

Set-Up & Operation of Your Screen Frame Clamping Unit



This economical upgrade from standard screen frame clamps allows registration adjustments without unclamping the screen frame. It is designed for higher tolerance printing such as nameplates, graphic overlays, 4-color process work and multicolor applications. Etched micrometer reference provides precise visual reference for front-to-rear registration moves. Also provides off-contact control for challenging printing conditions.

OVERVIEW

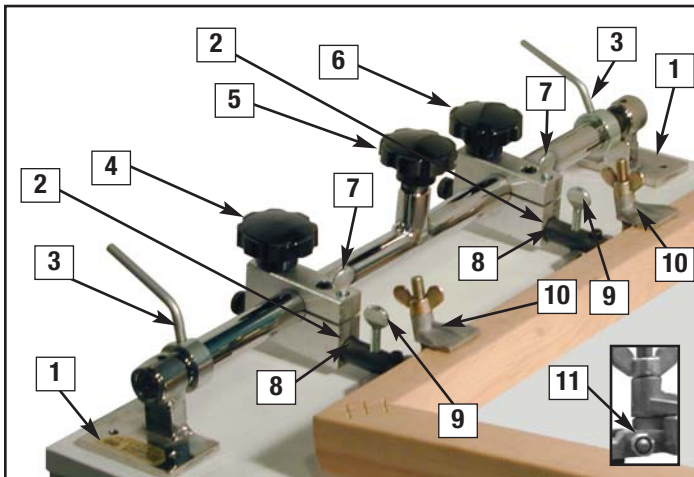


Figure 1. Overview of Screen Frame Clamp Assembly.

1. **Mounting Brackets:** Secures frame clamp assembly to flat printing base or vacuum table
2. **Frame Support Bars in Metal Extrusions:** Connects frame clamps to carriage bar
3. **Right and Left Tensioning Collars & Levers:** Use right and left levers to release collars before making side-to-side registration moves
4. **Left Registration Knob:** Controls front-to-rear registration on left side of screen frame
5. **Lateral Registration Knob:** Controls side-to-side registration adjustments
6. **Right Registration Knob:** Controls front-to-rear registration on right side of screen frame
7. **Frame Clamp Assembly Release:** Allows side-to-side positioning of frame support bars prior to installing screen
8. **Micro-Registration Reference Scores:** Precise visual reference for front-to-rear micro-registration adjustments
9. **Off-Contact Distance Setting:** Adjusts this critical variable to meet printing conditions and allows printing of three-dimensional workpieces
10. **Frame Clamp:** Secures screen frame
11. **Frame Angle Adjustment Bolt:** To accommodate three-dimensional stock

INSTRUCTIONS

INSTALLING THE SCREEN FRAME CLAMP

The Screen Frame Clamp bolts to any flat printing base or vacuum table. Hex-head screws are provided for mounting. To print 3D objects greater than 1/4" thick, spacers or shims may be used to raise the mounting brackets. Longer mounting screws may then be necessary. Prior to inserting the screen frame in the frame clamps, position the frame support bars in the appropriate position (side-to-side) for the screen size. Remember to loosen the thumb screws on the metal extrusions to free the frame holder assembly (Figure 1, #7).

INITIAL REGISTRATION/SECOND COLOR

Position stock to registration guides on printing surface. Insert screen in frame clamps, visually line up stencil with printed image or registration marks and tighten wing nuts on frame clamps. If initial test print shows a great variation in registration, loosen wing nuts and reposition the screen.

SIDE-TO-SIDE REGISTRATION

Lateral registration moves are easily accomplished. Loosen the collar levers on either end of the carriage bar (Figure 1, #3) and turn the center knob (Figure 2,) clockwise. This moves the screen frame from left to right, in small increments.



Figure 2. Center knob moves screen frame left to right.

FRONT-TO-REAR REGISTRATION

To move the screen image from front to back, use the registration knobs on top of the metal extrusions containing

Set-Up & Operation

Screen Frame Clamping Unit

INSTRUCTIONS (CONTINUED)

right and left bars in their initial position, remove the knobs and slide the bars into one of the three possible positions (Figure 3). Make sure the position is the same on both sides. Replace the knobs and turn to make micro adjustments using the scores in the bars, where they meet the extrusions, as a visual reference (Figure 4).

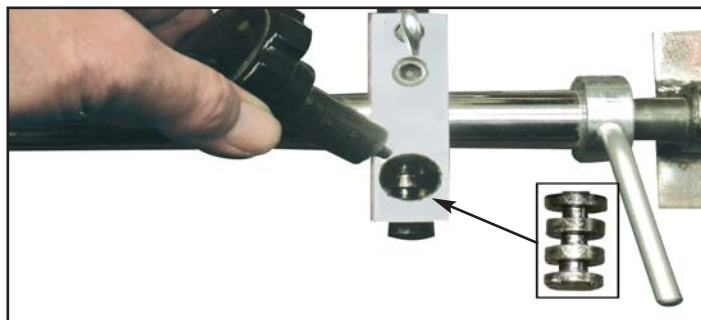


Figure 3. Three position initial registration.

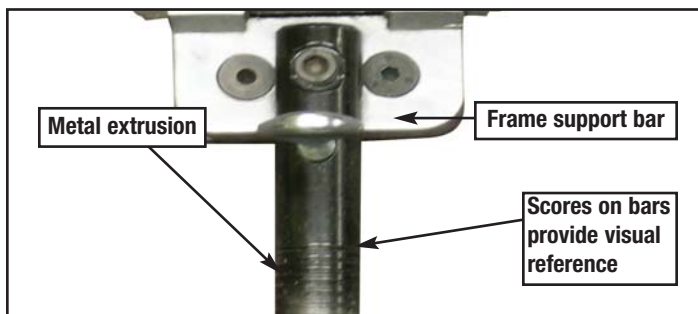


Figure 4. Micro-registration adjustment.

OFF-CONTACT DISTANCE

Off-contact is required to prevent the fabric from “dragging” in the printed wet film after the squeegee has passed. In hand printing, off-contact is determined by such factors as screen tension, squeegee pressure and ink viscosity. Best results are ensured when off-contact is minimized. Off-contact is set by turning the thumb screws (Figure 5) behind the frame clamps to extend the lifting feet. Measure off-contact on both sides of the frame to ensure even printing. After the off-contact screw

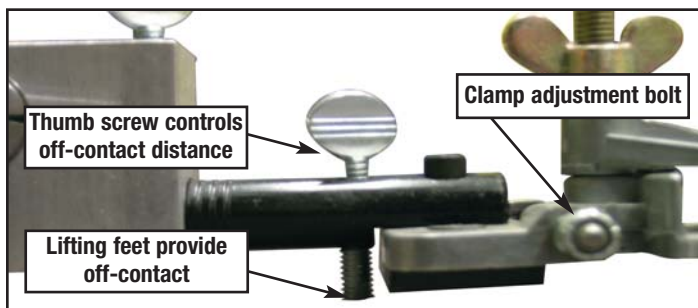


Figure 5. Off-contact adjustment.

has been set, you must shim the front of the screen frame so that it is parallel to the printing base (Figure 6). You can use small blocks of wood or any solid material that will attach to and support the front of the frame.

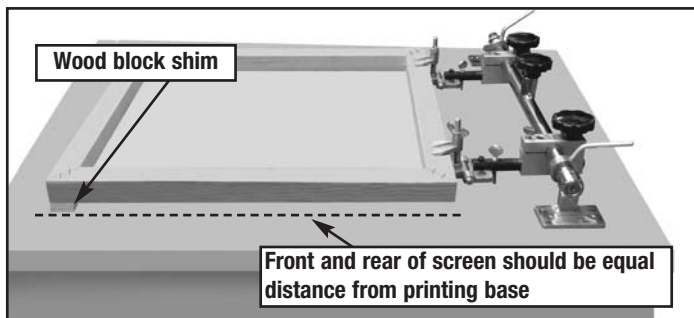


Figure 6. Off-contact.

PRINTING DIMENSIONAL STOCK

For substrates up to 1/4" thick, the off-contact feet serve the dual function of raising the screen to accommodate the dimensional stock and providing the additional off-contact distance. It is important to provide both dimensions. Off-contact distance for such an application is equal to the height of the bottom of the frame minus the thickness of the stock. The adjustment bolt (Figure 5) on the side of the clamp allows the angle of the frame clamp to be adjusted downward to hold the screen frame properly. For thicker stock, place shims or spacers under the mounting brackets to raise the screen. In order to provide off-contact, spacers of the same thickness must be placed under the off-contact lifting feet.

MAINTENANCE

About every six months, remove and grease the shafts of the registration knobs (Figure 1, #4,5,6). This is the only maintenance required.

*A perfect partner for the
Screen Frame Clamping Unit*

The SIDEKICK™

- Heavy-duty
- Spring action lift
- Reversible
- Clamp on or
- Permanent mount
- Six- and nine-inch sizes



*Screen Frame Clamping Unit &
Sidekick shown on a
Vacuum Table*



Recommended for faster production