UniFlex® Emboss System
Installation and Care Instructions

English

The UniFlex® Emboss System

UniFlex is a proprietary embossing system that utilizes a female UniFlex Plate and a male counter force plate to emboss material. The female UniFlex Plate is mounted on a magnetic cylinder typically in the top diecut position. The male UniFlex Counter Force is mounted on a steel cylinder using double-side adhesive tape typically in the bottom diecut position.

Pin Registration – Step One UniFlex Emboss Plate

The UniFlex Emboss System incorporates an innovative pin registration mounting system. The pins are utilized to accurately mount the UniFlex Emboss Plate on the magnetic cylinder so that the plate is in correct alignment. An added benefit of the pin registration system is that it provides increased rotational and torsion strength, which prevents plate slippage on large image area jobs.

1. Install the UniFlex magnetic cylinder in the press as you would any other cylinder. The cylinder must be run in the correct rotational direction, refer to rotation information on the cylinder, to prevent potential problems.

2. Locate the pin registration spine on the magnetic cylinder. (Fig 1) For maximum holding power the magnetic cylinder has also incorporated one row of high-strength magnets on the lead rotational row from the pins, which correspond with the leading and trailing edges of the UniFlex Emboss Plate. These special magnets add additional strength to the cylinder to prevent the raise of a UniFlex Plate edge.

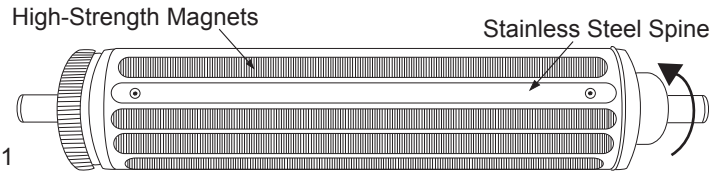

Fig. 1

3. To mount the UniFlex Emboss Plate, align the pre-punched holes within the plate to the cylinder's registration pins. For added registration assistance a centerline has been included on the plate. (Fig 2) The parallelism between the leading edge of the plate registration hole and the leading edge of the UniFlex Emboss Plate is 0.5mm/.002". For ease in mounting, align the pins to the plate registration holes while holding the leading edge of the UniFlex Emboss Plate up and away from the magnetic cylinder. Once the pins are aligned, then slowly release the edge of the plate towards the UniFlex magnetic cylinder.

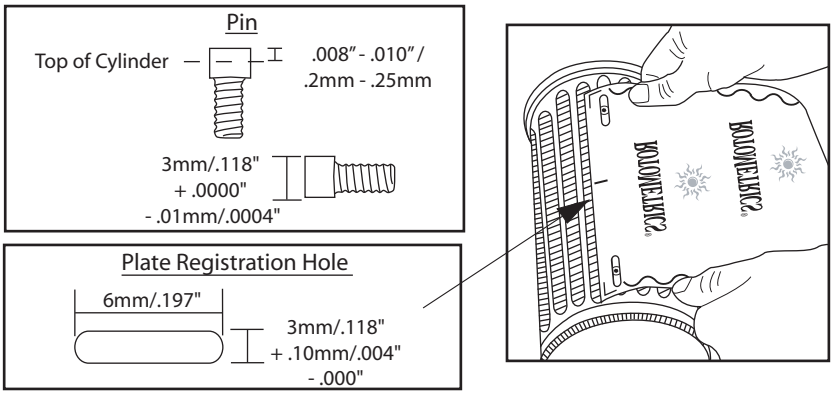

Fig. 2

4. When the UniFlex Emboss Plate has been properly mounted onto the registration pins, slowly rotate the UniFlex magnetic cylinder while wrapping the UniFlex Emboss Plate around the cylinder. Note: There will be a small gap left between the leading and trailing edge of the plate.

UniFlex Counter Force

The UniFlex Counter Force is specially designed and molded to work in registration with the UniFlex Emboss Plate. To aid in registering and mounting of the UniFlex Counter Force, two UniFlex Emboss Plate Counter Alignment Channels have been added to the edges of the UniFlex Plate and Counter Force. The UniFlex Emboss Plate Counter Alignment Channels have been strategically placed outside the web.
*NOTE: The Alignment Channels will reduce your maximum web width by 1" (0.5" on each side).

Typically a UniFlex Counter Force has a single application and additional counters may be ordered for future reruns. For customer convenience, UEI Group retains the counter master to manufacture additional counters and these can be easily ordered through RotoMetrics.

UniFlex Counter Force – Step Two Mounting UniFlex Counter Force

1. Clean the back of the UniFlex Counter Force with isopropyl alcohol and allow it to thoroughly dry before starting step #3.
2. Cut a piece of Duplofol® double-sided mounting tape slightly larger than the UniFLex Counter Force, in width and length.
3. Apply the Duplofol tape to the back of the UniFlex Counter Force. To ensure the tape is applied smoothly it is suggested to follow these steps: Hold the UniFlex Counter Force slightly above the Duplofol tape and slowly apply the leading edge of the UniFlex Counter Force to the tape. While pressing down, roll the UniFlex Counter Force onto the tape by running your finger back and forth over the top of the counter (about an inch at a time).
4. Once the Duplofol tape had been applied to the UniFlex Counter Force cut off any excess and remove the Duplofol backing then set the UniFlex Counter Force aside (with the UniFlex Counter Force face down).
5. Clean the counter force anvil with isopropyl alcohol and allow to thoroughly dry.
6. Install the emboss cylinder and counter force anvil cylinder into the press.
7. Place a piece of standard double-sided tape (not Duplofol, something with less tack) onto the face of the UniFlex Emboss Plate - in a non-image area that is also close to the leading edge of the UniFlex Emboss Plate. This double-sided tape will become your registration spot and aid in the mounting of the UniFlex Counter Force. If possible, it is also suggested for mounting assurance to mount another piece of double-sided tape opposite of the first. Multiple layers of double-sided tape may be needed to obtain the desired thickness.
8. You are ready to begin the mounting of the UniFlex Counter Force.
9. Align the UniFlex Counter Force with the UniFlex Emboss Plate (which has been securely mounted to the magnetic cylinder) using the image spot (from #7 above) and the UniFlex Emboss Plate Counter Alignment Channels that run along the sides.
10. Once the UniFlex Counter Force and UniFlex Emboss Plate have been aligned, press the UniFlex Counter Force onto the double-sided tape that is attached to the UniFlex Emboss Plate.
11. Jog both cylinders so the leading edge of the UniFlex Counter Force enters the nip and the Duplofol tape on the back of the UniFlex Counter Force starts to adhere to the counter force anvil. Continue feeding the rest of the UniFlex Counter Force into the nip until the entire UniFlex Counter has been securely adhered to the counter force anvil. Note: This process should be done slowly and accurately to ensure a secure mounted UniFlex Counter Force (Fig 3).
12. The UniFlex Counter Force should be properly mounted at this stage and the registration aids are no longer needed. Remove the double-sided tape that was used in registration (from #7).
13. Timing may be necessary at this stage. *See Solid Tooling Timing Instructions available from RotoMetrics.

Duplofol® Tape Thickness Needed

Stock Thickness Specified in the Order	Duplofol Tape Thickness Needed
0.008" - 0.009"	0.004"
0.006" - 0.007"	0.006"

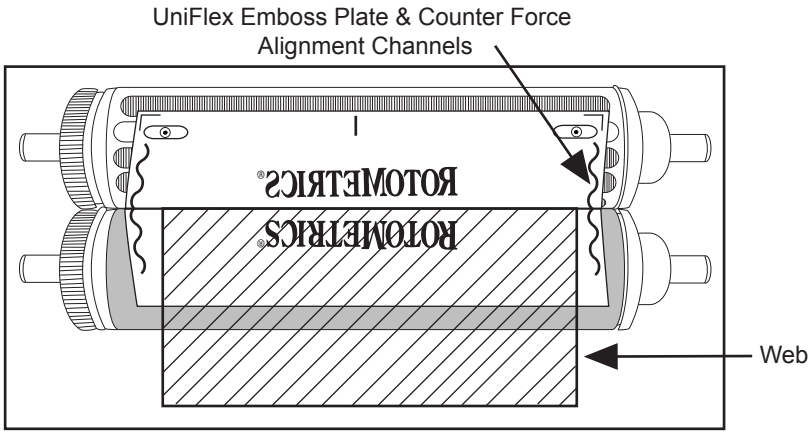

Fig. 3

UniFlex Emboss Plate and Counter Force Removal

1. To remove the UniFlex Emboss Plate insert the thin pointed portion of the RotoMetrics Super Lifter between the UniFlex Emboss Plate and the magnetic cylinder. Pry the UniFlex Emboss Plate up with the tool so you are able to grasp the plate and pull it off. Note: Use Caution

2. To remove the UniFlex Counter Force carefully peel it off the counter force anvil (Fig. 4). The UniFlex Counter Force is intended for single-use but additional Counter Forces may be ordered at any time. It is important to clean the counter force anvil afterwards with isopropyl alcohol to remove any tape residue and then properly store the counter force anvil.

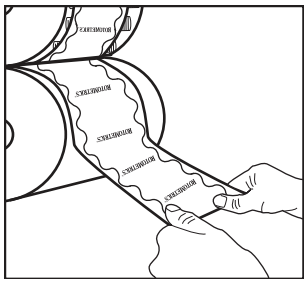

Fig. 4

Care and Storage of UniFlex Plate

1. UniFlex Emboss Plates should be stored "dirty". The additional grime and grit helps to prevent oxidation.

2. Spray both sides of the plate with an oxidation inhibitor. (Do not use WD-40®.)

3. UniFlex Emboss Plates can be stored either curved or flat. To protect the surface area of the plate from scratches and dents wrap the plate in cardboard or foam. If storing curved, take care that the overlapping edge of the plate isn't damaging the surface area by padding it with cardboard or foam.

4. Store the wrapped plate in a sealable plastic bag in an area where it will not be exposed to air and moisture. Avoid stacking objects on top of the plate.

5. Before being remounted, the "steel back" of the UniFlex Emboss Plate should be cleaned with an abrasive Scotch® Brite pad or 600 grit wet/dry sandpaper.

Note: Treat the image area of the plate with care. For necessary cleaning, utilize a soft brass bristle brush and wipe down the plate with alcohol or acetone and a soft oil-free paper towel. (Proper Personal Protective Equipment Required)

Care and Storage - Magnetic Cylinder

1. After removal from the press, clean the UniFlex Magnetic Cylinder with a common industrial solvent/cleaner and a clean cloth or soft paper towel. (Proper PPE required)

Note: Do not use any cleaners that contain oils, silicones or other types of lubricants.

Caution: Do not use shop towels or cloths that may have come in contact with oils or lubricants in the past.

Any additional ferrous based matter can be removed by using a single sided adhesive tape and placing the tape in the contaminated areas. The adhesive tape will remove any residue/matter.

2. Check the pins within the UniFlex Magnetic Cylinder with every use. In the unlikely event a pin does not fit properly, have your maintenance engineer contact a RotoMetrics Technical Representative for a solution.

Safety

1. The UniFlex Magnetic Cylinder has a very strong magnetic field.

2. Caution: Do not place fingers between the UniFlex Magnetic Cylinder and any piece of steel (pinch hazard).

3. Persons with implanted defibrillators or pacemakers should not work with or near the UniFlex Magnetic Cylinder.

4. Do not allow any magnetic recording media (i.e. floppy disks, removable disks, credit cards, audio and videotapes) near the UniFlex Magnetic Cylinder.

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