

VELOPEX[®]

Automatic X-Ray Film Processor

Intra - X
Intra - XE



USER GUIDE

Operation and Maintenance manual

WARNING:

Do not plug into the electrical mains power supply before reading this manual – or before filling the machine with liquids

Register your machine by returning the Warranty Card to enable full customer support.



Machine serial number to be
quoted on all correspondence:

Introduction

Thank you for purchasing your automatic film processor from Velopex, we certainly appreciate your business.

In order to maintain the quality of our product and your processing it is important that you pay close attention to the following instructions contained in this user's manual. This will ensure a long life for your processor.

This manual is to be used with the following Velopex processors: Intra-X, Intra-XE.

Warranty may be voided if the processor is incorrectly installed or maintained outside the guidelines set forth in this manual.

Caution: ***Use assistance when unpacking and positioning the machine.***

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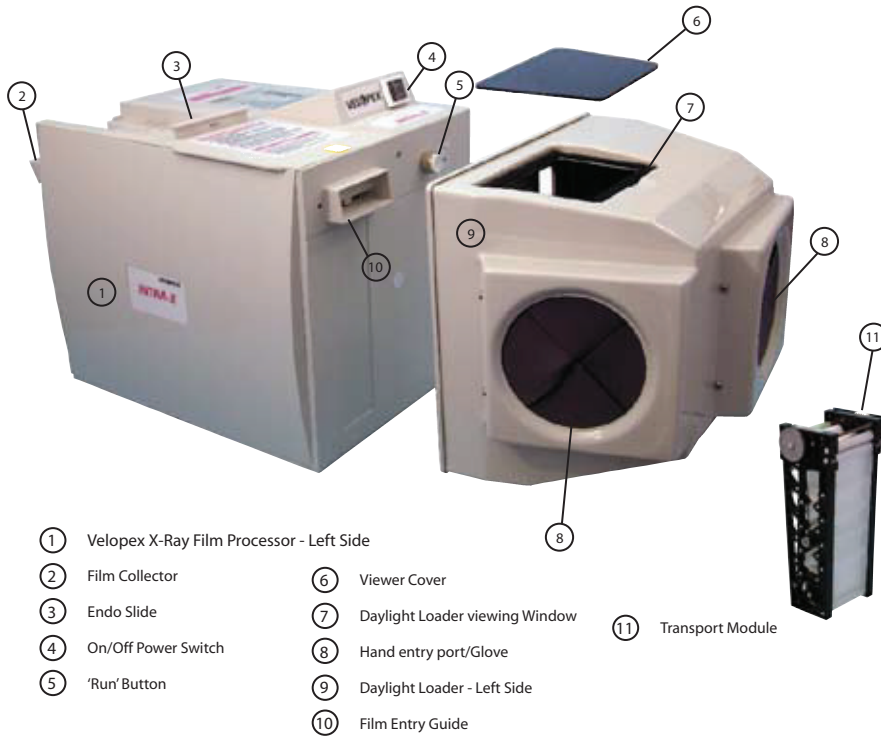
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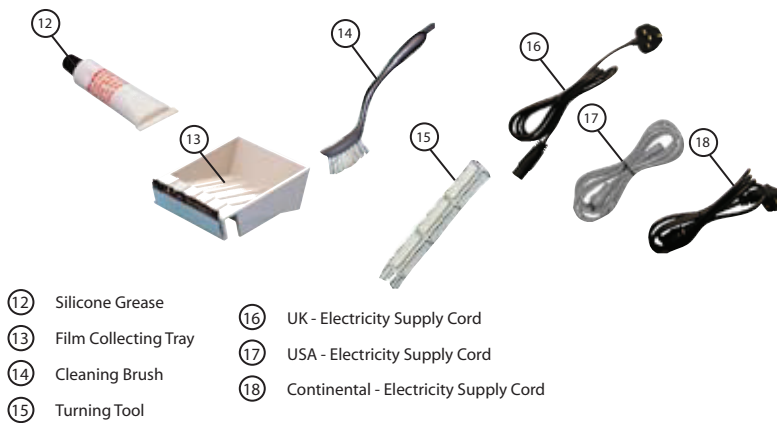
www.velopexusa.com

Velopex Processor - Exterior









- ① Velopex X-Ray Film Processor - Left Side
- ② Film Collector
- ③ Endo Slide
- ④ On/Off Power Switch
- ⑤ 'Run' Button
- ⑥ Viewer Cover
- ⑦ Daylight Loader viewing Window
- ⑧ Hand entry port/Glove
- ⑨ Daylight Loader - Left Side
- ⑩ Film Entry Guide
- ⑪ Transport Module

Machine Accessories and Extras Supplied





- ⑫ Silicone Grease
- ⑬ Film Collecting Tray
- ⑭ Cleaning Brush
- ⑮ Turning Tool
- ⑯ UK - Electricity Supply Cord
- ⑰ USA - Electricity Supply Cord
- ⑱ Continental - Electricity Supply Cord

Table of Symbols

| Symbol | Description |
|---|--|
|  | Alternating Current |
|  | Off (Power: Disconnect from the mains) |
|  | On (Power: Connect to the mains) |
|  | Type 'b' equipment |
|  | 'RUN' Button / Process switch |
|  | Protective Earth (Ground) |

Symbols used within Manual

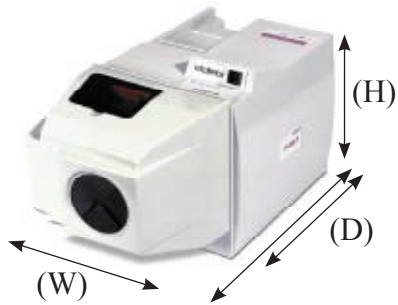
| | |
|---|---------------------|
|  | Tip |
|  | Attention / Warning |

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INSTALLATION**OPERATION****MAINTENANCE****TROUBLE SHOOTING**

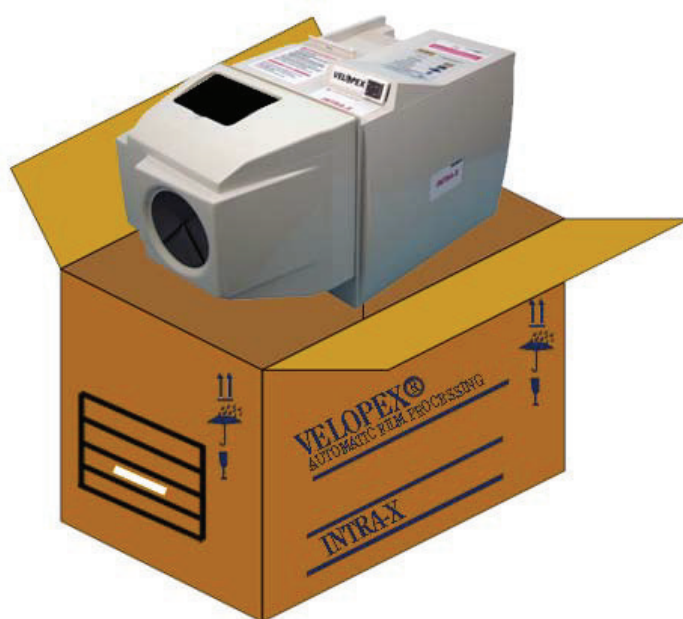
Specification



| | |
|---|----------------------------------|
| Width (W) | 290mm / 11½" |
| Depth (D) Inc. Loader | 435mm / 17" 635mm / 25" |
| Height (H) | 315mm / 12½" |
| Weight: Empty Full Tanks | 12.1Kg / 26½lb 13.9Kg / 30½lb |
| Tank Capacity | 1.4litres / 2½Imp Pints each |
| Standard Supply Voltage | 220-240v 50Hz 110-120v 60Hz |
| Warm-up time | 10 min. approx. |
| Film Feed Speed | 470mm / 18½" per min. |
| Max film width | 65mm / 2½" |
| Processing time: Dry Wet-Endodontic | 4 min. approx. 2 min. approx. |

Pre Installation Instructions

INSTALLATION



- **Unpacking the VELOPEX**

NOTE: For unpacking and lifting the machine into position it is important to have assistance.

The machine comes in a single carton containing:

Machine, Operator's Manual, Silicone Grease, Electrical Cord, Transport Module Turning Tool, Cleaning Brush, Chemical Change Chart and a box of Cleaning Tablets (UK only), and Daylight Loader (as required).

1. Familiarise yourself with the layout of the machine by referring to the images as you progress through the manual.
2. Lift the machine from the carton and position on counter top. Remove outer and inner packaging. The transport modules are protected by internal packing pieces: these must be discarded.

Pre Installation Instructions (cont.)

• Siting of the VELOPEX

When using the machine in daylight or a darkroom, avoid sources of intense light. Do not mount the unit under a window, fluorescent light or flood lamp.



IMPORTANT NOTE: A well ventilated position is mandatory.

The ambient temperature must be below 80°F (27°C).

Prevent siting the machine above or near other electrical or mechanical equipment. Surfaces susceptible to water or chemical damage should be avoided, such as carpeted areas.

1. COUNTER

- a. Use a stable and level counter that will support a weight of at least 100 lbs. (50 Kg.).
- b. When the machine is filled with chemicals, make sure the stand does not rock or shake. NEVER move the machine with chemicals in the tanks.

2. ELECTRICAL SUPPLY

- a. 115Vac 60Hz, 10A, 1150W (USA)/230Vac 50Hz, 10A, 1150W (World Wide).
- b. The power source must be within three (3) feet (1m) of the machine. It should be easily accessible for operation and maintenance.

WARNING: X-ray radiation can be harmful to patient, technician and dentist. Inadequate lead shielding of the darkroom or film storage area will also cause fogging from exposure of films to stray x-ray radiation. Consult your local codes, Health Department or Dental Equipment Dealer for proper construction of darkroom or placement of film processing equipment in the vicinity of x-ray radiation sources.

Daylight Loader Installation (as required)

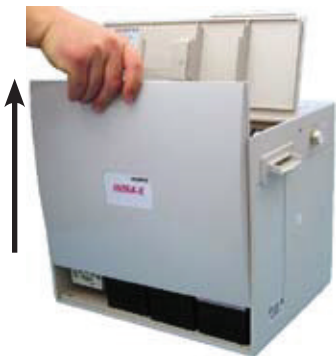
INSTALLATION



1.


Bring the Lid to the upright position.

TIP: The Lid can be kept in the upright position while the machine is open, or lifted away.



2.

Remove Side Panel by Sliding it Upwards in its Runners.



3a.


Remove All Packing / Wrapping Material and Modules.

TIP: Start with the Dryer Module, then the Water Module followed by the Fixer and Developer Modules. Those should be removed by sliding the Tanks out.

Daylight Loader Installation (cont.)

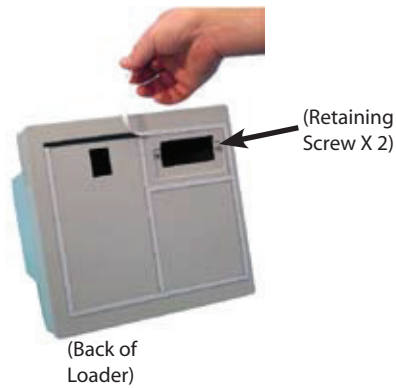


3b.



WARNING: When Removing the Fixer and Developer modules, slide tanks sideways until completely clear of the immersion heaters mounted on the machine internal wall.

INSTALLATION



4.

Unscrew the Two Retaining Screws and Remove White protective strip from sealing material on the back of the loader.



5.

Remove Protective Film from Viewing Window Cover.

Daylight Loader Installation (cont.)



- 6.** Slide Loader over Film Entry Guide and 'RUN' Button, Press the Loader firmly against Machine.

INSTALLATION



- 7.** Secure Loader with the Two Retaining Screws.

Filling with Chemicals



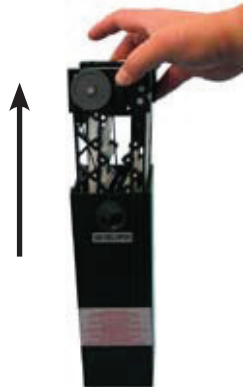
8.

Remove Modules (see Installation Sections 1-3b).



WARNING: Ensure machine is disconnected from mains power supply whilst filling. NEVER turn on the machine with the tanks empty.

INSTALLATION



9.

Lift the Transport modules from their respective tanks



WARNING: BEFORE filling with chemicals run the machine with clean water in the Developer, Fixer and Water tanks with Transport Modules in position – for a complete running cycle to remove all packing debris, dust etc.



10.

Fill tanks with their respective chemical solutions or water, Pouring in 1½ quarts (1400ml) of fluid.

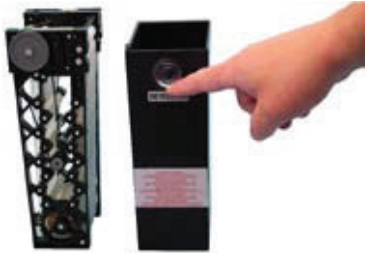


TIP: Use VELOPEX chemicals designed for your unit. If unobtainable use ONLY another proprietary chemical & always read and follow instructions on bottle.



WARNING: DO NOT use Chemistry or Film designed for manual processing.

Filling with Chemicals (cont.)



11. Fill the tanks up to the lowest edge of the Sight Glass.



12. Lower Transport Modules carefully into their respective tanks. Top up - the correct liquid level will show half way up the sight glass.



WARNING: This liquid level should be maintained at all times.



13. Grease Immersion Heaters for Developer and Fixer tanks with the lubricant provided.



TIP: Spread a thin smear of lubricant over the two projecting metal heating elements.



WARNING: Do NOT over grease.

Filling with Chemicals (cont.)



14.

To avoid spillage, carefully return tanks to the machine. Start with the Developer tank followed by the Fixer, Water and finally the Dryer tanks. Engage the module drive pins into the drive dogs, working from right to left.



TIP: Slide the Developer and Fixer tanks sideways onto the immersion heaters till backed up fully against the machine internal wall.

INSTALLATION



15a.

Return side panel and lid.



WARNING: Wipe dry any spilled solution.



15b.

The Machine may now be switched on.



TIP: Check that all modules are engaged and running smoothly by passing a 'clean-up film' through the machine. If it fails to exit the machine, check engagement of modules.



WARNING: The machine will not operate with the lid open.

Operating the Processor



1.



Plug in electric cord and switch on.

TIP: After approx. eight minutes the processor will go into 'stand-by' mode, by which time the chemicals will have reached their correct temperature.

WARNING: Always turn mains electricity switch off at night.



2.



Correct temperature is indicated when the red light is extinguished.

TIP: The time taken to achieve the correct temperature depends on the room temperature (usually 10-15 min.).

TIP: Intra-XE has no heating and therefore no temperature indicator. It relies on ambient room temperature of 20°C - 25°C.



(Image for instruction ONLY, Viewing Window is closed when operating machine)

3.



The Velopex is equipped with automatic stand-by mode. To initiate processing press the 'RUN' Button.

TIP: From time to time the temperature light will illuminate for short intervals as the machine requires heat throughout the day (Intra-XE excluded).

WARNING: Before placing in the machine, intra oral film packets should be wiped clean of all mouth contaminants.

Operating the Processor (cont.)



(Image for instruction ONLY,
Viewing Window is closed when
operating machine)

4.



Put Hands through Loading Ports and place Film inside Daylight Loader.

WARNING: Always remove old film wrappers from inside the loader.



(Image for instruction ONLY,
Viewing Window is closed when
operating machine)

5.



Press 'RUN' button, strip Wrapping from Film, Insert Film into Entry Slot.

WARNING: A second film can be inserted only after the first has fully entered the machine. Do not remove hands from loading section until the film has completely entered the machine.



6.



Each day make sure Chemical Levels are correct. If necessary, top up Chemicals (See Installation sections 10, 11 and 12)

TIP: Before processing run through "clean-up film" or any spare strip of extra oral film. This helps to clean the transport system.



WARNING: The same film may be used for this purpose for one week, after which discard the old film and use a fresh one.

Operating the Processor (cont.)



7.

All films are collected in the Film Catcher at the rear of the machine.



WARNING: At the end of the day turn off mains power switch.



8.

For quick viewing of X-Rays use the Endo Slide, which will halve the time of processing. To use: press the Endo Slide FULLY down, by pressing the latch and lowering the slide.



TIP: This procedure is only "Dry-to-Wet", which means the film should be washed with water and hung up to dry when needed for archiving.



WARNING: The Endo Slide must be returned to the 'UP' position before further processing.



9.

Remove film from ENDO slot.



TIP: After film exits, you can view and then wash it with water and hang it up to dry.



WARNING: Make sure film does not fall back into the Velopex - remove it as soon as it emerges.

Operating the Processor (cont.)

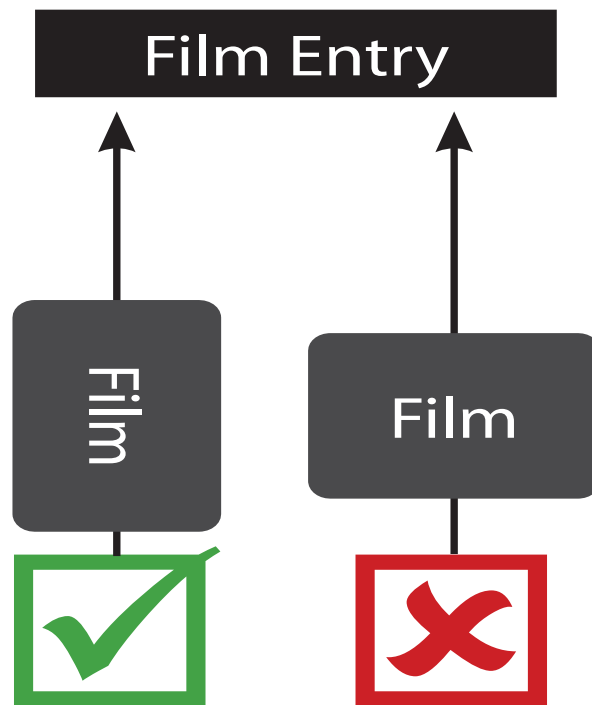
10. Film Feeding direction.



TIP: Centre the film on the guide provided to post the film through the processor.



WARNING: Make sure the film is fed in squarely, and in the centre of the entry slot, short edge leading.



OPERATION

Velopex Processor Cleaning



1.

Quality Assurance - for instructions refer to back of VISCHECK Quality Manager board supplied with your machine.



TIP: Regular use of this product will ensure the quality of the film processing and reduce the risk of retakes. Visccheck will also tell you when to change the chemicals.



2.

Open Lid, remove side cover, and remove tanks & modules (see Installation sections 1-3b & 8-9)



WARNING: Carry out the cleaning routine each chemical change or approx. once every four weeks, according to use.



3.

Drain Modules over the tanks before removing them.



TIP: Tip the Module and lean it on the edge of the tank letting it drain before completely removing.



WARNING: The Modules are wet with chemicals; handle with care. May cause staining or corrosion of surfaces, skin and eye irritation. Wipe away any spillage immediately and flush with copious amounts of water.

Velopex Processor Cleaning (cont.)



4.

Module cleaning - Immerse the Modules in a tank/sink filled with hot water and scrub with the supplied brush around the gears and roller ends.



TIP: Use the turning tool; turn the gears and belts by hand to assist in thorough cleaning.



WARNING: DO NOT use boiling water; it will damage the modules. Use ONLY cold water when cleaning the machine tanks.

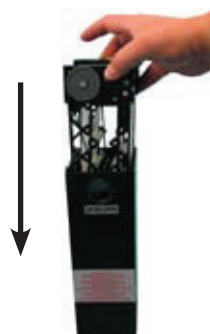


5.

Clean the Modules using the Velopex Cleaning Tablets: Empty Chemical and Water tanks. Re-fill with fresh cold water.



WARNING: Do not empty cleaning solution into containers containing processing chemicals - FOLLOW INSTRUCTIONS SUPPLIED WITH CLEANING TABLETS.



6.

Replace the modules in their tanks and run for one cycle. Empty tanks again, remove Modules and re-fill with fresh cold water.



WARNING: Always return a Module to the tank it was removed from e.g. Developer-to-Developer.

Velopex Processor Cleaning (cont.)



- 7.** Add Velopex Cleaning Tablets one per tank..



- 8.** Replace Modules and run for TWO cycles at operating temperature.



- 9.** Dryer Module Cleaning - Place Dryer Module in container or sink filled with fresh cold water. Add one Velopex Cleaning Tablet and soak for at least 10 minutes. Rinse thoroughly with water to remove all cleaning solution.



WARNING: Make sure you drip-dry the module before replacing in the dryer compartment.

Velopex Processor Cleaning (cont.)



10. Removal of film debris: Open Bottom hatch of Loader.



WARNING: Ensure hatch is securely closed and light - tight.



11. Remove old film wrappers from daylight loader. Wipe clean the interior of loader.



TIP: The interior of the daylight loader should be cleaned with cold sterilising solution, wipe dry after appropriate period.



12. Fill up with Chemicals (See Installation sections 10-12, pages 6-7). For best results, use VELOPEX chemicals.



TIP: Use the chart provided and keep a note of the date when chemicals were changed.
Process a Vischeck strip to produce the master reference strip and place in position on the Quality chart (follow Vischeck instruction for use).

| No. | SYMPTOM | POSSIBLE CAUSE | ACTIONS |
|-----|--|--|---|
| 1 | Machine does not operate | Power supply | Check if Mains Power is plugged in and supply wire is not on. NOTE: Velopex Machine will run one cycle when switched on and lid is in correct position. |
| | | Machine is in 'standby' mode | Check by pressing 'RUN' button that machine is not in 'standby' mode. |
| | | Blown Fuses | Switch off Mains power supply and unplug machine. Check the two fuses in cord socket on back of machine, if either fuse is blown, call Service USA. Reset Circuit Breakers. See Technical Manual, Item 25 on page 61. |
| | | Lid Open | If the machine is fitted with a safety switch, if the lid is not correctly closed the safety switch will prevent the machine from operating. Check by opening and closing again. |
| | | Cord | Check that cord is fully engaged in both plug and socket on the back of the machine. |
| 2 | Temperature Indicator Light stays on | | (At normal room temperature average warm up time is 10-15 minutes). In an unheated environment this time could lengthen. If light stays on for an excessive long time, call for service. |
| 3 | Solvent is overheating | | DO NOT USE MACHINE - Call for Service. |
| 4 | Films Do Not Enter through Filter Entry Guide. | Machine is in 'standby' mode | Press 'Run' button machine may be in 'standby' mode. |
| | | Transport Modules not in Place | Open machine lid and check correct engagement of transport modules. |
| | | Transport Modules not in Place | Check individual Module by rotating with turning tool to manually feed film. Check that the transport modules are correctly located in their drive dogs and running correctly. If not, re-locate. |
| 5 | Film Lost in the Machine | ENDO interrupt bar | Check that bar is fully in the 'up' position. |
| | | Wrong Positioning of Transport Module - Spinning | Check the springs on the modules for correct positioning. Use the module turning tool to rotate the belts for inspection, and run a test film through the module using this tool. |
| | | Dirty Transport Modules | Check that all transport modules have been put through the correct cleaning procedure. |
| | | Damage/Torn Belt | Replace a Module |
| | | Static Electricity in the Dryer Section of the Machine | Add a little domestic fabric softener to the washing water when washing dryer module to avoid static. IMPORTANT! Fabric softener should not be used for the Dryer Module ONLY - do NOT use it on the Developer, Filter or Water Modules. |

TROUBLE SHOOTING

| No. | SYMPTOM | POSSIBLE CAUSE | ACTIONS |
|-----|---|-----------------------------|---|
| 5 | Films too Dark Test for Light fog by feeding an unexposed film through the machine. It should process as a transparent piece of film base and there should be no shadows or blackness on it. REGULAR USE OF VISCHECK IS THE BEST TOOL FOR EARLY DIAGNOSIS OF PROCESSING AND X-RAY PROBLEMS. | | |
| | | Lid Open | Check that the top lid is firmly in place. |
| | | Dark room not light-tight | Check that the dark room is light-tight, and that the safelight is sound (e.g. process a test film with safelight off). |
| | | Daylight Loader not Secured | Check that the daylight loader is firmly secured, including removal of cover latches from self-adhesive mounting. |
| | | | When the Daylight loader is used, ensure that the machine has not been sited in direct sunlight or in intense lighting conditions (e.g. directly under spotlights or strip lights). |
| | There is Lightfog | Light Leaks | Do not remove your hands out of the hand entry ports before the film has fed completely into the machine. (Can at once and only if the film indicates premature removal of hands from daylight loader). |
| | | | Check that window cover on loader has been correctly replaced and check at hand entry ports to ensure there is a good light seal around the wrists - if not, call for service. |
| | | Close to X-ray Source | Check whether films have been stored too close to X-ray source, and re-locate/replace. |
| | | Film Expired | Check Expiry date on film box to ensure films are not out of date. (Keep films in cool, dry place; excessive heat can cause premature aging of film). |
| | | Chemical Contamination | Check that there has been no chemical mix-up, leading to cross-contamination. |
| | Dark Film | Mixing of Developer | Check that the Developer has been correctly mixed (if relevant). |
| | | Temperature (DE excluded) | Check temperature of Developer and Film tanks. Tanks are generally set at Developer 20°C (67.5°F), Film 82°F (27.5°C). If the Developer temperature is significantly higher, it could lead to dark film. Switch off the machine and call for service. |

TROUBLE SHOOTING

| No. | SYMPTOM | POSSIBLE CAUSE | ACTIONS |
|-----|----------------------------------|---|---|
| 7 | Films too Light | <p>Chemicals exhausted</p> <p>Chemicals Contaminated</p> <p>Developer incorrectly mixed</p> <p>Chemical Level too Low</p> <p>Temperature too Low (XE excluded)</p> <p>Light exposure</p> <p>Water Tank Dirty</p> <p>Transport Modules Dirty</p> <p>Chemical Level too Low</p> <p>Wrong Positioning of Modules</p> <p>Light Leaks</p> <p>Wrong Solutions</p> | <p>Refill with fresh (this will depend on volume of film being processed and length of time since last chemical change).</p> <p>Clean machine, replace chemicals with fresh solutions.</p> <p>Refill with fresh (if relevant).</p> <p>Top Up.</p> <p>If temperature indicator light does not go out, check with a thermometer – generally set at: Developer 82°F (27.5°C), Fixer 82°F (27.5°C). If significantly below these temperatures, call for service.</p> <p>Check filters have been exposed correctly.</p> <p>Clean module thoroughly and change water daily (insufficient cleaning can lead to a buildup of algae).</p> <p>Check transport modules are being cleaned correctly (see cleaning instructions above).</p> <p>Repeat.</p> <p>If found in wrong order, contamination will have occurred. Thoroughly clean modules and tanks re-fill with fresh chemicals.</p> <p>Check for stray light entering machine – proceed as for fogging (see symptom # 6).</p> <p>Make sure solutions are in correct tanks.</p> |
| 8 | Films Dirty or Mottled | <p>Develop Contamination</p> <p>Temperature</p> <p>Exposure Unit.</p> | <p>Replace Developer if contaminated with Fixer.</p> <p>Check Developer temperature.</p> <p>Check X-ray unit.</p> |
| 9 | Surround Change in image Density | <p>Exposure Unit.</p> | <p>Check X-ray unit.</p> |

TROUBLE SHOOTING

| No. | SYMPTOM | POSSIBLE CAUSE | ACTIONS |
|-----|--------------------------------------|-----------------------|---|
| 10 | Film not drying | Dryer | Make sure Dryer is working and blowing hot air. |
| | | Humidity | Look for poor air circulation or HIGH humidity in processing area. |
| | | Electrical Component: | Switch off machine. Switch on again after 10 seconds. If still not drying call for Service. |
| 11 | Deposits on Film: White Marks | Fiber | Check for contamination or wrongly mixed Fiber. |
| | | Fiber Deposits | Check for Dryer take-up contaminated by fiber deposits. |
| | | | Clean entry slot or feed guides |
| 12 | Dark Areas on film | Dirt | Clean bridge-over rollers. Clean Modules. |
| | | Splice Jammed | Check belts are turning properly. |
| | | Static Damage | Take care form of holes, form fiber lines or lightning strikes; check for I CW ambient humidity in processing area. Clean area with anti static solution. |

TROUBLE SHOOTING

| No. | SYMPTOM | POSSIBLE CAUSE | ACTIONS |
|-----|--|--|--|
| 13 | Light streaks on film. White speckles (scratches on Low Density Areas (Indicates Lack of Fixing)) | Temperature Fixer Dirty Transport Modules Film Expired High Fixing | Check fixer temperature. Check for exhausted fixer. Clean Modules. Check age and storage conditions of film. See above, Symptom # 6. |
| 14 | Mottle | Film Expired High Fixing | Check age and storage conditions of film. See above, Symptom # 6. |
| 15 | Films turning Out Wet | Air Coming Out of the Vent is NOT Warm. | After the processor has been running for two minutes, check that the air coming out of the vent over the Dryer module is warm. If not, switch the processor off at the Mains Power Switch for two minutes and switch it on again. If that does not correct the fault, contact your Velopex supplier. |
| 16 | Contamination | Chemicals | When changing Chemicals, make sure the tanks are completely empty and rinsed out. Fresh chemical will be spat out by contamination leading to later results. |
| 17 | Abnormal Odour, Overheated or Unusual Noises | | Immediately switch processor off and unplug from Mains Power Supply. Contact your supplier. |

TROUBLE SHOOTING

Service Log:

| Date | Service Description | Serviced By |
|------|-----------------------------|-------------|
| / / | <i>Machine Installation</i> | |
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MC = Monthly Cleaning ; WIA = When In Area ; SC = Service Call



TIP: Service Log Table

Use this table to record any service/maintenance done, including: Installation, Engineer- Servicing, Parts replaced by user, etc.

Keep this log for reference and use at any time you contact your supplier.