TANGO / TANGO XL

Operation

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Important Note!

Our products are subject to an ongoing process of development and further enhancement. Accord-ingly, our products are subject to change without prior notice. We do, however, endeavor to point out any such changes during the in-house training courses we run.

Heidelberger Druckmaschinen AG accepts no liability for the correct-ness of the information given in this manual where the descrip-tions and data given refer to prod-ucts other than our own.

The details regarding performance and speed outlined in this manual and other technical

data and information relating to possible applications for our prod-ucts are not features that are guaranteed by contract in the legal sense.

We would also like to point out that the above-mentioned companies and product descriptions refer either to trademarks or registered trademarks of the respective own-ers.

For any problems regarding the product described in this manual, please contact your local Hei-delberg distributor.

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■ Dear Customer

In buying TANGO/TANGO XL, you have obtained a high-quality and high-speed drum scanner.
Please take the time to read through the following pages and look forward to working with your TANGO/TANGO XL scanner.

To ensure that TANGO/TANGO XL always works to your complete satisfaction, please observe the following instructions for unpacking and setting up.
Once you have removed the packaging, check the scope of delivery as listed on the next page.

■ Power Supply Connection

The unit may only be connected to the power supply once you have carried out the instructions in the chapter *Unpacking and Setting up*.

■ Scope of Delivery

The TANGO/TANGO XL scope of delivery includes the following components:

- Scanning drum 150,
  scanning drum 212 (TANGO XL only)
- Scanning drum cover
- 1 SCSI cable
- 2 power cables
- 1 "50 pin Centronics/DB 25" adapter
- Documentation
- 1 LinoColor software
- 1 calibration diskette
- Tools
- Polishing materials
- Anti-static cloth
- Scanning lamp
- Barcode strips
- Alignment strips for
  reflection scanning
- 2 screws (for the cover)
- 2 plastic caps

■ Unpacking and Setting up

The scanner should be brought as closely as possible to the intended installation site on the pallet.

Space of approx. 3 m in length

Note:

Setting up TANGO/TANGO XL requires a space of approx. 3 m in length and 2.20 m in height to allow for pallet, ramp and the area of the unit itself.

■ Uneven Floors

In the case of uneven floors, we recommend that you:

– have the unit set up by the service department

or

– place a 1 cm thick aluminum plate, 62x62 cm under the unit. You will also need a ramp for the aluminum plate. Adjust the plate so that it is flat and cannot wobble horizontally.

■ Remove accessories from the pallet

Firstly, remove the accessories (e. g. scanning drum, cardboard covers) from the pallet.
Using a Phillips screwdriver, remove the screws securing the ramp. Then cut through the retaining strap used as an additional restraint.
The ramp will be needed later, so you should place it near to the pallet for the time being.

■ Remove the air-cushion foil

Using a pair of scissors, cut through the adhesive tapes and remove the air-cushion foil.

■ Undo front panel

Using a Phillips screwdriver, unscrew the screw in the lower part of the panel.

■ Remove front panel

Grasp the panel at the sides with both hands and lift it by about 1 cm. Now the panel can be tilted forwards and removed.

When putting it down, make sure that it cannot fall over.

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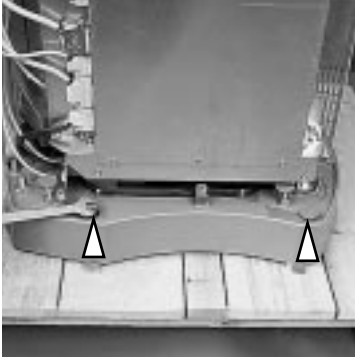
■ Remove wood screws

Using a 17 mm wrench, remove the two wood screws attached to the base.

■ Detach transport brackets from the pallet

Using a Phillips screwdriver, unscrew the rear transport brackets from the pallet.

■ Remove transport brackets

Pull out the transport bracket from under the bracket attached to the unit.

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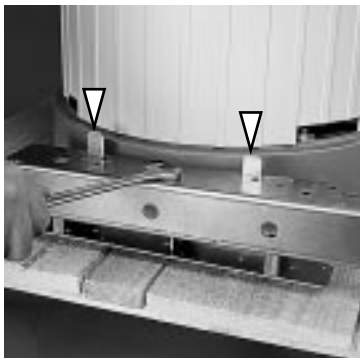
■ Initial use of transport rollers

Now turn the removed transport bracket round and fit it on to 2 metal prongs. Make sure that the bracket is really straight. Tighten up the transport bracket up to the stop on the attached bracket.
For this, you will need the 17 mm Allen wrench and the M 10x60 screws from the accessories box.
In this way, the rollers can be put into operation.
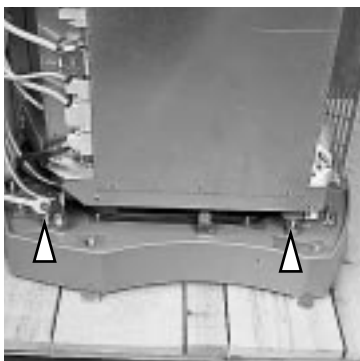
■ Making two further rollers ready for use

Using a 13 mm wrench, screw in the two screws on the front side of the scanner as far as the stop.

⚠ **Screw in the screws to the stop!** In this way, the rollers come out as far as possible so that the unit feet are not damaged during transport.

■ Now remove the two spacers exposed under the base (two at the front, one at the back).
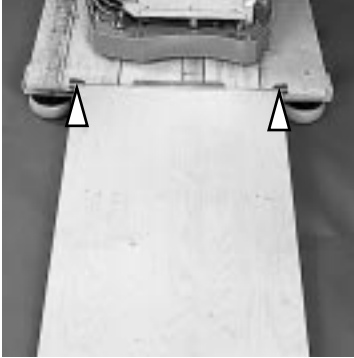
■ Positioning the ramp

The ramp can be positioned at the front or the back, as required.

Hook the ramp onto the pre-drilled holes of pallet using the two prongs.

Now, with the ramp in place, you can pull the scanner off the pallet from the front or push it off from the back. Hold on to the scanner so that it doesn't roll down the ramp by itself!

Note:
You will need a length of about 3 m for the pallet, ramp and the area the unit covers itself.

■ Push the scanner to the setting up site

You can now pull/push the scanner to its intended final location.

To negotiate bends, you can rotate the scanner to the right direction by raising the carrying plate on one side.

The location where the scanner is to be used must ensure the following characteristics:

Distance from the wall at least 50 cm (in order to remove transport safeguards/ allow service access)
Ceiling height at least 2.20 m (in order to raise the cover)

In the case of uneven floors, we recommend that you:

– have the unit set up by the service department

or

– place a 1 cm thick aluminum plate, 62x62 cm under the unit. You will also need a ramp for the aluminum plate. Adjust the plate so that it is flat and cannot wobble horizontally.

In the case of slight degrees of unevenness, you can adjust the feet for height later on.

Notes:

Pay attention to SCSI cable length

Pay attention to the **length of the SCSI connection cable** between scanner and Power Macintosh!

You must position the scanner very carefully at the final location.

Do not move the scanner any more!

STOP

You must not move the scanner when it is standing on its own feet since they are not suitable for this and could be damaged.

To be able to change the location at a later date, the scanner must again be placed on its transport rollers.

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You should not locate the scanner in the vicinity of air conditioning units and you must protect it from humidity and direct sunlight.
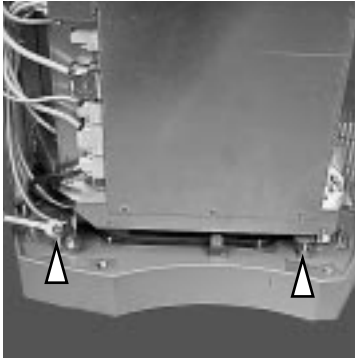
■ Retracting the transport rollers

Once the scanner has reached its final location, the rollers must be retracted. To do this, turn back the screws, until they rotate freely. You will need a 13 mm wrench for this.

The scanner must not be moved any more from now on!

■ Removing the rear bracket

Now retract and then remove the bracket with the rollers using the 17 mm wrench.

■ Remove the holder

Using the 8 mm Allen wrench, remove the holder.

■ Remove upper cover

Undo the adhesive tape and remove the cover.
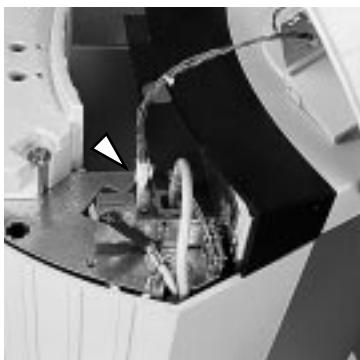
■ Detach electrical plug-in connections

Detach the electrical plug-in connections if necessary and put the cover on one side.

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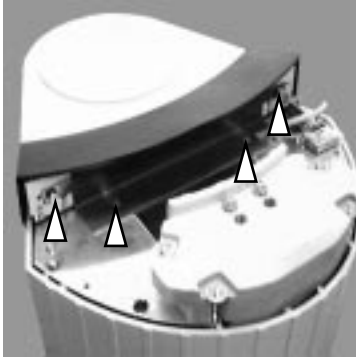
■ Remove the transport safeguard bracket for the drum cover

Undo the transport safeguard for the drum cover:

1. firstly, screw out the 2 screws using the Phillips screwdriver

2. raise the cover by 5 - 10 cm, so that you can reach the other screws better

3. now using a 10 mm wrench, undo the two screws on the cover.

■ Lifting drum cover

Lift the cover manually by about another 45 cm.

STOP The cover can no longer be pushed down.

■ Fitting the lid of the unit

Establish the electrical plug-in connections for the lid (see also *Undoing electrical plug-in connections*) and then attach it using the M 6x6 screws from the accessories box.

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■ Removing transport safeguards for the scanning head

Remove the 4 transport safeguards for the scanning head by firstly unscrewing the 4 screws using a 10 mm wrench and then removing the shims still attached with adhesive tape.

Make sure that you do not let the screws and shims fall into the unit.

Now pull the steel cable forwards and remove the plastic block.
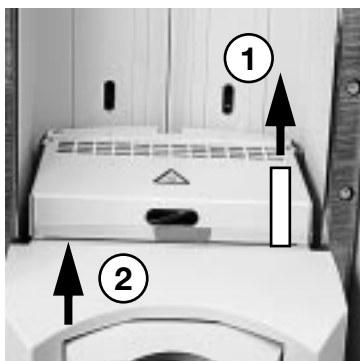
■ Removing the transport safeguard for the focus motor (1) (for TANGO only, not for TANGO XL) and the edge protection (2)

Remove the transport safeguard by pulling it upwards. It ensures that the focus motor does not become jammed in transport position, thus preventing errors occurring during installation.

Subsequently, remove the transparent edge protection. For this purpose, you have to lift off the lamp cover.

■ Removing the transparency arm trans-
port safeguard

Carefully remove the transport safeguard
which has been pushed onto the transpar-
ency arm.

■ Remove transport safeguard bar

Remove the transport safeguard bar at the
rear of the unit by pulling it out by hand.

■ Fit support

⚠ The scanner must not be assem-
bled without the support (safety
requirement)!

Using the 8 mm Allen wrench, fit the sup-
port to the scanner. This prevents it from
tipping over.

The support must not touch the floor after
assembly (important for scanner operation
– if necessary, adjust the unit's feet, see
page 17 and onwards)!

■ Connecting the SCSI cable

Feed the SCSI cable from the back around to the right of the unit through the special cable slit and connect it to the electronics.

SCSI connector
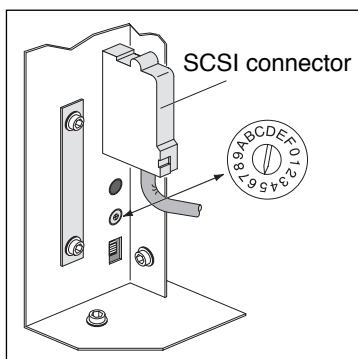
■ Setting the SCSI address

On delivery, the scanner is set to SCSI address number 5. If this address is already occupied by another SCSI device, you can select a different number between 1 - 6. Numbers 0 and 7 as well as switch positions 8 - F are already allocated and cannot be used. You will need a small Phillips screwdriver to make the setting.

■ Fitting and securing the front cover.

When fitting the front cover, you must make sure that the 3 lugs engage at the top and that the two elongated holes engage in the 2 yellow pins at the bottom. After that, tighten the screw using a Phillips screwdriver.

■ Altering the height of the unit's feet

The feet are factory-set to require no further adjustment when the unit is on level ground.

You can only achieve ideal stability for the unit through altering the height of the feet where deviations in floor level are minimal.

In the case of uneven floors, we recommend that you:

– have the unit set up by the service department

or

– place a 1 cm thick aluminum plate, 62x62 cm under the unit. You will also need a ramp for the aluminum plate. Adjust the plate so that it is flat and cannot wobble horizontally.

The tendency to wobble must be equal on all sides. You can check this, by trying to make the unit wobble diagonally.

If the wobble tendency is greater on one side than on the other, you can correct this by increasing the height of the rear foot, on the side that the unit tends to lean to.

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The support, as well as 2 points on the base of the unit must not touch the floor. At least 1 mm ground clearance must exist. This is vital to ensure perfect scanner operation.

To adjust the feet, you need two wrenches, sized 10 mm and 22 mm respectively.
You can adjust the foot using the 10 mm wrench, and loosen and then lock the lock-nut using the 22 mm wrench.

downwards
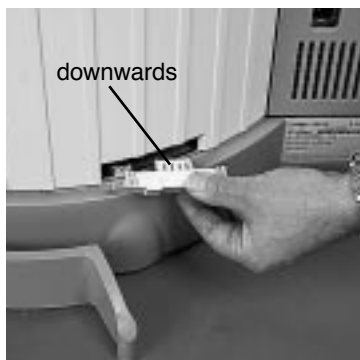
Once you have adjusted the feet, you can fit the blanking plugs on the left and the right at the back. Pay attention to the fitting position. If a plug cannot easily be fitted, then turn it around.

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■ Removing the transport safeguard for the scanning head (TANGO XL only)

1. Connect your TANGO XL to the operating station and install LinoColor (see Chapter 2).

2. Switch on the scanner and start LinoColor. If you have connected more than one scanner, select TANGO XL in LinoColor under "Import/Source".

3. The pilot lamps light up on the unit. While the scanner is being initialized, the scanning head moves backwards (position for the 212-mm drum) from its transport position (position for the 150-mm drum).

4. As a result, the transport safeguard is released, allowing it to be removed to the top.

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■ Correct Usage

The TANGO/TANGO XL is a drum scanner which is only to be used for this purpose in accordance with the user manual. Do not use the unit as a table or support for objects and liquids.

Do not cover up ventilation slits!

Ventilation slits should not be covered up.

■ Panels

STOP

Before connecting up the unit, make sure that all panels have been correctly fitted to it.

■ Installation

Once you have unpacked TANGO/ TANGO XL and pushed it to its final position, it must be installed. The following steps are necessary for this:

■ Connecting TANGO/TANGO XL to the operating station

■ Connecting TANGO/TANGO XL to the power supply

■ Switching on TANGO/TANGO XL

■ Installing the "LinoColor" software

■ Installing the calibration data

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Pay attention to SCSI cable length!

■ Connecting TANGO/ TANGO XL to the Operating Station

TANGO/TANGO XL has a SCSI connection. TANGO/TANGO XL can be connected with any other SCSI device that has a 50-pin Centronics socket via the connection cable – **pay close attention to the length of the cable when setting up the system**. You can connect TANGO/TANGO XL directly to the operating station using the 50-pin Centronics/DB 25 adapter supplied.

Connect the SCSI cable of the TANGO/ TANGO XL using the 50-pin Centronics/DB 25 adapter to the SCSI input of your Macintosh.

If you wish to connect other SCSI devices in addition to TANGO/TANGO XL to the SCSI bus, TANGO/TANGO XL must always be the last "link" in the chain, since the TANGO/ TANGO XL has a built-in terminator to terminate the SCSI bus.

The maximum length of the SCSI bus must not exceed 6 m, since otherwise faults in operation may occur.

To maintain interference suppression regulations, screened data cables must be used exclusively. Only use cables and adapters for connections certified by Heidelberg Prepress.

■ Connecting TANGO/ TANGO XL to the Power Supply

Connectors and outlets of the house installation must always be easily accessible so that, in the case of an emergency, the unit can be disconnected completely from the power supply by pulling out the power connector.

Connect the unit to the power supply by means of the three-pin plug and socket included in the delivery. Only operate the unit when a earthing conductor is connected.

The power connection is located on the left at the rear of the unit.

The operator has no access to the fuse.

The unit may only be serviced by the Service Department.

Do not install the unit in the vicinity of air-conditioning systems and protect it from moisture and direct sunlight.

Caution:

Unauthorized opening of the unit's housing and improper repairs not expressly described in the documentation can lead to considerable danger for the user.

Servicing work may only be performed by authorized specialist personnel. The respective accident prevention regulations must be observed at all times.

Non-observance of accident prevention regulations can lead to the loss of accident insurance cover.
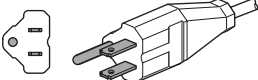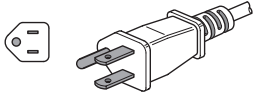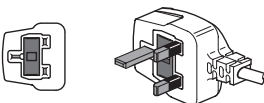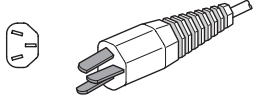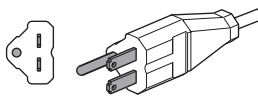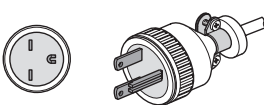
Connect the unit to the power supply using one the power cables supplied in accordance with the available power supply. National regulations must be observed when connecting the unit using power cables not supplied by Heidelberg Prepress or when adapting connectors.

Cables used in the USA and Canada must at least meet SJT standard.

Notes on the power cable:

When connecting to 100 - 127 V or to 220 - 240 V AC, select a cable type from the table below, whilst taking national regulations into consideration.

Plug Type	Country	Connection Voltage	Regulations	Cable Type
	North America 125V 10A	115 - 120 V	ANSI C 73.11 NEMA 5-15-P IEC 83	UL Listed CSA Certified Type SJT, 18AWG
	Japan 125V 10A	100 V	JIS C3102 UL 817 CSA C22.2 No.21	JIS C3102 UL Listed CSSA Certified Type SJT, 18AWG
	Europe 250V 10/16A	230 V	IEC 83	\<HAR\> H05VV-F
	United Kingdom 250V 10/16A	220 - 240 V	B.S. 1363 IEC 83 IEC 127	\<HAR\> H05VV-F
	Australia 240V 10A	240 - 250 V	A.S. C112	\<HAR\> H05VV-F
	North America 250V 10A	240 V	ANSI C 73.20 NEMA 6-20-P IEC 83 UL 198.6	UL Listed CSA Certified Type SJT, 18AWG
	Japan 250V 10A	200 V	JIS C 3102	JIS C310 TYPE SJT 3/18AWG

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■ Switching on TANGO/ TANGO XL

Press the power switch on the device.

The pilot lamps light up. The software boot procedure and TANGO/TANGO XL initialization are performed automatically, provided that LinoColor has been started and the scanner selected under "Import/ Source" in LinoColor.

■ Installing LinoColor Software

Please refer to the *LinoColor Installation* documentation for a detailed and precise installation sequence description.

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■ Installing Calibration Data

Every TANGO/TANGO XL has specific cali-
bration data. These data are stored on a
diskette which is included in the scope of
delivery.

Copy the calibration
diskette

Please make sure that you make a backup
copy of this calibration diskette and keep it
separately in a safe place.

To install the LinoColor software, click on
"TANGO Software" or "TANGO XL Soft-
ware" in the installation window.

If you only wish to add new calibration
data, you only need to click on "Calibration
files for TANGO" or "Calibration files for
TANGO XL".

During the installation procedure the cali-
bration diskette is requested.

■ TANGO/TANGO XL – Overall View

1 Pilot lamps
2 Drum cover
3 Scanning drum

4 Front panel
5 Change drum switch
6 Power switch

■   Operation Environment – Operating Station

1   TANGO/TANGO XL   **3**   Operating monitor
2   Image monitor   **4**   Power Macintosh

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■ General Notes

■ Susceptibility of Monitors to Magnetic Fields

Strong magnetic fields may have an influence on the monitor screen (e.g. could cause an unstable screen or flicker). This could be caused by the magnetic fields of 50/60 Hz power lines routed underground or inside the wall.

One or more of the following corrective actions may help, while observing the safety regulations for office working places including monitors:

- place the monitor at a different location
- shield the source (e.g. shield the cable duct)
- change the power supply cable routing
- shield the monitor with a metal cover

■ Optical Parts

Please avoid any contact by metallic objects with optical parts.

For information on the cleaning of optical parts, refer to *Chapter 6, Cleaning the Optics*.

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■ TANGO/TANGO XL – Product and Performance Features

TANGO/TANGO XL is a universal, fast, high-quality drum scanner.

TANGO/TANGO XL is easy to operate using the Power Macintosh and the color image processing software, LinoColor, version 4.2 and later for TANGO, and version 5.1.4 and later for TANGO XL.

■ Originals

Reflection, transparency, color and black-and-white, contone or lineart, positive or negative and screened printed originals.

■ TANGO Copix/TANGO iXL

TANGO Copix/TANGO iXL allow you to redigitize film sets (TANGO iXL also allows you to use the 212-mm Copix drum in addition to the 150-mm Copix drum). This enables you to re-use archived, screened originals, which can be scanned and further processed within a digital workflow.

■ Large-size scanning drum

In addition to the 150-mm diameter drum, the TANGO XL also allows you to fit a larger drum with a 212-mm diameter, giving you a useful format of 645 x 500 mm.

■ Easy and production-oriented job preparation

Exchangeable scanning drums can be prepared away from the scanner using the TANGOMOUNT or TANGOMOUNT XL original mounting device, while the TANGO/TANGO XL scanner continues to process other jobs.

■ Optimized data volumes for the desired output format and screen

The user receives precisely calculated data volumes. The digital scan processor calculates scales from 20% to 3000%, and up to 1700% in the case of TANGO XL.

■ Color format conversion and "on the fly" calculation of color corrections during scanning

■ Automatic aperture selection

■ Automatic focus setting

■ High resolution thanks to multiplier dot scanning

■ Digital detail contrast without additional calculation time

■ JobAssistant for batch scanning (automatic processing)

■ ColorAssistant for optimized and consistent scans (automatic original analysis)

■ Processing of data from other sources

■ Modification of print tables (Print Table Editor and PrintOpen)

■ Generation of Scitex-compatible data

■ Overall Configuration

The system environment consists of the operating unit, operating software and the output path.

For system requirements, please refer to the *LinoColor, Installation, Chapter 1*.

■ Pilot Lamps

Continuously lit up:
Scanner is switched on

Flashing slowly:
Scanner is active

Flashing rapidly:
Error

Not lit up:
Scanner is switched off

■ Scanning Drum

Drums with a diameter of 150 mm can be used. TANGO XL also allows you to use drums with a diameter of 212 mm. The drums are included in the scope of delivery.

The TANGO/TANGO XL specifications stipulate that only parts supplied or approved by Heidelberg Prepress should be used in TANGO/TANGO XL, as otherwise faults or even the withdrawal of approval may result.

This applies particularly to the scanning drums for TANGO/TANGO XL and TANGO Copix/TANGO iXL which, for operation at high speeds and automatic tensioning, must fulfil specific safety requirements of the appropriate test institutions.

Only original Heidelberg Prepress scanning drums guarantee the safe operation of TANGO/TANGO XL in respect of bonding, material, geometry, and the safety enquiring components required to comply with approval standards.

■ Scanning Area

The scanning area for transparency and reflection modes is the same. The maximum useful area is

- 450 x 480 mm for TANGO
- 645 x 500 mm for TANGO XL

■ Scanning Time

The scanning time depends on:

- Quality selection
- Scanning mode
- Original size
- Scale factor
- Recording screen
- Computing power of the operating station
- Scanning drum size

■ Scanning Lamp

The same halogen lamp is used for both transparency and reflection scanning modes.

See also *Chapter 6, Changing Lamps.*

STOP

TANGO/TANGO XL may only be operated with all covers and panels in place (danger of fire)!

■ Power Switch

TANGO/TANGO XL is switched on and off at the power supply by means of the power switch.

Switching on

Switch the scanner on. The pilot lamps light up.

The scanning lamp switches itself on.

The scanner can only be operated once it has been booted and initialized by the "LinoColor" program.

Switching off

Check whether the scanning operation is finished.

Switch the unit off using the power switch.

The scanner can be switched off at any time. Scanning operations currently in progress will be aborted by doing this. An error message appears on the monitor.

■ Scanning Drum Change

The drum change switch is used to open the cover and release the drum for changing. Once the drum has been changed, the cover is closed again by pressing the key and the drum is locked. The unit is ready for scanning.

Note:
During the scanning process, the drum change switch functions as an abort key. The current job is aborted immediately. An error message appears on the monitor.

■ Lamp in the switch

On: Drum change can be performed.
Off: Drum change not permitted.
Flashes: Unit is active, the unit can be stopped using the switch.
          The current activity is aborted.
          The drum is released.

■ Removal of the scanning drum

The drum can be removed by slightly tilting and lifting it.

You can pick up the 150-mm drum in the flange groove (see Fig.) and the 212-mm drum beneath the glass body.

STOP

Caution!

The cover must not be opened with the drum still rotating (danger of injury)!

Power failure

In an emergency, e.g. in the case of a power failure, the cover can be pushed up by hand once the drum has come to a standstill.

Otherwise, opening the cover by hand is forbidden.

■ Scanning (General Notes)

Once you have mounted the originals and inserted the scanning drum, the actual scanning operation can begin.

i Make sure that the alignment tracks for transparency and reflection modes are not covered up (space between the two grooves). There must be no picture or adhesive strip in this area.

Gap between the 2 grooves

Check whether the alignment strip attached to the drum for reflection scanning alignment is in perfect condition.

Operation is performed on the Macintosh.

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First quick scan

i
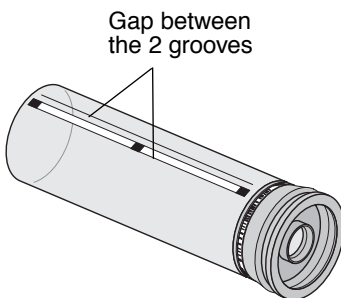
The most important settings for the **"first quick scan"** can be found in the documentation:

■ *LinoColor – User's Guide, chapter 2*

You will find further information in:

■ *LinoColor – Reference*

Batch processing

You will find information on batch job processing, jobs scheduling in the queue etc. in the manual

■ *JobAssistant – User's Guide.*

The last two manuals referred to are available in the documentation folder in your target directory once you have installed the LinoColor software.

Print tables

For generating your own print tables, you can use "Print Open ICC"/"Print Table Editor". You will find information on these products in the corresponding documentation.

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■ Focus on/off Function

The focus setting of the scanner lens is performed automatically in the middle of the defined scanning area.

Scanning collages

When scanning certain types of originals, e. g. collages, this setting can lead to an incorrect focus value, because the middle of the original is not on the same focus plane as the individual collage pictures.

Desired focus point in the picture

Center of original = automatic focus point
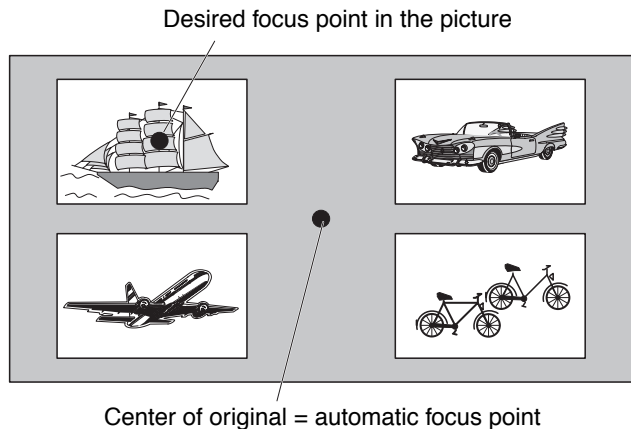
In the case illustrated above, the automatic focus setting at the middle of the original can be "disabled" and the focus point "positioned" by means of a special operation.

Proceed as follows:

1. Perform a prescan on the image section with desired focus point in the middle.

2. Perform a fine scan for the entire image by simultaneously pressing the Shift key and clicking on the "Scan" button in the "Scanner settings" window.

   In this way, no new focus value is determined during scanning, and the value of the preceding prescan is used instead.

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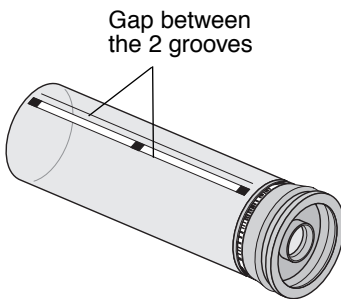
■ Mounting of Originals

Originals are mounted away from TANGO/ TANGO XL. To perform this task, we recommend using the original mounting devices

- TANGOMOUNT for 150-mm drums
  or
- TANGOMOUNT XL both for 150-mm drums and for 212-mm drums.

▨ Important Notes for Mounting of Originals

Gap between the 2 grooves

| **i** | Make sure that the alignment tracks for transparency and reflection modes are not covered up (space between the two grooves). There must be no picture or adhesive strip in this area. |

▨ Optimum Quality

■ Original near the flange

Always mount originals which are to be heavily enlarged near the flange of the scanning drum.

■ Distribution of originals

Evenly distribute originals

Originals must be evenly distributed over the circumference of the scanning drum to keep balance errors in the scanning drum to a minimum.
When scanning reflection transparencies which do not occupy the whole drum circumference, the remainder of the drum should have a similar material mounted to it as a counterbalance.

Counterbalance

If the balance error is too large, the scanner switches off automatically. Large balance errors will inevitably lead to losses in quality.

■ Physical factors

Caution:

Physical factors (e.g. temperature changes, scanning drum balance errors, necessary bearing play) have a stronger effect at the open end of the scanning drum than in the vicinity of the flange. Originals should therefore always be mounted in the vicinity of the flange, if possible.

Scales larger than1000 %

To achieve optimum quality and register accuracy, make sure that with **scales larger than 1000 %** the originals for this scale range - even with the drum covered in originals - are always mounted in the vicinity of the flange.

Warning!

If volatile and therefore usually easily inflammable substances such as film cleaner are used for original mounting instead of the recommended scan gel or anti-Newton oil, ensure that the area is well ventilated. There should be no smoking and fire and sparks should be avoided.
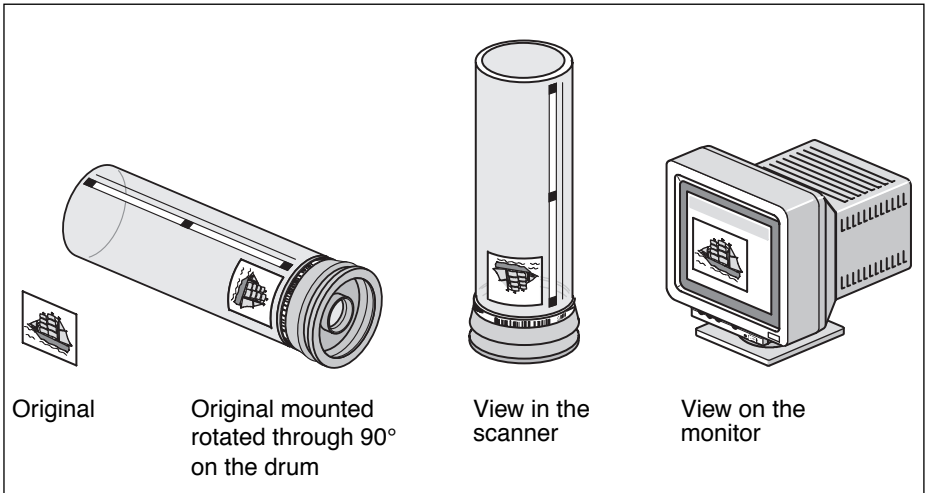
Caution with inflammable film cleaner!

You will find information concerning the accessories required for original mounting and consumables in the chapter *Technical Data and Accessories.*

Positioning the Original

In order to display the originals the right way up on the monitor, the originals must be mounted at an angle of **90°** on the drum. The original mounted at the bottom of the drum, i.e. near the flange is depicted at the top on the monitor.

Original

Original mounted rotated through 90° on the drum

View in the scanner

View on the monitor

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■ Transparency Mounting up to 6 x 6 cm Format

We recommend fixing transparencies up to this size in the case of heavy enlargement scales using anti-Newton oil. Pure liquid paraffin is the most suitable. This procedure is quick and suitable for all scale factors.

■ Clean the transparency and the scanning drum.

■ Attach the upper edge of the original using an adhesive strip, parallel to the drum groove on the scanning drum.

■ Flip up the transparency so that it hinges on the adhesive strip and apply oil behind it using a an oil roller or an oil bottle.

■ Fix the transparency using the roller of original mounting device TANGOMOUNT or TANGOMOUNT XL, or a hand-held wiping blade (squeegee) to remove trapped air bubbles under the transparency.
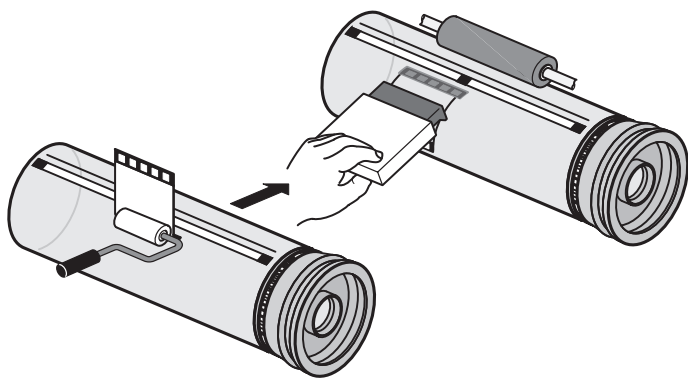
■ Remove the excess oil, and stick down the transparency on all sides using adhesive tape.

■ Clean the upper face of the transparency.

■ Check whether the oil is distributed evenly under the transparency. If this is not the case then repeat the operation.

Useful Tips

■ Adhesive strips as hinges

The adhesive strip at the top of the transparency should not be much longer than the transparency itself, so that the strip can be used as a hinge when lifting the transparency.
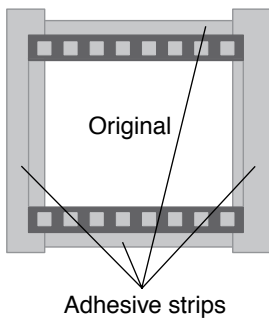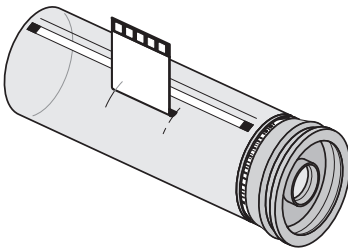
Stick the adhesive strips to all sides to seal up the original including the punched holes, so that oil is not spun out during rotation.

To do this, use a special adhesive tape available from:
Tesafilm,
Type 4113, 19 mm wide,
Tesa, Beiersdorf AG, Hamburg

Original

Adhesive strips

■ Avoidance of fingerprints

To avoid fingerprints getting on to the transparencies, always handle the transparencies using curved flat tweezers.

■ Newton rings

You can most easily recognize Newton rings by looking directly at the transparency. If Newton rings are present, then the mounting and fixing procedure must be repeated.
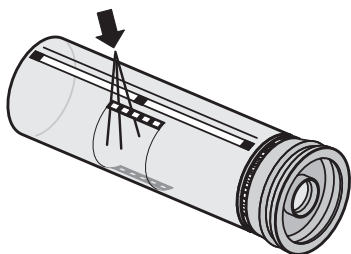
■ Air bubbles

You can most easily recognize air bubbles by looking through the scanning drum onto the transparency with a dark background. You can push out the air bubbles by going over the transparency with a cloth.
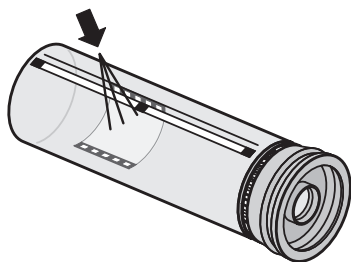
■ **Transparency Mounting from 6 x 9 cm Format onwards**

If the transparencies have drying hooks and cutting out the unevenness these cause is not permitted by the customer, fixing with oil is not possible. If the unevenness is well outside the image section, then fixing with oil and foil is possible (see *Transparency Mounting using Film*).

To avoid Newton rings you can treat transparency originals with anti-Newton spray (enlargement factor less than 500%) or with scan gel (enlargement factor greater than 500%).

■ Clean the transparency and the scanning drum.

■ If necessary, cut out the unevenness caused by the drying hooks.

■ Attach an adhesive strip to each of the original edges which are to be at the top and the bottom of the scanning drum.

■ Spray the underside of the original with anti-Newton spray, e.g. Alron spray (you must observe the drying time of approx. 1 minute).


Underside of original

Hold original at a slant

50 cm
20 inch

Anti-Newton spray
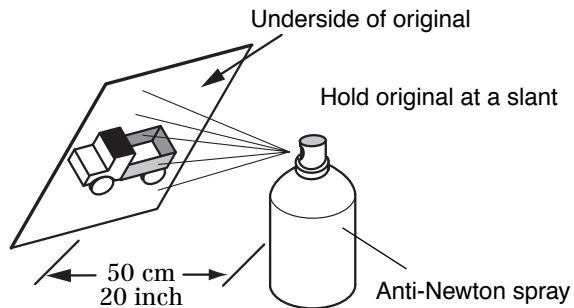
■ Attach the original using the upper adhesive strip parallel to the drum groove (do not cover over the alignment tracks).

■ By applying even pressure with a soft cloth or using the pressure roller of the mounting device, stretch the original over the scanning drum. Continue to a point beyond the end of the original until the bottom adhesive strip adheres to the scanning drum and the original is secured.

■ Clean the upper face of the transparency.

Transparency Mounting using Film

Several transparencies are to be mounted onto the scanning drum - with or without specifying the angle - using oil, gel or other suitable liquids and with the aid of a suitable mounting film (e.g. mounting film Chronar-Clean-Film C 42).

■ Clean the transparencies and the scanning drum.

■ Cut out the unevenness caused by the drying hooks, if necessary or file it off.

■ Fix the film on an light table, either at the edge of the glass plate or at the upper edge.

■ Transfer the reference line from the light table using a ruler and film marker onto the upper edge of the film.

■ Arrange the transparencies wrong-reading according to the reference lines or marks onto the film, and attach them using short adhesive strips at the upper edge.

■ Check the film with the transparencies for cleanness.

■ Stick the film parallel for the groove on the drum. To do this, fix the film to start off with at the top end using short adhesive strips and then attach them onto all sides.

Mounting film
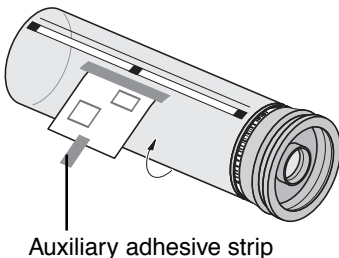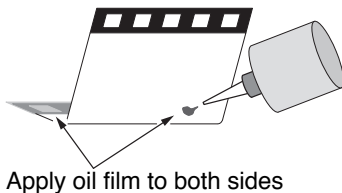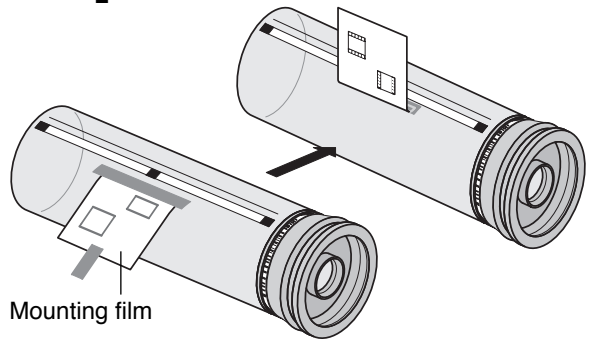
■ Flip the film over backwards.

■ Apply a trace of oil (or similar) along the top edge and, in the case of pronounced angles, along both sides as well on and under the transparency. Apply the amount in accordance with the size of the transparency. If necessary, apply several traces.

Apply oil film to both sides

■ Flip the film back again. Attach a supporting adhesive strip to the bottom edge of the film.

■ By applying even pressure with a soft cloth or using the pressure roller of the mounting device, stretch the original over the scanning drum. Continue to a point beyond the end of the film until the

Auxiliary adhesive strip

bottom adhesive strip adheres to the scanning drum and the film is secured.

■ Attach the film at the bottom end and at the sides using adhesive tape, possibly cleaning away the adhesive edges beforehand.

■ Check the results and press out any air bubbles present.

| **i** | Note: large transparencies can be fixed using spray or powder and with the help of a suitable film. Anti-Newton films can be used up to an enlargement factor of 400%. |

Useful tips

■ If possible the film should be as long as the circumference of the scanning drum in order to keep the balance error when scanning to a minimum (1).

■ Arrange the transparencies such that the bottom quarter of the film remains free, since the film can go out of shape through the strong tension exerted on it (2).

Auxiliary adhesive strip
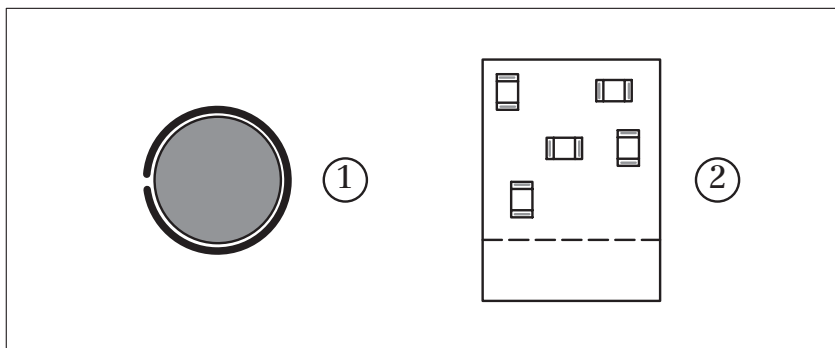
■ **Mounting of Reflection Transparencies using Film**

■ Clean the original using an antistatic cloth or an ion blower.

■ Fix the film to an light table, either on the edge of the glass plate or at the upper edge.

■ Transfer the reference line using a ruler and a film marker to the film.

■ Align the original with the rear side upwards (motif side lying on the film) as specified or according to layout lines.

■ Stick the film to the drum using an adhesive strip parallel to the drum groove.
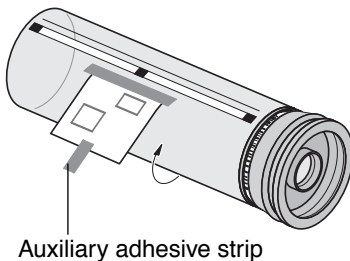
> **i** If, in the case of delicate originals, attachment using adhesive strips is not possible, you must slide the original under the film and align it according to the reference lines after having already fixed the film to the drum by its upper edge.

■ Using the auxiliary adhesive strip, pull the film over the scanning drum and the original, whilst rotating the drum with the other hand.

■ Attach the film all round the lower edge and both sides using adhesive strips.

Useful tips

Originals, especially water-colors, are often not flat but wavy. They should therefore be stretched over the scanning drum 1 or 2 days before scanning and should be stretched again directly prior to scanning.
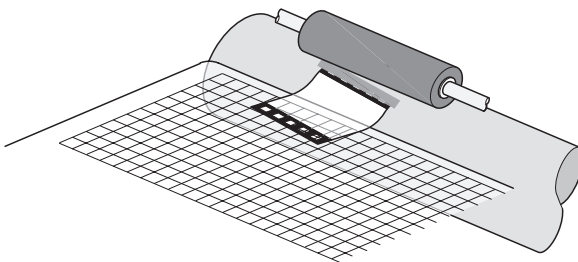
Angled Original Mounting

Note: The TANGOMOUNT XL original mounting device also has reference edges (2 degrees) on the original table. These can be used when mounting originals for the TANGO Copix/TANGO iXL.

Aligning Originals according to Motif

If you wish to align your original according to the motif (e.g. edge of a house, tree, etc.), proceed as follows:

■ Position the original on the table of the TANGOMOUNT/TANGOMOUNT XL as far as possible forwards so that the upper edge can be affixed to the drum.

■ Align the original according to the motif on the gridlines of the table, and stick the upper edge to the drum.
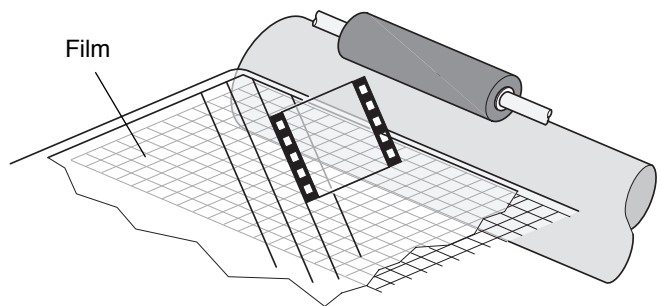
■ Perform the rest of the mounting procedure as already described for the various original sizes.

Aligning the Original according to a Prescribed Angle

If you wish to mount your original according to a prescribed angle (e.g. for an advertising insert), proceed as follows:

■ Draw one or more lines of the desired angle on a film relative to the upper film edge.

■ Place (and possibly affix) the film onto the table of the TANGOMOUNT/TANGO-MOUNT XL and align it relative to the gridlines or to an edge of the table until the upper foil edge contacts the drum.

■ Align the original according to one of these lines on the film, and stick the upper edge of the original onto the drum.

Film

■ Perform the rest of the mounting procedure as already described for the various original sizes.

■ Notes on Safety

STOP

Connectors and outlets of the house installation must always be easily accessible so that, in the case of an emergency, the unit can be disconnected completely from the power supply by pulling out the power connector.

The operator has no access to the fuse.

The unit may only be repaired by the Service Department in the case of failure.

Do not install the unit in the vicinity of air-conditioning systems and protect it from moisture and direct sunlight.

Caution:

Unauthorized opening of the unit's housing and improper repairs not expressly described in the documentation can lead to considerable danger for the user.

Servicing work may only be performed by authorized specialist personnel. The respective accident prevention regulations must be observed at all times.

Non-observance of accident prevention regulations can lead to the loss of accident insurance cover.

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■ Servicing

STOP

In addition to the servicing work listed in the documentation to be performed by the user, further servicing work – also during the warranty period – has to be performed by the Service Department. This servicing work is not part of the warranty.

■ Checking the Scanning Drum for Scratches

If scratches are present on the scanning drum, polish the area using a polishing cloth and a polish (order No. 00129038), until the scratches are no longer visible.

■ Cleaning Agents

When using cleaning agents, observe the manufacturer's instructions.

■ Cleaning the Scanning Drum

Rub the scanning drum with a cleaning cloth to remove dirt. To remove smears and old anti-Newton coatings, dampen the cleaning cloth with cleaning agent.

Commercially available cleaning agents:

- Scanning drum cleaner from Messrs. Neumann and Partner.

- RF5337B from Messrs. Röbel and Fiedler.

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■   **Cleaning the Optics**

To clean the scanning lens, you should first remove the drum as described in the section on changing the drum.

Only clean the optics when the they are actually dirty. Owing to the special surface sealing of the lens, frequent wiping of the lens with dry cloth may cause damage.

To determine the extent of the dirt, use a flashlight.

Cleaning may be necessary when a scattered light effect becomes visible or even measurable on the edges of the original (perforation).

The lens can be cleaned with a clean cotton bud – **Use each cotton bud only once**!

■ Dust and lint can be removed with compressed air (rubber blower), a soft optics brush, or a clean dry cotton bud.

■ Oil and gel can be removed with a cotton bud which has been slightly moistened in spectroscopically pure acetone.

As acetone solubilizes plastics and color paints, it should not come into contact with either of these materials and should be used very selectively. For this reason, the cotton buds must have a wooden stem, as plastic stems may be solubilized by the acetone and can soil the optics, causing irreparable damage.

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⚠

The acetone should not come into contact with the scanning drum or painted parts.

After you have cleaned the lens, you should go over it with spectroscopically pure isopropanol.

Here too it is important that the cotton buds are used only once.

The lamp used for reflection scanning should be cleaned in a similar way, although dirt here is relatively unimportant.

Drum or film cleaners should only be used in the last resort, as these can leave traces on the surface of the optics after drying. Here too, you should in any case go over the optics after cleaning with dry cotton buds.

If you have any questions regarding cleaning, ring the Service Department. You can send very dirty optics to be cleaned by the Service Department!

You can find the order numbers for the necessary accessories and consumables in Chapter 7, *Technical Data and Accessories.*

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■ **Cleaning the Unit**

STOP

You must disconnect the unit from the power supply prior to cleaning it using liquids by pulling out the power supply cable.

Caution: the unit is not completely disconnected from the power supply simply by switching it off at the power switch.

The surfaces of the unit can be cleaned using a dry cloth.

If the unit is very dirty, cleaning can be performed using a damp cloth, dipped in washing-up liquid and well wrung out.

Make sure that no liquid can penetrate into the inside of the unit and do not allow liquid to reach the power connection socket on the rear of the unit.

Do not use any abrasive cleaning agents or solvents.

■ Cleaning Originals

To obtain optimum scanning results, the originals must also be cleaned and maintained as required.

■ "Inspecting" the Originals before Cleaning

Hold transparency originals against a dark background and then against a light background. Carefully view the original from different angles and distances to determine whether it is soiled or not, and if so, the nature of the soiling.

■ Preparing Originals for Cleaning

Avoid electrostatic charging (e.g. by grounding).

Switch on an antistatic device. After approx. 1 minute, pass a pin through the brush to remove the dust.

Pull on lint-free gloves.

Remove dust from the original (for example, by moving it through the antistatic device and brushing it).

Place the original flat on a clean, smooth and flat plate, dirty side up, and secure it, if necessary.

Refer to the following table when selecting cleaning material for the originals:

Cleaning Material / Equipment	Name / Supplier e.g.	Remarks
Dark background material (approx. 5OOmm x 5OOmm)	Black cloth	
Lint-free (low-lint) gloves	Polyester gloves, MAB 02, Basan FRANKFURT	
Absorbent, lint-free (low-lint) cloths	Kleenex Professional Wipes, Code 7107, Kimberly Clark	Order No. 02336154
Oil-free compressed air	Compressed air 67, Messrs. Kontakt Chemie, RASTATT (or rented compressed-air bottle) (with pistol valve) Messrs. Messer-Griesheim, techn. Gase	Order No. 02065436
Antistatic brushes, with grounding	Antistatic brushes, CW 101/ SW 141, Mssrs. Kinetronics	
Antistatic device	Antistatic device 1212, Messrs. Kinetronics	
Ethanol, spectroscopically pure	Chemical sales outlets	in spray bottles 0.5 l Order No. 04177355
Adhesive roller	Nagaoka Rolling Cleaner	
Curved tweezers, with spoon-shaped tips, metal or plastic	Laboratory supply outlets	Order No. 04160770

■   **Oily Residues or Water-based Liquids**

Dab up liquids using a lint-free cloth.
(then clean with ethanol)

■   **Cleaning with Ethanol**
     (Dried-up finger-prints; adhesive tape
     residue, dry smudges, except for
     Acetone rings)

■ Applying ethanol

Spray or coat the surface to be cleaned with
ethanol (using sparingly).

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■ Wiping off Ethanol

Moisten a small amount of ethanol and remove the liquid by wiping the cloth in the same direction applying a small amount of pressure.
A thin film of alcohol (which will evaporate) should be left on the liquid.

Cleaning has been successful when the film of alcohol does not form any drops and evaporates without leaving any streaks. Repeat the procedure if required!

If you also wish to clean the other side of the original, lift the original and wipe the glass plate dry. Then proceed as described above. (the proceed as in section "Removing Dust")

▧ Removing Dust

Carefully pull the original through the antistatic device.

Remove dust from the original using a grounded antistatic brush and oil-free compressed air.

Do not blow he compressed air over the original in short blasts, as this would cause condensation. Use a steady stream of air over the original!

Never use compressed air if the original is already in the unit!

▪ Cleaning using Film Cleaner (Soiling which could not be removed by dabbing and cleaning with ethanol)

Depending on the type of original, other cleaning agents (i.e. solvents, such as naptha, film cleaner or similar) can be used to supplement ethanol. Experiment for best results.

These agent should be used to supplement ethanol, and you should always finish off cleaning with ethanol.

▪ Removing Dust with Adhesive Roller (Dust that could not be removed following normal procedures)

Place the original flat on a clean, smooth and flat plate with the surface to be cleaned facing upwards.

Roll an adhesive roller over the original without stopping.

The original is electrostatically charged – the roller must be dry before using it again (clean using water).

Remove the original. (Then proceed as in normal dust removal)

■ Changing Lamps

■ By pressing the drum change switch the cover lifts upwards.

■ Remove the drum.

■ Swing the lamp cover upwards

STOP   Caution
The cover and the lamp are hot!

Swing the cover for the lamp connection upwards.

The lamp goes out automatically.
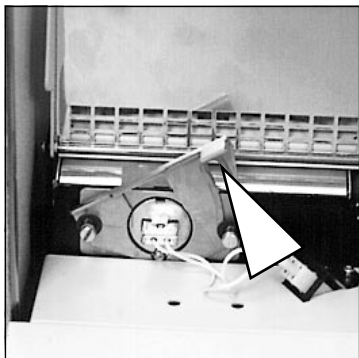
■ Push the lever upwards. This exposes the lamp fitting for easy access.

■ Undo the plug-in connections for both cables.
Take the lamp out of the fitting at the cables.
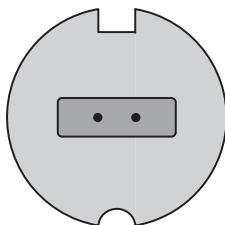
■ Insert a new lamp – this can only be put in one way round. Refit the plug-in connections, press down the lever and close the cover.

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■ Mounting the Alignment Strip for Reflection Scanning

This process is only necessary if the alignment strip is dirty or defective. The scanning drums have the strip pre-mounted on delivery.

The alignment strips are included in the scope of delivery.

Before you fit a new strip, first remove all the remains of the old adhesive strip. The drum must be completely clean and grease-free.

The strip is applied to the inside, parallel to the groove in the direction of feed. Prefabricated strips are available for this, which are included in the scope of delivery. Between the grooves there is a gap of approx. 1 cm as an alignment track for transparency scanning. Make sure that the strip begins **5 mm from the flange end** of the drum with a field for focus measurement. The distance to the open drum end can vary (the 212-mm drum is longer than the 150-mm drum).

■ Make sure that the alignment track for the transparency mode remains free.

These mounting instructions apply for all TANGO drums, namely both for standard drums and for Copix drums with 150-mm and 212-mm diameters.

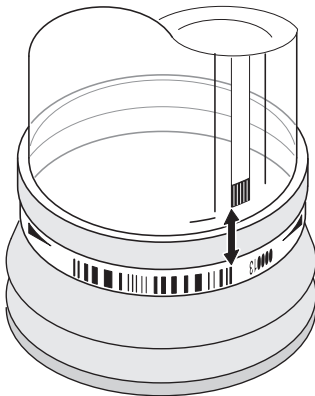Hell Verein / www.hell-kiel.de

Standard drum

2 grooves

Alignment strips for
reflection scanning

Alignment strip for
transparency scanning

Distance 5 mm

Fields for focus measurement

Barcode (groove)

Copix drum

2 grooves

Alignment strips for
reflection scanning

Alignment strip for
transparency scanning

Distance 5 mm

Fields for focus measurement

Barcode (groove)

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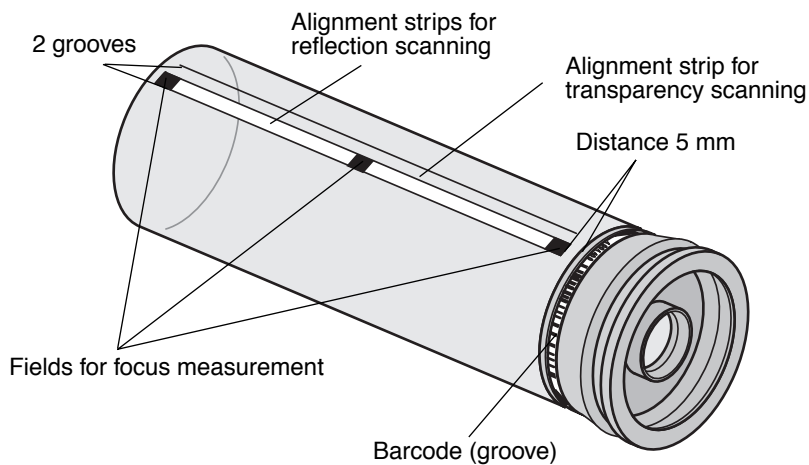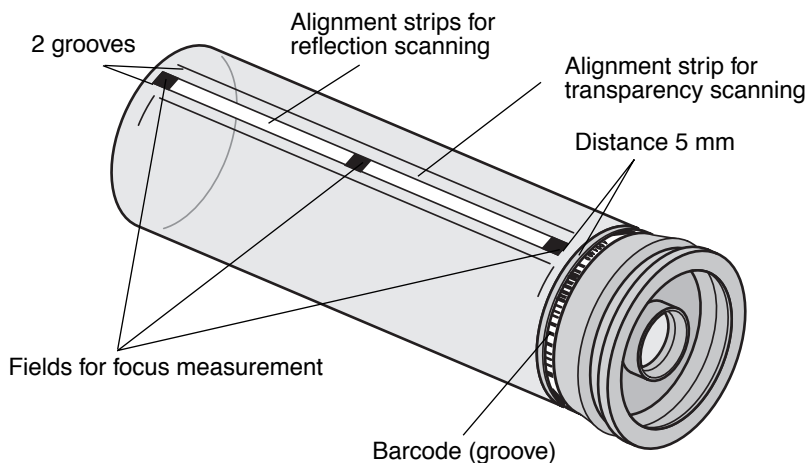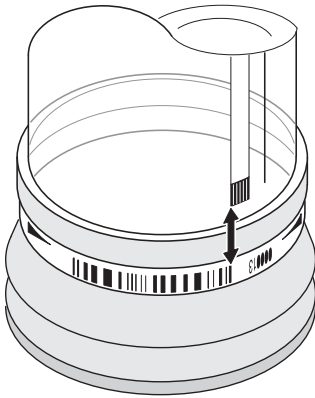
Standard drum with
barcode strips

Copix drum with
barcode strips

■ Mounting Barcode Strips

This step is only necessary if the barcode strip is dirty or defective. The scanning drums have the barcode strips pre-fitted on delivery.

Barcode strips are contained in the scope of delivery.

■ Different Barcode Strips

Different barcode strips are available for the 150-mm and 212-mm drums. No distinction is made between standard and Copix drums.
For 150-mm drums, it is necessary to use barcode strips whose initial digit is 0, whereas for 212-mm drums, it is necessary to use barcode strips whose initial digit is 2:

150-mm drum: 000001 to 099999
212-mm drum: 200001 to 299999

i	Before you fit a new strip, first remove all the remains of the old adhesive strip. The drum must be completely clean and grease-free.

Stick the barcode into the designated groove, making sure that the 1st marking on the barcode is aligned such that it is in line with the groove at the side of the alignment strip for reflection scanning – tolerance threshold ± 1 mm (see sketch).

These mounting instructions apply for all TANGO drums, namely both for standard drums and for Copix drums with 150-mm and 212-mm diameters.

■ Technical Data

Scanning type	Multiplier scanning
Unsharp masking (USM)	digital (program-controlled)
Focus	computer controlled
Max. scanning speed	30 revolutions/sec. (TANGO) 22 revolutions/sec. (TANGO XL)
Max. useful format	480 x 450 mm (TANGO) 500 x 645 mm (TANGO XL)
Scale range	20 - 3000 % (TANGO) 20 - 1700 % (TANGO XL)
Max. original thickness	2.0 mm
Standard interface	SCSI (image data and communications)
SCSI address	5 (preset)
Dimensions (width x height x depth)	622 x 1536 x 627 mm, 2156 mm height with the drum cover open
Power supply	100 - 230 V ± 10 % single-phase
Frequency	47 - 63 Hz
Rated current	3.0 - 6.0 A
Power consumption	approx. 500 W
Ambient temperature	18 to 28 °C
Humidity	30 - 80 % (non-condensing)
Operating weight	approx. 250 kg
Noise emission	less than 55 dB (A)

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■ Accessories

Not part of standard delivery	Order No.:
Transparency squeegee	04088883
Tweezers	04160770
Rubber blower (ion blower)	00346608
Foam roller	04214153
Anti-Newton spray	00129100
Antistatic cloth	00057606
Mounting film	03004570
Optics cleaning set (without fluids)	02064626
Drum cleaning set (can only be ordered through designated dealerships)	04089545
100 cotton bud cleaners	02132923
Drum polishing material	00129038
Halogen lamp	02777150
Barcode strip / white strip, 150-mm drum 212-mm drum	05191548 05331617
White strip (50 pieces)	05281660
Standard scanning drum, 150 mm Standard scanning drum, 212 mm Copix scanning drum, 150 mm Copix scanning drum, 212 mm	05117682 05304040 05252652 05304067
Drum cover for 150-mm drum Drum cover for 212-mm drum	04960343 04090209
TANGOMOUNT mounting device TANGOMOUNT XL mounting device	05181461 05304075

■ **Consumables**

■ Special adhesive tape, Tesafilm,
Type 4113, 19 mm wide,
Tesa, Beiersdorf AG, Hamburg

■ Alron anti-Newton spray,
Alron scan gel, Reg. No. 33068

Messrs. Neumann u. Partner
Billeweg 20
22851 Norderstedt
Tel.: +49/40/5249143
Fax.: +49/40/5245526

■ WALKISOFT Cloth
perforated roll, 60 g/m², 20 x 14 cm
Use film cleaner, type DC 2001

Kami Vertriebs GmbH,
Lübener Str. 6
90471 Nürnberg
Tel.: +49/911/803694
Fax.: +49/911/807757

■ Wiping cloth, 30 x 36 cm,
Article No. 7262/60
Tenca Chemische Union, Betriebshygiene

■ Mounting film Chronar-Clean-Film C 42,
300 x 400 mm,
available through Dupont distributors

■ Standards

This unit complies with to the safety regula-
tions of the standards listed below.

▉ Approvals

GS: (Germany)
CE: Conformity declaration (Europe)
UL: E 156891 (NWGQ) (USA)
cUL:E 156891 (NWGQ 7) (Canada)

▉ General

GSG	(Device safety regulations Germany)
89/392/EEC	Machine directive (Europe)
73/23/EWG	Low-voltage directive (Europe)

▉ Mechanical Safety

EN 292   (Europe)

▉ Electrical Safety

VDE 0805	(Germany)
EN 60950	(Europe)
IEC 950	(International)
UL 1950	(USA)
CSA C22.2 No.950	(Canada)
VDE 0113-T1	(Germany)
EN 60204-1	(Europe)
IEC 204-1	(International)

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▨ **Electromagnetic Compatibility (EMC)**

EMVG	Gesetz über elektromagnetische Verträglichkeit von Geräten (Germany)
89/336/EWG	EMC, Directive of the European Community (Europe)

▨ **Noise Emission**
(Radio Interference and Noise Voltage)

EN 50081-1 (Europe)
EN 55022, threshold value B (Europe)
CISPR 22 mod., threshold value B (International)
FCC, Part 15, Subpart B, Class A (USA)
DOC, Radio Act SOR/88-475, Class A (Canada)

▨ **Immunity from Noise**

EN 50082 -1/2   (Europe)
IEC 1000-4   (International)

▨ **Radio Interference Suppression**

Note for users in Europe

To comply with directive 89/336/EEC, it is necessary to operate the scanner with all covers correctly installed.

Ensure compliance with the radio suppression interference regulations if you connect other electrical equipment to this unit by

following the instructions given by the manufacturer of this equipment regarding correct installation and maintenance.

It can be assumed that the equipment you are going to connect complies with radio interference suppression if it is marked with the conformity mark of the European Union (CE) and all instructions regarding installation, operation and maintenance are followed.

■ Disposal of the Unit

The following table lists all parts which do not contain harmful substances. Accordingly, these parts can be recycled in an environmentally-sound way.

We cannot assure this for all electronic components.

Rational recycling should be ensured by an approved waste disposal company.

Addresses are available at your local environmental office.

In all cases, the disposal of the unit should comply with the relevant national or international laws and regulations.

Enquiries should be addressed to the Environment Representative at Heidelberger Druckmaschinen AG, Business Unit Prepress.

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Name	Material
Cover	Lexan 123 R 111, colored
Cover	PS-HSF 20 - TSG, varnished
Panel, left	PS-HSF 20 - TSG, varnished
Spacer	PC/ABS Bayblend T45
Cover	S/B - TSG, colored
Finger jam guard	TPU - Elastollan - 1180A, black
Cover, back	S/B - TSG, varnished
Key block	S/B - TSG, varnished
Keys	PC/ABS-FR Bayblend KV2 1466, colored
Covers (pilot lamps)	PC Makrolon 2405
Panels (back)	PC Makrolon 2405
Holder (optics)	PC Makrolon 2407
Cast-iron base	Aluminum cast iron with lead insert
Molded stand profile	Aluminum
Bearing block	Aluminum cast iron
Support (to be fastened to the rear of unit with screws)	Aluminum cast iron, varnished
Weight 1 (fastened)	Gray cast iron, varnished
Weight 2 (moveable)	Gray cast iron, varnished
Air duct	Royalite R 59 plastic

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Covers for pilot lamps

Back cover

Finger jam guard

Weight 1 (fastened)

Top cover

Weight 2 (movable)

Drum cover

Molded stand profile

Optics holder

Spacer

Keys

Air duct

Key block

Front panel

Left panel

Back covers

Cast-iron base with lead insert

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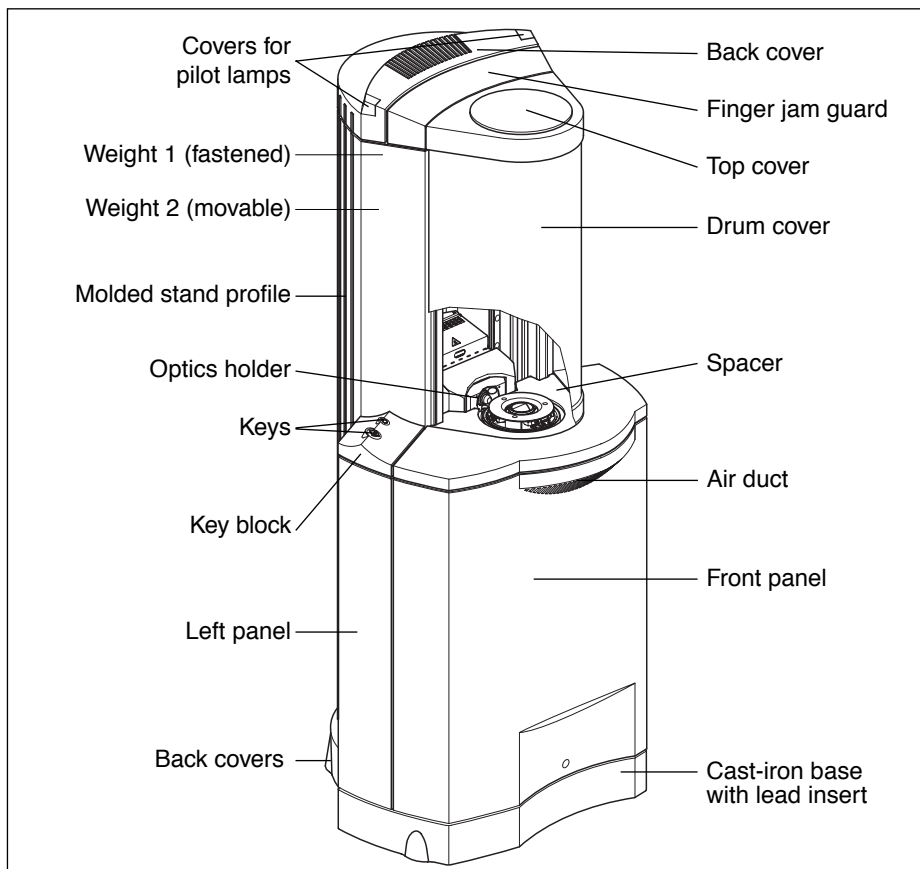
■ Quality Assurance

Heidelberger Druckmaschinen AG requires information on the quality of a product delivered and on the delivery procedure to ensure effective product control and quality assurance and to plan further developments.

Please use the enclosed forms to report general defects or desired improvements to Heidelberger Druckmaschinen AG.

■ Installation Report for the Service Technician

The Installation Report is used to evaluate the quality of the product and of the delivery procedure. This may also be used to process the modification of the product.

It must be filled out by the person responsible after every installation and mailed to Heidelberger Druckmaschinen AG.

■ Specify serial number of all installed machines and components.

■ List missing parts and errors which occurred during initial starting. This applies to hardware and software.

Listing the missing parts does not cause their subsequent delivery. They must be ordered separately.

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Problem Report for Customers and Service Technicians

The Problem Report is to be used in cases where general hardware and software defects are discovered or where you find that the products need to be improved.

Do not use the Problem Report to clarify questions on use or operation! In these cases, contact your regional Heidelberg Prepress distributor.

Copy the forms before completing them. Fill out the copies and retain the originals. This ensures that forms will be available for later use.

■ Specify exact product name
(machine name, software and version).

■ Only ever describe one problem stating the exact conditions under which the problem occurred such as error messages, serial no. of the machine, modification states, the software used and its version etc.

■ Specify sender and customer no./message no., and, if available, include your phone and fax nos.

Send the Problem Report to your agency or to the Heidelberg Prepress distributor responsible for your area. Send the forms to the addresses in Kiel or Eschborn if you are a member of the world-wide Heidelberg Prepress service organization.

You will always receive an answer to your Problem Report.

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W WALKISOFT cloth 7–5
Warranty period 6–4
Wood screws 1–7

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⚠ Achtung! Attention!
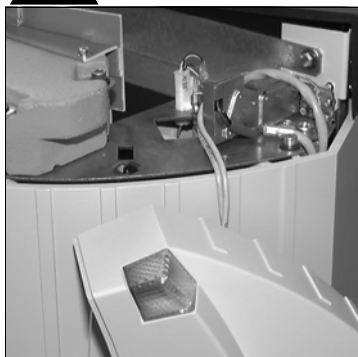
Aufstellen des Gerätes! (DE)

Bei einigen Geräten ist das Kabel zum oberen Gerätedeckel am Gerät festgeschraubt. Dadurch muß die Steckverbindung nicht mehr gelöst werden. Der Deckel kann mit dem Kabel am Gerät hängen bleiben (siehe auch Kapitel 1 des Bedienhandbuches TANGO/ TANGO XL, elektrische Steckverbindung lösen).

Installing the device! (GB)

In some devices, the cable leading to the upper device cover is screwed on to the device. This renders disconnecting the plug-in connections unnecessary. The cover can remain attached to the machine by the cable (refer also to the TANGO/TANGO XL operating manual, Chapter 1, disconnecting electrical plug-in connections).

HEIDELBERG
PREPRESS

Order No. 05382351
Edition April 1999

Compared with previous version 5.1.4, the following has changed for the **operation of TANGO/TANGO XL** in the **LinoColor Version 6.0** (the changes made also relate to TANGO/TANGO XL operating instructions, Order No.: 05338085):

1. **Connecting TANGO/TANGO XL to the operating station: (page 2 – 4)**
   You must incorporate an SCSI interface card into your computer if your Power Macintosh has no SCSI connection. TANGO/TANGO XL is only connectable using SCSI.

2. **Installing LinoColor software: (page 2 – 8)**
   You need to have installed operating software 8.5 on your Power Macintosh in order to be able to use LinoColor 6.0.

3. **Installing calibration data: (page 2 – 9)**
   As of LinoColor version 6.0, specific calibration data for your scanner is in the form of ICC Profiles and is delivered on CD and no longer on diskette. Keep the CD in a safe place. If you wish to new ICC-profiles for your new scanner, you must click on *ICC-profiles for TANGO (from "TANGO Profiles" CD)* in the LinoColor installation window.

4. **Replacing scanning drums – TANGO XL only: (page 4 – 4)**
   When replacing the drum and changing from a large to a small scanning drum or vice versa. LinoColor automatically switches to the correct scanner drum display during an overview scan. However, the scan mode, whether standard or Copix, is maintained, even if you replace a Copix drum with a standard drum or vice versa.
   The barcode number on the drum is crucial for this automatic switch-over. Malfunctions in LinoColor may result if the following number allocation is not adhered to.

TANGO/TANGO XL
Additional Information (EN)

Order No. 05382351
Edition April 1999

Small drum (150 mm):	000001 to 099999
Small drum (150 mm) for Copix:	100001 to 199999
Large drum (212 mm):	200001 to 299999
Large drum (212 mm) for Copix:	300001 to 399999

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