Cyberware®

Below the Knee (BK) 3D Scanner

Below the Knee (BK) custom 3D scanning system was designed to digitize the residual limb of a below knee amputee. The digitized data enables automated design and manufacturing equipment to produce custom sockets for prosthetics devices. The resolution of the digitizer is far greater than necessary for the typical socket. The interface software supplied with the BK produces a complete three-dimensional model of the residual limb.

This custom scanning system is 50 cm high with a 50 cm diameter and weighs 30 Kg. The stand is 125 cm high. The digitizing volume is 42 cm high by 25 cm diameter. The resolution of X or Theta is .7 degrees at 17 seconds (1.6 mm at extreme surface of 25 cm cylindrical volume). Z is .15 - .23 mm depending on range, and Y is .87 - 1.4 mm depending on height. Sample pitch is 1.0 mm and 1 degree spatially and 0.5 mm in radius. Accuracy is within 1%.

The scanner completes a 360 degree scan in 4 to 17 seconds. The scan head can be adjusted between 18 cm and 80 cm high from the base of the stand and can be rotated from vertical to horizontal to accommodate scanning a subject's limb while sitting down. The scanner operates under a normal office or laboratory environment.

The BK is intended to be sold on an OEM or VAR basis incorporated into a complete prosthetic design system. Cyberware has contracted with the Veteran's Administration to provide a new version of the BK 3D scanner for prosthesis design.

Nearly half of our business is custom engineering projects. If you want to purchase a system like this one or want Cyberware to develop a custom system to meet your particular requirements, please contact Cyberware Sales.

The Below the Knee (BK) custom 3D scanning system was designed to digitize the residual limb of a below knee amputee.

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