

CAPTIVE BOLT TRAINING MODELS

Basic System

This simulation platform consists of a series of livestock heads and bodies with specific provisions for training euthanasia with a captive bolt gun. The species, breeds, and sizes available include short-face bovine cow, long-face bovine cow, market steer, sow, market hog, piglets (3kg neonate, 6kg, 9kg), market lamb, and 2kg lamb. The large animal models are represented by a head with a cavity that receives a brain canister. These head models are intended to teach targeting, proper gun positioning, and to provide a realistic tactile feedback. Once a shot is taken, the brain canister provides a 3-dimensional practical trace of the trajectory, delivering immediate information concerning bolt placement, angle, and depth, thereby qualifying a "good kill."

The small, full-body models are intended for use with only a non-penetrating bolt, and can be used to train proper animal restraint and targeting.

Adjustable Stand

The adjustable stand provided with the VSI Captive Bolt Training System is designed to receive the various species of animals available with the system. It is adjustable for height, head angle forward and back, and can be rotated 90 degrees to one side.

To assemble the stand, first orient the sections by matching the letters on the sections, then bolt the three base sections together with the four 1/4" x 2" bolts, washers and nuts provided. Next insert the longer of the two perforated square tubes into the receiver in center of the stand base with the narrower end up. Bolt the tube into the base using the two 7/16" x 2 1/2" bolts and nuts provided. Bolts should be installed perpendicular to each other for maximum rigidity.

Depending on the height of animal species being used, the second section of perforated tubing may need to be added onto the first. The second section slides over the narrow end of the first tube and should be bolted into position with two 7/16" x 2 1/2" bolts and nuts. Bolts should be installed perpendicular to each other for maximum rigidity.

The head adjustment assembly slides on to the perforated tubing, with the threaded hand crank rod up, and handle end

toward the rear of the stand. The rear of the stand is identified by a single castor and two floor locks.

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The head adjustment assembly is held in the desired height position with a single clevis pin and retaining clip. Each head model has a square bracket on the transverse plane that fits into a corresponding square tube on the adjustment assembly. Once the head model is in place, the rostral tilt can be adjusted via the hand crank. To rotate the head 90 degrees to the right, remove the locking pin and carefully rotate the head.

When in use, the front castors and rear floor locks should be engaged to prevent movement of the stand.

All of the stand components are either powder-coated, galvanized, plated, or of plastic and are resistant to moisture, however, the stand should always be stored indoors and kept dry to prevent unnecessary corrosion.

Large Animal Head Models

Head

Each head has a square bracket on the back panel which fits into a square tube receiver on the head adjustment assembly of the dedicated stand. The adjustment assembly allows the head to be elevated or lowered to match appropriate animal height, allows a rostral tilt, and a 90 degree right rotation. This permits a wide variance in positioning to demonstrate difficult animal characteristics and movement as extreme as a downer animal. For more detailed description, see the Adjustable Stand instructions.

A cylindrical cavity in the head receives the brain canister. The cavity is lined with a plastic tube that can be replaced, should missed shots cause damage to this lining. This plastic liner will not cause damage to the captive bolt.

All head models are constructed of silicone rubber skin with flexible foam interior and steel armature. They should be cleaned with mild soap and water, never with solvents or harsh chemicals. Should the skin ever be torn or damaged, it can be repaired with household tube silicone such as Dow Corning 732 or GE Supreme Kitchen and Bath 100% silicone M90006.

Brain Canisters

Targeting/Certification Canister

Each brain canister consists of at least 5 parts, including a soft clay brain, a two-piece silicone brain case, a cardboard tube housing, and a plastic skull plate with an attached hair/hide piece. In some models, the hide piece is an item separate of the skull plate. This entire canister assembly slides into the dedicated cavity in the corresponding model head. It can be oriented by male keys in the bottom of the head cavity that fit into the equivalent receivers in the foam brain case.

The canister is intended to be inserted into the head cavity and shot once with the appropriate bolt and selected gun charge or gun pressure for the species. Depressions on the perimeter of the head cavity provide access to finger-grip the cardboard housing of the canister in order to extract it from the head. Once the complete canister is removed from the head cavity, the silicone brain case can be removed from the cardboard tube. The externalized brain case can now be opened by separating it from the skull plate and pulling apart the halves, or by cutting through the brain clay to examine the shot. The shot can also be probed for depth and placement.

The brain cases and brains are fabricated in a variety of sizes and configurations to suit the appropriate head model. Some brain cases are prepared with a faux-fur hide covering attached to the skull plate, whereas some of the head models make use of a separate hide covering of silicone rubber that must be positioned over the skull plate before the shot is taken. The brain clay material is a non-toxic, water-based wheat dough that should be stored in sealed bags and preferably refrigerated to extend the shelf life. If properly stored, the brain clay will remain soft and the canister usable for at least 6 months.

The ribbon that is attached at the base of the canister is used to remove it from the cavity. When loading the canister ensure that the ribbons run along the canister and are visible at the top, so that they can be used as pull tabs.

Full Body Non Penetrating Captive Bolt Models

The small animal models, including piglets and small lamb, are for use only with a non-penetrating captive bolt. These models are intended to train proper animal restraint as well as bolt placement, and are constructed to represent the flexibility and weights of the corresponding animal. The solid silicone rubber heads can endure 50 to 100 shots before extremes of deformation render them unusable.

Heads can be removed by simply pulling on the head and working the head off the flexible locking key that protrudes from the body. A replacement head can be pushed on to the protruding key until the head locks.

Please contact Veterinary Simulator Industries Ltd. for specific repair instructions or any concerns or inquiries.

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