

## Model L-706 Patient Penetrometer Kit

### Features

- Three High-Purity Aluminum Plates
- One Laminated Lead Stop Plate
- Four Copper Plates
- One Resolution Plate
- Two Sets of Spacing Rods

### Introduction

The Ludlum Model L-706 Patient Penetrometer Kit provides the necessary patient phantom attenuation material to test the exposure rate output of any standard or digital fluoroscopic system. This kit is designed to work with almost all X-ray exposure or multimeter measurement devices.

The three high-purity aluminum plates are used in combinations to simulate the different masses of an adult abdomen, a child abdomen, or an adult chest. Using all three plates represents 26 cm (10.2 in.) of water for a large adult abdomen at 90 kVp. A child abdomen or adult chest is simulated by using two of the plates. Automatic brightness control at maximum output is evaluated using the lead "stop" plate, which is laminated to ensure the safety of the user.

The resolution plate has four columns of five holes each with hole diameters of the following sizes:

- Two columns with 6.4 mm, 4.5 mm, 3.2 mm, 2.2 mm, 1.6 mm (0.25 in., 0.176 in., 0.125 in., 0.088 in., 0.0625 in.) holes
- Two columns with 4.7 mm, 3.2 mm, 1.6 mm, 0.8 mm, 0.4 mm (0.187 in., 0.125 in., 0.0625 in., 0.032 in., 0.016 in.) holes

Typically two of the aluminum plates (one above and one below) are used to measure the contrast gradient of the image systems. Two sets of spacing rods in two different lengths are provided to act as spacers from the X-ray source.

### IMPORTANT NOTICE

Recommendations from a revision of FDA-CFR-21 [CITE: 21CFR1020.30] indicate that the long-used Patient Penetrometer Plates should be larger by about 38 mm (1.5 in.) than the current 178 x 178 mm (7 x 7 in.) plates, in order to cover the entire X-ray beam during the testing of the X-ray and fluoroscopic systems.

### ALSO AVAILABLE FROM LUDLUM

**Model L-706 -21:** Plate size 210 x 210 mm (8.3 x 8.3 in.)



### Specifications

Part Number: 99-9430

#### ALUMINUM PLATES

QUANTITY: 3

CONSTRUCTION: High-purity aluminum

SIZE (L x W x H): 178 x 178 x 12.7 mm

(7 x 7 x 0.5 in.)

#### LEAD PLATE

QUANTITY: 1

CONSTRUCTION: Lead, laminated

SIZE (L x W x H): 178 x 178 x 3 mm

(7 x 7 x 0.13 in.)

#### COPPER PLATES

QUANTITY: 4

CONSTRUCTION: Copper

SIZE (L x W x H):

2 ea. - 178 x 178 x 0.5 mm (7 x 7 in. x 0.5 mm)

2 ea. - 178 x 178 x 1 mm (7 x 7 in. x 1 mm)

#### RESOLUTION PLATE

QUANTITY: 1

CONSTRUCTION: Aluminum

SIZE (L x W x H): 178 x 178 x 0.8 mm

(7 x 7 x 0.03 in.)

HOLE DIAMETERS: see introduction

#### SPACING RODS

QUANTITY: 2 sets of 3 rods each

SIZE (Dia. x L):

1 set - 6 x 32 mm (0.25 x 1.25 in.)

1 set - 13 x 259 mm (0.5 x 10.25 in.)

**Note:** Older versions of this instrument are upgradeable by purchasing the copper plates and the updated resolution plate. Ask for Model L-706-CC Copper Plate Set and Model L-706-R Resolution Plate. Contact a sales representative for more information.