

# Surly Front Rack™

Thanks for choosing our Front Rack. You have a rack that is going to give you many years of reliable service. Use it, enjoy it, and depend on it.

## Design

The Surly Front Rack is fully adjustable to accommodate most forks. It works on forks that utilize 26–29” wheels with or without fenders, including all Surly forks...except the Pugsley fork (due to the offset of the Pugsley fork’s driveside blade). The height of The Rack can be fine-tuned to keep the weight of your cargo as low as possible. And, you can get the angle of your rack parallel to the horizon, regardless of your fork rake, curve radii, or braze-on locations. Your panniers can ride high or low. Keeping your weight low keeps your bike stable. But, in some cases you’ll want to run your panniers high to keep ‘em out of the tall grass or mud (if you’re riding on heavily rutted roads or trails). This rack is truly versatile.

## Construction

The Surly Rack is constructed of 4130 chromoly tubing, because it’s durable and repairable. It can be welded, brazed, and soldered in the rare instance that you’d need to repair it while you’re on a tour. Aluminum racks won’t afford you the same luxury. The tubing wall thicknesses vary according to the stress loads they will have to bear, because we want to optimize the strength-to-weight ratio of the rack. We’ve included braze-ons that may be useful to you: Front through-eyelet...use it to attach a light or home-made flat fender. Rear through-eyelet...attach a flat fender or add an additional/alternate rack strut to the crown of your fork. Bottom braze-ons...these keep your rope, bungies, or panniers in check. Your rack is phosphated and powdercoated to keep corrosion at bay. The included hardware is made from aluminum and stainless steel. These materials were chosen for their corrosion resistance and superior strength-to-weight ratios for their given applications.

## Capacity

Your Rack will haul up to 32kg (70 pounds) of well-secured, well-balanced gear over roadways and maintained off-road trails. The rack capacity goes down as the road or trail gets rougher. If you load it appropriately, it will serve you well for many years.

## Tools

4mm hex wrench  
8mm open end wrench  
Hacksaw  
File or bench grinder  
Grease  
Electrical tape or friction tape  
Tape measure, ruler, or caliper  
Marker or grease pencil (optional)  
Level (optional)  
Linseed oil, Framesaver, Boeshield,  
or engine fogging oil (optional)

## Hardware list:

- (4) M5 x 12mm stainless steel socket head cap screw with included washer
- (4) M5 x 16mm stainless steel socket head cap screw
- (12) M5 x 20mm stainless steel socket head cap screw
- (12) M5 x 25mm stainless steel socket head cap screw
- (16) M5 stainless steel locking nut
- (40) M5 x 12mm o.d. stainless steel flat washer
- (2) Upper Offset sliding plate
- (2) Lower offset sliding plate
- (2) Flat sliding plate
- (8) 1mm-thick aluminum spacer
- (8) 2mm-thick aluminum spacer
- (8) 3mm-thick aluminum spacer
- (2) Mid-blade adapter
- (2) Adjustable stainless steel band clamp (hose clamp)
- (2) 40mm x 60mm mid-blade adapter backing sheet

Adjustable hose clamp  
(2)



M5 nylock nuts  
(16)



Midblade fork adapter  
(2)



M5 x 12mm washers  
(40)



1, 2, & 3mm spacers  
(8 each)



M5 x 12mm  
(4)



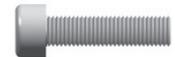
M5 x 16mm  
(4)



Upper offset sliding plate  
(2)



M5 x 20mm  
(12)



Flat sliding plate  
(2)



M5 x 25mm  
(12)



Lower offset sliding plate  
(2)



40 x 60 backing sheet  
(2)



## Assembly Instructions

**Read all of the instructions before assembling and installing your rack.** If you are unsure of your ability to install your rack correctly, take it to your local bike shop mechanic for installation. Failure to install your Surly Rack correctly could result in your injury or death. Of course, you could botch the installation, get lucky, and simply experience a series of frustrating complications and delays leading to a less-than-enjoyable ride. When in doubt, take it to the shop.

1. Find a clean space on a workbench or table for assembly. And, work in an area that gives you adequate room to move around your bike. A cluttered workspace will complicate the assembly and installation procedure.
2. Inventory hardware. Gather tools and supplies.
3. Optional...apply oil or Framesaver to the inside of the rack tubes (through the vent holes) to aid in corrosion prevention.
4. Measure the distance between the fork dropout eyelets...outside to outside. **See figure 1.** Your measurement will be most accurate if there is a hub secured in the dropouts.
5. Calculate the number of spacers needed for attaching the offset sliding plates to the rack. Use this formula:

$$154\text{mm} - \text{eyelet spacing (measurement from step 4)} - 15\text{mm} = \text{spacer amount per side}$$

**Example:**  $\frac{154\text{mm} - 110\text{mm} (1 \times 1 \text{ fork eyelet spacing measurement})}{2} - 15 = 7\text{mm}$ . 7mm of spacers are needed between each offset plate and the rack.

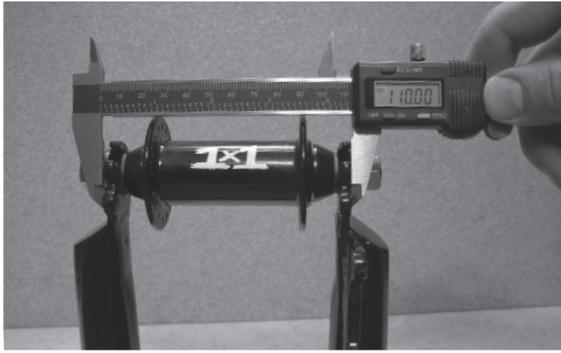


Figure 1

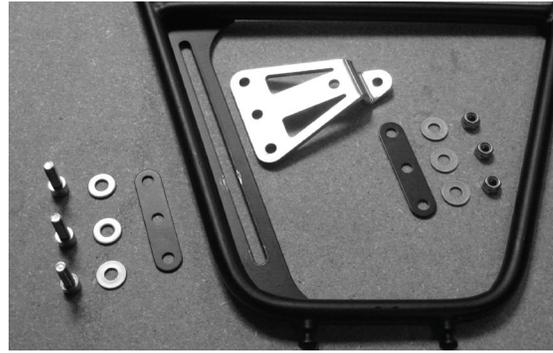


Figure 2

6. Attach lower offset plates to the bottom of the rack. Hardware assembly sequence for attaching each plate...from outside to inside: 20mm or 25mm cap screw...depending on spacer amount, washer, 1mm spacer, rack, spacers (from step 5 calculation), offset plate, washer, locking nut. **See assembly references in figures 2 and 3.** Don't tighten the hardware, yet. It must be loose enough to allow the assembly to slide up and down.



Figure 3



Figure 4



Figure 5

7. It may be easiest to complete this step with the wheel removed and the bike resting upside-down on the floor. Attach the offset plates to the fork using the 12mm cap screws. Apply grease to the 12mm bolts before installation. The bolts should be snug, but loose enough to allow the rack to pivot. This allows you to level the rack before all the hardware is tightened. **See Figure 4.**

Our lower offset sliding plate will allow mounting of the front Rack to forks with disc brake calipers. If the disc caliper does interfere, the offset plate can be spaced further from the caliper using provided spacers and hardware. Note that doing so may result in asymmetrical spacing between the disc and non-disc sides. **See figure 5.**

8. Install the wheel in the fork, rest the bike upright on a level floor, and adjust your rack up and down to attain your desired height. Be sure to allow clearance, between the rack and tire, for debris accumulation and fender installation (if desired). Tighten the nuts of each lower offset plate to hold your rack's vertical position. Adjust the angle of your rack so its top surface is parallel to the floor. **See figure 6. Proceed to step 10 if you have mid-blade fork eyelets.**
9. Mid-blade adapters allow you to mount The Rack to forks without mid-blade eyelets. Every model of fork is different, so you'll have to determine the best location to mount the mid-blade adapters. The adapters should be secured as high as possible while allowing attachment of the upper sliding plates to the adapters and the rack. It's best to mock up the assembly to find the best adapter location. Then, the adapter can be securely fastened into its final position. This step may take a while, depending on the fork you're using and your level of mechanical competence. Don't expect to complete this step in 15 minutes.

- a. Loosely fasten an adapter (holes at the top) to a flat sliding plate using a 12mm cap screw and nut. The front hole of the adapter allows the most versatility for mounting. Curved-blade forks (like the 1x1 fork) usually utilize the front hole for final attachment. Straight-blade forks (like the Instigator fork) can often utilize the rear hole of the adapter plate; use the rear hole if possible. Loosely attach the sliding plate to the rack using 20mm cap screws and nuts. If the rear bolt tab of the mid-blade adapter is interfering with your rack, you need to remove this tab with a fine-blade hacksaw. Cut it as shown in **Figure 7**. Use a file or bench grinder to remove any burrs or sharp corners. Remember...it's stainless steel, so it won't corrode where you've cut it. Depending on the width of your fork, the sliding plate may be mounted on the inside or outside of the rack. 1x1, Instigator, and Karate Monkey forks require the plate to be mounted in the outside position. With the rack level, move the sliding plate to the top of the rack slot, and mark the position 5mm below the bottom of the adapter on the fork blade using tape, a marker or grease pencil. **See Figure 8.** Remove the adapter/sliding plate assembly from the rack. Remove the rack and wheel from the fork. Make another mark (or tape line) 42mm above the first line. **See Figure 9.** Mark the other fork blade in the exact same locations. Your cantilever boss, rack eyelet, or dropouts may be used as reference points for measurement...you'll have to determine the best reference point.



Figure 6

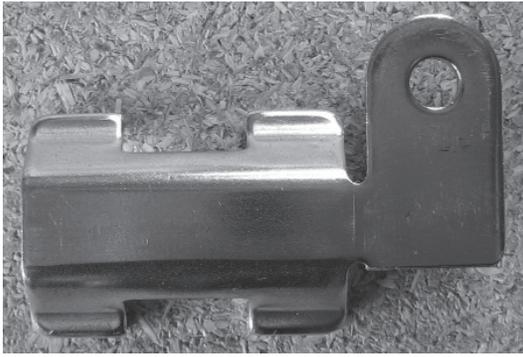


Figure 7



Figure 8

- b. Wrap 2 layers of electrical tape or friction tape around the fork blade between your marks. **See Figure 10.** If applicable, remove the marking tape at this time. Center the mid-blade adapter backing sheet over the taped area and tape it into place. **See Figure 11.** Tightly wrap the backing plate with a layer of tape to secure in place. **See figure 12.** Repeat this sequence for the other fork blade. Now, your fork blades are protected from abrasion, gouging, and denting from the mid-blade adapters.
- c. Using hose clamps, attach the mid-blade adapters to the fork blades as shown in **Figure 13.** The bolt tab should be pointing straight ahead. Don't fully tighten the hose clamps, yet. They may need minor angle and height adjustment before the final assembly is completed. Reattach the rack to the lower eyelets...leave the bolt loose enough to level the rack, and install the wheel.
10. Determine the number of spacers needed, for attaching the rack to the fork. Measure the distance between the rack and mid-blade eyelets or mid-blade adapters on each side. Average these measurements. Subtract 2mm or 15mm (the thicknesses of the flat or offset plates) from your average measurement. This gives you the spacer amount needed for each side.



Figure 9

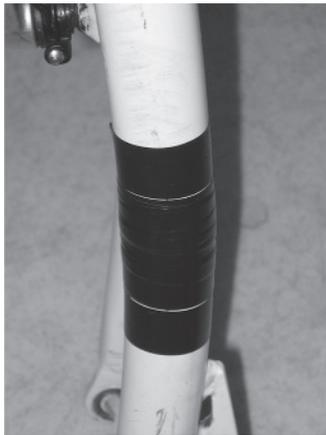


Figure 10

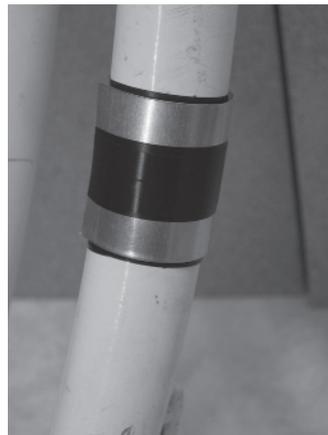


Figure 11

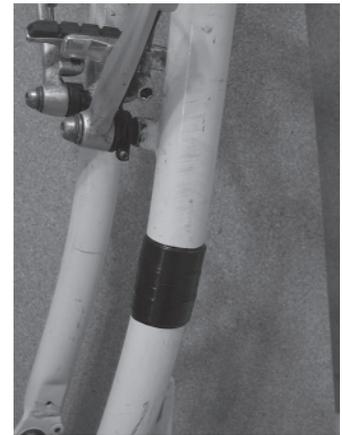


Figure 12

In some cases when mid-blade adapters are used on wide forks, flat plates should be attached to the outside of the rack (1x1, Instigator, and Karate Monkey forks, for example). Use this measurement to determine the number of spacers needed per side:

**Measurement between mid-blade adapters (outside to outside) - 158mm = Spacers needed**

**2**

11. Attach upper sliding plates to the rack. When sliding plates are located on the **inside** of the rack, the hardware assembly sequence is as follows...from outside to inside: 20mm or 25mm cap screw...depending on spacer amount, washer, 1mm spacer, rack, spacers (from step 10 calculation), sliding plate, washer, locking nut.

When sliding plates are located on the **outside** of the rack, the hardware assembly is as follows...from outside to inside: 20mm cap screw, washer, sliding plate, spacers (calculated in step 10), rack, 1mm spacer, washer, locking nut. Don't tighten the hardware, yet. It must be loose enough to allow the assembly to slide up and down.



Figure 13

12. Use a 12mm cap screw to loosely attach each sliding plate to the mid-blade eyelet or mid-blade adapter (using a locking nut). Level the rack. Tighten the sliding plate hardware. Tighten the 12mm sliding plate-to-eyelet (or adapter) screw (and nut). If applicable, tighten the hose clamp. Don't overtighten it. It's possible to ruin the clamp if too much torque is applied to the clamp tightening screw. Tighten the lower sliding plate-to-fork eyelet bolt. Check all of the hardware once more. Tighten if necessary. Final assemblies should look similar to **Figures 14 and 15**. Your rack should be level and centered on the fork and the wheel (assuming it's dished properly). If not, you'll need to loosen the appropriate hardware and move the rack around until proper adjustments are made.

13. Fender struts can be mounted to the holes in the lower sliding plates. See **Figures 16 and 17**.

You're going to have hardware left over. We included enough hardware for most installation scenarios. Some of your bolts may be too long for your aesthetic taste. Replace them or cut 'em off if you're losing sleep over it. We figured it would be best to err on the long side. Save all of your leftover hardware and these instructions, so you can easily move your rack to another fork if you desire to do so in the future. Your new rack requires little maintenance. Check the tightness of the hardware once in a while. And, spray a little oil inside the tubes on occasion, if you're prone to riding in wet conditions. Let us know if you have questions or concerns. And, tell us where you and your rack end up. We love to hear about your adventures.

### Limited Warranty:

Stuff eventually breaks or wears out if you use it enough. That's beyond our control. We guarantee this product to be free from defects in manufacturing and design for one year from date of purchase. It's guaranteed to not fail under normal riding conditions. Surly is not responsible for the actions you take on your bicycle, however, and cannot be responsible for products that break when not installed correctly or used inconsistently with the product's design. If you're not sure if something will work the way you want, contact us. If you destroy it, fess up, and maybe we can help you with some replacement parts to keep you riding.

Sorry, the finish isn't covered, nor is any damage that happens to you or other components as a result of any failure of one of our products. Lastly, if you modify or neglect our products, we can't be responsible for them or what might happen to you while you're using them.

All potential warranty items should be returned to the original place of purchase, accompanied by a sales receipt. In the unlikely event that this is not possible, give us a call or email us, and we'll do our best to get you back on the bike.

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Figure 14



Figure 15

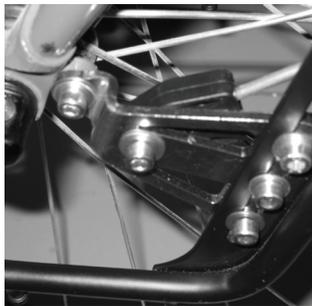


Figure 16



Figure 17