

CLEANCUT

CLEAN CUT

After a humanitarian disaster - such as the 2010 Haiti earthquake - many different medical NGOs swoop in to play an important part in the relief effort. Once these organisations leave for the next urgent disaster the local populace is left with medical equipment that needs frequent sterilisation but is often designed for single use.

One such device is an electrosurgical unit, used for both cutting and coagulating in the vast majority of modern surgeries. Whereas modern hospitals use disposable electrodes for each of their patients, third-world hospitals lack resources and must sterilize the electrodes they have. Oftentimes these electrodes haven't been designed for reusability and (rapidly) deteriorate with each subsequent sterilisation process.

CleanCut is a durable electrosurgical pen for electrosurgery. It is simple to (dis)assemble, its components are easily replaced, reducing waste, and it is easy to use. CleanCut features improved ergonomics over existing products. Only two materials - stainless steel for the electrode itself and elastomeric silicone for the cannula - are used, reducing waste compared to conventional complex electrodes. Both materials are relatively easy to recycle. Application of a Return and Replace service will ensure proper reuse of materials. Both materials have excellent thermal properties, allowing for simple sterilisation in an autoclave.

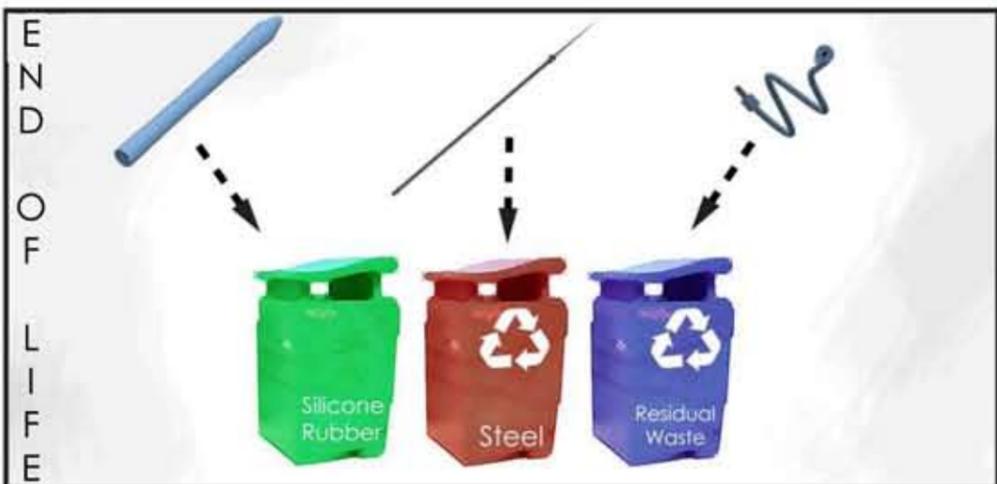
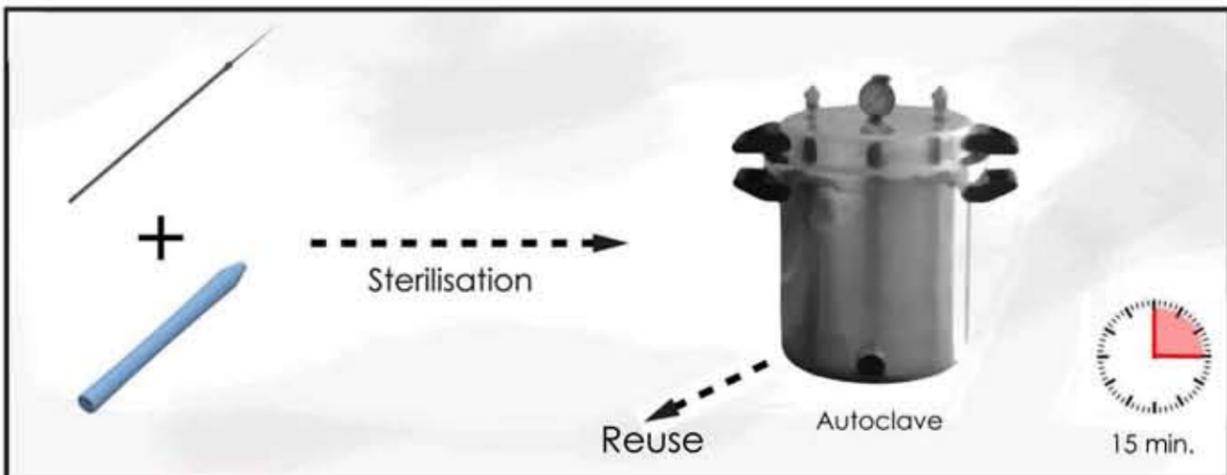
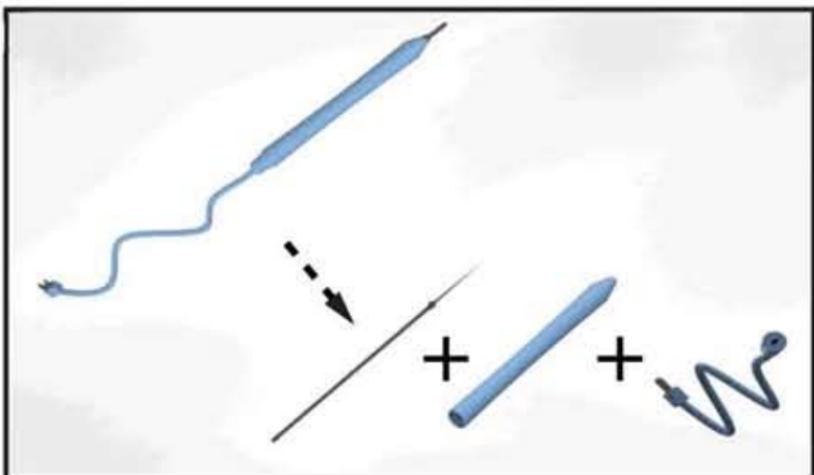
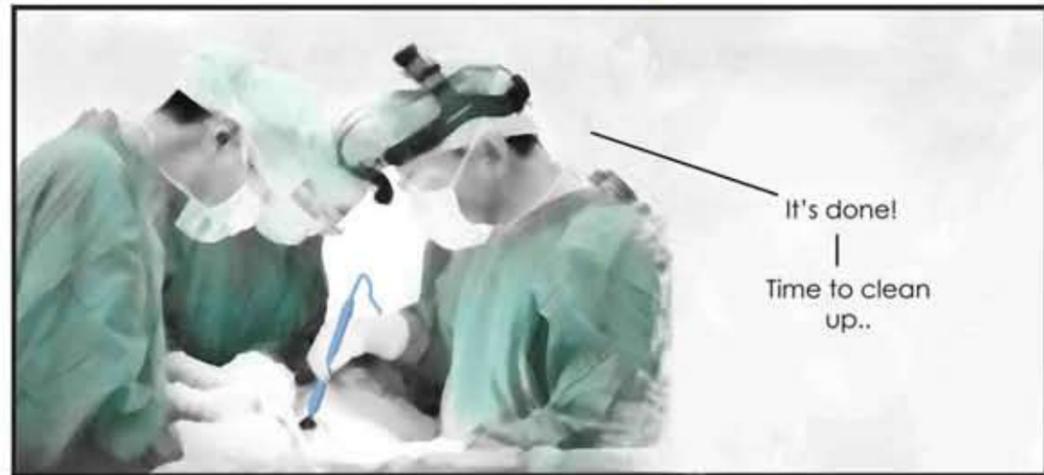
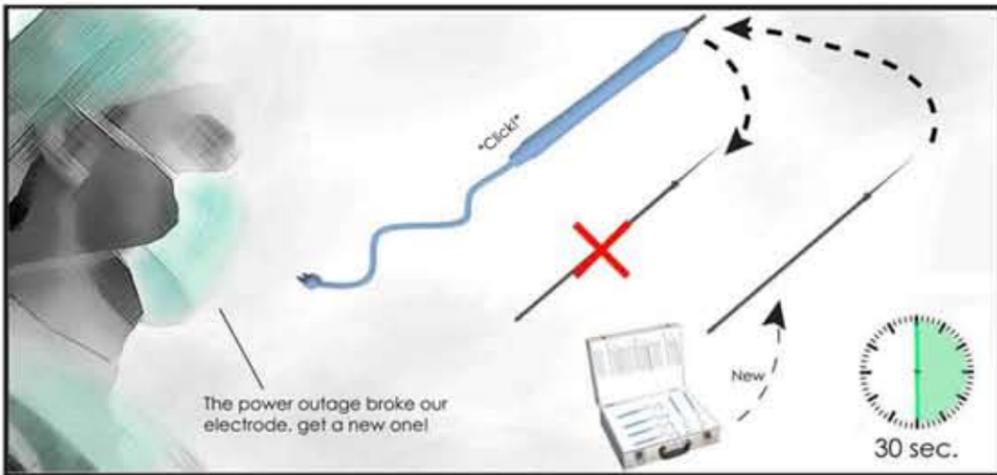
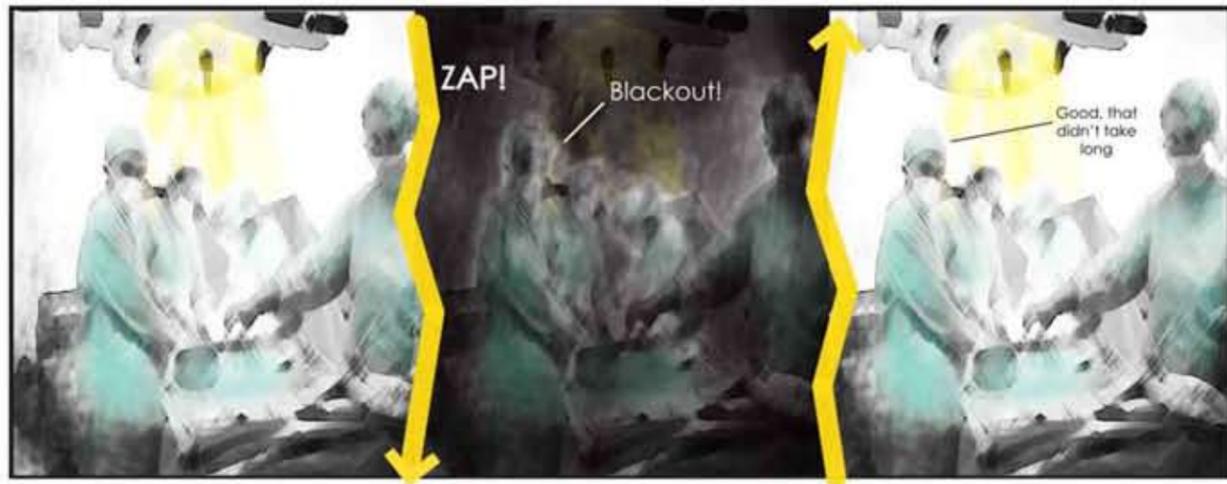
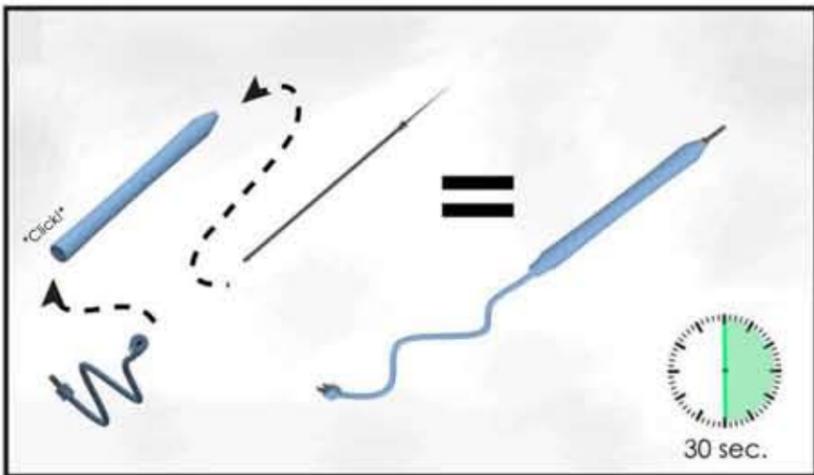
By combining the insulator and cannula the risk of capacitive coupling, with potentially severe injuries for the patient, is considerably reduced. Through elimination of the waveform controls on the electrode - in favour of foot switches - complexity is again reduced and durability improved. CleanCut's power cord is detachable, allowing removal for sterilisation. Here a bayonet mount is used, reducing wear and tear compared to screw threads. CleanCut is not only a simple, effective solution for developing countries; it's also a more sustainable electrode for developed countries.

Designers of CleanCut

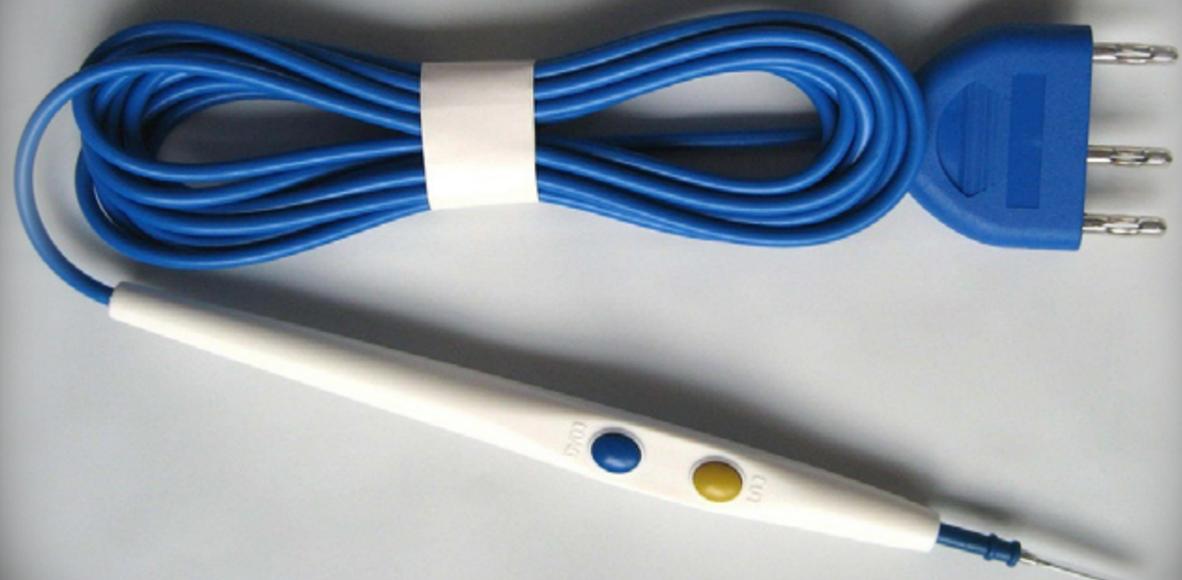
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TYPICAL ELECTROSURGICAL PEN

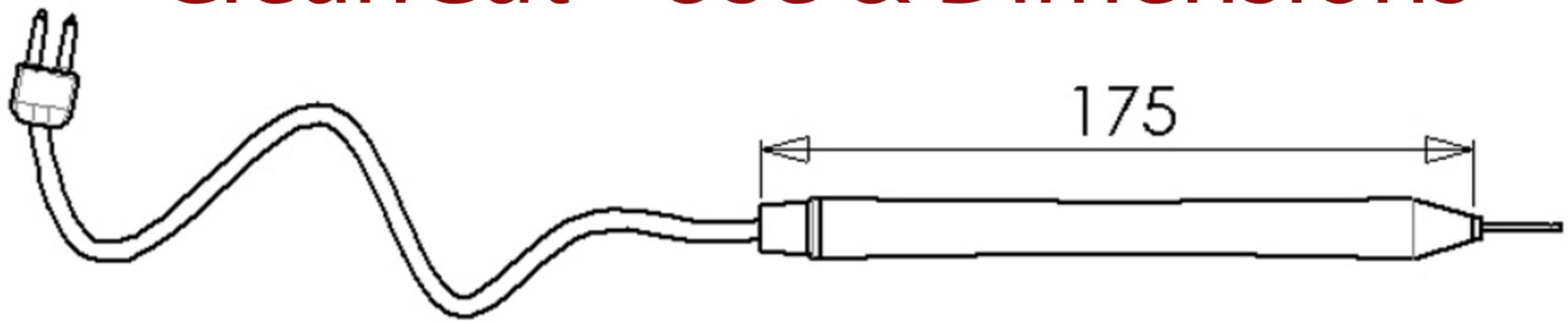
QUICK AND CLEAN
DUAL ACTION CUT AND COAGULATE
REACTS BADLY TO STERILISATION
CONSISTS OF MANY COMPLEX PARTS
CUMBERSOME CHANGING OF ELECTRODES
RE-USABLE VERSION IS EXPENSIVE
NO RECYCLE PROGRAM
BUTTONS ON PEN
WILL, BUT CANNOT BE STERILISED
SAFE DESIGN, BUT MOSTLY USED WRONG



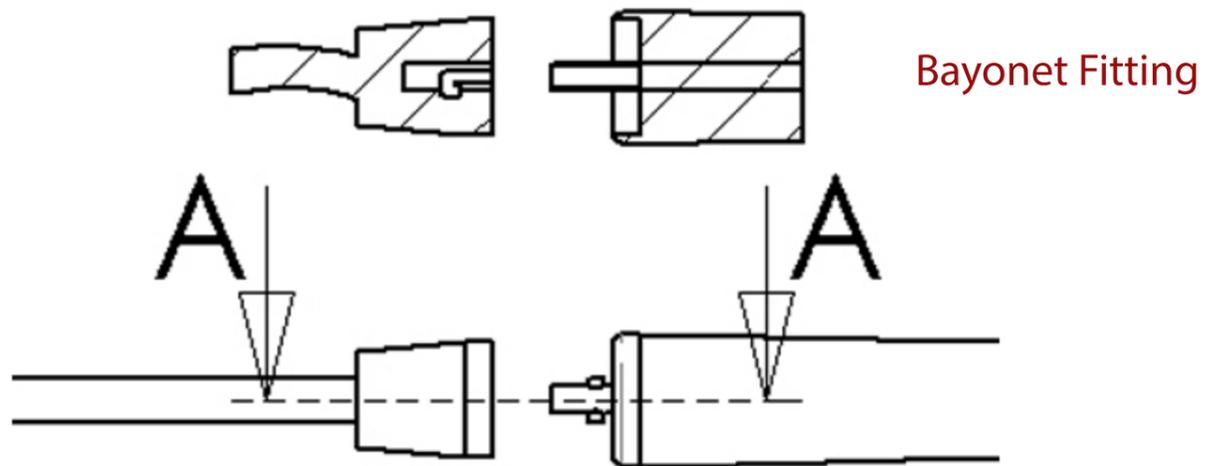
CLEANCUT

QUICK AND CLEAN
DUAL ACTION CUT AND COAGULATE
EASILY STERILISED DUE TO MODULARITY
3 SIMPLE, DURABLE PARTS
SIMPLE 15 SEC CHANGE OF ELECTRODE
LOW COST
RETURN & REPLACE SERVICE
BUTTONS REPLACED BY FOOT PEDAL, EASIER USE
FOOLPROOF DESIGN
SAFE USE DESIGN
EASILY PRODUCED & LOW PRODUCTION COSTS
EASILY DISASSEMBLED & RECYCLED
EASILY AND FAST REPAIRABLE
STANDARDIZED & RE-USABLE PARTS

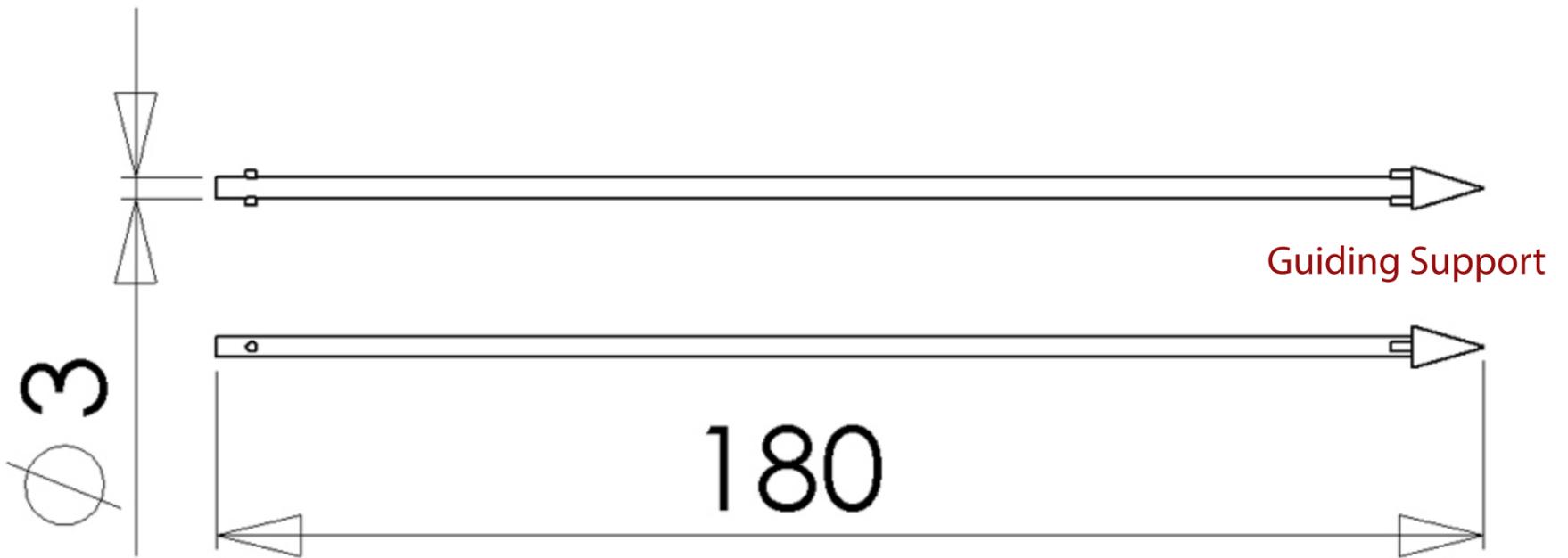
CleanCut - Use & Dimensions



SECTION A-A

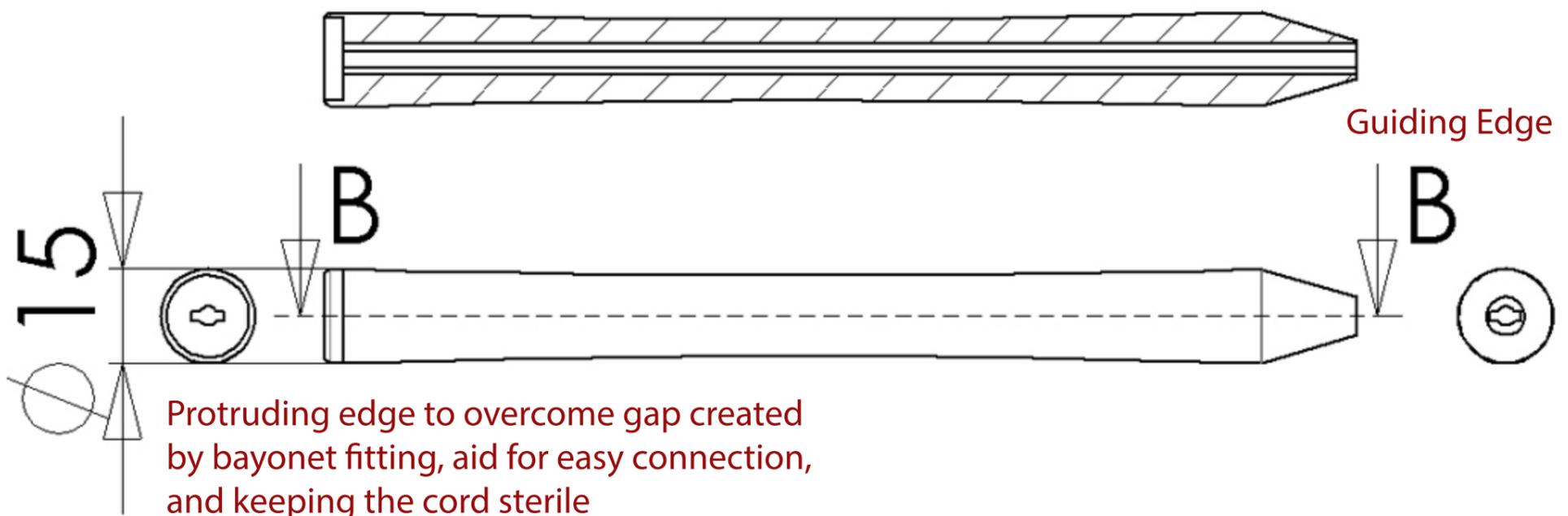


Bayonet Fitting



Guiding Support

SECTION B-B



Guiding Edge

Protruding edge to overcome gap created by bayonet fitting, aid for easy connection, and keeping the cord sterile

Dimensions in mm