

PIXY The Anthropomorphic Training/Teaching Phantom

PIXY was designed specifically for training radiologic technologists. PIXY is 156 cm (5 ft 1 in) tall and weighs 48 kg (105 lb). She is repeatable, virtually indestructible and a convenient substitute for patients.



Opaque PIXY

PIXY is made of tissue-equivalent materials and has life-like articulations. Students have no difficulty in maneuvering PIXY into most desired positions.

- An anatomically and radiologically correct female
- Small size and low weight simplify positioning
- Can be positioned for most views
- Permits evaluation of student performance
- Organs accept contrast media
- Opaque or transparent

PIXY is used to demonstrate anatomy and evaluate positioning and imaging techniques, including kVp, mAs, contrast, optical density, OFD and TFD. Radiographs of PIXY are optically equivalent in density and contrast to human patients.

PIXY permits unlimited exposures and tolerates trainee errors.

PIXY anatomy

PIXY shoulders have ball and socket joints; elbows and knees flex 90° to 100°. Hips flex 130° with 30° hyperextension.

A “frog position” is made possible by lateral flexion at the hips. The right hand is molded with fingers positioned for an AP view, while the left hand is in an oblique-lateral position. The left foot is in full plantarflexion; the right foot is in a neutral position.

C1, C2, C6 and C7 were converted to mechanical nylon joints because educators in the field prefer full positioning capabilities for the head. The design permits the remaining neck vertebrae to be fixed in a normal position, while assuring a full range of head motion.

PIXY contains abdominal and pelvic organs: stomach, gall bladder, urinary bladder, kidneys, rectum and sigmoid flexure. These are air-filled, but accept water or contrast media and can be easily flushed after use. Custom fractures and custom pathologies are optional.

PIXY materials

Skeletons

Skeletons are in continuous production, so prompt shipments are routine.

Nevertheless, human skeletons are available for users who desire them.

There is a surcharge to cover the high cost of scarce natural skeletons and for added labor needed to rework them to fit PIXY molds.*



Transparent PIXY

The matching of skeletons and soft-tissues permits external and bony landmarks to coincide. The position of bones within the soft tissues is anatomically correct.

The detail cast into Fluke Biomedical phantom skeletons is considered a triumph of the sculptural moldmaker’s craft. The skull, for example, has frontal and sphenoidal sinuses, ethmoidal and mastoid air cells and the auditory ossicles. Bone sutures are radiographically visible.

Soft tissues

PIXY is available in opaque or transparent tissue-equivalent materials. The transparent PIXY has visible organs and skeleton except at the hips, knees, and elbows, which are opaque because, as on the opaque PIXY, latex coverings are needed to retain tissue-equivalent gels for soft-tissue continuity at these articulations. Two-ply coverings protect against gel leakage.

Lungs

Standard PIXY lungs are molded of tissue-equivalent foam with the mass density of inflated human lungs (0.30 g/cc). They are connected to the oro-nasal cavity by the stem bronchi and trachea. The oro-nasal pharynx is filled with a nearly air-equivalent foam.

Optional animal lungs, which duplicate the intricate detail of the vascular trees, are available. These lungs are fixed in the inflated state and molded to conform to the pleural cavities of the phantom. The pulmonary arteries are injected with a blood-equivalent plastic. In addition, low, medium or high contrast material may be selected by the user.

Refurbishment

Fluke Biomedical phantoms offers a PIXY refurbishment service which, after wear and tear from usage over an extended period of time, restores PIXY to its original condition. This service includes repair of minor bone fractures of hands and feet. Quotes are furnished upon request for more extensive damage.

| Model | Description |
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| RS-102 | Opaque PIXY Phantom with stomach, gall bladder, urinary bladder, kidneys, rectum and sigmoid flexure. Permanent shipping/storage case |
| RS-102T | Same as RS-102 but transparent |
| RS-157* | Animal lungs |
| RS-102SP* | Custom fractures and pathologies. Depressed skull fracture at any desired location. Hairline fracture of the scaphoid bone of the wrist (with no fragment separation). Fracture of the superior pubic ramus. Rib fracture at the mid-axillary line. Unseparated fracture of the patella. Stress fracture of the 5th tarsal bone of the extended foot. Pathologies based on user's requirements |
| RS-102R | Standard PIXY refurbishment |
| *Must be ordered with phantom (cannot be retrofitted). | |

*Highly detailed polymer skeletons which reproduce the shape, mass density and attenuation coefficients of the cortical bone and spongiosa, allow continuous production of phantoms instead of sporadic production due to limited availability, variable size and uncertain chemical composition of human skeletons.