



## Film Processor

# HQ-350XT



**Oxidation proof and minimal pollution**  
To reduce oxidation, an oxidation-proof cover is designed for each chemical tank. The cover can reduce the pollution to the room as well.

**Well-designed and reliability**  
The racks, rollers, electronic control system, dryer, chemical replenish and circulation system are all designed elaborately, without any risk of film jamming, scratching or not dry enough.

### Small footprint

The footprint of the processor is only 0.36m<sup>2</sup>, it can be installed in any darkroom without considering room space.

### Save chemical and keep activity

The volume of the developer and the fixer is only 5.5 L, which can reduce the chemical renewal period and keep the chemical in a good active condition.

### High efficiency and energy saving

Lower price, less chemical and water consuming, it fits for the medical organizations that process more than 10 sheets of films every day.

### High-speed process and quick output

When selecting high-speed mode, it only need 90 seconds for a complete cycle. It can meet any emergencies.

# HQ-350XT



## Micro processor control and automatic process

The process is controlled by micro processor, temperature and speed are controlled by micro processor.

All kinds of alert functions such as chemical replenish, be ready and low chemical level can be controlled automatically.

Keyboard LEDs indicating all the work conditions. Once a sheet of film is fed, it will start processing automatically.

## Two ways output selection

Two output modes can be selected freely before placing order: output forwards and output backwards. If you select the former mode, you need install the whole processor in a darkroom.

The films can be output on the processor. If you select the latter one, you need adjust the guider on the drying rack, open a 8x48cm slot between light room and dark room. The films can be output into a basket under this slot and you can take the films in the light room.

## Easy maintenance and service

Small footprint and lightweight make it easy to move. All the racks can be taken out and cleaned by water easily.

Open the cover under the feeding box and you can access to the electronic control system easily.



## High efficient and quick drying

The unique water-absorbing roller and the high efficient drying system ensure complete film drying at high speed and high volume.

## HQ-350XT Specification

Film format	3×6in-14×17in (MAX FILM WIDTH14")
Film applicable	X-ray, MRI and etc.
Process time	90S-160S
Time of develop	25S-65S
Capacity (when Dev time is 25S)	14×17in: 75pcs/hour, 10×12in: 135pcs/hour, 4×4in 970pcs (in theory)
Adjustable Dev./Fix temp. Range	20°C-40°C
Adjustable dryer temp. range	40°C-65°C
Adjustable range of repl.	20ML-200ML
Chemicals replenish mode	Automatic/Manual/Continuous replenish during processing
Tank volume	Dev: 5.5L    FX: 5.5L
Replenishment containers	25L
Anti-crystallization	In 4 min intervals
Water consumptions	2l/min during processing 0l/min during stand-by
Water pipe dimension	D=15mm
Process procedure	Developer-Fixer-Washer-Dryer
Power conditions	220VAC, 240VAC, 50/60HZ, Rated current: 3A, Rated Power 2.64KW 110VAC, 50/60HZ, Rated current 25A, Rated Power 2.70KW
Dimensions (L/W/H)	86×38×52cm
Weight	55kg
Conditions for transport and storage	Ambient temperature: -40°C~+70°C Relative humidity: 10~100% Ambient air pressure: 500hpa~1060hpa
Standard	CE ISO9001/ISO13458    IEC 606601-1 EN 60601-1

Note: All data above are subject to change without prior notice.



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**A Full Automatic  
Film Processor with  
High Quality,  
Fast Speed  
and Deep Tank**



# Film Processor HQ-450XM

Now, the processing quality of medical film is not only related with processing quality, but related with the most correct image information of patient that we could provide to doctor precisely. It's about the issue of human life.

During the designing of 450XM, we treat reliable processing of high quality with the same care that we treat human's life.



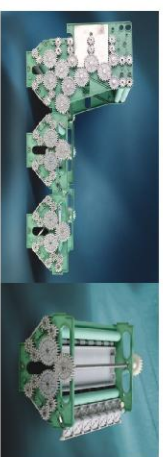
## Technical Features

**Large Processing Volume and Fast Speed with a Small Body:** When 450XM is set fastest as Develop 14 sec (full process time at 60 sec), it can process 14x17 inch film (240pcs), 10x12 inch film/ 380pcs (theoretical volume). This will meet requirements on processing speed for any hospital.

**High Processing Quality:** On design of chemical's circulation, we fully considered its high effectiveness and include an anti-oxidation cover for chemicals. With precise replenish system which replenishes automatically according to processed area, and hi-precision roller-film-transport system, machine's working performance and processing quality are controlled at a very excellent level.

**Processing Program by Full Automatic Control:** 450XM is advanced full-automatic processing equipment. Controlled by a micro computer, the machine can control chemical's temperature, chemical's replenishment, chemical's circulation and dryer automatically, with processing data programmable. Several types of detection system are integrated in the machine to realize auto control on functions, such as solution level, over high temperature, wash water's level, status of processing film and standby. There's also alarming and display function.

**Film Output Optional:** 450XM has two modes for film output. Front film output: in this mode, whole machine is placed in dark room for processing operation. The film will be transported to machine's top cover after processing. Rear film output: you only need to adjust a group of guide in dryer exit to rear output status and open an 8x45cm whole between the dark room and separate wall. Place film collector below this whole. Film collection is in light room.



## Specifications

Max. Processing Width	17 inch (17×14inch)
Minimum Processing Width	3×6 inch
Film applicable	X-ray, CT, MRI medical films
Processing procedure	Develop, Fix, Wash, Dry
Process Time	60S-280S
Time of Dev	14 sec-80 sec(continuous adjusting)
Capacity (when Dev. at 25)	10×12 inch 380pcs/hour 14×17 inch 240pcs/hour 17×17inch150pcs/hour(in theory)
Temperature adjust	Dev.:10°-40°C Dry:40°-65°C
Tank Volume	Develop: 10 liters fix: 10 liters
Chemical Replenish	Auto and manual. Auto:replenish once per 0.5M2 of film processed
Wash Control	Auto controlled by solenoid auto-stop when no film processed
Chemical Replenish Adjust	50ml-300ml (adjustable)
Water House Connector	Diameter φ 15mm water Volume2-5 liters/minute
Power Supply	220V-240V/50Hz/60Hz; current: 6.5A; Rated power: 3.3KW
Dimensions & Weight	1200×660×1150 (Length×Width×Height) mm;90kg
Standard	CE ISO9001/ISO13458 IEC 60601-1 EN 60601-1
Conditions for transport and storage	Ambidat temperature: -40°C-+70°C Relative humidity: 10%-100% Ambient air pressure: 500hpa-1060hpa

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**Advanced and Reliable Roller Transport System:** the design of 450XM's rack integrate advanced roller film-transport technology and Huqiu's new hi-precision roller manufacture technique, assuring reliability and hi-quality requirement during film processing.

**High Working Reliability:** The design and manufacture of 450XM integrate themerits of similar advanced products and Huqiu's professional experience of nearly 30 years. This machine is well designed on film-transport rack structure, roller transport, single-chip computer control, no-air dryer, complete-autochemical replenish and circulation. It assures long period usage without failures such as film jam, scratches, not dried.

**Hi-efficient Dryer:** since 450XM has much higher processing speed, besides hi-efficient air duct of dryer system, a Huqiu special squeeze roller of high performance is designed to mount on dryer's entrance. This is to assure that, at conditions of hi-humidity, the high requirement on dryer performance is met when processing mass films.

**Easy Maintenance:** easy maintenance is well considered during the design of 450XM. This machine has small body and light weight. Every rack from develop to dryer can be all released out easily for maintenance and washing by water. Electrical control part is enclosed and mounted below the feed-in dark box. Open E-box cover and you may easily maintain every electrical component inside.

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# Film Processor

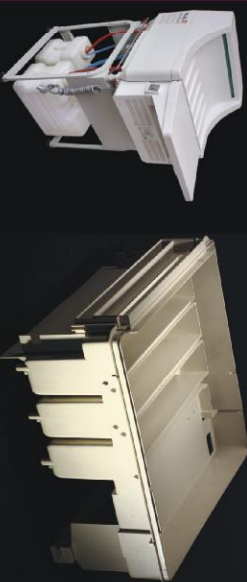
## HQ-450XT

450XT is the best machine for its technique, technology and operation. This machine has small body but can process large volume. All plastic parts of 450XT processor's chemical tank and external cover are made by mold. Thus manufacture and technique of whole machine reaches an advanced level in current world and it is the sole product which is made by mold in all brands of China.

Another advanced feature of this machine is that he broke through the kind in the world could not jump the design and manufacturing of brand name products difficult, namely: ultra-deep trough design 450XT medicine chutes and transmission shaft planes depth of 140mm, 88mm in width. So ultra-deep, super narrow chutes and axial planes drug designed to achieve the high demand -- large, liquid high oxidation resistance, washing density, no scratches and flowering.

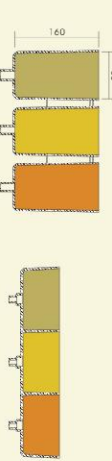


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### Specifications

- Film format:** Max processing width 17 inch, 3 X 6 in~17X14in
- Film applicable:** X-ray, CT, MRI medical film, etc
- Time of develop:** Develop continuous adjust range: 25 to 45s, all process: 90s~160s
- Capacity (When Day time is 25s)** 14 X 17in : 150pcs/hour; 10X12in: 230pcs/hour
- 17X17in:** 120pcs/hour (in theory)
- Temperature-adjust Range:** Dev: 20°C~40°C, Dryer: 40°C~65°C
- Chemical replenish mode:** Auto replenish according to processing area detected by infrared and manual button replenish
- Replenish rate adjust:** 20ml, 200ml/0.50m<sup>2</sup> or continuous replenish during processing film.
- Processing procedure:** Develop, fix, wash and dry are completed in one process
- Tank volume:** Develop: 4.4 liters, Fix: 4.4 liters
- Wash Control:** Automatically controlled by solenoid, wash flows with film fed in, and it will be shut off when no film fed in
- Replenish Tank Volume:** Develop: 25L, Fix: 25L
- Power Supply:** 220V~240V, 50/60Hz; Rated current: 6.5A, Rated power: 2.84KW
- Water Hose Connector:** Diameter: φ15mm, water volume: 2~5L/minute
- Dimensions:** 97x88x55cm (length x width x height, height with stand connected 1125mm)
- Weight:** 70kg
- Stand:** CE ISO9001/ISO13458 ICE00601-1, EN60601-1
- Conditions for transport and storage:** Ambient temperature: -40°C ~ +70°C, Relative humidity: 10% ~ 100%
- Ambient air pressure:** 50hpa ~ 1060hpa
- Note:** All data above are subject to change without prior notice



### Technical Features

**Whole Machine Outer Shape:** Utilize mold to form the shape one time, beautiful and fluent shape, robust body.  
**Body Volume:** Small body of whole machine with only 0.6 square meter space area, suitable for installation in every dark room of every type of hospital and organization. It solves the contradiction between big body of deep-tank Machine and small dark room.  
**Processing Volume:** Machine's processing volume can be 150 pieces per hour (4X17 inch).  
 It is the machine with biggest processing volume among desktop small machines in China and meets the processing requirement of deep-tank machine's processing volume.

### Anti-oxidation:

The extreme narrow and deep Design on chemical tank reduces chemical oxidation largely. The chemical tank's width is only 88mm, which is most narrow model of tank in the world. 4.4 liters of chemical load reduces chemical consumption largely, 40% chemicals saving compared with similar products all around world. On the other hand narrow tank and low oxidation design improves air conditions in the dark room, reducing the damage to operator in dark room made by chemical's smell.

### Film-transport Structure:

Utilized most advanced structure design for processing in the world and combined with Hugu's 30 years experience and technology on manufacture processing equipment, the roller film-transport system is designed by state of the art for a high performance of stability, no film jam and no scratches.

### Electronic Circuit:

Utilize components of world-brand and hi-reliable circuit to design the stable electronic circuit control system. Microcomputer control system can automatically control the chemical's temperature and replenish, circulation and drying. Detection system inside the machine can automatically monitor and control the status of solution low-level, high temperature, no film fed-in, with also alarms and display.

### Dryer:

There is a hot-air duct-mode dryer system of hi-efficiency and squeeze roller of hi-performance in dryer section. This guarantees the high performance of dryer required by mass processing of film in a high-temperature environment. There is a hot-air duct-mode dryer system of hi-efficiency and squeeze roller of hi-performance in dryer section. This guarantees the high performance of dryer required by mass processing of film in a high-temperature environment.

### Processing Effect:

Deep-tank design makes processed film with less fog, good contrast, full of details, improving film-processing quality and diagnosis effect largely.

### Energy Saving

Energy saving design reduces consumption of water, power and chemicals so that machine operation's cost will be lowered effectively.

### Maintenance:

Small body volume, light weight, easy to move. You can disassemble all parts of machine in 5 minutes with extreme easy operation. This helps to inspect and maintain every part inside the machine.

### Cooling System:

To prevent chemical temperature affected by ambient temperature and thus exceeding set value, a cooling system is configured. Once chemical temperature exceeds the set value, water cooling system will be opened automatically.

Note: left figure show chemical tank of 450XT. The tank's width is only 88mm. The right figure shows chemical tank design of normal small type of desktop machine.