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| **Operation of the SCD (Backup equipment)** |
| **Purpose** | This procedure provides instructions for the SCD 312 Sterile Tubing Welder is manufactured by Terumo to sterilely connect two lengths of PCV tubing, thus maintaining a functionally closed system |
| **Policy Statements** | * A Sterile Connecting Device (SCD) is not beneficial in splitting washed red blood cells, glyced red blood cells, pooling products or when removing additive solutions.
* SCD wafer may be used only once.
* If leaking is observed from a previous weld, the product must be discarded.
* Products must be considered an open system if there is any question regarding the integrity of the current weld. Correct product expiration times accordingly.
* Clean the SCD as needed.
* Refer to the Operating manual for troubleshooting.
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| **Related****Documents** | [TS 17.2.1 SCD Quality Control Logsheet](http://khan.childrensmn.org/Manuals/Lab/SOP/TS/Res/Sysf/200332.pdf) |
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| **Materials** | **Equipment** | **Supplies** |
| SCD 312  | * SCD Wafer cartridge
* Primary component bag
* Transfer bag or Chartmed syringe (with filter)
* Appropriate component and ABO/Rh label
* Metal clips
* Sealer
* Scissors
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| **Quality Control** | Assessment of weld alignment and integrity shall be performed and documented with each procedure.Revalidation of the SCD shall occur after major repair. |
| **Procedure** |  |
|  | **Step** | Action |
|  | 1 | Press and hold the black button on the cover latch, and lift the cover open. |
|  | 2 | Turn the power switch in the back of the instrument ON. (As soon as the instrument is turned on, the cooling fan can be heard.) |
|  | 3 | Insert or replace the wafer cartridge, if needed, as follows:1. Make sure the wafer advance knob is positioned all the way to the back of the track.
2. To remove an empty cartridge press the cartridge ejector. The empty cartridge will pop up.
3. Position the new cartridge so that the writing is on top. Slide the cavity in the front of the cartridge onto the metal tab.
4. Press the cartridge down until it snaps in place
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|  | 4 | Open the tubing holder covers. Remove any tubing in the tubing holders. |
|  | 5 | Press the (√) button (with the tubing holder covers open). The red light will come on for three (3) seconds. The left tubing holder will move forward to align with the right tubing holder. If the tubing holders are already aligned no action occurs. |
|  | 6 | Place tubing in both tubing holder slots (see illustration on SCD cover). Remember, at the end of the welding cycle, the tubing in the **left front slot** will be welded to the tubing in the **right rear slot**. The tubing to be welded should be at least 4 inches in length.Caution: Tubing should be long enough so that at least one inch of tubing extends beyond the edges of both tubing holders. Failure to do so may result in leakage of the stub ends. Be sure tubing containing whole blood or packed red blood cells is placed in the front tubing holder slot. Also, be sure tubing is seated firmly in the tubing holder slots before closing the tubing holder covers. |
|  | 7 | Close the tubing holder covers as follows: **close the left holder cover** **first**, then the right holder cover. This will prevent the tubing from shifting in the tubing holders and cause less stress on the instrument. Be sure the covers are latched. |
|  | 8 | Press (1) button slide. Slide the advance knob all the way forward to the front of the track and then all the way back to its original position to advance a new wafer. The (1) button light will stay lit until the weld cycle is complete.Note: The SCD 312 will not operate unless a wafer is advanced; assuring that a new wafer is used for each weld. Therefore, a new wafer must be advanced after each time the (1) button is pressed. |
|  | 9 | Remove and discard the used wafer in a biohazard sharps container.WARNING: DO NOT reuse wafers. To do so may result in an incomplete or a nonsterile weld, which can contaminate the blood product. |
|  | 10 | Press (2) button to begin the weld cycle.The (2) light will come on and remain lit until the weld cycle is complete. WAIT for the weld cycle to end - DO NOT open the tubing holder covers or advance another wafer until the (1) and (2) button lights go off.WARNING: Do not turn the instrument off and do not open the tubing holder covers until the (1) and (2) button lights go off. If the covers are opened before the lights go off an alarm will sound three beeps indicating the weld may not be complete or sterile. Discard this weld in the biohazard sharps container. |
|  | 11 | When the (1) and (2) button lights go off, open the tubing holder covers. |
|  | 12 | Remove the welded tubing. Rotate the tubing and inspect the weld for completeness.To inspect weld alignment, leave the weld sealed and:1. Rotate welded tubing 360o and visually inspect how well the outer diameters of the two tubes line up at the connection (weld).

1. Compare the weld to those in the figure. Ideally, there should be no misalignment (View A), but differences in outer diameters of tubing may produce an apparent misalignment across the weld. This is generally acceptable. View B shows a misaligned weld that may be unacceptable. Repeated misalignment of welds (View B) could indicate that service may be necessary.

CAUTION: Misaligned welds may not be complete. Assume the blood product has been exposed to air and change the product expiration accordingly. |
|  | 13 | Hold the welded tubing in your hands with the flattened side of the weld facing up (see figure). Open the seal by pinching or rolling the tubing until the fluid pathway opens. If welds are difficult to unseal it could indicate that either the two pieces of tubing being welded together are incompatible, or an alignment problems may exist. |
|  | 14 | Examine the tubing at the site of the weld for leaking.

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| **If** | **Then** |
| No leaking is observed | * Parent unit maintains it’s original expiration.
* Assign the expiration to new component according to component preparation procedure.
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| There is evidence of leaking | Consider the parent and new component as being in an open system:* Blood in the tubing should be clamped off with metal clips and be discarded as biohazard waste.
* Correct the expiration
	1. Red cells or plasma units to 24 hours (original outdate if <24 hours).
	2. Platelet units to 4 hours (original outdate if <4 hours)
	3. Syringe aliquots have a 4 hour expiration (original outdate if <4 hours).
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|  | 15 | Remove and discard the pieces of stub tubing remaining in the left rear and right front tubing holder slots.CAUTION: Before pressing the (√) button to realign the tubing holders, be sure to open the tubing holder covers and remove any tubing if necessary. Realigning the tubing holders before removing the tubing could damage the weld and/or the tubing holders. |
|  | 16 | Press the (√) button to realign the tubing holders |
|  | 17 | Record component preparation on TSf 17.2.1 SCD Quality Control logsheet. |
|  | 18 | When the weld cycle is complete, the next weld can be started by repeating steps above.\*If the instrument will not be reused shortly, turn the power switch OFF and close the cover. For intermittent use, the instrument may be left on with the cooling fan running. |
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| Verification after long term storage | 1 | Connect the power cord t the power supply inlet at the back of the device. |
|  | 2 | Plug the power cord into an outlet |
|  | 3 | Press down on the black latch to open and pull the latch toward you while lifting the cover upward. |
|  | 4 | Turn the power switch on. |
|  | 5 | Perform instrument verification according to form TSf 17.01.1 SCD 312 Verification. |
|  | 6 | Place in service after verification is completed and passed. |
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| **References** | SCD 312 Operation Manual, Haemonetics Corporation |
| **Approval****Workflow** | Transfusion Service/Technical Specialist |
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| **Historical Record** | **Version** | **Written/Revised by:** | **Effective Date:** | **Summary of Revisions** |
| 1 | D. Hansen | 7/20/92 | Initial Version |
|  | 2 | J. Wenzel | 3/1995 |  |
|  | 3 | D. Hansen | 12/11/96 | Merger |
|  | 4 | J. Wenzel | 08/17/01 | Backup to TSCD |
|  | 5 | J. Wenzel | 10/07/2009 | Online Format |
|  | 6 | S. Cassidy | 04/10/2012 | CMS Format |
|  | 7 | S. Cassidy | 12/15/2022 | Added Verification steps |