# Mercury 6x12 120 Back Instructions

Introduction

The Mercury 6x12 120 back is the first high-quality, low-cost, lightweight 6x12 back for the Graflok 45 mount. It is compatible with most large format cameras from all brands, including all 4x5 Mercury Universal cameras, as well as the Mercury Stereo 12 and M cameras for medium format stereo.

It features a robust design, smooth film transport, a metal darkslide, and a larger-than-standard 117mm wide frame. This is larger than any of the standard metal backs. We've found this to be the optimal width for medium format stereo photography, enabling 50mm wide mounted slides, while still providing structural stability. It also makes great panoramas on large format cameras.

Loading and Unloading

To load or unload, you need to remove the insert from the shell. You'll notice that there are two small bolts on the back, one on top and one on the bottom (the bottom one is circled in green in the image below). They prevent these two parts from separating. To remove, just unscrew them. When replacing these bolts, do not screw them on tight. They only need to be very loosely tightened in order to keep the parts together.
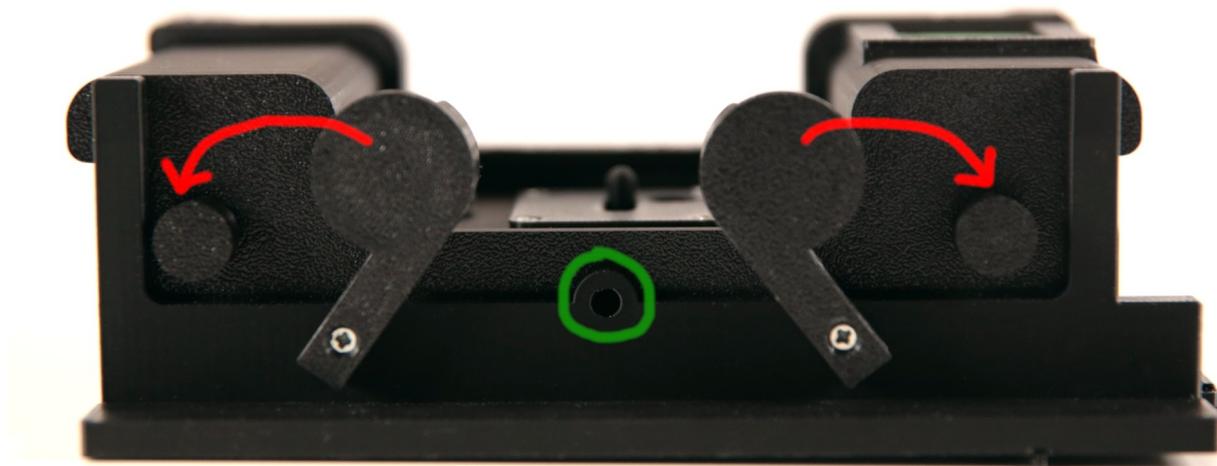
There are two "arms" on the bottom of the back that cover the two Spool Holders when the back is in operation. To unload, swing the arms toward the center of the back, into the position shown above. When loading the back, swing them outward, in the directions indicated by the red arrows.

Next, pull the Shell and Insert apart. Everything happens in the Insert from now on.

Pull out the two Spool Holders from the bottom of the insert. If one seems too tight, rotate it slightly until it becomes looser.

With your Spool Holders removed, you can now remove, move, or add 120 spools or rolls of film to the Insert. Your takeup spool is moved to the side under the large advance knob. Your fresh roll of film is loaded on the other (left) side.

1. Place the spool or film in the cavity. On the takeup side, the spool should be rotated until its holes align with the advance mechanism, and it will slip into place.

2. Insert the Spool Holder into the bottom of the Insert. It should center the 120 spool and lock it in place.

3. Unroll some backing paper, black side facing away from the Insert, roll it over the left roller, across the pressure plate, over the right roller, and into the takeup spool.

4. Carefully advance the knob in the direction of the arrow while holding the folded backing paper against the takeup spool, helping it through one rotation until it begins to catch on itself.

5. Roll a bit more backing paper onto the takeup reel while using a finger to hold a bit of tension on the film roll, so the backing paper remains semi-tight against the pressure plate.

Once you are confident that the film is catching on the takeup spool, re-insert the Insert into the Shell, pushing them together until they are firmly conjoined.

Then simply replace the locking bolts and swing the bottom arms outward to cover the protruding Spool Holders, and you are done!

Advancing and Shooting

To advance the film to frame 1, make sure the darkslide is fully inserted in the back, then open the backing paper window on the back by sliding the protruding nub downward. Look into the round window and advance the film with the Advance knob (turning it only in the direction of the arrow on the knob). Turn until the number 1 appears in the window, perfectly centered.

Note that all number that appear in the window will be upside down. This is normal.

Once you've advanced the film to your first frame, close the backing paper window. You can now mount the back to a camera (if it isn't already).

To expose your frame, open the darkslide until you see the black line appear. *Do not fully remove the darkslide from the back, or a light leak may appear, if you are in bright sunlight.*

After exposing your shot, immediately close the darkslide, open the backing paper window, and advance your film until the number "3" appears. As the label below the window indicates, you will always skip even numbers on the backing paper and advance only to odd numbers.

Once you've exposed your sixth shot (#11 on the backing paper), advance the film until you feel it lose tension. The back can now be opened in subdued light and the exposed roll of film removed.

If you have trouble removing a spool or roll of film, pinch the edge of the spool against the back, on the opposite side as the hole for the Spool Holder. This will cause the spool to lift upward, allowing you to grasp the other end and lift it out of the back.

Tips

Due to the nature of 3D printed plastic, and the thin layers around the darkslide mechanism, there is a natural "curl" to the mounting plate of the back. This is normal; it is not a defect. When you mount the back to your camera, you may find that this plate protrudes very slightly from the cavity in the camera, making it difficult to close your Graflok sliders that lock the back into place. Simply press the back's mounting plate into your camera and the sliders will now lock in place. This bit of resistance is different from metal and (most) wood backs, but it is not a problem. The back's mounting plate will slightly flatten as a result of being mounted, removing the curl.

As with all backs that use darkslides, if you will not be changing lenses or removing the back, we recommend hat you replace the darkslide (in subdued light) with a strip of gaffer's tape to seal the darkslide slot. This will make accidental light leaks impossible. We recommend that you use black, cloth, ½ inch wide gaffers tape. The back has been engineered to be easily taped, unlike most metal backs.