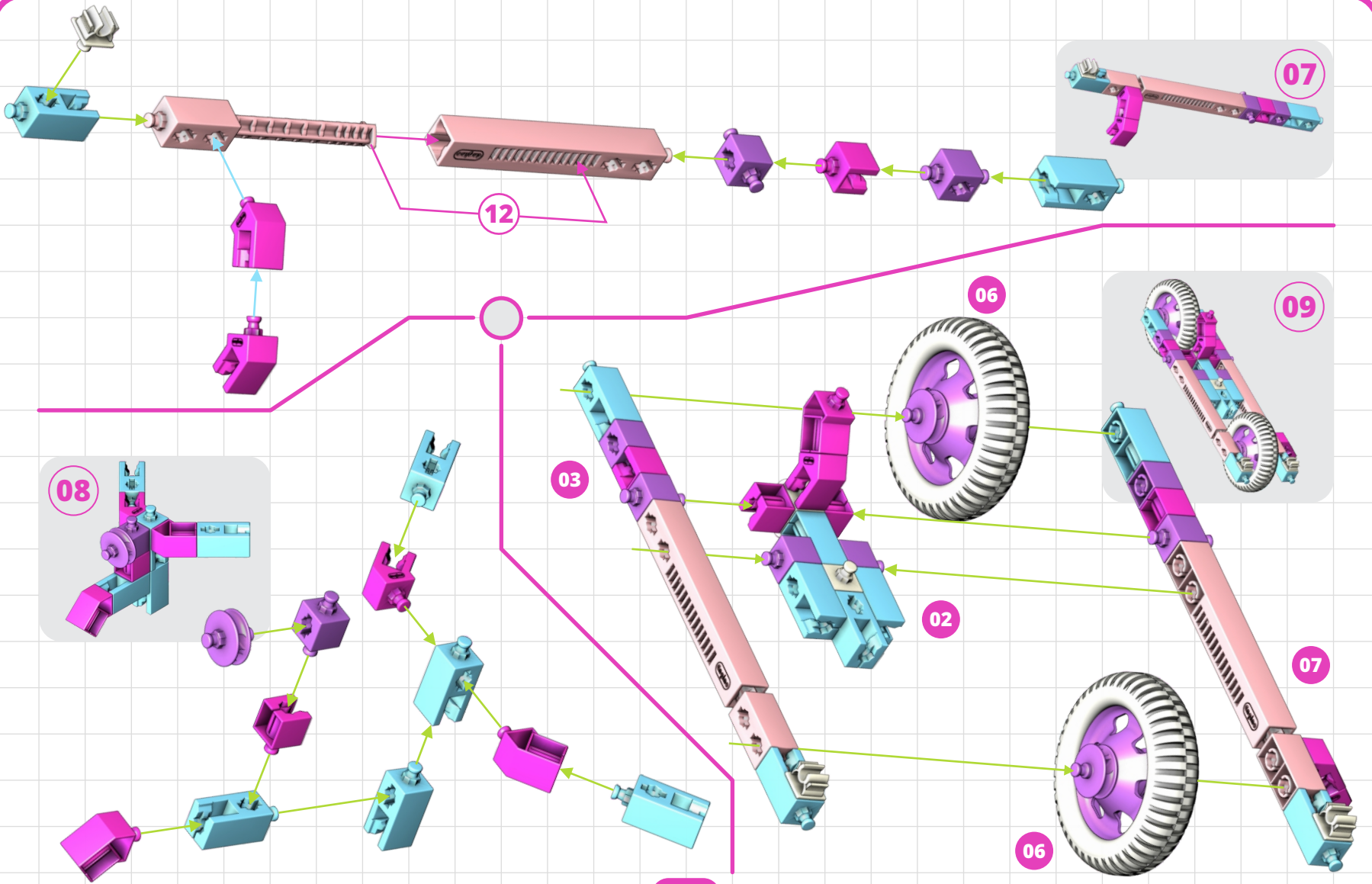
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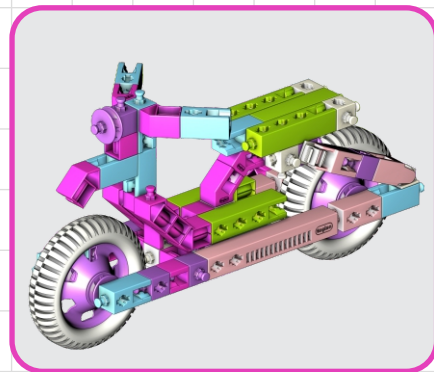
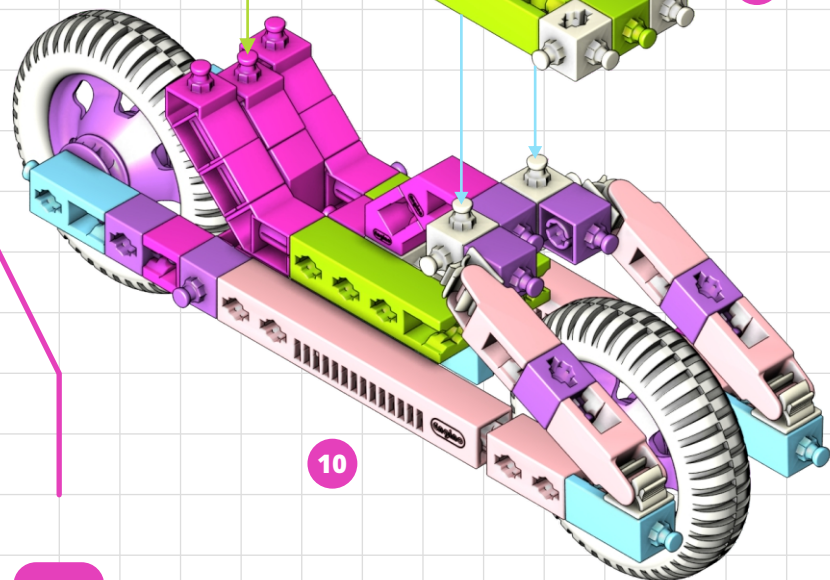
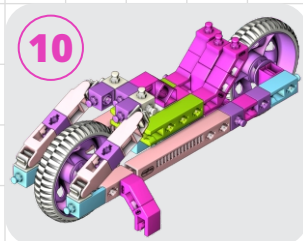
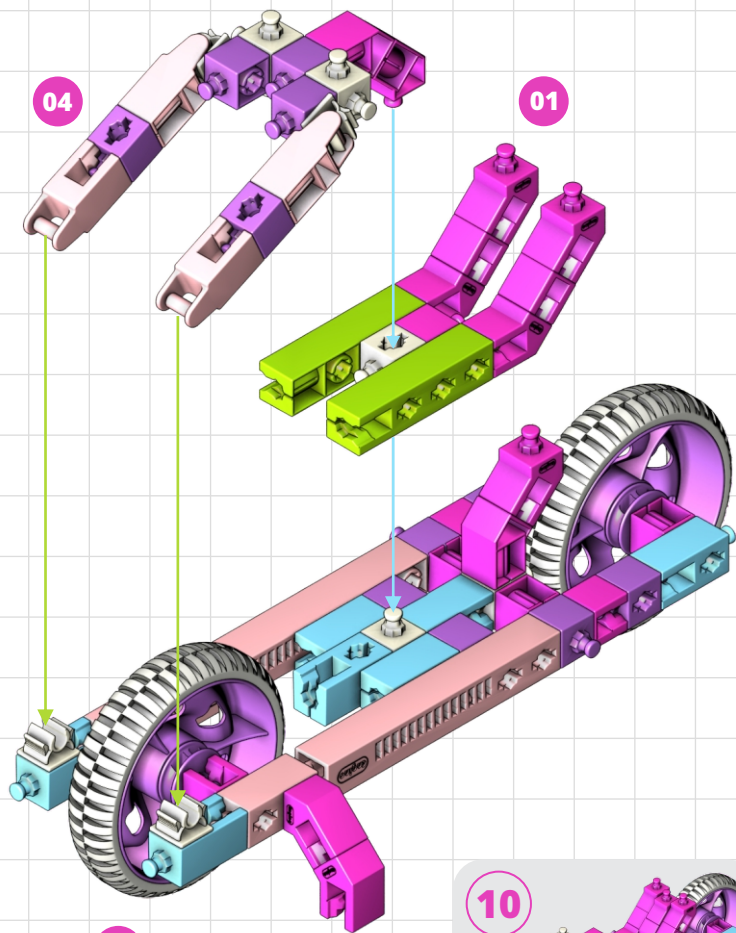


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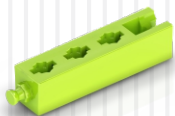
06







Bill of materials



x12
S004-09



x14
S005-12



x10
S006-20



x12
S010-19



x10
S007-00



x5
S013-18



x5
S011-00



x16
S009-20



x1
S014-19



x6
S012-19



x2
S016-20



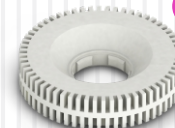
x1
S015-19



x2
S018-19



x2
S017-01



x4
S019-01



x4
S020-01



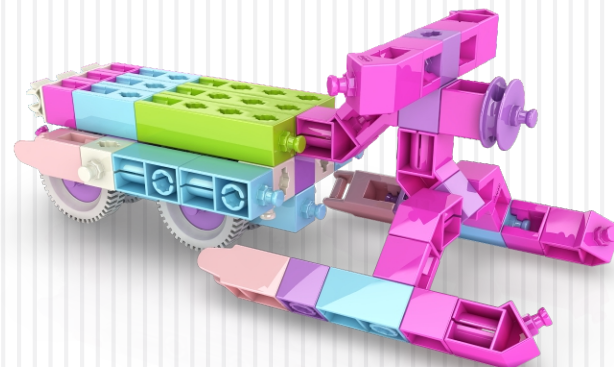
x2
S001-18



x2
S002-18



x1
M006-04



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WARNING:

CHOKING HAZARD—Small parts.
 Not for children under 3 yrs.



Made in
EUROPE

Product code:
CE202MG-A

