

IMPROVEMENT DESCRIPTION

1. Device description

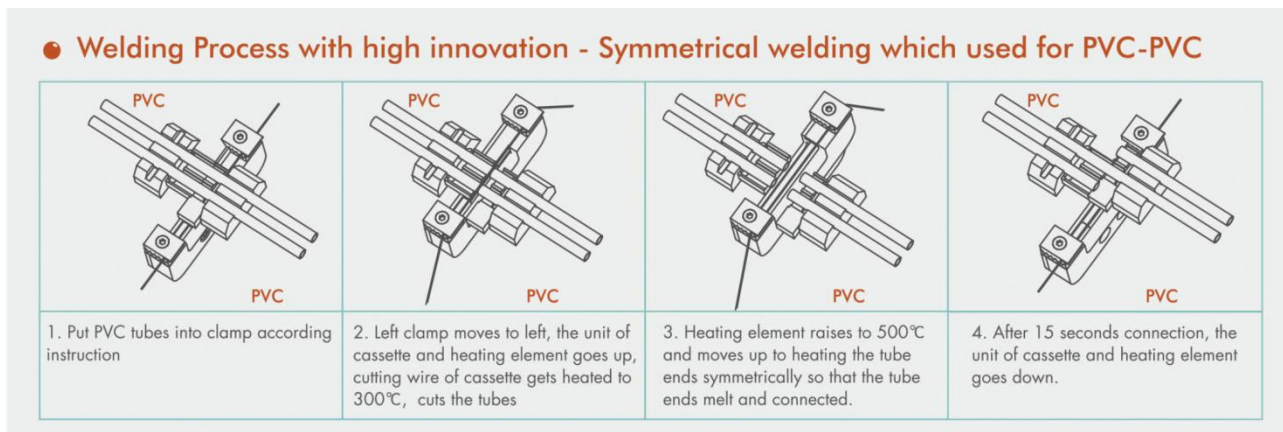
Name of Device: Sterile Tube Welder

Model of the Device: STW6810

The Sterile Tube Welder STW6810 consists of main device, bag trays, metal wire cassette and AC power line

2. Working principle

The device cuts, heats and connects two PVC tubing through metal wire and heater, and welds the two blood bag tubing into one, so as to achieve the purpose of sterile tube welding



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3. The problems about using heaters

We listed the following issues that related to the heater, due to the unstable performance of the contactless heating, we want to have a significant improvement, by using contact heating instead of contactless heating

	Issue	Frequency (estimation)	Importance	Issue description	Goal to reach
1	Product leakage	1/500	High	Sometimes there is leakage on the joint(welded tube),the blood inside is exposed to air and gets contaminated ,so this blood bag has to be destroyed, such result is very bad and unacceptable by users	1/10000
2	Waste leakage	1/100	High	Sometimes there is leakage on the tubing waste, it may happen on the left side or right side, the tubing waste will be thrown away by users.However, if there is such leakage during welding process, there blood might be spilling on the device or contacting with operators.The users can't accept such issue too	1/10000
3	Overburn on the joint	1/100	High	Sometimes the joint gets black after welding completed, as the tube is overburned.The tensile strength might be not enough and the user has concern about the welding quality.	1/10000
4	Hard to squeeze	1/100	Middle	After tubing welded,the user needs to press the joint, then then blood from one side can go through to another side.However it is hard and difficult to squeeze the tubes sometimes	1/10000

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