

INSTRUCTIONS

The PHARAOH

This compensating filter is specifically designed for digital arteriography of the aortic arch, the carotid and the cerebral arteries, with and without subtraction. It removes the intense peripheral radiation causing halation responsible for the degradation of digital subtraction. Multiple rotation views are possible allowing a 3D effect and a better demonstration of bifurcations and lesions. Thus, radiations and volume of opaque substance are kept at an optimum risk / benefit ratio. Finally, the PHARAOH is great for immobilization.

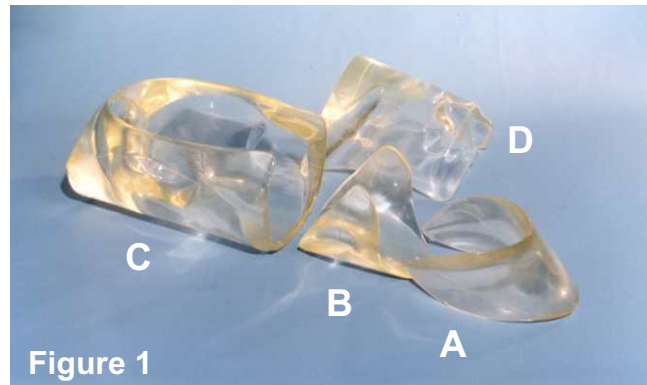
WARNINGS

1. This set of filters is not suitable for infants or atypical adults.
2. The material is a polyurethane. It is not allergenic to the skin. Nonetheless, care must be taken when it is applied to patients having a skin sensitivity.
3. The filters are fragile. They must not be hit, dropped, or bent abruptly. In particular, do not stretch or pull apart the thin edge with fingernails. This polyurethane is inflammable and the vapors are toxic. It may turn yellowish with time.

DESCRIPTION

The PHARAOH consists of five transparent components, (**figure 1**): **A**) an *anterior* collar marked "A"; **B**) a *posterior* collar marked "P"; **C**) a *bonnet*; **D**) a *large mask* and **E**) an *eye mask "LOUP"* (not shown). All junctions are wedged to facilitate adaptation to normal variations in morphology.

The PHARAOH has the same absorption as water. Disinfection is done with alcohol or Zephiran®. A hair net and plastic wrappings are recommended for hygienic purposes. Plenty of Velcro® is supplied.



PREPARATION

To become acquainted with the device, we suggest you examine its parts under fluoroscopy before you start using it. The images will help foresee the effect on the anatomy. Any suspicion toward the PHARAOH always vanishes when one tries it on himself. Therefore, it is mandatory that technologists practice on each other before using it on patients. Such rehearsals shorten preparation time and improve examinations. Remove any compensating filters already present in the collimator.

NECK COMPONENTS (COLLAR)

The neck varies in length and size. Fortunately, the cervical parts fit all individuals automatically. With the patient sitting, first lower the *posterior* filter "P" (**figure 2**), against the shoulders. Then place the *anterior* filter "A" raising it against the jaw (**figure 3**) while overlapping the posterior one evenly on each side. Fix the two filters together with adhesive tape.



Figure 2



Figure 3

BONNET

It is preferable to anchor the *bonnet*. It has a Velcro® felt on the posterior midline (**arrow, figure 4**); stick a 10 cm strip of auto-adhesive hooks Velcro® transversely on the table or its cushion where it will anchor. Next place the head into the bonnet (**figure 5**), while pushing upward against the top of the filter. The bonnet may also be fitted sitting and the patient laid down after. If the flaps draw aside, close them in with adhesive tape. If a flexion is necessary, loosen collar "A" and raise the head on a cushion (**figure 6**).

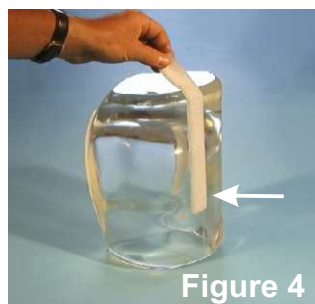


Figure 4



Figure 5

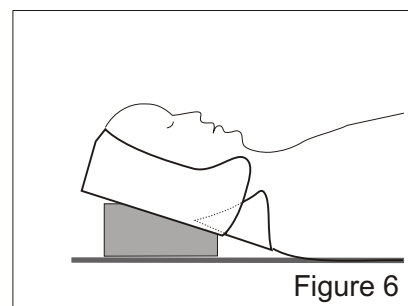


Figure 6

FIRST EXAMINATIONS

Arteriograms of many vessels may be performed in P.A. and oblique views with the *collar* and the *bonnet*, such as the aortic arch, the carotid arteries, the vertebrals and the posterior cerebral arteries.

MASKS

The *large* or the *small mask* "LOUP" is used at the end of the examination for the *profile* of the mid and anterior cerebral arteries. The patient must have been well informed about advantages and inconveniences. Gently lay the mask on the face (**figure 7**).



Figure 7

VERIFICATION

Fluoroscopy and/or films prior to the injection are important for high quality imaging, since an immediate correction will insure better results later.

IMMOBILIZATION

If immobilization is necessary, it is done both *anteriorly* and *posteriorly*. The *anchored bonnet* is the posterior immobilizer. Anterior immobilization is very strong with either *large* or *small mask* fitting closely over the bones of the nose and eyebrows. Again, important advantages and the necessity of the mask must be well explained to the patient. Consult the included instructions for the A-P STOP, as the PHARAOH is then used as a head immobilizer.

The **eye mask “Loup”** is fixed to the bonnet with four short Velcro strips (**figure 8**); the hook end of the strips goes on the mask. Then long straps are applied between the mask and the table in a “I”, “Y” or “X” fashion (**figure 8**).

The **large mask (figure 9)** is fixed with adhesive tape in the same fashion.



Figure 8



Figure 9

ROTATION and PIVOTING FILTERS for the HEAD (Optional COMPLEMENT to the PHARAOH)

During rotation on a full skull for inclusion of the peripheral mid and anterior cerebral arteries, the width of the field must decrease from 22 cm in lateral to 16 cm in P.A., otherwise important halation would appear. Since the diaphragms do not adjust automatically during rotation, we developed PIVOTING COMPENSATING FILTERS as a solution. They are fixed on the collimator and they pivot by gravity during rotation, thus closing the field automatically. Further information is available on request.

MISCELLANEOUS

Please consult the accompanying video and the educational brochure "THE OCTOSTOP® FILTERS" by Dr Jean A. Vézina M.D., president and medical advisor of OCTOSTOP® Inc.

WARNING

Must be used only by qualified personnel, according to appropriate procedures, and under the responsibility of a physician. OCTOSTOP® Inc. and its personnel do not assume any liability regarding the use, indications, consequences, or any situation directly or indirectly related to its products.