

ThermoFlex Wide II KRS Beta

Installation Procedure - KRS Beta Sheet-only Device

Document Number
731-00941A-EN-A

23 Aug 2006

Copyright 2006 Kodak. All rights reserved.

Revision History

Revision	Date	Author	Comments
A	Aug 2006	John Funk	Modified procedure for KRS Beta devices based on document 725-00069A-E

ThermoFlex Wide II KRS Beta
Installation Procedure - KRS Beta Sheet-only Device

CONTENTS

Revision History i

1. Tools and Equipment Needed 1

2. Other Documents Needed 1

3. Inspecting the crates 2

4. Installing the ThermoFlex Wide II Device 2
   - 4.1 Unpacking the Device 2
   - 4.2 Lowering the Device 6
   - 4.3 Leveling the Device 8
   - 4.4 Installing the bearing follower bracket 10
   - 4.5 Adjusting the table 12
   - 4.6 Connecting the Cables and Hoses 13

5. Drum Vacuum System 16
   - 5.1 Installing the Drum Vacuum Pump 16
   - 5.2 Installing the Drum Vacuum Drive 16

6. Installing the Thermal Head 16

7. Setting up the Workstation 17

8. Testing the System 17

9. Appendix A—Interconnections 18

1. TOOLS AND EQUIPMENT NEEDED

Table 1 describes the tools and equipment needed to install the *Kodak ThermoFlex* Wide II sheet-only output device.

Table 1: Toolkit for device installation

Description	Usage	Quantity
Leveling kit (precision level and leveling jig) (516-00018A)	Device leveling (see calibration procedure below)	1
Dotmeter: *Centurfax CCDotmeter*, BetaFlex 330 or equivalent	ITP	1
Microscope (100X recommended)	ITP	1
Press sheet Densitometer: Gretag D19C or D196, X-Rite 400 series, or Tobias IQ150, all with relative density and dot area (Murray-Davies) functions.	ITP	1
Multimeter	Voltage supply checks	1

2. OTHER DOCUMENTS NEEDED

As you complete the procedures in this document, you may need to refer to the following:

- Precision Level Calibration Procedure
  http://techplanet.creo.com/output/computer_to_plate/thermoflex_II/nav/install.htm
- Site Preparation document (part number 725-00093A)
  http://techplanet.creo.com/output/computer_to_plate/thermoflex_II/nav/install.htm
- TFX Head Installation document (part number 725-00094A)
  http://techplanet.creo.com/output/computer_to_plate/thermoflex_II/nav/install.htm
- PPP Server Setup document
  http://techplanet.creo.com/output/computer_to_plate/thermoflex_II/nav/install.htm
- UDRC Installation document
  http://techplanet.creo.com/output/heads/debris_removal/nav/install.htm
- Pivot Adjustment Procedure (only needed if table is out of alignment)
  http://techplanet.creo.com/output/computer_to_plate/thermoflex_II/nav/proced.htm
  Note: You will only need this document if the table alignment is out.
- Installation Test Procedure (part number 708-00069A)
  http://techplanet.creo.com/output/computer_to_plate/thermoflex_II/nav/install.htm

3. INSPECTING THE CRATES

When the crates arrive at the customer site, do the following:

1. Inspect all delivered crates and boxes. These will normally be located in the customer's loading dock area.
2. Check that all the shipped crates have been received.
3. If shock watches were mounted on the outside of any crates, check that they are white and not red.
4. Look for signs of damage from moisture, improper packing, tipping, dropping, stacking of crates, or any sign of mishandling.
5. Record any problems immediately on the Installation Report form and report them to both Kodak and the delivery company.
6. Unpack all crates except the device crate. Inspect all components for damage and report any damage on the Installation Report form.

4. INSTALLING THE THERMOFLEX WIDE II DEVICE

4.1 Unpacking the Device

1. If the device was shipped by air, remove the top and sides of the crate. If it was shipped by ground, open the two front doors of the crate.
2. Remove any protective packing material from the device.



Figure 1: ThermoFlex Wide II crate

3. Open the top front panel by inserting a T-handle hex key into the hole on the right side of the panel to disengage the latch. Push the hex key handle downwards to lift the latch.

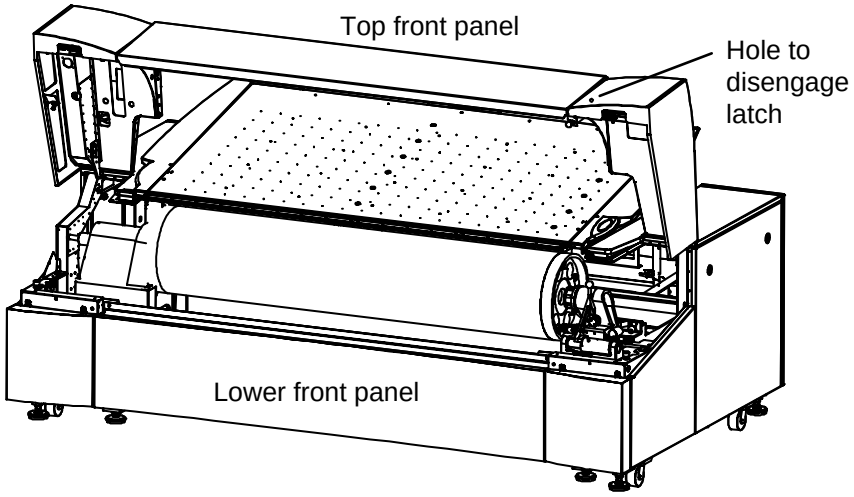


Figure 2: Front panels

4. To access the lifting bar/forklift channels, remove the lower front panel by loosening the two screws (one on either side) and lifting the panel up and away from the device.

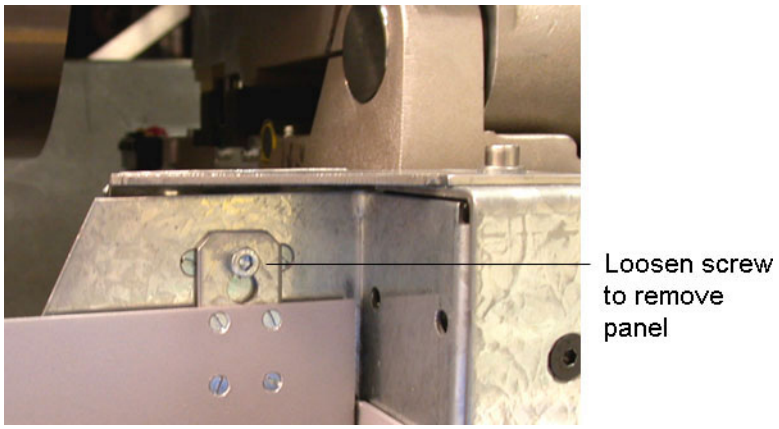


Figure 3: Removing the lower front panel

5. Remove the device from the crate using a forklift with a minimum rating of 1800 kg (4000 lb.). Lift the device from the crate shoe from the front using the forklift channels shown in Figure 4. Take care not to crush any cables or pipes at the rear of the device. **Note:** Do not lift the device if the lifting bar is not installed.

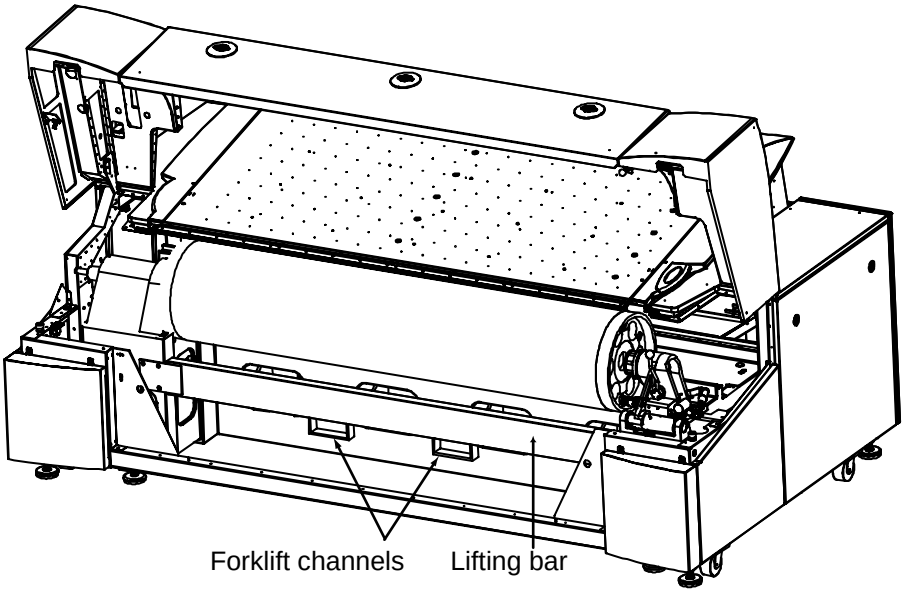


Figure 4: Forklift channels and lifting bar

6. Move the device on the forklift as close as possible to the installation location.
7. Lower the device onto the casters so that it can be rolled to the final installation area**.**
8. If the door openings or passages are 1930 mm (76 in.) or more, you do not need to remove any panels. If the openings are between 1778 mm (70 in.) and 1930 mm (76 in.), remove the front right and left panels and the back right and left panels.

   Note: When removing panels, take care not to dent or scratch them and put them in a safe place while they are not on the device.

9. To remove the front panels, loosen the two screws on each panel and lift the panels up and away from the device.

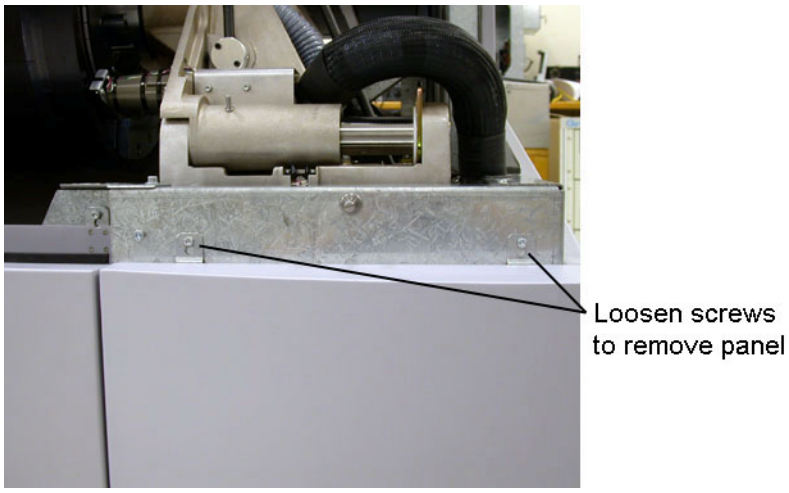


Figure 5: Removing front side panels

10. Remove the back panels and side panels by using a flat screwdriver to unlock the latches.
11. Remove any internal shipping braces and/or packing material.
12. Remove the lifting bar by removing the four bolts on each side of the lifting bar. You must remove the right front and side panel to access the bolts (the lifting bar may be yellow or red).

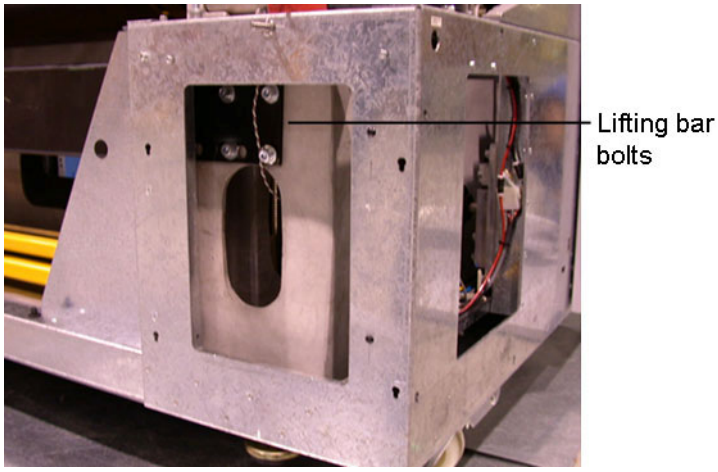


Figure 6: Lifting bar bolts

4.2 Lowering the Device

Once the device is in the correct location, use this procedure to remove the casters and level the device.

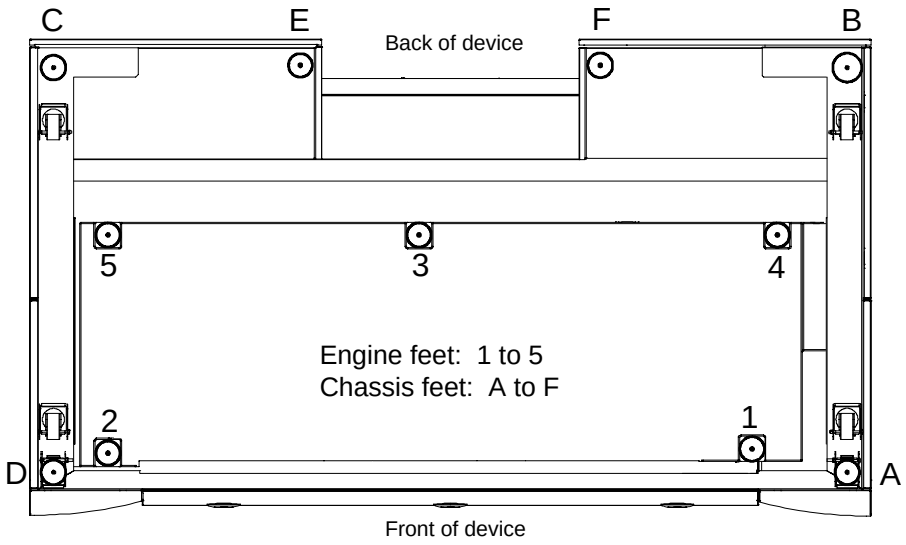


Figure 7: Feet location

1. Using a large adjustable wrench, turn the lifting feet A, B, C, and D to lift the device up and off the casters. Lift the four corners evenly until the casters are approximately ½ in. off the ground.
   (Newer lifting feet are red and not black as shown in the picture below).
2. Undo the bolt on each caster and remove the casters by tilting one side downwards.

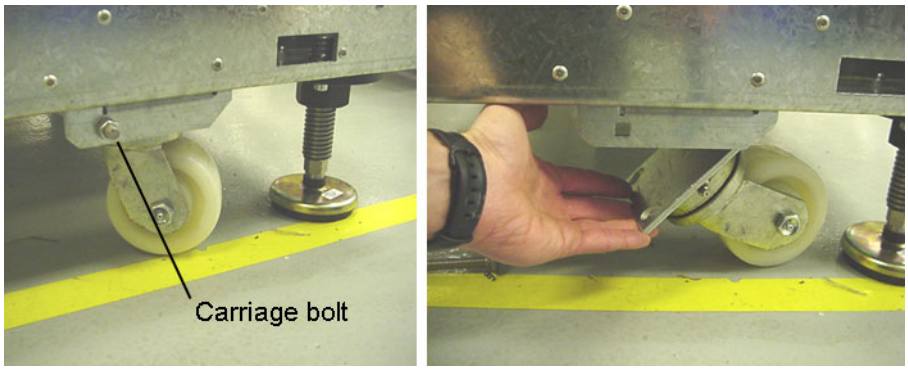


Figure 8: Removing the casters

3. Lower the device by turning the lifting feet until the adjustable engine feet 1, 2, and 3 are on the ground.

4. Screw the front lifting feet A and D all the way up, remove the bolt on each foot and remove the foot from the chassis by tilting one side downwards (newer feet may be red).

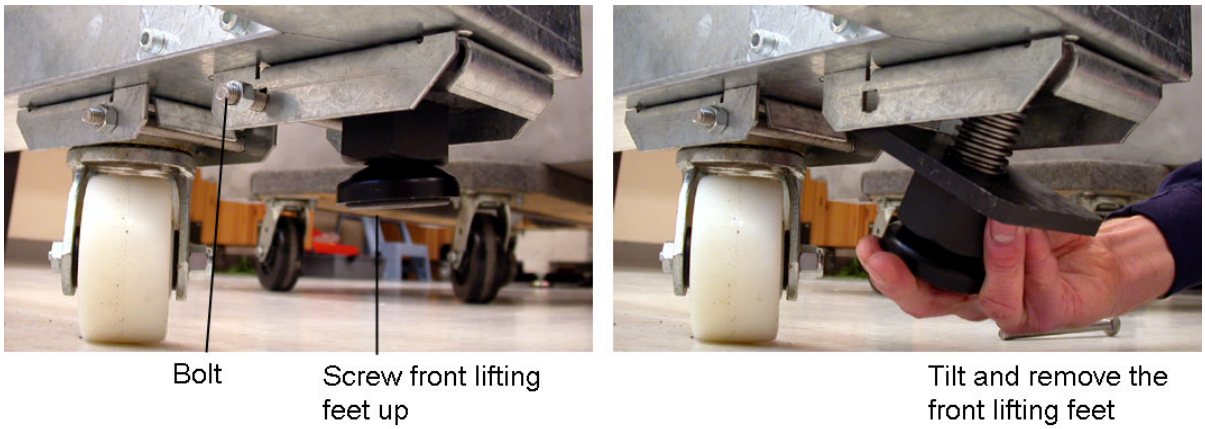


Figure 9: Removing the front lifting feet

5. Store the lifting feet in the fan box as shown in Figure 10.

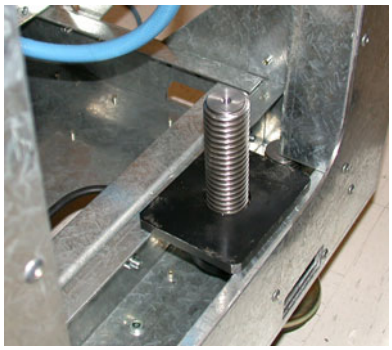


Figure 10: Storing the front lifting feet

6. Pull the side-locking pins out on both sides of the device. You may need to adjust the rear chassis feet B and C to remove pressure from the pins.

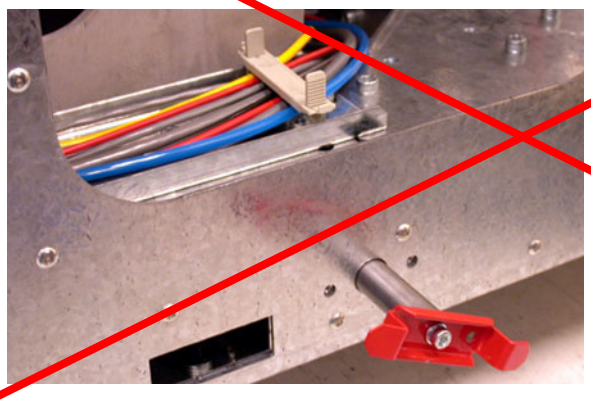


Figure 11: Side-locking pin (tailstock side shown)

7. Use a socket wrench to loosen the nuts on the engine-locking bracket. Engine feet 4 and 5 will now also touch the ground.

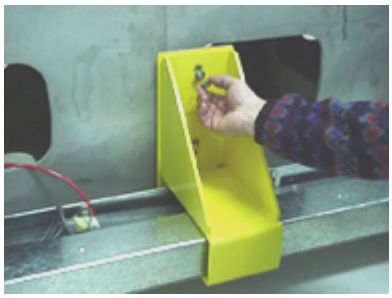


Figure 12: Engine-locking bracket

8. Undo the nuts and remove the engine-locking bracket.

9. Back off the jacking screws near the rear of the engine casting completely to allow the machine to be leveled. You may need to adjust the rear chassis feet B and C to remove pressure from the screws.

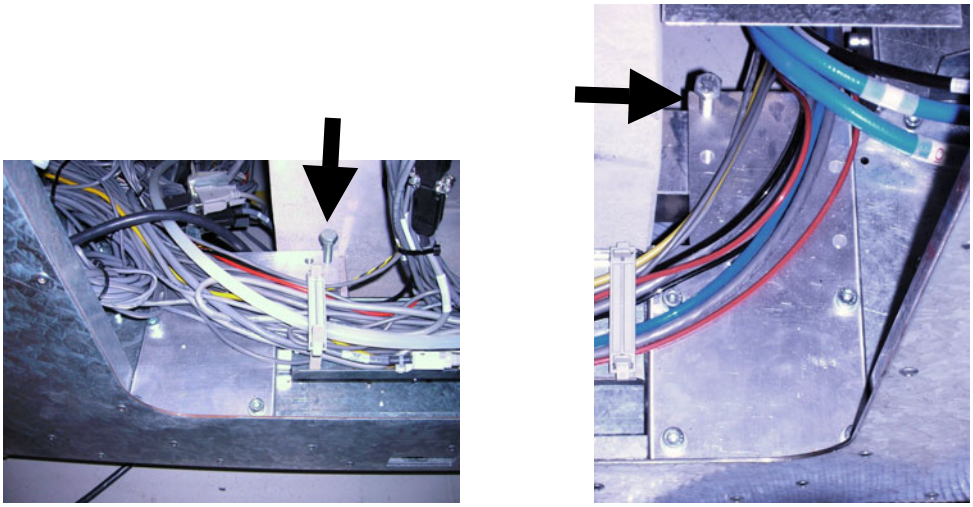


Figure 13: Chassis support jacking screws

4.3 Leveling the Device

Note: The precision level accuracy must be checked before use. See the Precision Level Calibration Procedure at http://techplanet.creo.com/output/computer_to_plate/thermoflex_II/nav/install.htm#see_also

See Figure 7 for device feet location.

1. Adjust all feet up so that the device is standing on the engine feet 1, 2, and 3 and the chassis feet B and C.

2. Adjust feet 1, 2, and 3 so that the height between the floor and the engine casting at each foot is approximately 60 mm (2 3/8 in.).

To level the engine:

3. Place the leveling jig on the carriage tracks in the middle of the device—you may need to move the carriage manually if it is in the way.

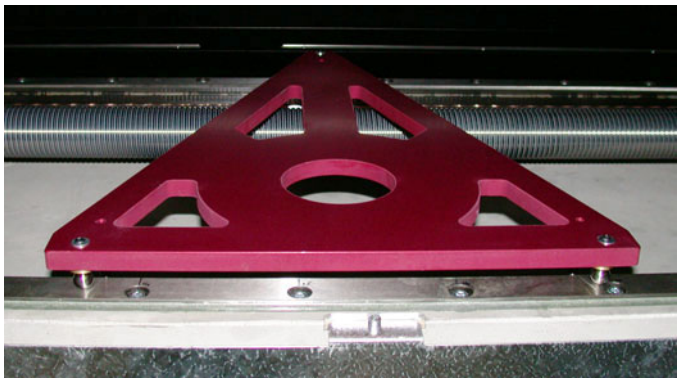


Figure 14: Leveling jig

4. Place the precision level on the jig parallel to the carriage tracks and observe the measurement. Adjust either foot 1 or foot 2 on the device for approximate side-to-side level.

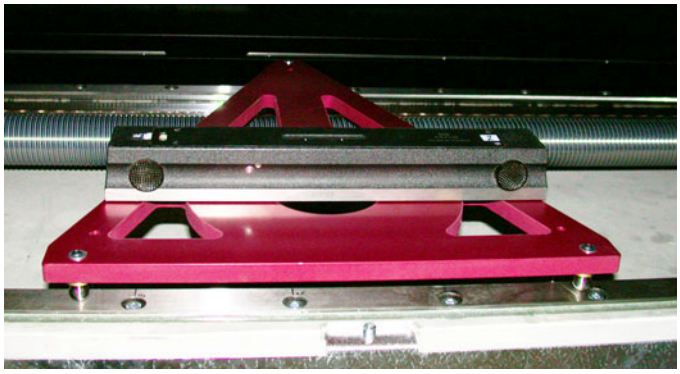


Figure 15: Side-to-side leveling

5. Turn the precision level 90° on the leveling jig and observe the measurement. Adjust foot 3 for approximate front-to-back level.

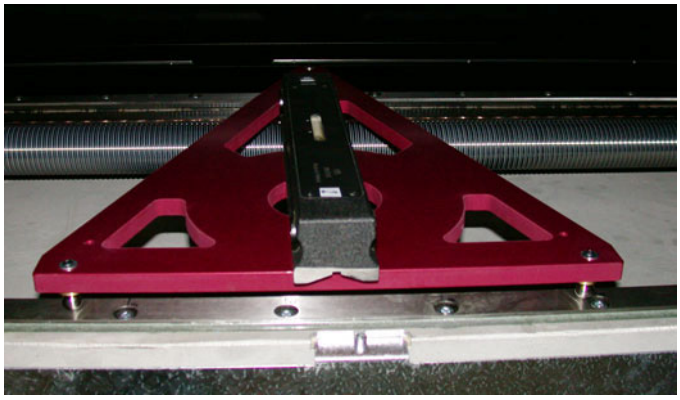


Figure 16: Front-to-back leveling

6. Repeat steps 3 to 5, but level to within (0.003º) or 50 microns per meter (one division). You may need to follow the steps three or four times to level accurately.
7. Lower engine feet 4 and 5 by hand until they are touching the floor and turn each foot an additional ¼ turn.
8. Lock the lock nuts on all the engine feet.

To level the chassis around the engine:

9. Remove the side panels and place a level on a suitable chassis surface.

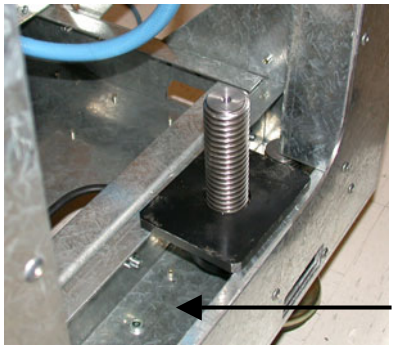


Figure 17: Chassis leveling

10. Using a wrench, adjust foot B with the level on that side of the machine, then move the level to the other side and adjust foot C. The chassis must be level to within 0.1º.
11. Lower chassis feet E and F by hand until they are touching the floor and turn each foot an additional ¼ turn.
12. Adjust feet E and F so that the chassis is level from left to right. You may need to further lower feet E and F.
    Note: Make sure feet C and B do not lift off the ground as that would prevent successful leveling of the top surface.
13. Check that feet 1 to 5 are locked.

4.4 Installing the bearing follower bracket

A shipping bracket is installed to provide stability for the table during shipping and to prevent the roller bearing bracket from getting damaged. The shipping bracket must be removed and the roller bearing bracket installed before the table is adjusted. The shipping bracket is only installed on devices shipped after Dec 14 2004.

1. Remove the two M6 shipping bracket screws and remove the shipping bracket.

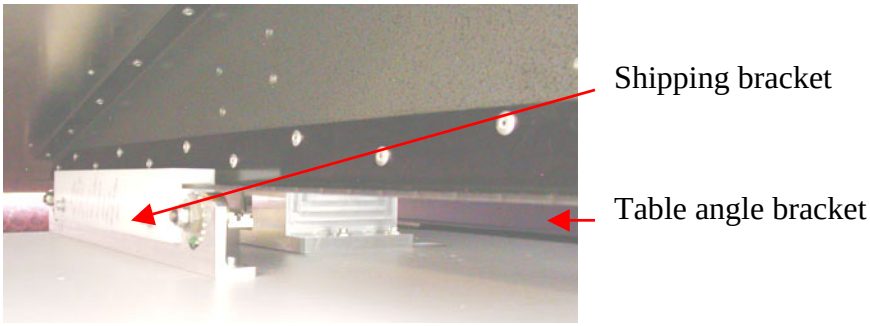


Figure 18: Table shipping bracket

2. Install the roller bearing follower bracket (58-0407A) with the roller bearings above the table angle bracket. Use the two M6 screws removed in step 1, but do not tighten the screws yet.

3. Move the table to the front of the device. With the aid of a helper, use a piece of wood (2x4) to lever the bracket downwards so that the front roller bearings come into contact with the table angle bracket. Fasten the front screw.



Figure 19: Installing the roller bearing follower bracket - front

4. Move the table to the back of the device. Lever the bracket downwards so that the rear roller bearings come into contact with the table angle bracket. Fasten the rear screw.



Figure 20: Installing the roller bearing follower bracket - back

5. Tighten the M6 screws to 15 Nm.

6. Inspect the roller to table angle bracket gap. All four rollers must be in contact with the table angle bracket in both the forward and back positions. If they are not, loosen the M6 screws and repeat steps 3, 4, and 5.

4.5 Adjusting the table

The *ThermoFlex* device's table alignment can change during transportation. Once the device is leveled, look at the leading edge of the table flap when the table is fully closed. The gap between the flap and the strip on the top front panel should be consistent across the table and be 2–3 mm wide.

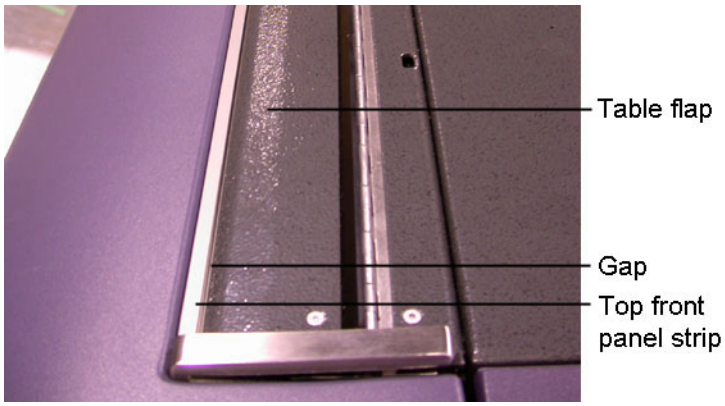


Figure 21: Table alignment

If the table is out of alignment:

1. Remove the tailstock-side rear panel.

2. Loosen the four screws that hold the table to the two bearing blocks. The other side of the table is on bearings and has no fasteners.

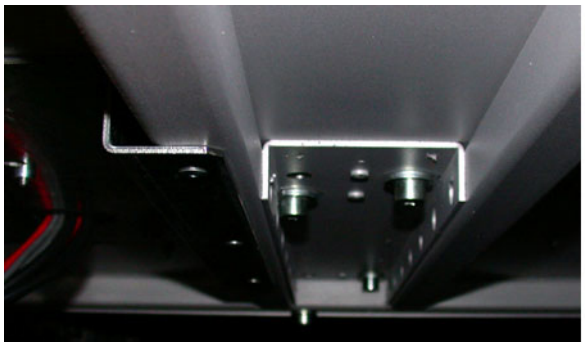


Figure 22: Table adjustment bolts

3. Adjust the table until the forward edge of the table flap is 2–3 mm from the top front cover strip—the gap must be uniform across the width of the table.
4. Ask an assistant to hold the table still while you tighten the four screws. If the table moves while tightening the screws, loosen them again and repeat steps 3 and 4.
5. Open and close the table a few times to see if the gap remains consistent and within specifications. The table should move smoothly when opening and closing it.
6. Close the rear panel.

4.6 Connecting the Cables and Hoses

Note: Measure and verify the outlet voltages in accordance with the ThermoFlex Wide II Site Preparation Guide (part number 725-00093A) before connecting any Kodak equipment to the customer's outlets. Check the air supply for the correct air requirements and for excessive oil or moisture in the air.

See "Appendix A—Interconnections".

1. Roll out any cables that were stored inside of the device.
2. Route the SCSI diagnostic cable to where the workstation will be.
3. Route the power cable to the wall socket but do *not* plug it in.

4. Route the chiller hoses to where the external chiller will stand. Connect the hoses to the chiller. Take care to connect the in and out hoses to the correct fittings on the chiller.

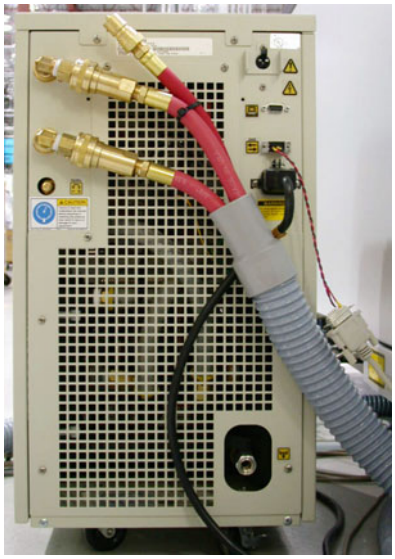


Figure 23: Chiller connections

5. Route the device's debris removal hose through the hole provided in the chassis (flex-track bracket) and connect the hose from the UDRC to the device hose.

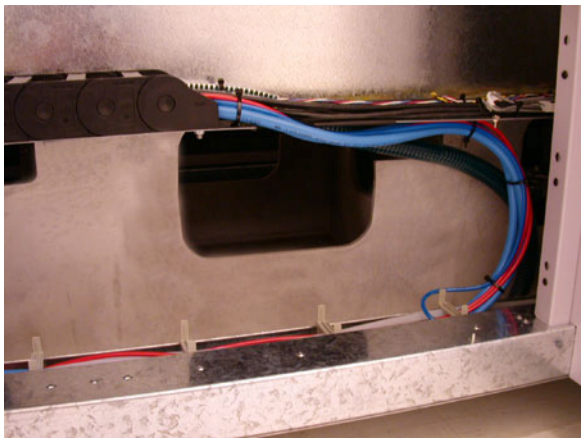


Figure 24: UDRC hose connection

6. On the bulkhead on the headstock side of the device:
   a. Connect the UDRC cable to the top plug
   b. Connect the Drum Vacuum Drive (DVD) cable to the bottom plug

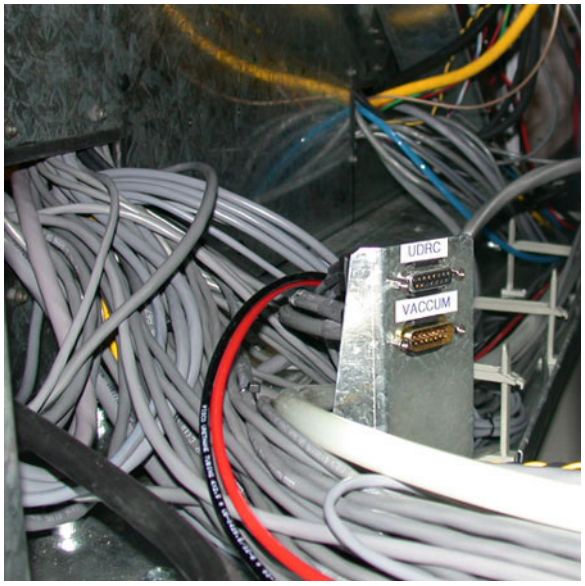


Figure 25: UDRC and DVD cable connections

7. Connect the head diagnostic cable (located close to the DVD/UDRC bulkhead) to the workstation.

8. On the tailstock side of the device at the rear, connect the air hose.

9. On the left side of the device near the front, connect the hose from the Drum Vacuum Pump (DVP)—route the hose through the engine casting from the bottom.

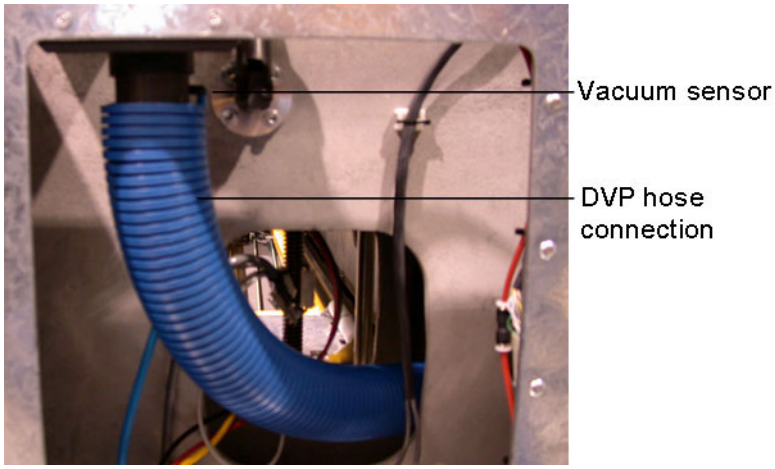


Figure 26: DVP hose connection

5. DRUM VACUUM SYSTEM

The Drum Vacuum System consists of the Drum Vacuum Pump (DVP) and the Drum Vacuum Drive (DVD).

5.1 Installing the Drum Vacuum Pump

To prevent overheating of the DVP, the ambient temperature where it is installed should not exceed 40° C (104° F). Adequate ventilation must be provided to keep the temperature below this limit. The minimum ambient temperature should not go below -5° C (23° F).

1. Place the DVP enclosure in its designated area.
2. Inspect the PVC vacuum piping installed by the customer. The piping must be 2 in. or greater schedule 40 PVC tubing. All joints must be cemented. Long radius elbows are recommended. The total length of hard piping should not exceed 50 ft.
3. Blow the PVC vacuum piping out with compressed air prior to connecting the piping to the pump or to the *ThermoFlex* device.
4. Have the customer's plumber fabricate the connection from the pre-installed piping to the pump. Alternatively, a short length of 2 in. flexible tube can be used.
5. Route the 15 m (50 ft.) cable from the DVP to where the DVD will be mounted.

5.2 Installing the Drum Vacuum Drive

1. Remove the DVD cover and mount the DVD against the wall.
2. A certified electrician must connect the 3-phase power to the top of the main circuit breaker/relay inside the DVD. Ensure the ground wires from the AC mains and from the DVP are securely connected to the ground bar inside the DVD.
   Check that the AC mains power is correctly wired and is the correct voltage at the circuit breaker/relay inlet terminals.
3. Route the 15 m (50 ft.) cable from the DVP through the hole in the bottom of the DVD and mount it in place with the strain relief.
4. Connect the power and data cables according to the diagram inside the DVD cover.
5. Install the DVD cover.
6. Connect the control cable from the *ThermoFlex* device to the bottom of the DVD.

6. INSTALLING THE THERMAL HEAD

Install the head according to the TFX Head Installation document (725-00094A). To access the head, open the table and the top front panel.

7. SETTING UP THE WORKSTATION

For network configuration, see the PPP Server Setup document.

1. Assemble the workstation as set out in the vendor installation document provided with the workstation.
2. Check that the customer AC receptacle is wired correctly, has the correct voltage (see Site Preparation Guide), and is on the same AC panel as the AC receptacle for the *ThermoFlex* device.
3. Plug the UPS into the AC mains. Connect the workstation to the UPS.
4. Connect the workstation to the network and phone line.
5. Turn on the workstation.
6. Log into Windows using the administrator account.
7. Create a new directory **E:\Service** for text logs of service performed on the *ThermoFlex* device. Use this directory to log service calls, firmware upgrades, workstation upgrades and NVS backups.
8. Set the workstation's clock for the local time zone.
9. Verify that the phone connection and modem work by dialing the modem number from another phone or by using RAS from a laptop and another line.
10. Start the diagnostic interface serial communications program (Terminal or other) and run the setup utility to set the correct baud rate, port, and so on.
11. Turn off the workstation.
12. Connect the serial cables from the workstation to the computer serial interface and diagnostics ports on the device.
13. Connect the differential SCSI cable from the workstation to the device.
14. Make sure all cables are secure at both ends.

8. TESTING THE SYSTEM

See the Installation Test Procedure document (708-00069A).

9. APPENDIX A—INTERCONNECTIONS

