

INSTRUCTION FOR THE USE OF THE

HP CombiPlan

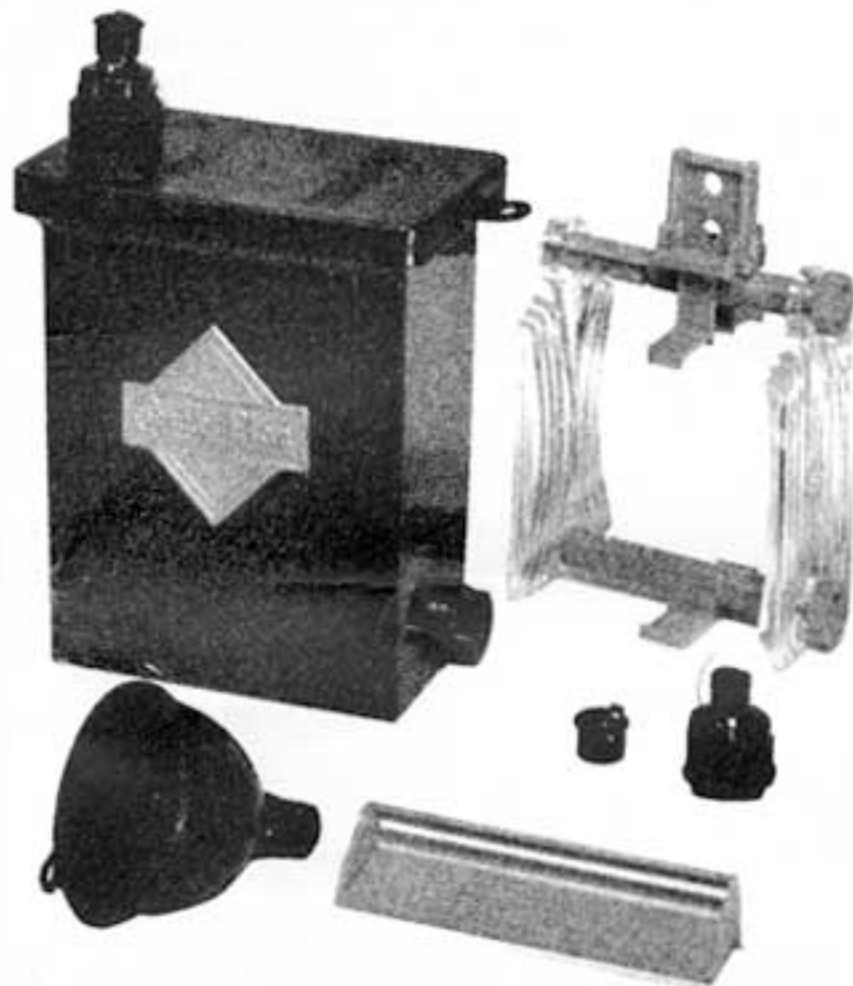
"T"

DEVELOPING TANK (DAYLIGHT TYPE)

ANOTHER
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PHOTO PRODUCT



HP COMBI PLAN "T" is a conveniently small tank for processing either six sheet films or six plates, black and white or color, designed for utmost economy as the quantity of solution required is very small. It features a removable, easily adjusted, sturdy negative carrier for the following formats:

6.5 x 9cm
3¼ x 4¼ inches

9 x 12cm
and

10 x 15cm
4 x 5 inches

as well as the transparency sizes 8.5 x 8.5cm and 8.5 x 10cm and X-ray films of 10 x 10cm.

HP COMBI PLAN "T" is a daylight-type developing tank. After loading the negatives in a darkroom, all other operations are carried out in full daylight.

HP COMBI PLAN "T" is of modular design, every component is available individually for replacement. All parts bear their catalog number for easy identification.

HPMarketing Corp. 216 LITTLE FALLS ROAD • CEDAR GROVE, NEW JERSEY 07009 • (201) 857-017—(212) 732-0783

Description of the **HPcombiPlan "T"**

HP COMBI PLAN "T" is made of the highest quality plastic material which, even after long use, is highly resistant to the corroding influence of all known photographic solutions, particularly present day color developers. In addition, this plastic material helps, to a very great extent, to maintain a constant temperature during the developing process, a factor of the greatest importance, particularly in color processing.

HP COMBI PLAN "T" consists of the following parts:

1. Lid No. 9409

made of extra strong, flexible plastic material. This ensures a firmly closing lid for the tank body No. 9407 and makes inversion agitation possible, the best developing method known. The opening in the lid for filling or draining the tank is provided with a ventilation aperture and can be fitted with a light-tight screw-in nipple No. 9421, which, in turn, accepts the funnel No. 9425 or sealing cap No. 9422.



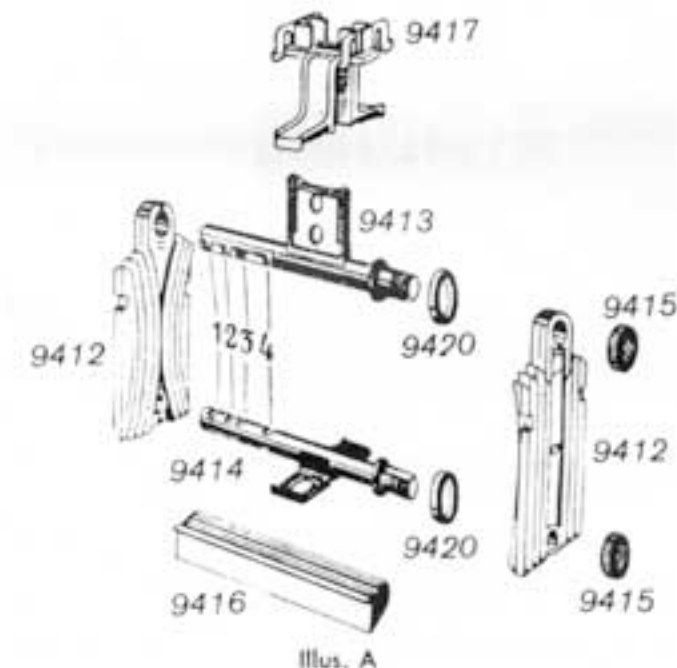
2. Tank Body No. 9407 "T" (Daylight-Type) accommodates the negative carrier.

Its well designed shape enables the user to grip the tank easily and firmly with one hand. The vertical, raised grooves in the front and back of the tank prevent slipping, even when the users hands are wet. An outlet is provided at the bottom on one of the small sides to which another light-tight screw-in nipple No. 9421, or screw-in stopper No. 9418, or screw-in hose connector No. 9419 may be attached.

3. Negative Carrier No. 9812

for six sheet films or plates. The carrier consists of the following parts:

- Two grooved plates No. 9412** of glass-clear plastic material. On the one side the grooves are straight for use with plates, on the other side curved for use with sheet films
- Upper Spacer Rod No. 9413** with format markings and handle. The holes in the handle permit easy hanging of the negative carrier for drying.
- Lower Spacer Rod No. 9414** with nipped film stop plate
- Two locking rings No. 9415** to secure the upper and lower spacer rods to the grooved negative carrier plates.
- Film loading guide No. 9416** to facilitate the insertion of film into the carrier grooves in the dark. (Not used with plates)
- Slip-on ratchet-locking film retaining clip No. 9417** slips over handle and ensures proper separation of films. Also prevents films from slipping out during inverse agitation.



4. Two light-tight screw-in nipples No. 9421

one each for insertion in lid and tank body openings.

5. **Two stopper caps No. 9422**

to render the light-tight screw-in nipples water-tight.

6. **Funnel No. 9425**

is inserted into light-tight screw-in nipple on lid when pouring in solutions or water.



AVAILABLE ACCESSORIES:

1. **Screw-in Stopper No. 9418**

with rubber washer used instead of the light-tight screw-in nipples No. 9421

2. **Screw-in hose connector No. 9419**

for lower pouring spout of tank. (Not light-tight!)

3. **Divider Frame for 6.5 x 9cm film No. 9423**

Permits developing of 12 films at one time with Negative Carrier adjusted to the 9 x 12cm position.

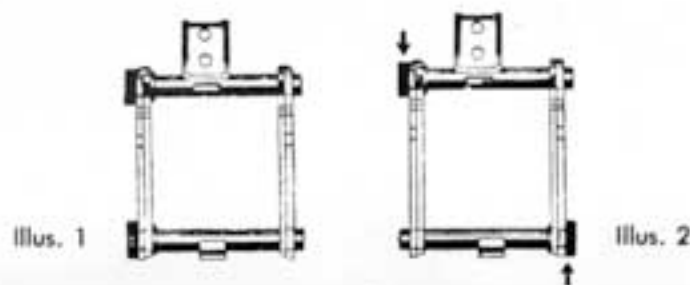
4. **Numbering Wheel No. 9424**

with numbers from 1 to 0 for marking tanks and lids making them more readily identifiable in the dark. Numbers are 3/4-inch high.

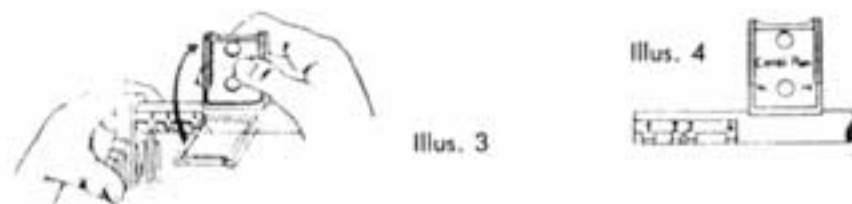
How to use the **HPcombiPlan** "T"

A. Assembly of the negative carrier in daylight.

Make sure the carrier is assembled correctly for the type of material to be developed: sheet films or plates. For films, the curved grooves of the film retaining plates must face each other and the straight grooves are on the outside. When developing plates, the straight grooves must be on the inside and the curved grooves on the outside. (illus. A) Curved grooves are used for films to give them greater strength to resist the pressure of the solutions during inverse agitation. The two spacer rods No. 9413 and 9414 are fitted on one side with a sort of bayonet lock for adjustment to the various film formats accommodated and on the other side with a thread to accept the locking screw rings No. 9415. The bayonet cut-outs are numbered to indicate the format positions.



When assembling the negative carrier the upper rod is inserted into the upper opening of the grooved plate with its groove facing downward so that the notch in the opening fits smoothly into the groove. As soon as the figure marking the exact format desired is over the notch and the latter is in the groove, turn the rod clockwise until it stops (illus. 3). The lower rod is similarly inserted, the only



difference being that notch and groove are here uppermost. The second grooved plate is now slipped over the rod's screw thread. The notches in the openings of the plates rest on the flattened portion of the screws, thereby preventing any accidental turning of the rods. Hold Negative carrier firmly together by placing screw rings No. 9415 over the screw threads of the rods and tightening them firmly. (illus. 1)

When using larger film sizes even greater stability of the negative carrier is obtained by inserting the connecting rods through the grooved plates in such a way that one screw thread will be on the left and the other on the right of the negative carrier. (Illus. 2)

The following table indicates the figures to be selected on the spacer rods for adjustment to the various formats:

1	2	3	4
10 x 15 cm	9 x 12 cm	8,5 x 8,5 cm*	6,5 x 9 cm
10 x 10 cm	6,5 x 9 cm o)	8,5 x 10 cm*	
4 x 5 inches	3½ x 4¼ inches	3¼ x 4¼ inches	2½ x 3½ inches

(For figure markings see Illus. 4)

o) with divider frame No. 9423

* for the 8.5 cm transparency sizes two blue washers No. 9420 must be placed on the flattened screw thread (one on each rod) before the grooved plate is attached. This gives the added space required between the two grooved plates. (In this case use figure marking No. 3)

B. Insertion of sheet films or plates in the dark

When loading sheet films into the carrier it is advisable to use the loading guide No. 9416. The upper two cross bars of the frame have sharp edges, while the lower one is rounded. This facilitates identifying the loading slots in the dark and lessens the danger of accidentally sliding two films into one slot. It also prevents the film being inserted at a slant. (Illus. 6)

Platte



Illus. 5

Film



Illus. 6

Film



Illus. 7

The loading of plates is rendered easier by the protruding upper tips of the grooves which serve as loading guides. (Illus. 5)

The loading guide frame is hooked into position by placing the top cross bar over the last two projecting guide grooves and then pressing the lower edge of the flat back of the loading frame into the cut-out in the sides of the carrier

plates (Illus. 7). This prevents the loading guide frame from slipping while working in the dark.

When loading it is preferable to insert the first film or plate in the slot nearest the handle. Using the film guide frame this means inserting the first film behind the uppermost bar of the frame, the other two in the slots in front. The film must rest firmly on the film stop plate of the lower spacer rod. Films should be inserted in such a way that their backing faces the center of the negative carrier. This ensures that the emulsion side of the film will be pressed away from the grooves, once the film retaining clip has been positioned, and the processing solutions can reach the entire surface of the emulsion, even the very outside edges.

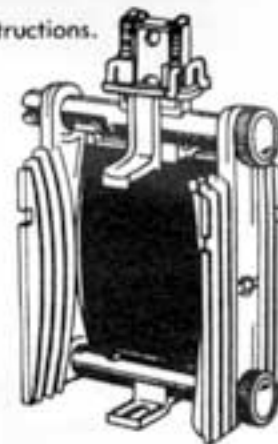
In the case of very valuable films it is advisable to insert only two films on each side of the carrier, leaving the middle slot free.

To remove the loading frame, slightly raise the bottom edge of the smooth front portion and then lift it upwards.

When the loading frame guide has been removed, slip film retaining clip over the handle on the upper spacer rod and slide clip downward until it makes contact with the upper edges of the film. When so doing make sure the upper edges of the film are properly separated and the retaining clip holds film firmly. Also check lower edges of film resting on the stop plate of the lower spacer rod for proper separation. (Illus. 8)

IMPORTANT: See last page for detailed additional instructions.

Illus. 8



Now place the loaded negative carrier into the tank and press lid firmly over the edge of the tank until it makes firm contact with the rim. Screw the light-tight nipple No. 9421 into the lid opening and into the lower pouring spout on the tank body.

The lid is removed easiest by first lifting one corner.

C. Developing with the COMBI PLAN "T"

Loading the negative carrier with film or plates and closing the tank must be carried out in the dark. All processing operations may be performed in daylight with the tank closed.

If the first developing solution has not been poured into the open tank before inserting the negative carrier, proceed as follows:

a) To fill the COMBI PLAN "T"

1. Place funnel No. 9425 on the screw-in nipple No. 9421 of the lid.
2. Give Funnel with screw-in nipple a half a turn anti-clockwise to open ventilation aperture.
3. Close the lower screw-in nipple (on tank body) with cap No. 9422.
4. Measure the required amount of solution as per table below and pour solution through the funnel into the tank:

6,5 x 9 cm	9 x 12 cm	10 x 15 cm	3 $\frac{1}{4}$ x4 $\frac{1}{4}$ in.	4 x 5 in.
800 ccm	1000 ccm	1200 ccm	1000 ccm	1050 ccm
28 oz.	35 oz.	42 oz.	35 oz.	36 oz.

A shield under the opening in the lid prevents the negatives from being splashed or otherwise damaged by the inflowing solution which would result in uneven development. The shield thus ensures that the solution rises evenly from the bottom of the tank.

b) Processing method

1. Remove funnel and cap the screw-in nipple.
2. Shut ventilation aperture by turning screw-in nipple firmly clockwise.
3. Tap the safely closed tank firmly on a hard surface to remove any air bubbles from the surface of the film. Repeat several times.



Illus. 9

4. Inverse agitate the solution by a smooth, not too abrupt tilting of the tank from side to side, alternately to the left and right in an arc of approx. 180 degrees. For black and white negatives this should be repeated every 15 seconds, for color film follow the directions of the color film manufacturer.

c) Draining the COMBI PLAN "T"

1. Remove cap from screw-in nipple of lid to admit air.
2. Insert funnel into bottle readied to receive solution.
3. Remove cap from screw-in nipple at bottom of tank and pour solution through funnel into the bottle.



Illus. 10

4. Daylight washing can be carried out as shown in illustration 10. A rubber hose runs from the top to the screw-in nipple at the bottom of the tank. The pressure of the water being forced through the tank from the bottom to the top ensures a particularly thorough washing.

To avoid any possible harm to the negatives by the forced flow of water during the intensive washing, it is advisable to frequently change the position of the negative carrier in the tank.

d) Cleaning the tank and negative carrier.

After each processing operation the negative carrier should be taken apart and each part cleaned with a brush in luke-warm water to which a little detergent has been added. The same procedure should be followed with the tank and lid. NEVER use hot, let alone boiling water. NEVER place the negative carrier on a stove, hot plate or near a fire for drying. It should be remembered that a damp negative carrier can be loaded with film without any difficulty, thus ensuring uninterrupted work.



Illus. 11

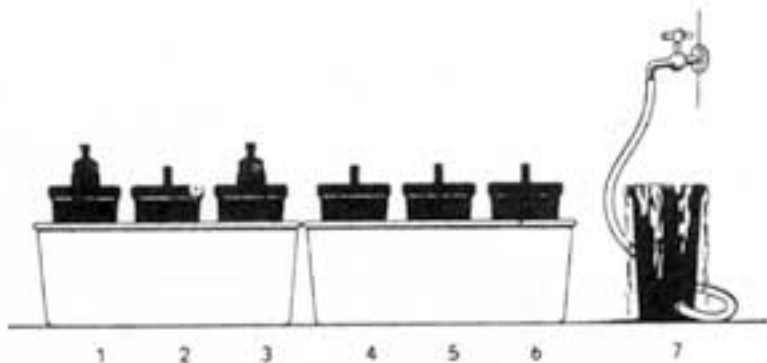


9408 L

D. Processing with a Battery of COMBI PLAN "T" and "L" Tanks.

If there is a great deal of processing to be done, it is advisable to assemble small tank batteries. These can be put together in various ways according to individual needs.

Below is an example of an adaptable and efficient color tank battery.



1. First Developer, 2. Stop Bath, 3. Color Developer, 4. Hardening Stop/Fixing Bath, 5. Bleaching bath, 6. Fixing Bath, 7. Washing Tank.

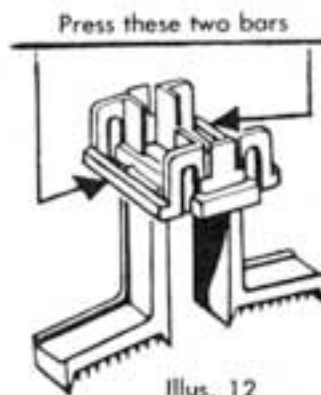
The number 2, 4, 5 and 6 Tanks are COMBI PLAN "L" (Lab-type) Tank Bodies No. 9408 with Lab Lid No. 9410 (Ill. 11). Consult the HP COMBI PLAN Price List for further details.

Proper Use and Care of Film Retaining Clip No. 9417.

Four small ratchets engage into four rack-like bars along the outer edges of the handle of the upper spacer rod to lock the film retaining clip securely.

To disengage and remove the film retaining clip from the handle simply press together the two bars of the clip (Ill. 12) using thumb and index fingers of BOTH hands and lift off. (Illus. 14 Front View)

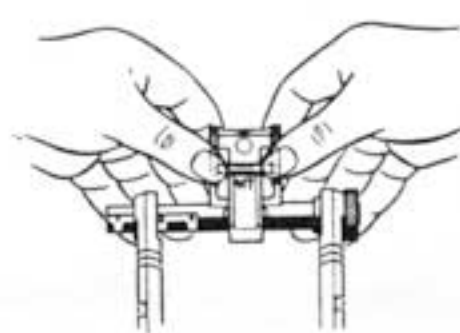
The inherent spring action of the plastic material used fully meets these requirements. Do not, however, abuse the Clip: Never squeeze or pull apart the two arms of the clip by force (Illus. 13). Avoid excessive wear by never allowing the ratchets of the clip to ride the racks of the handle. Always slip-on or remove the clip with the ratchets released, i.e. with gentle but firm pressure on the two bars of the clip. (Ill. 15)



Illus. 12



Illus. 13



Illus. 14



Illus. 15

HP combina

the foolproof developing tank

A COMPLETE LINE OF FOUR MODELS
FACILITATES SELECTION OF THE ONE
TANK AND REEL COMBINATION BEST
SUITED TO YOUR INDIVIDUAL NEEDS.

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