40460 Roses

Set adapted by Jordi Isus and tested by Saqib Shaikh.

Mark a special occasion with these LEGO® Roses (40460). They're the perfect gift for Valentine's Day, Mother's Day or just to let someone know how much they're cherished – and they'll bring a beautiful burst of color when displayed in a vase. This easy-to-assemble set comes with 2 red blooms, green leaves and length-adjustable stems. Combine with LEGO Tulips (40461) to add extra color to this brick-built bouquet. The set is also compatible with the LEGO Flower Bouquet (10280). Show someone how special they are with this LEGO® Roses (40460) building kit. It makes the perfect Valentine's, Mother's Day or just-because gift. Includes 2 buildable red roses with adjustable stems. Each rose stem measures over 10 in. (26 cm) long – perfect for displaying in a vase.

In front of the box there are two tilted roses made from LEGO pieces. The roses are red with green leaves. The background of the box is light pink.
In the back of the box there is an image of the 2 roses lying on their sides. The box has a pink background and in the upper right corner is the LEGO logo along with the recommended age indication, which is 8+.
The build is 120 pieces in total and 17 building steps.

Welcome to text-based instructions from Bricks for the Blind. Before you start building, here are some terms we will be using:

- In Front of/Front: towards you.
- Behind/Back: away from you.
- Up: towards the ceiling.
- Down: towards the floor.
- Stud: the bump on a LEGO brick. Example: A 2x1 brick has two studs on it.
- Vertically: going from front to behind.
- Horizontally: going from left to right.
- Upright: pointing up towards the ceiling.
- That one/ppp: previously placed brick.
- Plate: brick with studs.
- Tile: smooth brick without studs (unless otherwise specified).
- A jumper plate is a 1x2 plate with a single stud on top, or a 1x3 plate with only two studs on top.
- "Anti-stud" is a term for the portion of a LEGO brick which accepts studs, like the bottom of a plate or brick.
- Symmetrically: a mirror image. Example: If you place a 2x1 brick with technic connector on the front wall at the right, connector to the front, and then place another such brick symmetrically on the back wall, at the right, the technic connector of the second brick should point to the back, since it will be placed symmetrically.
- Centered-vertically: even amount of space in front of and behind piece.
- Centered-horizontally: even amount of space left and right of piece.
- Row: studs lined up horizontally (left to right/side to side).
- Column: studs lined up upright or vertically (top to bottom/back to front).

For builders with low vision, or a sighted building partner who may want to follow along with the printed visual instructions that come with each kit, PDF versions are always online at LEGO.com: [https://www.lego.com/en-us/service/buildinginstructions/60404]: As low vision users may benefit from viewing the instructions on a personal device where they can zoom in on content and use assistive technologies to enhance the visuals.

A note on LEGO Technic™ part names. These parts are somewhat different from regular LEGO bricks. Here are some definitions in case the builder or helper is not familiar with LEGO Technic™.

- Axles - An axle is a connector which has an X shaped cross-section. Because their cross section is not round, anything connected to an axle using an axle-hole will rotate with that axle. Axles are longer than they are wide, and the length of an axle corresponds with how many bricks long it is. Aka a 3L axle is three bricks long. Axles come in a variety of lengths, with a 2L axle being the shortest available. They may be combined with pins or have circular stops on them. A stop prevents the axle from sliding through an axle-hole at a specific point on the axle.
- Pins - A pin is a connector which has a circular cross section and a flanged notch out of one or both ends. This flanged notch allows them to click into bricks with a pinhole. Pins come with and without friction ridges, which are small bumps on the pin which prevent them from rotating freely. For standard pins, black is a high friction pin, and gray is a low friction pin. A standard-length pin is two brick lengths long, with a stop in the middle. This prevents a brick from being pushed from one side of the pin to the other. A 1L pin is one brick long and still retains the stop; however, it also includes a hollow stud at the other end. A 3L pin is three bricks long, and only contains a stop at one side, allowing two bricks to be pushed onto the other side of the pin. Pins may also have one side which is an axle.
- Technic brick - a brick which contains one or more holes which accept technic pins.
- Lift-arms - A lift-arm is a basic structural element, similar to a brick or a plate, but usually without any studs. It is a beam with rounded ends and with holes in it, with the same spacing as the studs on a LEGO brick. lift-arms come in a variety of lengths, including a 1x1 lift-arm which looks like a cylinder. Thick lift- arms are as wide as a LEGO brick, and thin lift-arms are half as wide as a LEGO brick, but not the same thickness as a LEGO plate! The holes in a lift-arm arm may accept axles or pins. They also come in a variety of shapes, including tees, ells and triangles.
- Gears - A gear is a functional element. They are typically discs with teeth on the outside, there are also worm gears which look like a spiraling cylinder! Gears connected by axles transmit or even transform rotational motion!
- Axle and Pin Connectors - These elements are typically smaller than lift-arms and are used to connect some combination of pins or axles. They might have pins or axles, as well as axle or pin-holes. They have a lot of different angle combinations! The simplest just connects two axles or pins together in a straight line.
- Bushes/Bushings - LEGO Technic™ uses bushes largely as spacers, but they also can reduce friction between rotating parts or can form useful elements such as handles. Bushes are typically light gray, generally cylindrical, and have an axle-hole running through the middle. They have a flange at the front and back to make it easier to pull on and off.

Sorting the pieces:

To begin a successful build, it helps to sort the pieces into groups, bags or small containers. Have a sighted friend or family member do this in advance following the instructions below. You will see that the pieces should be sorted into groups according to the building steps in the set. Doing this in advance makes locating the pieces easier. See below on how to sort the pieces to correspond to the steps in this set. Number the containers using letters A-Z, numbers or meaningful names. The parts will be collected into a small number of steps in the instructions. Example: Steps 1-3 means collecting all the parts used in steps 1, 2 and 3, and putting them in one container.

This LEGO set comes with 2 bags which are not labeled, and an instruction booklet.
Sort the pieces into groups as described below. Note that where there are multiple colors of the same brick in a step, the colors will be split across two groups to make telling the difference easier for the builder!
LEGO includes a few spareparts in case you lose something. Set these into their own group away from the rest, in case you need them later.

Bag 1 and 2:

Group 1 contains the pieces for steps 1-12.

Group 2 contains the pieces for steps 13-17.

Instructions:

Open bag 1.

Group 1
1.1 Find a dark green vehicle steering wheel with 2x2 center.
1.2 Place a green round 2x2 plate with axle hole on the center of the previous piece.

2. Find a second dark green vehicle steering wheel with 2x2 center and place it centered on the previous structure.

3. Place a red 2x2 round brick with axle hole centered on the previous structure.

4.1 We need to form a square structure on the center. Place a red 1x2-2x2 bracket vertically on the leftmost column, with side-studs pointing to the left. Place a red 1x2 brick with wing end horizontally, upright on the upper row of side-studs of the previous piece. The wing should point upwards.
4.2 Repeat step 4.1 symmetrically at the right.

5.1 Place a red 1x2-2x2 bracket horizontally on the back row of the build, with side-studs to the back. Place a red 1x2 brick with wing end horizontally, on the upper row of side-studs of the previous piece. With the wing pointing upwards.
5.2 Repeat step 5.1 symmetrically at the front.

6. Place a black 2x2 jumper plate in the center of the previous structure.

7.1 Let's make a part!
Find a green 1x1 brick with studs on 4 sides. Place a red, round, 1x1 flower plate on the top stud of the previous piece.
7.2 Place 4 1x1 red plates with tooth upright on each side even with the tooth pointing upwards. Now the four sides of the green 1x1 brick with studs on 4 sides are covered.
7.3 Place this sub-build on the main build, on the stud of the 2x2 jumper plate in the middle that you placed in step 6.

8.1 Let's make a part!
Find 4 red 3x4x2/3 plates with curvature, these pieces have the shape of a rose petal, they are curved and horizontally, at the front row there are 2 studs centered. Turn them upside down, with the 2 horizontal studs facing down in the front row.
8.2 Find a red 1x2 plate with clip on long side and place it on one of the previous pieces. Place it horizontally on the front row of anti-studs, clip to the front. Repeat 3 more times.
8.3 Insert each petal on the dark green vehicle steering wheel with 2x2 center placed in step 2 using the clips. The petal anti studs' side should face inwards.

9. Close the petals.

10. Turn the structure upside down. Place a red 4L axle in the hole of the dark green vehicle steering wheel with 2x2 center placed in step 1.

11. Repeat steps 8.1 and 8.2. Insert each petal into the dark green vehicle steering wheel with 2x2 center placed in step 1 using the clips. The petals should point down since we have turned the structure upside down in the previous step.

12. Find a green curved tooth with a clip. Insert it between two petals attached to the green steering wheel in the previous step, teeth curving upward. Repeat 3 more times.
Now repeat steps 1-12 for the second rose.
Now we have 2 roses. Let's call them rose A and rose B.

Group 2

Rose A
13.1 Let's make a part!
Place a black, 2L notched axle inside a dark green, 3L axle connector. place a second dark green, 3L axle connector on the other end.
13.2 Place the stalk into the rose's base.

Rose B

14.1 Place a black, 2L notched axle inside a dark green axle and pin connector angled 3. The dark green axle and pin connector angled 3 should bend towards us, with one at the top and one end towards us.
14.2 Hold the sub-group upright. Place a second dark green axle and pin connector angled 3 on the other end of the black, 2L notched axle. The dark green axle and pin connector angled 3 should bend towards us, with one at the top and one end towards us.
14.3 Insert a dark green, round, 1x1 plate with open stud into the right upper pinhole of the structure. Insert a second dark green, round, 1x1 plate with open stud into the left lower pinhole of the structure.
14.4 Insert 2 reddish brown, long cattle horns into the previously placed pieces of step 14.3. place the stalk into the rose's base.
In rose B, the stem is bent over and there is one thorn on each side of the stem.

15.1 Let's make a part!
Insert a gray, 3L axle into a dark green, 3L axle connector.
15.2 Insert a black round pin connector with 4 clips into the other end of the gray, 3l axle. Then insert the end of the gray 3L axle into the stalk of rose A.
15.3 Repeat steps 15.1 and 15.2 for rose B.

16.1 Let's make a part!
Insert a black, 2L notched axle into a dark green, 3L axle connector. Repeat it 4 more times. Stack these parts so that the stack is 5 3l axle connectors long with the black, 2L notched axle sticking out of one end. This is the rose's stem.
16.2 Attach the stem's sub-build of step 16.1 into the stalk of rose A.
16.3 Repeat steps 16.1 and 16.2 for rose B.

17. Insert 2 dark green 4x5x1 cockpits into the 2 clips of the black round pin connector with 4 clips. They are the leaves. Insert one at each side, Use the thorns as an orientation. The leaves should be connected on the same sides of the flower as the thorns. Two of the clips on the black round pin connector with 4 clips on each rose should remain empty. The leaves are pointing downwards.
Repeat with the other rose.

Congratulations! Now the set Roses is complete!

Thank you so much for building this set!

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