

## CHAPTER

## 5

# Draping

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Draping provides a sterile interface between the patient cart arms and the patient. This chapter will outline how to drape the instrument arms, the touchscreen monitor, the camera arm and the camera head.

## DRAPING GUIDELINES

Draping should be done by a two person team: a scrub nurse or surgical assistant and a circulating nurse who can handle non sterile components. This adds to the speed, sterility and safety during the process.

- The arms are draped systematically, moving from left to right or right to left.
- The circulating nurse moves each straightened arm to provide plenty of room to maneuver around the arm using the clutch buttons.
- Once an arm is draped, the scrub nurse moves the draped arm away from the undraped arms and prepares to drape the next arm.
- Drape the touchscreen monitor before draping the camera arm.

To drape the patient cart of DVSS, one needs three instrument arm drapes, a touchscreen monitor drape (optional), a camera arm drape and a camera head drape, all in their original, sealed, sterile packaging (Figure 1). Adequate draping material should be checked before beginning a procedure to account for inadvertent contamination while setting up the system.

To prepare the system for draping, confirm the following sterile system accessories are laid out and ready for use:

- Endoscope
- Endoscope Sterile Adapter
- Camera Arm Sterile Adapter
- Touchscreen Drape(s) Handles
- Bifurcated Light Guide Cable



**Fig. 1:** Patient cart drapes (Blue band indicating sterility barrier is seen)

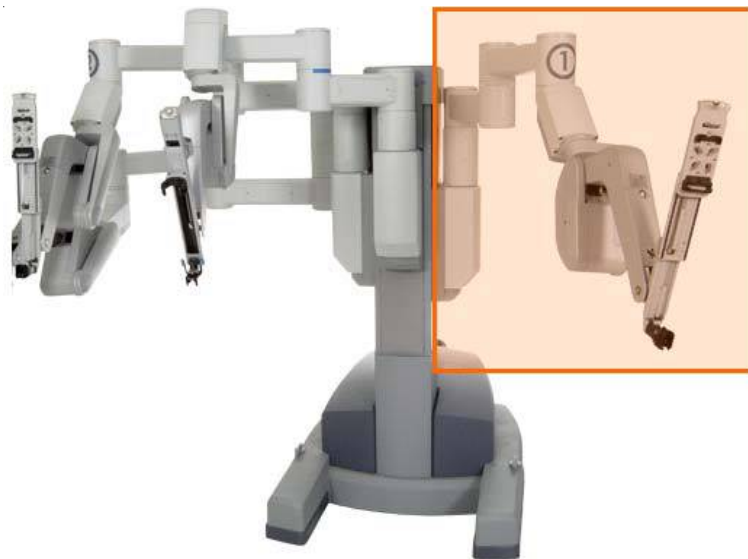
These sterile accessories may have alternative components depending on the needs of the procedure being performed. It should be taken into account when preparing for the procedure.

## **INSTRUMENT ARM DRAPING PROCEDURE**

The blue band on the drape indicates the sterility barrier (Figure 1). The drape should not be held by a non-sterile person beyond the blue band.

First drape instrument arms 3 (if configured) and 2. The steps of draping instrument arms are as below:

1. The instrument arm is positioned for draping in an extended position away from other instrument arms (Figure 2).
2. The circulating nurse delivers the instrument arm drape to the scrub nurse in sterile fashion.



**Fig. 2:** Position the instrument arm for draping

3. The drape is unfolded on a sterile table by the scrub nurse, with the instrument arm sterile adapter facing the ceiling (Figure 3).
4. Tent the opening of the drape and grip the outside with your finger and thumb. Hold the top of the drape with the other hand (Figure 4).
5. Lower the drape over the instrument arm insertion axis.



Fig. 3: Unfolding of drape



Fig. 4: Prepare the drape

6. Place the base of the sterile adaptor into the instrument arm carriage. Using both thumbs, push the sterile adaptor into the instrument arm until it clicks into place (Figure 5).
7. Once the system recognizes the sterile adaptor, the wheels on the sterile adaptor spin, and three beeps are heard.
8. Remove the two tear aways on the front of the drape.
9. Using the cuff of the drape, move the drape back along the instrument arm toward the patient cart tower (Figure 6).



**Fig. 5:** Attaching the sterile adaptor



**Fig. 6:** Stretching the Drape Along the Arm

10. Seat the cannula mount moulding. Make sure the moulding snaps over the cannula mount (Figure 7).
11. Wrap all white drape straps snugly around the instrument arm, and attach each strap to itself (Figure 8 and 9).



**Fig. 7:** Seating the Cannula Mount Moulding



**Fig. 8:** Securing the drape straps



**Fig. 9:** Instrument arm after draping



**Fig. 10:** Bending the blue flex strips

12. Bend the blue flex-strips to create a clear instrument insertion path along the axis of the instrument arm (Figure 10).
13. Move the draped arm away from the other arms for draping.

## **CAMERA ARM DRAPING PROCEDURE**

When the instrument arms have been draped, the camera arm is draped next. The sterile person should move the draped instrument arms away from the camera arm to provide plenty of room to walk between the arms before draping the camera arm.

The blue band on the drape indicates the sterility barrier. The non sterile assistant in installation of the drape must not grasp the drape anywhere beyond the blue band.

To begin draping the camera arm:

1. The circulating nurse delivers the camera arm drape (Figure 11) to the scrub nurse in sterile fashion.
2. The scrub nurse unfolds the drape on a sterile table, with the arrow side facing up, and unfolds the drape (Figure 12).

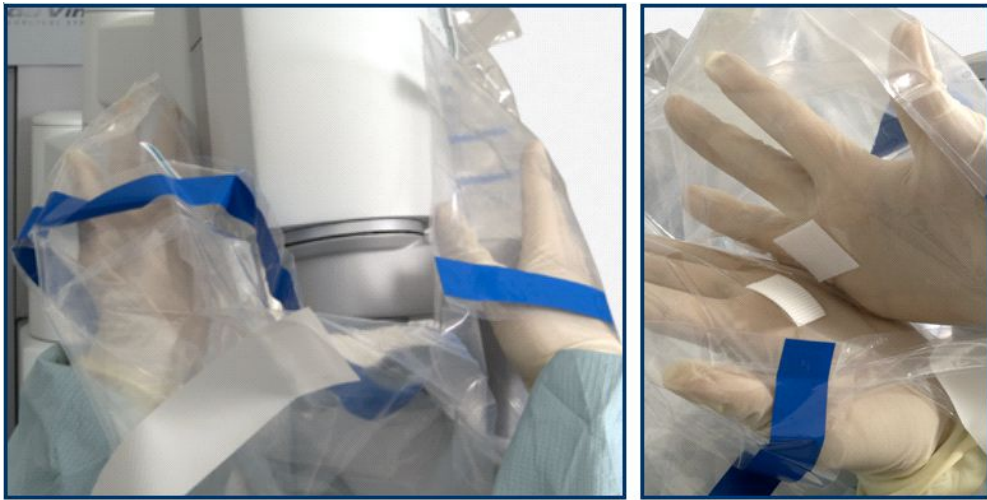


**Fig. 11:** Camera arm drape



**Fig. 12:** Preparing the drape

3. One hand is inserted into the bottom opening of the drape and top of the drape is held with the other hand. The drape is lowered over the insertion axis.
4. The drape is moved down along the camera arm setup joint using the cuff of the drape. The drape is extended to the center column of the patient cart and velcro pads are pressed to one another (Figure 13).
5. Seat the cannula mount moulding. Make sure the moulding snaps over the cannula mount (Figure 14).



**Fig. 13:** Extending the drape to center column and pressing the velcro pads



**Fig. 14:** Seating the Cannula Mount Moulding





**Fig. 15:** Removing the Adhesive Strip and Attaching the Camera Arm Sterile Adapter



**Fig. 16:** Camera arm drape secured with straps

6. The scrub nurse takes the camera arm sterile adapter to the drape, removes the adhesive strip cover, and presses the backside of the camera arm sterile adapter to the adhesive strip. Line up the camera arm sterile adapter with the carriage on the camera arm. Create room for the endoscope to pass through, and push the camera arm sterile adapter into place (Figure 15).
7. Wrap the white drape straps snugly around all the way around the camera arm, attaching each strap's end to itself (Figure 16).
8. Adjust the blue flex strips so as to allow space for endoscope insertion (Figure 17).



**Fig. 17:** Adjusting the blue flex strips



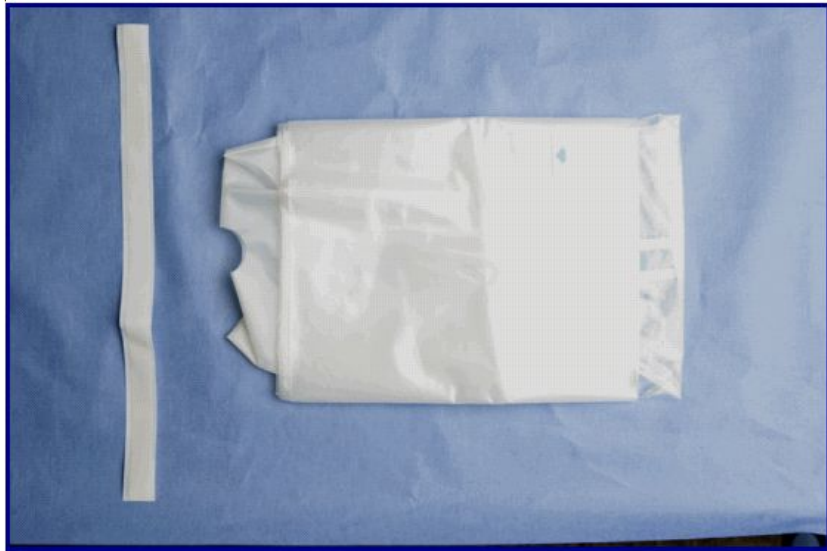
**Fig. 18:** Camera assembly components (Camera head, Endoscope, Camera drape, endoscope sterile adaptor)

## CAMERA HEAD DRAPING PROCEDURE

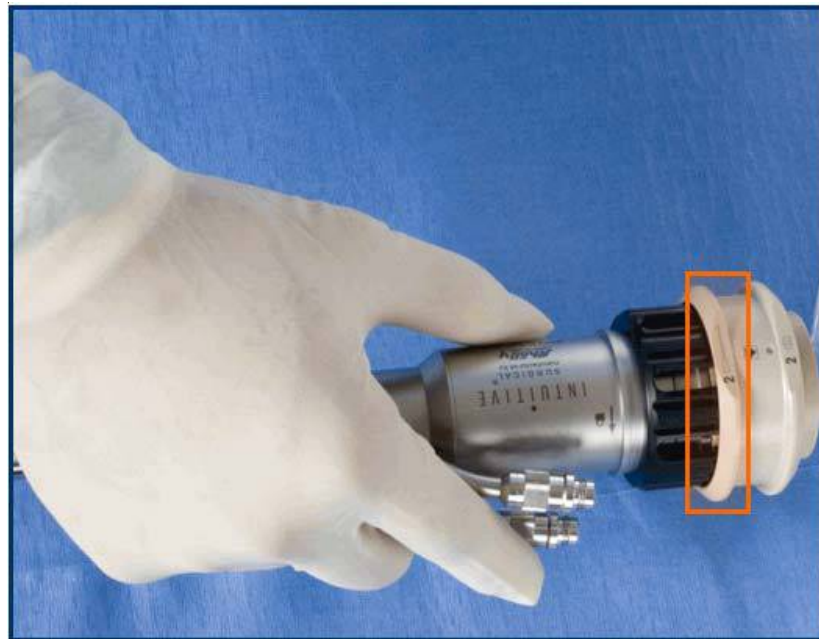
Since the Vision Cart and cables are not sterile, a non sterile assistant is required with draping and connecting the camera head. The components of the camera assembly are shown in figure 18.

To begin draping the camera head:

1. The camera drape is delivered to the scrub nurse in sterile fashion by the circulating nurse.
2. The scrub nurse unfolds the drape on a sterile table with the arrow side facing up (Figure 19).
3. The endoscope is attached to the endoscope sterile adaptor (Figure 20).



**Fig. 19:** Camera drape on a sterile platform



**Fig. 20:** Attach endoscope to endoscope sterile adaptor

4. The endoscope is inserted into the drape, starting with the sterile adapter end (Figure 21).
5. The endoscope sterile adapter is pushed through the elastic end of the drape until the drape completely surrounds the sterile adapter.
6. The drape is attached to the endoscope using the sterile adhesive tape found in the drape packaging (Figure 22).



**Fig. 21:** Inserting the Endoscope into the drape



**Fig. 22:** Taping the drape to the endoscope

7. The camera head is attached to the endoscope sterile adapter by circulating nurse (Figure 23). The scrub nurse then inverts the drape over the camera head and the circulating nurse pulls the drape along the cables. Since the Vision Cart and cables are not sterile, the non sterile person must assist with draping and connecting the camera head. To avoid contamination, the draped assembly and cables are arranged on the table in the shape of a letter "S" (Figure 24).



**Fig. 23:** Attaching the Camera Head



**Fig. 24:** Placement of camera assembly on table to avoid contamination



**Fig. 25:** Connecting the light guide to the endoscope and the other end to illuminator



**Fig. 26:** Wrapping the drape straps

8. The double end of the light guide cable is connected to the light ports on the endoscope by the scrub nurse. The other end of light cable is attached to the illuminator (Figure 25).
9. The straps are attached to themselves by the scrub nurse so as to snugly fit drape around the camera cable and the light guide cable (Figure 26).