Terminal Devices – Hooks

Description

The classic ‘split-hook’ design was developed by David Dorrance and patented in 1912. The design has been largely unchanged in a hundred years due to the remarkable function the clever design affords.

Hooks are very robust being commonly made from aluminium alloys or steel. They are particularly suited to tasks which require a very precise pinch grip.

Like mechanical hands, hooks can come in voluntary opening or voluntary closing options:

- Voluntary opening hooks require a conscious effort to open and close under rubber ring pressure. Maximum grip pressure is preset by the number of rings.
- Voluntary closing hooks spring open in their relaxed state and require effort to close. The amount of grip force is able to be varied by the user.

Hooks are usually voluntary opening and body powered by way of a Bowden cable system. The cable generates a ‘pull’ from the contra lateral (non amputated side) shoulder. Tension on the cable opens the hook. The hook closes under pressure from rubber rings when cable tension is released.

Advantages

- Easy to clean.
- Highly durable.
- Very robust.
- Highly functional with very precise pinch grip.
- Very fast, efficient and easy to use.
- Lower maintenance and repair costs
- Fairly light weight (aluminium).
- Tolerant of excessive heat and exposure to chemicals and toxic environments.
- Water resistant.
- Reasonably inexpensive.
- Can be used to type on a keyboard.

Disadvantages

- Cosmetically unappealing.
- Stainless steel hooks can be heavy.
- Can be harsh on skin, clothing, furnishings & other surfaces.
- Harness for Bowden cables may be uncomfortable.