Upper Extremity Control Systems

Single Cable Control System
The single cable control system is used with the transradial (below elbow) prosthesis. This cable is anchored to a harness worn by the amputee and is attached to the terminal device (hand or hook). The amputee can open and close the terminal device (hand or hook) by applying tension on the cable through glenohumeral flexion (bringing the arm forward and up) or scapular abduction (moving the arm out to the side) of the shoulder.

Dual Cable Control System
The dual cable control system is used by transhumeral (above elbow) amputees. This system allows the amputee to control flexion (bending) of the elbow, as well as opening and closing of the terminal device.

Heavy Duty
Heavy duty means selecting more durable components and materials in the fabrication of a prosthesis. Using heavy duty components will increase the durability and weight of the prosthesis.

Teflon Lined Cable
Teflon lining is placed inside the housing of cable control systems to reduce friction when operating a prosthetic elbow or terminal device.

Myoelectric
Myoelectric prostheses are electrically powered prostheses driven by the electrical impulses transmitted every time an arm muscle contracts. Grip speed and grip force of the hand are controlled proportionally to the strength of the muscle signal. In addition, some myoelectric hands feature sensors in the fingertips that prevent objects from slipping by recognizing when an object begins to move and automatically increasing the grip force as needed.

Hybrid Control System
A hybrid control system utilizes body power and external power to control the prosthesis.