Laparoscopic Training Simulator
By **DR-MED™**

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List of Kit Contents (See description for details):

- Hemispherical Laparoscopic Simulator (SKU# DRYD917)
- Camera with USB port
- Suture Module (A1/A2)
- Clamp Module (B1/B2)
- Perforate Module (C1/C2)
- Anastomosis Module (D1/D2)
- Laparoscopic Needle Holder
- Laparoscopic Forceps
- Laparoscopic Grasper
- Laparoscopic Scissor
- Instructional DVD
- Suture Thread
- Plastic Clamp
- Extra Screw for Dome
- Extra Screw for Module Lock (inner dome)
- Extra Needles for Suture Module
- Extra Clear Suction Cup for Bottom of Dome
- Plastic Clamp and Liquid Paraffin for Lubricating Instruments before use.

Hemispherical laparoscopic simulator kit includes all the components needed to provide hands-on experience in a risk-free environment to both medical students and professionals.

The kit features four modules to simulate skills used during laparoscopic surgery: Suture Module (A), Perforate Module (B), and a Clamp Module (C), and Anastomosis Module (D).

(A.) The Suture Module simulates body tissue and is comprised of flexible material which allows for multiple uses. Students will use the forceps, needle holder, scissors, thread, and needles to practice suturing. An example of the Suture Module is shown in A1; in A2 the Suture Module is attached to the simulator.

(B.) The Clamp Module’s objective is for users to practice picking up objects using the grasper to improve control skills. There are 7 pegs attached to the module and beads sit on top of each peg. The student uses the forceps and grasper to move the beads from the peg to the tray (located on in the top right corner of B1). The Clamp Module can be seen attached to the simulator in B2.
(C.) The Perforate Module helps students operate with accuracy. The Perforate Module is made up of ten forged screw eyes (small metal loops) that rotate 360°. Students will use the forceps and grasper to further improve threading skills with ease. As skills improve, the pegs can be adjusted to increase difficulty by having to loop through different angles.

(D.) The Anastomosis Module is comprised of two screws with attached clamps and two rubber tubes. Students will use the needle holder, forceps, needles, suture thread, and scissors to sew the two “vessels” together. The two rubber tubes simulate blood vessels or loops of intestine. D1 shows the tubes before they are sewn together. D2 demonstrates that the screws can be adjusted as necessary.

Four training instruments (see above photo) are included: a needle holder, forceps, grasper, and scissors (all which are about 19 inches in total length).

Instruments should be inserted into the 4 smaller ports on the dome (instrument ports, see photos below). Before being inserted into the port, instruments should be lubricated with the liquid paraffin.
The training dome itself is a transparent hemispherical box which simulates the human abdomen. It has five silicone holes in it, 1 for the camera and 4 to be used as entrances for the training instruments.

The laparoscopic simulator kit comes pre-assembled and includes all the accessories needed to complete all modules, such as suture threads, suture needles, hooks, liquid paraffin (to lubricate instruments/hooks before they enter the training dome) and comes pre-assembled.

The 4 modules can be attached to the inside of the dome as necessary. To attach, screw the module base to the base of the dome using the 4 screws provided. To change out the modules, the four screws located on the inside of the dome must be unscrewed and screwed; same for the four screwed located on the outside of the dome.
The training dome is designed to allow the camera free range of vision. The training camera is 300,000 dynamic pixels, can be connected to a computer by USB, and has manual focusing available at the top of the camera. It will work on Windows XP and higher. It will not work on a Mac System.

The camera can be connected to a USB port for viewing on a larger screen. Insert the camera into the largest plastic port on the dome (endoscope port). Connect the camera USB to your computer USB port for external display.