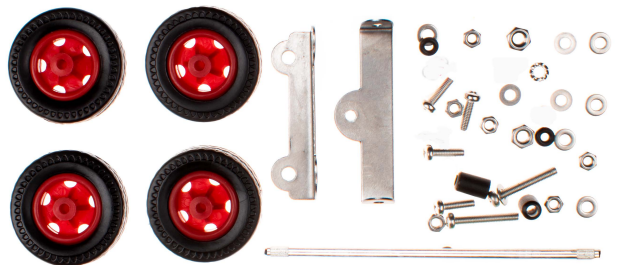


**Model No.: RESK-02C-1/RESK-02C****Do-It-Yourself Chassis Kit/Classroom Pack** **Warning!**

To avoid the risk of property damage, serious injury or death:

This kit should only be used by persons 12 years old and up, and only under the supervision of adults who have familiarized themselves with the safety measures described in the kit. Keep small children and animals away, as it contains small parts that could be swallowed. Read the instructions before use and have them ready for reference.

**IMPORTANT:** This product is an add-on kit to Horizon product RESK-02B-1 DIY Fuel Cell Kit /RESK-02B DIY Fuel Cell Classroom pack. Therefore some parts mentioned in this manual might be parts of RESK-02B/RESK-02B-1 package and viceversa.



**DIY Chassis Kit /  
DIY Chassis Classroom Pack 12x**



## List of components

|                          | RESK<br>02C-1 | RESK<br>02C |                        | RESK<br>02C-1 | RESK<br>02C |
|--------------------------|---------------|-------------|------------------------|---------------|-------------|
| Wooden Chassis           | 1X            | 12X         | Small Nut              | 6X            | 72X         |
| Wheels                   | 4X            | 48X         | Big Nut                | 2X            | 24X         |
| Axle                     | 1X            | 12X         | Short Screw            | 4X            | 48X         |
| Front Wheel Supporter    | 1X            | 12X         | Long Screw             | 2X            | 24X         |
| Fuel Cell Holder         | 1X            | 12X         | Flat Metal Washer      | 7X            | 84X         |
| Front Wheel Bumping Post | 2X            | 24X         | Metal Profilled Washer | 1X            | 12X         |
| Rubber Washer            | 2X            | 24X         |                        |               |             |



Wooden Chassis



Wheels



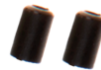
Axle



Small Screw



Small Nut



Front Wheel  
Bumping Post



Rubber Washer



Long Screw



Big Nut



Front Wheel Supporter



Flat Metal  
Washer



Metal Profilled  
Washer



Fuel Cell Holder

## Safety Information

Before you start working with the Horizon DIY Chassis Kit/Classroom Pack take notice of the following. Under certain circumstances, hydrogen can create an explosive gas mixture. Though these devices in this box are designed such that they can be used as described without danger, the advice below must be followed at all times:

- The fuel cell and hydrogen storage may not be operated without supervision of adult person.
- Hydrogen (H<sub>2</sub>) is much lighter than air and thus rises rapidly. In conjunction with oxygen, a gas mixture capable of explosion can form. A potentially explosive mixture arises for hydrogen concentrations from 4.0 to 77.0% in air. Therefore, it holds that:
- The fuel cell must only be operated either outside or in sufficiently ventilated rooms.
- Oxygen (O<sub>2</sub>) is a strongly oxidizing gas. When this gas gets in contact with organic substances (e.g. oil, grease) spontaneous combustion may occur at room temperature.
- Do not insert the cables into an electrical outlet.
- Do not connect the fuel cell or motor to other power sources.
- The removing and inserting of batteries is to be conducted by the adults only. Ensure to respect the polarity.
- Non-rechargeable batteries are not to be recharged.
- Different types of batteries such as rechargeable, alkaline and standard batteries or new and used batteries are not to be mixed and should be used separately.
- The battery pack cables are not to be inserted into an AC socket.
- The supply terminals of the battery pack are not to be short-circuited.
- The two spare red & black cables are not to be inserted into an AC socket.
- Discharged batteries are to be removed from the battery pack.
- Dispose of discharged batteries properly and without delay.
- Do not attach the battery wires directly to each other.

## Safe Experimentation

In following section you will find important instructions for parents, teachers, and students. All activities described in this manual can be conducted without risk if you follow instructions and rules conscientiously. To avoid the risk of property damage, serious injury or death:

1. Read carefully and fully understand the instructions before assembling this kit.
2. This product is intended only for use by persons 12 years old and up, and only under the supervision of adults who have read and understood the instructions in this user manual.
3. Pay special attention to the indications of quantity and to the sequence of the individual steps.
4. Some parts are small and fragile: please be careful when handling and connecting parts to avoid damage. Handle all parts and components with care.
5. Do not attempt to dismantle any part, item or component in this kit.
6. Keep small children away, because this kit contains small parts that could be swallowed.
7. Save these instructions and review frequently during use.
8. Do not eat, drink, smoke near the fuel cell device and hydrogen storage while building DIY car.
9. Clean your hands after use.
10. After using the reversible fuel cell, connect the silicon plugs to the nozzles, and seal the fuel cell in a zip bag. Improper storing may lead to membrane drying out, which may consequently result in the fuel cell damage.

## Content

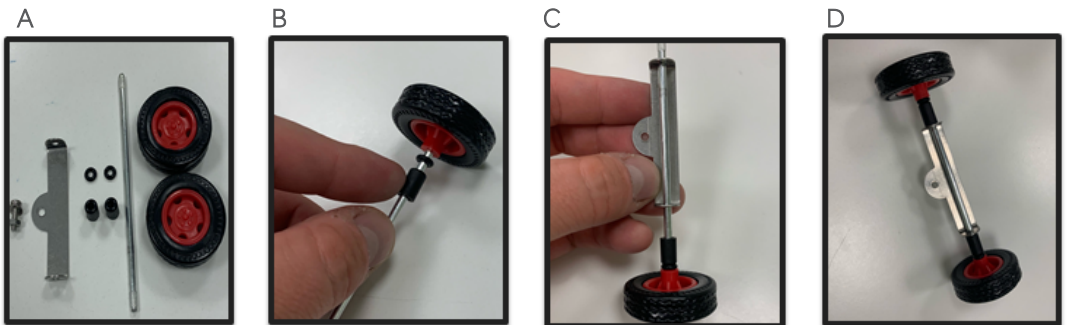
|   |   |
|---|---|
| 1. Assembling the front axle .....                    | 1 |
| 1.2 Attaching front axle to the chassis .....         | 1 |
| 2. Assembling the rear end .....                      | 2 |
| 2.1. Assemble the gearbox .....                       | 2 |
| 2.2. Attaching the gearbox to the chassis .....       | 2 |
| 3. Final assembly .....                               | 3 |
| 3.1. Attaching the mounting bracket to the Cell ..... | 3 |
| 3.2. Attaching the Fuel Cell to the Chassis .....     | 3 |
| 4. Project-DIY Chassis-Car Kit .....                  | 4 |
| 5. DIY RACE .....                                     | 5 |

## Assembling Front Axle

Start by identifying all essential front end components: 2x wheels, axle, 2x rubber washer, 2x front wheel bumping post and front axle supporter. (A).

Next attach a wheel to one side of the axle and press on firmly. Once this is done, slide on a rubber washer and a front wheel bumping post as seen in (B).

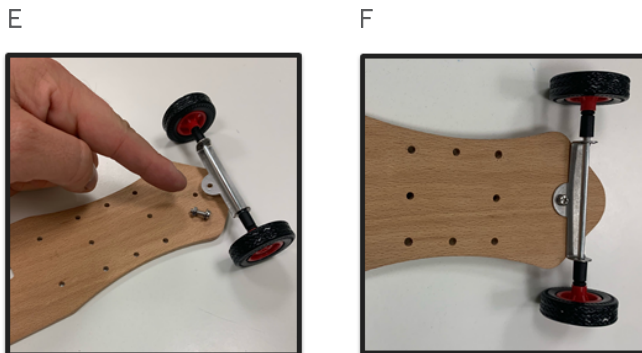
Now slide on the front axle supporter, the front wheel bumping post, the rubber washer, and finally press on the other wheel so that all firmly. See pix (C) and (D) for visual reference.



### Attaching Front Axle to the Chassis

Locate the frontend mounting hole at the front of the Chassis (E).

Use the short screw and attach the axle to the Chassis (F). This could be done by hand or by wrench and screwdriver. (Note: wrench and screwdriver are not included in this kit).

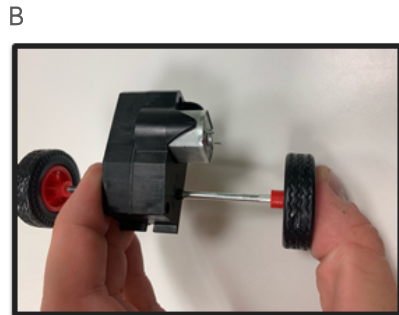
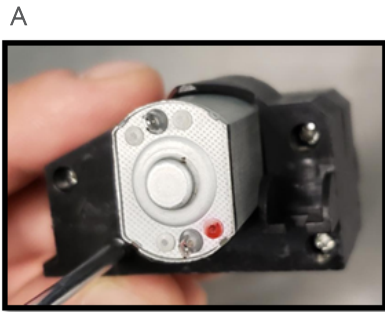


## ASSEMBLE THE REAR END

### Assembling the Gearbox

Attach the Motor from RESK-02B to the gearbox by sliding it in the appropriate location. Make sure to push in firmly so that the gear on the motor properly engages the gears in the gearbox. (A)

Firmly press on the wheels to both ends of the Axle. (B)

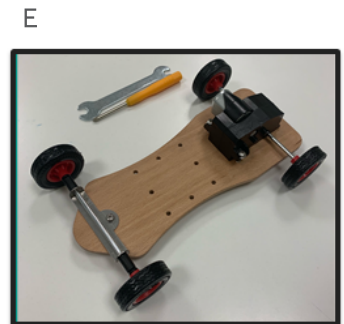
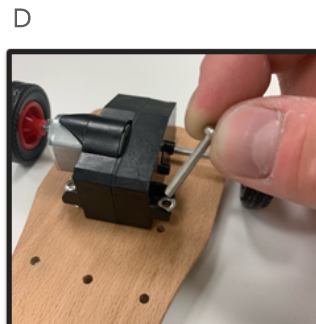
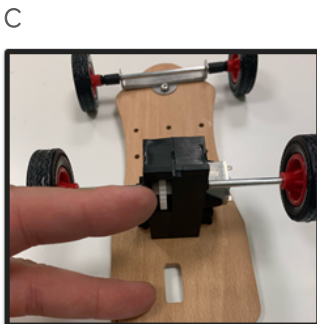


### Attaching the Gearbox to the Chassis

Make sure the hole in the chassis is aligned to the exposed gear on the Gearbox. (C)

Use 2 of the long screws to attach the gearbox to the Chassis. (D)

Use the provided Screw Driver and Wrench to firmly tighten the screws. (E)



Wheel alignment can be changed depending on which direction you want the vehicle to go. For best results set as straight as possible for easy distance calculation.

## FINAL ASSEMBLY

### Attaching the mounting bracket to the Cell

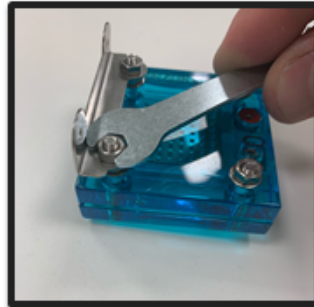
Locate fuel cell holder and attach to the fuel cell from RESK-02B where the threads are exposed (A).

Use the Wrench to securely fasten the bracket to the Cell. You can do this step with or without the tubes attached. (B)

A



B

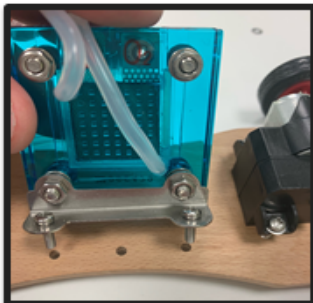


### Attaching the Fuel Cell to the Chassis

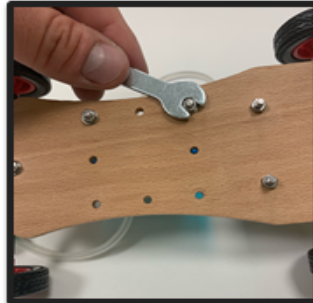
Insert the short screws into the mounting holes on fuel cell holder and use them to locate the mounting holes on the chassis. There are 3 possible sets of holes to choose from, so it is up to you to choose which mounting holes to use (C).

Use the Wrench and Screwdriver to tighten the screws to the nuts on the bottom side of the chassis (D).

C



D





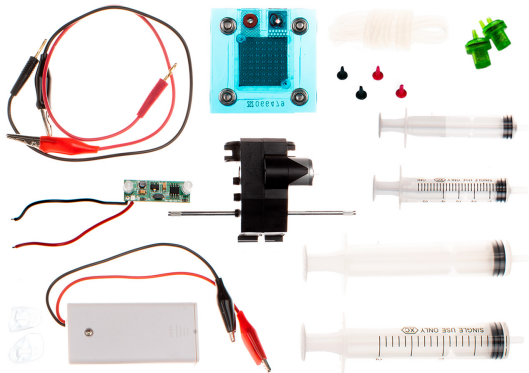
## PROJECT

### DIY Chassis Kit - Car

DIY Chassis Kit  
(RESK-02C-1)

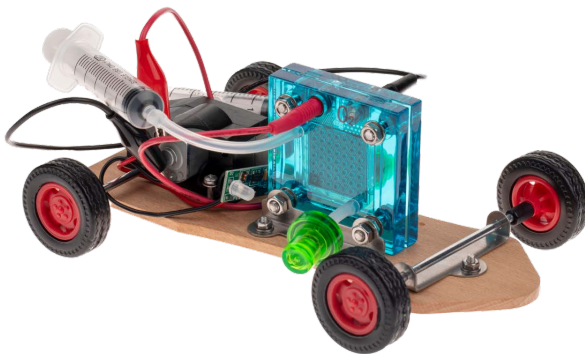


DIY Fuel Cell Kit  
(RESK-02B-1)



+

=



powered by:



[www.horizoneducational.com](http://www.horizoneducational.com)

Horizon Fuel Cell Americas, Inc.  
2531 W 237th Street, Ste 101  
Torrance  
CA 90505  
United States of America

Horizon Fuel Cell Europe s.r.o.  
Narodni 416/37  
110 00 Prague  
Czech Republic