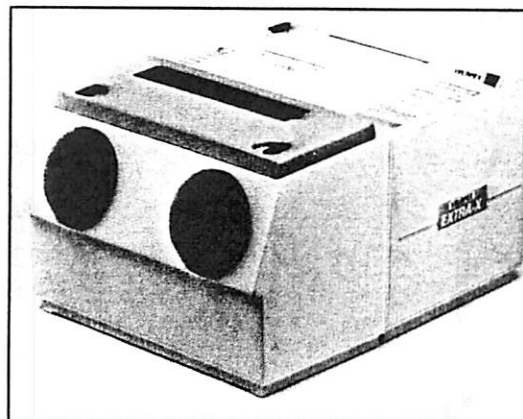




Automatic X-ray Film Processor



Installation, operation and maintenance manual

Tech. line#
1-888-700-2312

WARNING:

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

THE FOLLOWING IDENTIFICATION COLOURS ARE USED THROUGHOUT THIS MACHINE

Developer chemical – Red







Fixer chemical – Blue

Water – White

Machine serial number to be
quoted on all correspondence

X/53191/R

Table of Symbols

Symbol	Description
	Alternating current
	Off (Power: disconnection from the mains)
	On (Power: connection to the mains)
	Type B equipment
	Film transport switch/Process 'RUN' Button
	Attention, consult accompanying documents

Some machines are fitted with an ON/OFF switch illuminated RED. When lit this signals that the machine is switched ON. In darkroom conditions, red illumination is used to prevent film fog, and on this machine it is not indicating a dangerous condition.

MAINS POWER SUPPLY:

115 Volts, 60 Hz, 15 Amps, 3-wire grounded outlet.

Use only with grounded hospital grade plug, as supplied

INTRODUCTION TO THE PROCESSOR

The diagrams at the front of this manual are designed to introduce you visually to the layout of the Velopex.

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WARNING: STUDY THIS MANUAL THOROUGHLY BEFORE ATTEMPTING TO INSTALL OR OPERATE PROCESSOR. FAILURE TO DO SO COULD RESULT IN IMPROPER OPERATION WHICH MAY LEAD TO INJURY OR MACHINE DAMAGE.

DATA X ML IV X-RAY PROCESSOR WITH ENDOSLIDE FACILITY

Your new X-Ray Processor gives you the ability to remove INTRA-ORAL films directly from the developer stage, only 2 min after feeding the x-ray into the processor.

This facility, situated on the top of the lid, is called the ENDOSLIDE.

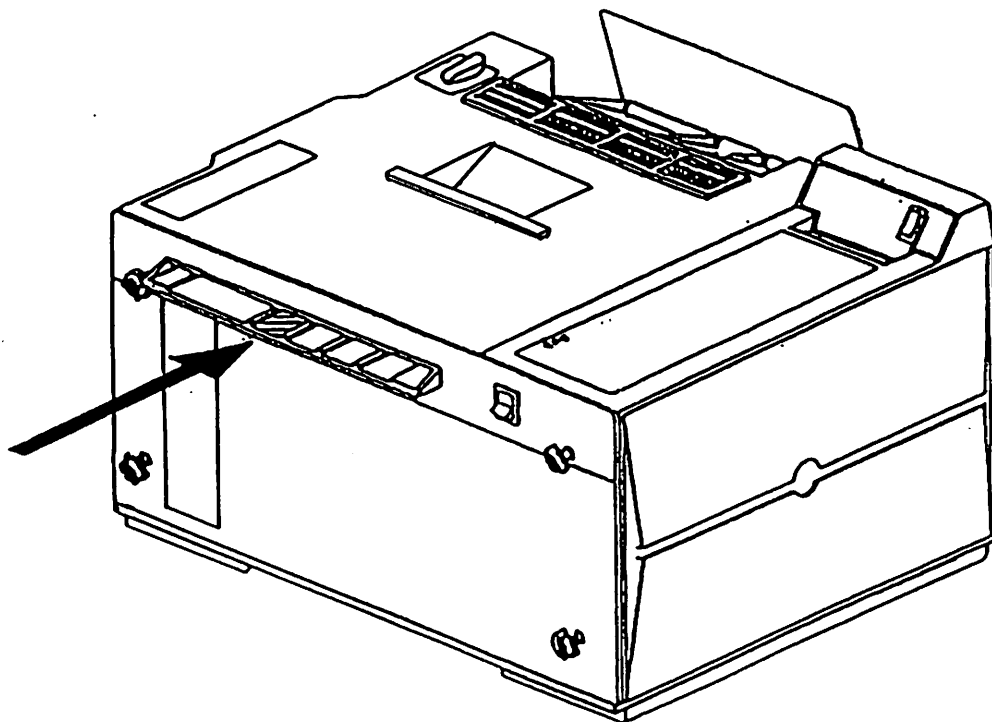
To view the x-rays after only 2 min, lower the ENDOSLIDE fully into its slot in the lid before feeding the Intra-oral film into the front feed slot – ONLY between the film guides as shown below.

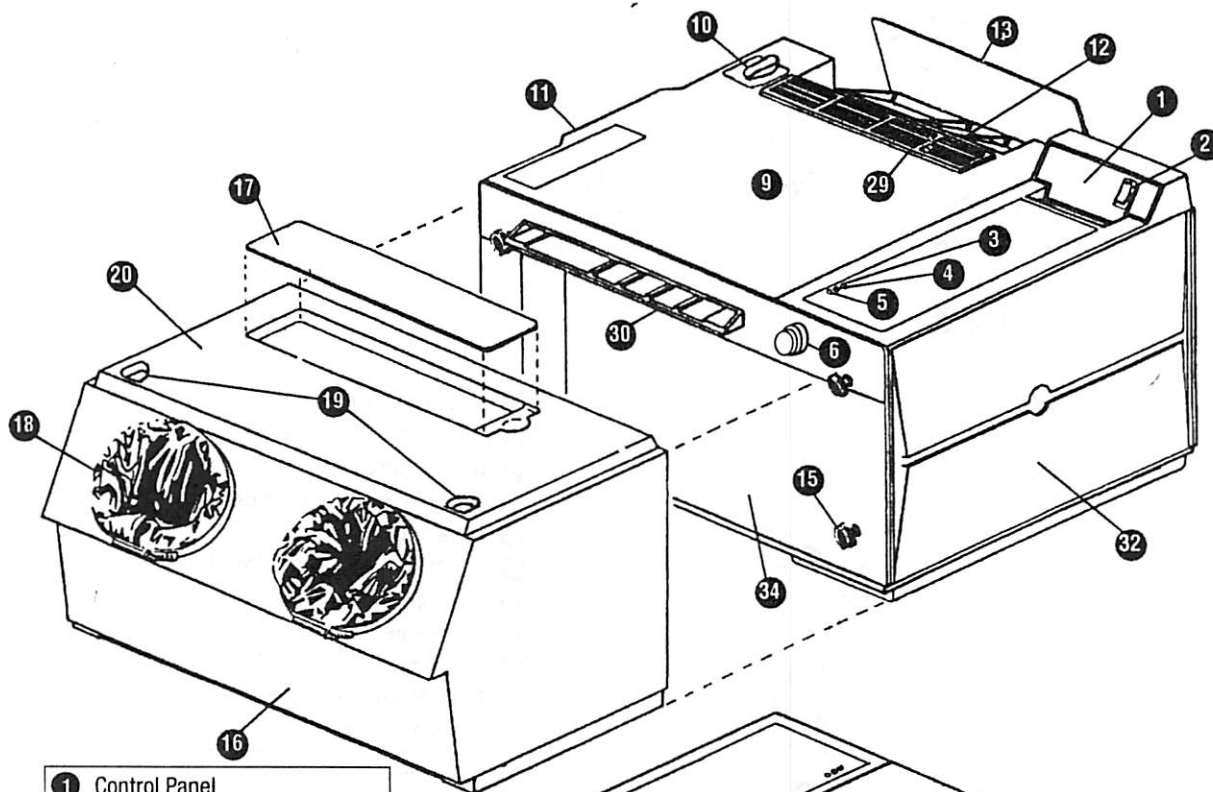
If you intend to archive the x-ray film, it will need to be rinsed and dried after viewing.

When this facility is not required, pull the ENDOSLIDE fully up until it locks in its raised position.

NOTE:- The ENDOSLIDE is intended for INTRA-ORAL films ONLY.

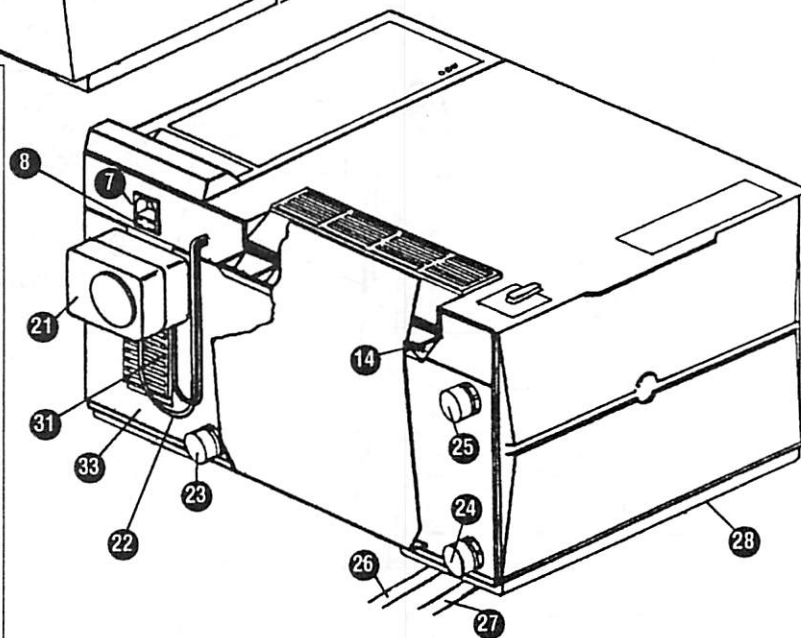
It must be kept in its fully raised position when processing all other sizes of film to prevent the film from jamming in the fixer module.





- 1 Control Panel
- 2 On/Off Power Switch
- 3 Chemical Temperature Indicator
- 4 Low Liquid Level Indicator
- 5 Machine Shutdown Indicator
- 6 'RUN' Button

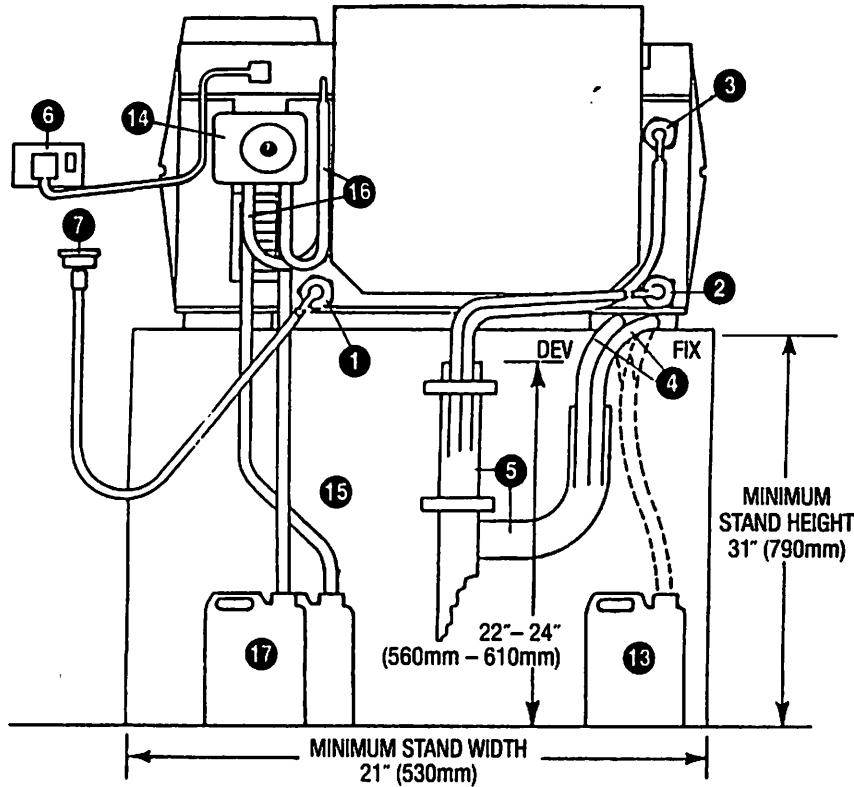
- 9 Machine Lid
- 10 Machine Lid Lock
- 11 Protruding Grip
- 12 Film Collector
- 13 Film Collector Backplate
- 14 Film Collector Spring
- 15 Daylight Loader Coupling Knobs
- 16 Daylight Loader
- 17 Viewer Cover
- 18 Hand Entry Ports
- 19 Daylight Loader Lid Locks
- 20 Loader Lid
- 21 Replenisher Pump
- 22 Chemical Replenisher Inlet Tubes



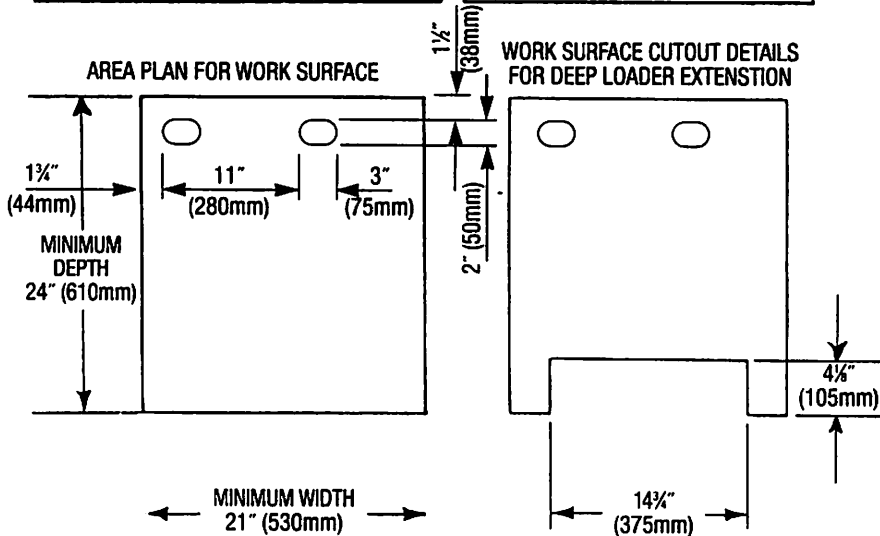
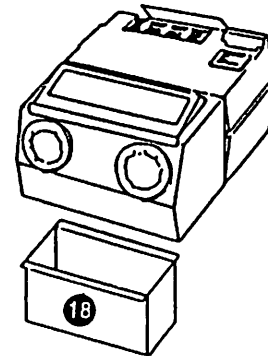
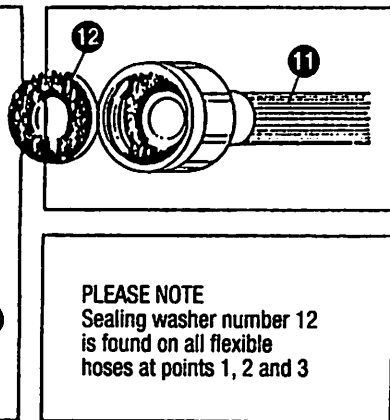
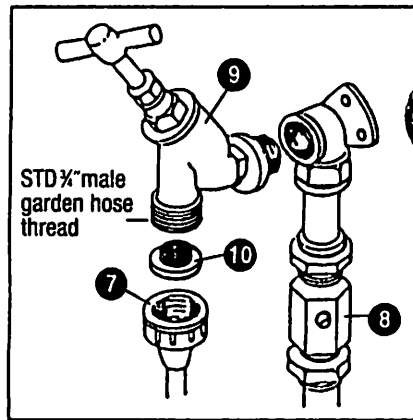
- 23 Water Inlet
- 24 Water Waste
- 25 Water Overflow
- 26 Developer Waste BLUE/BLACK
- 27 Fixer Waste RED
- 28 Machine Foot

- 29 Air Vents
- 30 Film Entry Guide
- 31 Air Inlet
- 32 Side Panel
- 33 Back Panel
- 34 Front Panel

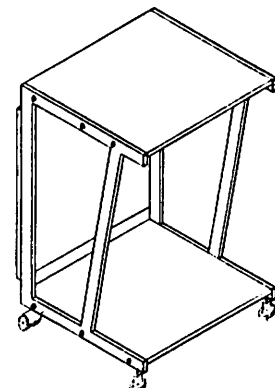
REAR VIEW OF EXTRA X



- 1 Water Inlet
- 2 Water Waste
- 3 Water Overflow
- 4 Fix and Developer Waste
- 5 Standpipe Drain with Trap
- 6 Electrical Supply
- 7 Cold Water Hose Union
- 8 Flow Restrictor and Isolating Valve
- 9 Standard Garden Hose Faucet/Tap with external thread
- 10 Filter
- 11 Flexible Hose
- 12 Flexible Hose Sealing Washer
- 13 Waste Chemical Containers (when used - see page 8)
- 14 Replenisher Pump
- 15 Chemical Lift Tubes
- 16 Chemical Delivery Tubes
- 17 Chemical Containers
- 18 Deep Loader Extension



MACHINE STAND



DEPTH 19 1/2" (495mm)
WIDTH 20 3/4" (517mm)
HEIGHT 31 1/4" (810mm)

PRE-INSTALLATION INSTRUCTIONS

Although the Velopex is designed for use in either darkroom or daylight, care should be taken to avoid sources of intense light. For example, the daylight version must not be sited directly under a window, fluorescent tube or floodlight.

When the machine is to be sited in a darkroom, it is essential to ensure that the darkroom is well ventilated and light-tight, and that there is sufficient space for easy chemical changes and for the machine to be serviced safely. When choosing a site for your Velopex, if possible site the machine near a sink for ease of changing chemicals.

NOTE: A well ventilated position is mandatory.

The Extra-X (daylight model) weighs 80lb (36kg) when filled; a stable and level counter top is required, sufficient to support weights up to at least 200lb (91 kg). Alternatively, Velopex manufacture a rugged, free-standing machine stand, purpose-built. It is important that when the machine is filled with solution the stand does not rock or shake, as this could cause spillage. NEVER move the machine with chemicals in the tanks.

The Velopex Machine Stand: this stand is supplied in flat pack – follow the assembly instructions supplied. Diagram, page 5, shows dimensions. When positioning the stand, ensure that plumbing and mains power are within the specified distances (see diagram).

If you are constructing your own stand please follow the guide on page 5: these dimensional guidelines are necessary for the proper operation of your machine and should not be ignored.

Avoid siting the machine above or near other electrical, mechanical or sensitive apparatus (e.g. autoclave, compressor, evacuation equipment), or near sources of heat (e.g. water heater or central heating boiler).

The machine must never be sited below surfaces that could restrict air circulation around it (e.g. below or inside a cupboard or below a shelf). In choosing the site, it is important to allow for the presence of liquids: surfaces susceptible to water or chemical damage should therefore be avoided. Avoid carpeted areas.

The ambient temperature must be maintained below 82 degrees (F), 28 degrees (C). Note also that ambient temperatures below 44 degrees (F), 7 degrees (C), will cause delayed warming-up and the possibility of increased condensation.

UTILITIES a) Electrical

The mains power supply must be within 3 feet (1 m) of the Machine, above counter height and well separated from the water supply. It should be easily accessible for operating and maintenance routines. Electrical lines must be 'unitary', i.e. without extensions to the length.

The machine will have been supplied with a mains power cord with moulded plug.

See inside front cover.

N.B.: For 'stand-alone' machines with water re-circulation, a second power-point will be necessary.

b) Water Supply (see plumbing diagram, page 5)

Input water must be free of contaminants and should have a filter on the incoming water line to remove contaminant and particulate materials.

A chiller is essential if incoming water exceeds 79 degrees (F), 26 degrees (C).

The supply must be fitted with an isolating valve which should be adjusted before installation to limit water-flow at the faucet (tap) to a delivery rate of 2½ quarts/minute (2.5L/min). This is done as follows: turn water-flow reducing valve to 'fully-closed'; open faucet (tap) fully; open the flow-valve gradually until there is a water-flow; using a measuring jug, check the volume per 12 seconds until the flow is approximately 1 pint (500ml) per 12 seconds (2½ quarts/minute), (2.5L/min).

It should be terminated with a garden hose type faucet (tap) with ¾" male thread (see diagram); the faucet (tap) should be situated in a position convenient for it to be turned on and off each day with ease.

c) Waste

A corrosion-resistant drain (PVC or equivalent but not copper pipe), 1½" (38mm) diameter minimum to rise centrally at the back of the machine stand to approximately 4 inches (100mm) below the machine is required, with a stand-pipe of 22-24 inches (560-600mm) with drain trap: see plumbing diagram, page 5, for detail.

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.

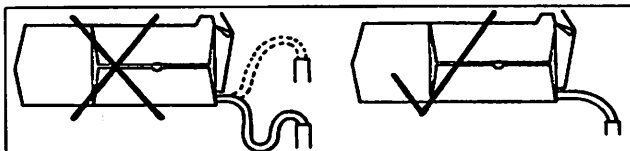
Installing the Machine

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

The machine comes in a single carton containing: Machine in "darkroom" configuration, Operator's Manual, Hoses, Electrical Cord, Transport Module Turning Tool, Cleaning Brush, Chemical Change Chart.

1. Familiarise yourself with the layout of the machine by referring to illustrations at the front of this manual. It is useful to refer to these illustrations as you progress through the manual.
2. Lift the machine from the carton and position on counter top. Remove outer and inner packaging, including carry-straps and tape securing film-catcher. The transport modules are protected by internal packing pieces: these must be discarded.
3. Connect the two Water Waste hoses to the back of the machine (labelled 'water overflow' and 'water drain').
4. Cut hoses to allow 8-12 inches (200-300mm) to be inserted into the waste outlet stand-pipe, ensuring no loops or kinks are left in them. Place hoses in drain, and see diagram – they must not rise higher than the outlet on the back of the machine.

WARNING: Any rise in the height of these pipes above the level of the outlet on the machine will cause incomplete drainage, and could cause the machine to flood.



CHEMICAL WASTE

Dependent on your local codes and area Water Authorities, the machine can be configured to release waste EITHER into the main waste lines OR into waste containers below the machine.

5. If mains drainage is used for chemical waste, cut Developer and Fixer hoses to length, leaving no loops or kinks, as in no.4 (see above).
6. For drainage into containers, place empty containers below counter and cut hoses so that they enter container fully (approximately one inch from bottom of each bottle), though not to full depth. CAUTION: always check that waste containers are of sufficient capacity to take full volume of tank, are in position and empty before discharging chemicals to them.
7. It is advisable to run off a quantity of water from the main supply before connecting to the machine: check the supply is running completely clear and free from any plumbing debris before proceeding.
8. Connect water inlet hose to rear of machine and to faucet (tap) from incoming water supply, ensuring that the ANGLED fitting on the hose is used at the machine end. ("Water Inlet" diagram page 3, item 23). Flow-rate should have been pre-set (see 'Utilities' above).

NOTE: Hoses will seal with hand-tight pressure only – if using a tool for final tightening, do not exceed a quarter turn from hand-tight. Over-tightening can cause damage to internal pipework or threads.

ATTACHING THE DAYLIGHT LOADER

See diagram, page 3. Extra-oral films are extremely light-sensitive so it is important that the daylight loader is fitted correctly and sealed around the film entry slot and process 'RUN' button.

1. Open the loader: release lock by turning the two latches on the top (a quarter turn each, inwards), and lift open the hinged lid.
2. On the back of the loader – remove white protective strip from sealing material around film entry recess and 'RUN' button hole.
3. Remove the four black knobs from the front of the Velopex and slide daylight loader over projecting studs. Secure the loader to the main body of the machine by replacing the black knobs on the studs from the inside of the loader. Start at the top first. To ensure complete adhesion of sealing tapes, press the panel firmly around the entry slot while finally tightening all four knobs.
4. Close lid and secure latches.

FILLING THE MACHINE



1. It is important to run the machine with clean water only in the developer, fixer and water tanks (all three) with transport modules in position – for a complete running cycle, before starting to fill with chemical.

This will clear any dust or debris that may have appeared in the machine during shipment and handling.

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

Do not use chemistry or film designed for manual processing.

NOTE: optimum processor performance will be achieved by using only Velopex Fixer and Developer. The machine is built, however, to work satisfactorily using most high quality brands of chemical.

Always use chemical designed for automatic processing ONLY.

Chemicals MUST be from universally accepted manufacturers and be clear, contaminant-free and within expiry date.

2. Fill Fixer and Developer tanks in that order with their respective solutions (Water tank fills automatically). The chemical level for ready-to-use solutions is marked by the longer rib (nearest the drain plug) inside the chemical tanks.

NOTE: Should there be any spillage of Fixer into Developer tank this MUST be wiped clean before proceeding to fill Developer tank – otherwise the Developing solution will be contaminated.

Installing the Machine

3. Lower transport modules carefully into their respective tanks; top up if required (chemical should be one inch below the top of the tank); replace machine lid; plug in electric cord and switch on.
4. The machine will now run for a period of eight minutes; the water will reach its correct level automatically. At eight minutes, the processor will go into 'standby' mode.

NOTE: in cold weather the chemicals may not yet have reached operating temperature – wait for the temperature indicator light to go out before starting x-ray processing.

USING THE DAYLIGHT LOADER

When the machine is fitted with a daylight loader familiarise yourself with the location of the film entry slot and the 'RUN' button. Practise using the loader using a dummy film; practise loading and unloading cassettes. See note on extra-oral film under "Processing Films".

When processing film do not remove hands from the loader section until the film has fully entered the machine. Keep the daylight loader clear of old film wrappers to avoid these entering the machine and to maximise the space available.

TO START

After reaching the required operating temperature the machine is ready to accept films (average warm-up time 10-15 minutes).

The automatic temperature control will maintain the correct operating temperature for processing: correct temperature is indicated when the temperature indicator light is extinguished. The machine remains in 'standby' mode throughout the day, ready for immediate use.

PROCESSING FILMS

NOTE: The machine should be used only with clean, dust-free films designed for automatic processing, from world-wide recognised manufacturers, and be within expiry date.

In darkroom use, press the process 'RUN' button on the right hand side of the film entry guide and feed films into entry slot.

In daylight use, put hands through the entry sleeves in the daylight loader, press the 'RUN' button, strip the wrapping from the film with the aid of the viewing window (intra-oral films ONLY) and post the film into film entry slot, using the positioning guides for films of different sizes.

IMPORTANT NOTE: when using extra-oral film, always work with the viewing window cover in place, on account of the light sensitivity of this type of film (practice in using the daylight loader, as recommended above, will familiarise you with this procedure).

The Velopex processor has a continuous processing mechanism – as soon as the first film has fully entered the mechanism the next film can be inserted. When processing film, do not remove hands from entry sleeves until the film has fully

INFORMATION PANEL

EXTRA-X

Serial No.

WARNING:
DO NOT USE IN THE PRESENCE OF
FLAMMABLE ANAESTHETIC GASES

EACH DAY

- Turn on water supply.
- Check liquid level indicators and top up chemicals if required.
- Pass cleaning and test film through processor.
- Before processing film check that ready light has gone out.
- After feeding a series of film always re-press film transport switch before leaving machine.
- Turn off mains and water supply to the processor at night.

WHEN CHANGING CHEMICALS

- Drain each tank in turn, never together. Tanks are drained by removal of drain tubes.
- Remove transport system which should be immersed and thoroughly cleaned using hot water (not boiling). Gears and rollers should be cleaned with the brush provided then returned to their respective tanks in the machine.
- Fill developer and fixer tanks with cold water and run for approximately 8 minutes. Drain and refill with fresh chemicals taking great care not to splash the chemicals as contamination of either developer or fixer solutions could occur.
- Always keep machine clean and dry.

- INDICATOR ILLUMINATED – CHEMICAL TEMP. LOW
INDICATOR OFF – VELOPEX READY FOR USE
- INDICATOR ILLUMINATED – LIQUID LEVEL LOW
- INDICATOR ILLUMINATED – MACHINE SHUTDOWN,
LIQUID LEVELS MUST BE RESTORED

entered the processor: this avoids fogging the tail-end of the film. Always remove film wrappers from daylight loader.

Note: When doing several films it is recommended that the process 'RUN' button be pressed again after the last film has been posted. This avoids the possibility of the machine going into 'standby' while films are still processing.

FILM COLLECTOR

All films collect in the film collector at the rear of the machine, arriving in the position corresponding to where they were posted (see diagram, page 3).

EACH DAY

1. When not using automatic replenishment, check level of developer and fixer and top up where appropriate.
2. With automatic replenishment, bottles should be checked for the presence of adequate liquid.
3. Before beginning the day's processing run through a 'clean-up' film. After a week discard the old film and use a fresh one. This routine helps to clean the transport system and checks that the transport mechanism is running properly.
4. At the end of the day turn the Main Power Switch OFF.
5. At the end of the day, also, TURN OFF water supply at inlet faucet (tap).

WARNING:

- A. **Turning off electrically at the end of each workday is an essential safety procedure.**
- B. **Failure to exercise a daily water shut-off procedure could subject your premises to severe flooding conditions if a water hose connection fails or malfunctions.**

CLEANING THE PROCESSOR

A clean processor is the key to consistent good results and the following cleaning routine should be carried out at each chemical change – approximately once per two weeks, depending on the use of the machine and the number and sizes of x-ray films passed through it.

When the Velopex is fitted with automatic replenishment, the change cycle will be substantially extended, with complete chemical changes required only every 4-6 weeks, according to use.

Always wear protective clothing when cleaning the processor.



1. **SWITCH OFF MAINS POWER AND REMOVE PLUG FROM SOCKET.**
2. Unlock the lid of the machine, open lid by means of the protruding grip, and remove.
3. Drain Fixer, Developer and Water tanks one at a time by removing drain plugs, using the turning tool provided (see diagram page 4, item 1).
4. Place transport modules separately in a sink with running water and a drain. NOTE: the modules will be wet with chemicals – take care to allow them to drain a little over the tanks before moving them.
5. Clean tanks first by wiping the insides with a clean damp sponge, starting with the Developer and rinsing sponge thoroughly after each tank: Fixer tank to be done second, Water tank last. Wipe dry and clean with a paper towel before re-filling.
6. Clean transport modules thoroughly one at a time.
7. Carry out the cleaning procedure with fresh water for each module to avoid cross-contamination.
8. The best method of cleaning a module is to immerse it totally in a sink full of hot water (not boiling). Using the brush provided, scrub around the gears, roller ends and screens.
9. Rinse the belts thoroughly. Using the turning tool provided, rotate the gears and belts by hand to assist in thorough cleaning.
10. Do not use detergents – just hot water.

DO NOT USE BOILING WATER AT ANY TIME; BOILING WATER WILL DAMAGE YOUR MODULE.

11. After cleaning, fill the tanks as before – to the top of the longer vertical 'indicator rib' inside chemical tanks, whilst the water tank fills automatically when power is switched on.

12. Take care to return each module to the tank from which it has been removed, e.g. Developer module to Developer tank. Top up as necessary, to one inch (25mm) from top of tank.
13. The correct order for replacement of modules is: Developer – Fixer – Water – Dryer.
14. Be sure to keep a note of the date when chemicals are changed, using the chart provided.

PLEASE NOTE: do not begrudge time spent cleaning the machine as you will be amply rewarded by high quality results and extended chemical and machine life.

CAUTION

Processing chemicals should be handled with care. If spilt they may cause staining or corrosion of surfaces. They can also cause skin or eye irritation – wipe up any drips or spillage immediately. If chemicals are splashed onto the skin or eyes, flush immediately with abundant amounts of plain water. Always observe the chemical manufacturer's recommendation for this situation. Problems of this nature can be avoided by wearing protective glasses and gloves.



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SYMPTOMS AND ACTION

SYMPTOM: Machine does not operate

ACTION:

1. Check that Mains Power is plugged in and supply switched on, with cord fully engaged in socket on the back of the machine.
2. Check by pressing 'RUN' button that machine is not in 'standby' mode.
3. Switch off Mains Power supply and unplug machine. Then check the two **circuit breakers** on the back of the machine. If either **has operated call for service**
4. The machine is fitted with a safety switch: if the machine lid is not correctly closed the safety switch will prevent the machine from operating. Check by opening and closing again.

SYMPTOM: Temperature Indicator Light stays on

ACTION: (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 abnormally long time, call for Service.

SYMPTOM: Solution(s) overheating

ACTION: Call for Service.

SYMPTOM: Films will not enter through Film Entry Guide

ACTION:

1. Press 'RUN' button – machine may be in 'standby' mode.
2. Open machine lid and check correct engagement of transport modules.

SYMPTOM: Film Lost in the Machine

ACTION:

1. Check that the transport modules are correctly located in their drive dogs and running correctly. If not, re-locate.
2. 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.
3. Check that all transport modules have been put through the correct cleaning procedure.
4. Should there be any damage to the belts, such as tearing or twisting, order a replacement module.
5. Static electricity can retain films in the drying 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 be used on the dryer module ONLY – do NOT use it on the developer, fixer or wash modules.

GEAR REPLACEMENT

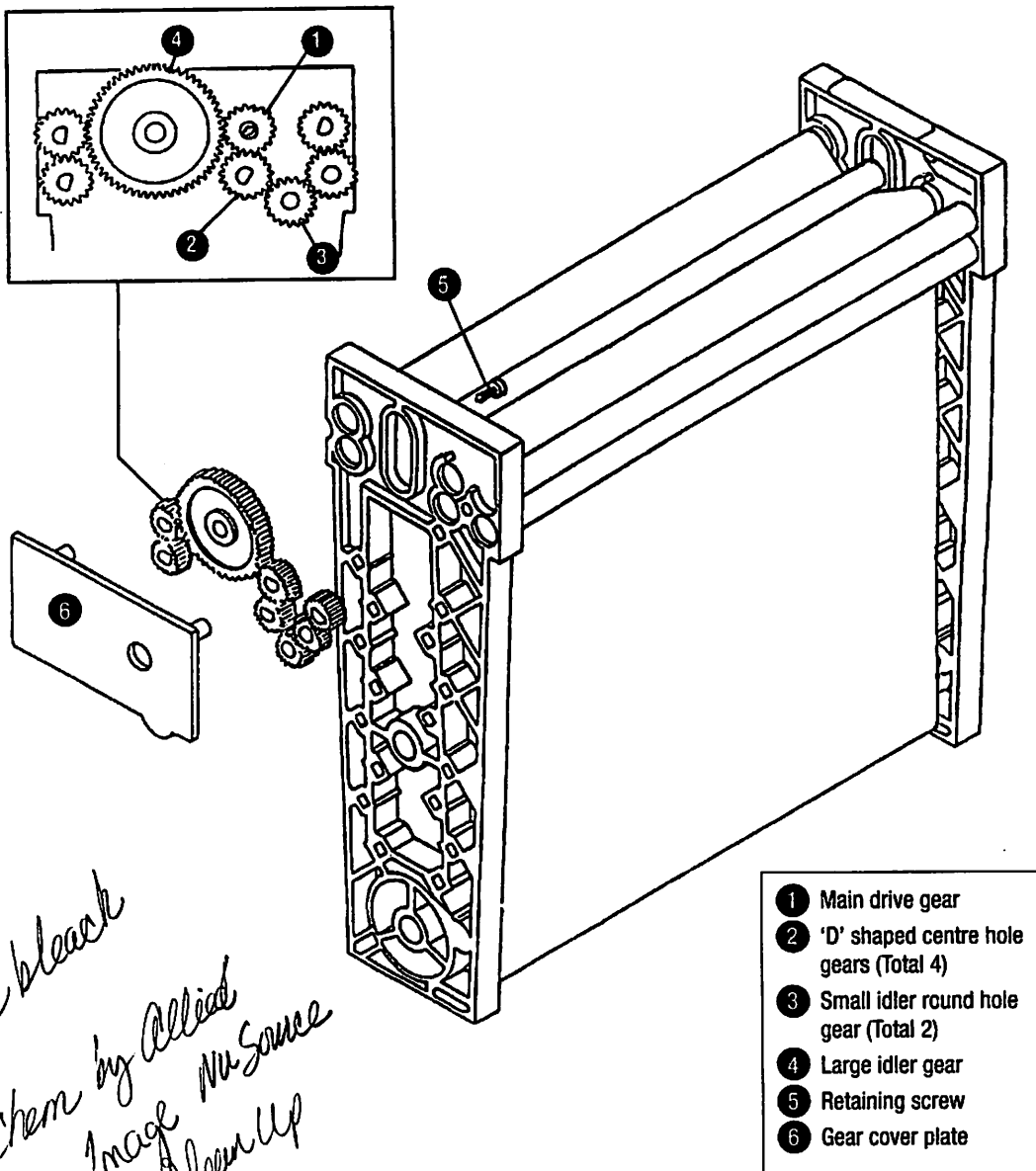
If problems are experienced with a transport module the module gears should be inspected for replacement: changing worn gears for new ones is an extremely simple operation and you may choose to do this yourself.

To replace gears, proceed as follows:

Remove retaining screw on gear cover plate (see diagram, item 5);

The gear cover plate (item 6) can now be gently eased off; Remove old gears, and replace with new gears to their correct positions; to ensure smooth running, ALWAYS replace complete gear set – not individual gears;

Replace gear cover plate and retaining screw.



* diluted bleach
* Predi-Chem by Allied
Clear Image MSource
16 Chlorox CleanUp

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SYMPTOM: Films too dark

- ACTION:**
1. Test for light fog by feeding an unexposed extra-oral film through the machine. It should process as a transparent piece of film base and there should be no shadows or blackness on it.
 2. If there is light fog:
 - i. check that the top lid is firmly in place;
 - ii. check that the darkroom is light-tight, and that the safelight is sound (e.g. process a test film with safelight off);
 - iii. check that the daylight loader is firmly secured, including removal of cover tapes from self-adhesive mounting;
 - iv. check very closely for other possible light leaks: 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 striplights or spotlights), do not take your hands out of the hand entry sleeves before the film has fed completely into the machine (fog at one end only of 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.
 - v. check whether films have been stored too close to x-ray source, and re-locate;
 - vi. check that lid has not been left off film box: i.e. process one film from a new box of film;
 - vii. check expiry date on film box to ensure films are not out of date. (Keep films in a cool, dry place: excessive heat can cause premature ageing of film.)
 3. Check that there has been no chemical mix-up, leading to cross-contamination.
 4. Check that the developer has been correctly mixed (if relevant).
 5. Check temperature of developer and fixer tanks. These are generally set at: Developer 77°F (25°C), Fixer 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.

SYMPTOM: Films too light

- ACTION:**
1. Check chemicals as follows:
 - i. chemicals exhausted* – replace with fresh;
*(this will depend on volume of film being processed and length of time since last chemical change);
 - ii. chemicals contaminated – clean machine, replace chemicals with fresh solutions;
 - iii. developer incorrectly mixed – replace with fresh;

- iv. chemical level in tanks too low – top up;
 - v. temperature of chemical(s) may be too low: if temperature indicator light does not go out, check with a thermometer – generally set at: Developer 77°F (25°C), Fixer 82°F (27.5°C) – if significantly below these temperatures, call for service.
2. Check films have been exposed correctly.
 3. Check that films are compatible with the type of intensifying screen used with the x-ray machine.

SYMPTOM: Films dirty or marked

- ACTION:**
1. Check water tank. Clean module thoroughly (insufficient cleaning can lead to a build-up of algae).
 2. Check transport modules are being cleaned correctly (see cleaning instructions above).
 3. Check chemical level in all tanks and top up as required.
 4. Check modules for correct positioning: if found in wrong order, contamination will have occurred. Thoroughly clean modules and tanks; re-fill with fresh chemicals.
 5. Check for stray light entering machine – proceed as for fogging (see above).

SYMPTOM: Sudden change in image density

- ACTION:**
1. Make sure solutions are in the correct tanks.
 2. Replace developer if contaminated with fixer.
 3. Check developer temperature (and replenishment rate).
 4. Check x-ray unit.

SYMPTOM: Film not drying

- ACTION:**
1. Check top-up/replenishment rates.
 2. Check wash water flow rate.
 3. Make sure dryer is working.
 4. Look for poor air circulation or HIGH humidity in processing area.

SYMPTOM: Deposits on Film

1. White scum:

- ACTION:**
- i. check for very low wash water flow rate;
 - ii. check for contaminated or wrongly mixed fixer;
 - iii. check for dryer module contamination by fixer deposits.

2. Black parallel lines:

- ACTION:**
- i. dirt on entry slot or feed guides;
 - ii. dirt on bridge-over rollers;
 - iii. dirt on modules;
 - iv. screens not turning properly.

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SYMPTOM: Light Areas on Film:

1. White opaque patches on low density areas (indicates lack of fixing):

- ACTION:**
- i. check fixer temperature;
 - ii. check for exhausted fixer;
 - iii. check water flow in wash tank.

2. Light spots in exposed areas:

- ACTION:**
- i. dirt on intensifying screens;
 - ii. film desensitisation by pressure or kinking;
 - iii. poor screen contact.

SYMPTOM: Dark Areas on Film:

1. Dark spots can be caused by kinking the film: check intensifying screens for dirt.
2. Static damage can take the form of dots, fern-like lines or lightening strikes.

ACTION: Check for LOW ambient humidity in processing area.

SYMPTOM: Mottle:

- ACTION:**
1. Check for dirty transport modules. ✓
 2. Check age and storage conditions of film. ✓
 3. Check for light fogging (see above).

SYMPTOM: Films coming out wet:

- ACTION:**
1. After the processor has been running for 2 mins, 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 2 mins and switch it on again.
 2. If the above procedure does not correct the fault, contact your Velopex supplier.

When changing chemicals, make sure that the tanks are drained down fully and rinsed out. Fresh chemical will be spoiled by contamination, leading to poor results.

Should a tank fail to drain down fully when the drain tubes are removed, it will probably be because the waste outlet pipe is not lying flat, but rising before entering the waste pipe. The tank will then take its level from this point. Correct this by ensuring that all waste exit pipes do not rise above counter top level.

WARNING: If the unit should emit abnormal odour, become overheated in some parts or produce unusual noises, immediately switch processor off and unplug from Main Power Supply. Contact your Velopex supplier.

A clean, well-maintained machine makes for good clear x-rays; a dirty machine makes problems.

WARRANTY

VELOPEX INTRA-X AND EXTRA-X AUTOMATIC X-RAY PROCESSORS

This warranty is limited to defects in materials and workmanship only, and is valid for a period of one year from the date of installation or eighteen months from date of manufacture, whichever date occurs first. (Velopex Transport Modules: warranty valid for two years).

Limitations of cover: this warranty is to include replacement or repair of component parts, but does NOT include labor and mileage charges for a field service representative or shipment to base; Velopex International Inc. shall not be liable to the purchaser or to any third party in respect of either incidental or consequential damages (including but not limited to losses from business interruption, lost materials, lost profits, cost of labor, time or substitute equipment); Velopex International Inc. shall not be held liable for any loss, damage, detention, or delay resulting from causes beyond its control or those caused by FORCE MAJEURE (including but not limited to fire, strike, lockouts, military authority, government order, ruling or administrative act, power failure, insurrection, riot, embargoes, wrecks, delays in transportation, or inability to obtain necessary labor, materials, or other facilities due to such causes).

Liability is restricted to the cost of the equipment. Replacement parts will be limited to the duration of the warranty, and outside the original period of the warranty will become chargeable to the purchaser.

This warranty is validated following the receipt by Velopex International Inc. at the address below of the attached warranty card within one month of installation. The warranty shall apply ONLY if the Velopex International Inc. equipment has been properly and correctly installed by an installer approved by Velopex International Inc. in line with the installation instructions contained in the machine manual accompanying the equipment. It is valid ONLY if the equipment has been used strictly in accordance with the operating instructions contained in the machine manual, and ONLY if the equipment has been properly maintained in line with the instructions contained in that manual.

This warranty shall not apply - if the machine or any component parts have been subjected to misuse, neglect, accident, incorrect wiring, improper installation, improper use in violation of the manufacturer's instructions, abnormal wear and tear, improper maintenance, failure to perform regular maintenance and cleaning procedures as specified in the manufacturer's manual, or servicing performed by anyone other than persons authorised by Velopex International Inc.; it shall not apply if the environment of the machine varies from that described in the machine manual, nor if the serial number of the machine has been altered or removed, or the machine modified.

Work undertaken in any of the above circumstances will be chargeable to the purchaser.

THERE ARE NO WARRANTIES, EXPRESSED OR IMPLIED, WHICH EXTEND BEYOND THE DESCRIPTION ON THE FACE HEREOF.

VELOPEX INTERNATIONAL INC. MAKES NO WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. VELOPEX INTERNATIONAL INC. NEITHER ASSUMES NOR AUTHORISES ANY REPRESENTATIVE OR OTHER PERSON TO MAKE ANY OTHER WARRANTY OR ANY REPRESENTATION OR TO ASSUME ANY OTHER LIABILITY FOR VELOPEX INTERNATIONAL INC. IN CONNECTION WITH THE SALE OR USE OF VELOPEX PRODUCTS OR PARTS.

The Law:

The laws of the State of Georgia shall apply to Warranties, Terms, Offers and Agreements with Velopex International Inc. regardless of where the agreement is signed and it shall be binding on successors to the original purchaser.

VELOPEX WARRANTY (USA)
REQ. ISSUE 1 11/96

Thank you for choosing

VELOPEX.

Your Warranty is overleaf, and will be validated by the return
of the card attached below.

Please be sure to fill it out clearly with all the
information requested.

VELOPEX INTERNATIONAL INC.

Do not struggle with film processing problems. Through experience, VELOPEX probably have the answer.

When there is a problem call us or write enclosing a sample of your film – we will do all we can to solve it for you.

Call: (888) VELOPEX

FAX: (570) 356 2613

VELOPEX INTERNATIONAL INC. will make available on request information to assist the user's appropriately qualified technical personnel to repair those parts of equipment which are designated by Velopex International Inc. as repairable.

Application to:

VELOPEX INTERNATIONAL INC.

203 Main Street

Catawissa, PA 17820

Tel: (570) 356-2614 Fax: (570) 356-2613

Velopex International Inc.
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