is constant regardless of the vacuum level. In Linear the limit varies depending on the vacuum level.

- Phaco Pulse Off Time Up/Down Buttons - Sets the Phaco pulse off time.
- Phaco Pulse Off Time Progress Bar and Numeric Value - Shows the current Phaco pulse off time.
- Phaco Pulse Off Time Limit Control Drop Down List - Determines whether

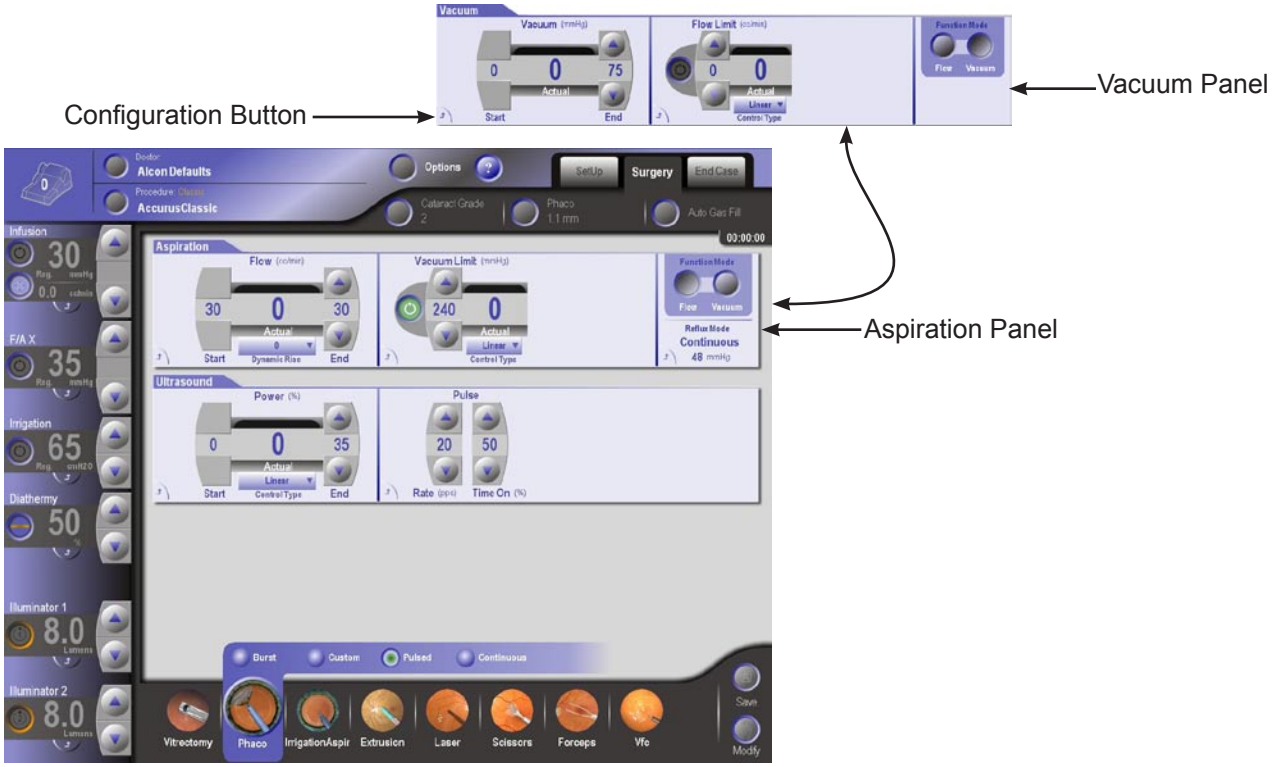


Figure 2-58 Surgery Screen: Phaco Mode - Pulsed Submode

the pulse off time pulse type limit is decreasing, fixed, or increasing. In Fixed the limit is constant regardless of the vacuum level. In Linear the limit varies depending on the vacuum level.

- Phaco Pulse Configuration Button - Displays the configuration dialog. Simplifies large value changes by providing slider controls.

Phaco Mode: PULSED SUBMODE

In the Phaco Custom submode fixed U/S power (Power %) can be adjusted for Rate

(pulses per second-pps) and Time On (%) U/S power pulses. The pulse is controlled with the footpedal from detent two to full treadle depression. The actual percent of time U/S power is activated is reflected in the Actual window.

The controls for each panel in Pulsed submode have the following functions:

Aspiration Panel:
Same as Burst submode.

Vacuum Panel:
Same as Burst submode.

Ultrasound Panel:
- Power End Up/Down Buttons - Sets the power at full treadle.
- Power Progress Bar and Numerical Value - Shows the current power value.
- Phaco Power Configuration Button - Displays the configuration dialog.
- Phaco Pulse Rate Up/Down Buttons - Set the Phaco pulse rate in pulses per second (pps).

The following controls are available only in the Advanced view:
- Smart Pulse - Indicator for smart pulse. Becomes visible when power is greater than 0 and pulse on time is less than 20ms.
- Power Limit Control Type Drop List Determines whether the power limit is fixed or linear. In Fixed, the limit is constant regardless of the vacuum level. In Linear, the limit varies depending on the vacuum level.
- Phaco Pulse Time On Up/Down Buttons - Sets the Phaco time on percentage. Phaco Pulse Configuration Button - Displays the configuration popup.

Phaco Mode: CONTINUOUS SUBMODE

In the Phaco Continuous submode provides continuous fixed U/S power (Power %). Phaco power is controlled with the footpedal from detent two to full treadle depression. The actual percent of time U/S power is activated is reflected in the Actual window.

The controls for each panel in Continuous submode have the following functions:

Aspiration Panel:
Same as Burst submode.

Vacuum Panel:
Same as Burst submode.

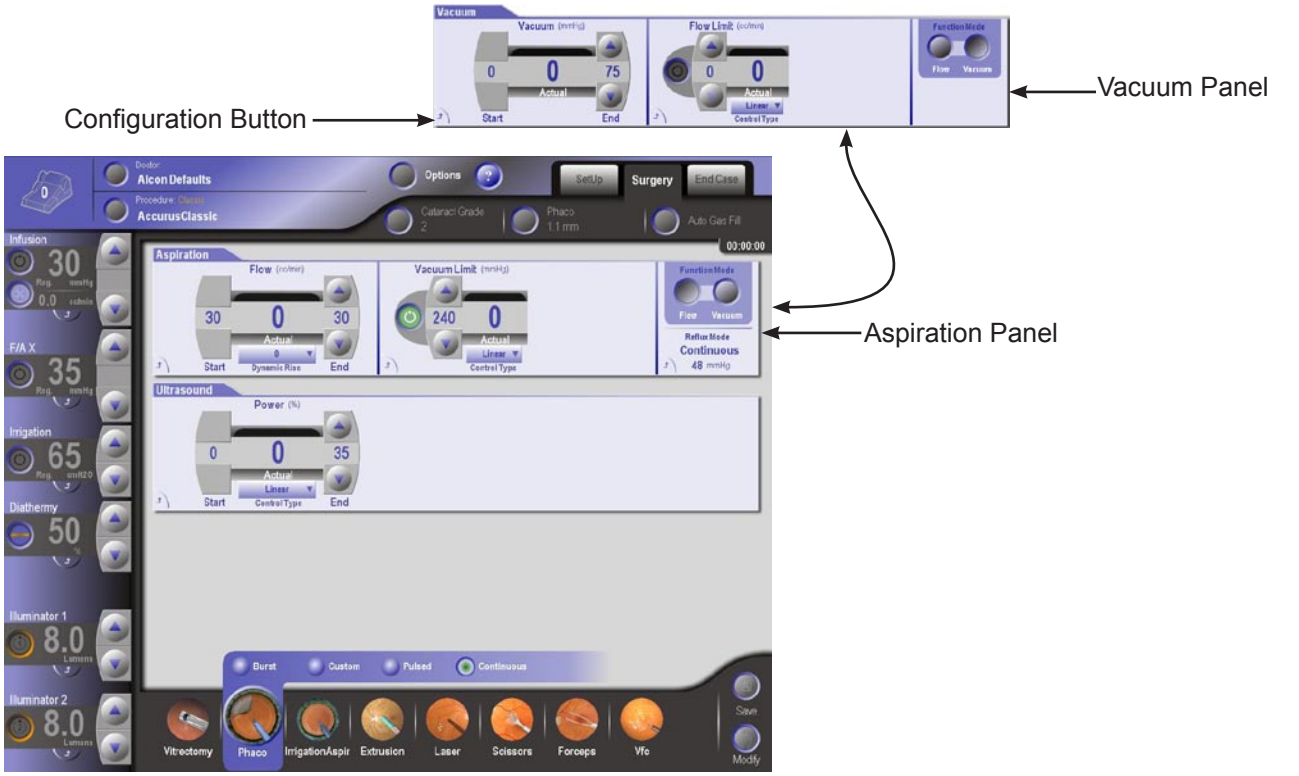


Figure 2-59 Surgery Screen: Phaco Mode - Continuous Submode

Ultrasound Panel:

- Phaco Power End Up/Down Buttons - Sets the power at full treadle.
- Phaco Power Progress Bar and Numerical Value - Shows the current power value.
- Ultrasound Configuration Button - Displays the configuration popup.

The following controls are available only in the Advanced view:

- Smart Pulse - Indicator for smart pulse. Becomes visible when power is greater than 0 and pulse on time is less than 20ms.
- Phaco Power Limit Control Drop DownList - Determines whether the power limit

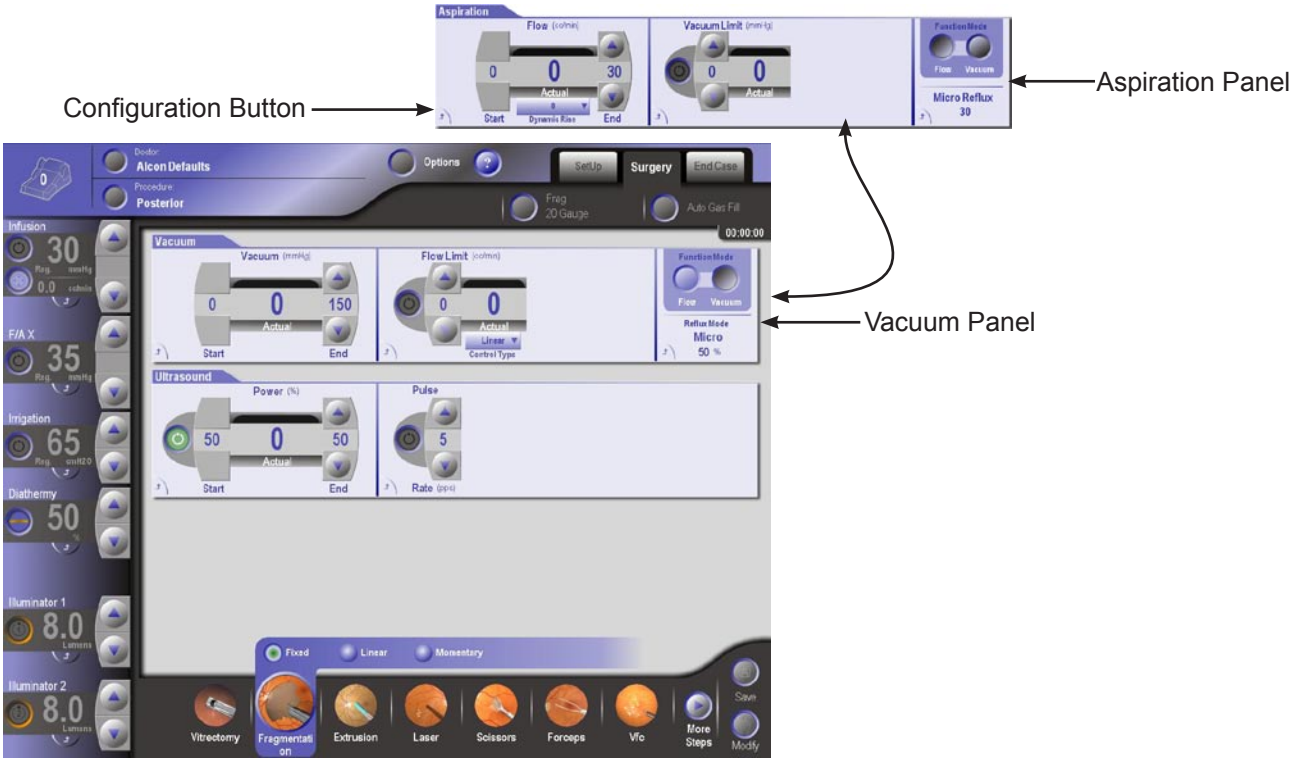


Figure 2-60 Surgery Screen: Fragmentation Mode - Fixed Submode

is fixed or linear. In Fixed, the limit is constant regardless of the vacuum level. In Linear, the limit varies depending on the vacuum level.

Fragmentation Mode

Fragmentation mode is enabled when a fragmentation handpiece is connected to the system and the Fragmentation Surgery step is pressed. Three submodes are available, each with its own default U/S power and vacuum limits. U/S power is enabled and disabled using the footswitch or by pressing the power setting on the touch screen (except in momentary mode). Micro and proportional reflux are available via the footswitch. U/S Pulse controls are available in all submodes.

Fragmentation Mode: FIXED SUBMODE

In Fixed submode, the vacuum level is controlled linearly from 0 to the programmed value whereas the ultrasound power level is fixed. The controls for each panel in Fixed submode have the following functions:

Vacuum Panel:

- Vacuum End Up/Down Buttons - Sets the vacuum level at full treadle.
- Vacuum Progress Bar and Numerical Value - Displays the current vacuum level
- Vacuum Configuration Button - Displays the configuration popup. Simplifies large value changes by providing slider controls. Also provides panel specific configuration capabilities such as Drainbag Change.

The following controls are available only in the Advanced view:

- Flow Limit On/Off Button - Turns flow limit on or off. When the maximum rate is reached, the vacuum level can no longer be increased. If the Flow Limit is turned off, the vacuum level is limited only by the Start and End values.
- Flow Limit Up/Down Buttons - Sets the maximum flow rate.
- Flow Limit Progress Bar and Numerical Value - Displays the current flow rate.
- Flow / Vacuum Toggle - Switches between Flow Mode and Vacuum Mode.
  Flow Limit Configuration Button - Displays the configuration popup.
- Reflux Label - Read Only display of the current reflux configuration together with its current value.
- Reflux Configuration Button - Displays the Reflux configuration popup.

Aspiration Panel:

- Flow End Up/Down Buttons - Sets the flow level at full treadle.
- Flow Progress Bar and Numerical Value - Displays the current flow level.
- Aspiration Configuration Button - Displays the configuration popup.
- Vacuum Limit On/Off Button - Turns vacuum limit on or off. When the maximum rate is reached, the flow can no longer be increased. If the Vacuum Limit is turned off, the flow is limited only by the Start and End values.

The following controls are available only in the Advanced view:

- Vacuum Limit Up/Down Buttons - Sets the maximum vacuum value.
- Vacuum Limit Progress Bar and Numerical Value - Displays the current vacuum level.
- Vacuum Limit Configuration Button - Displays the configuration popup.
- Flow / Vacuum Toggle - Switches between Flow Mode and Vacuum Mode.

Ultrasound Panel:

- Power On/Off Button - Turns power on or off.

- Power End Up/Down Buttons - Sets the power at full treadle. The Start value tracks with the End value.
- Power Progress Bar and Numerical Value - Displays the current power value.
- Ultrasound Configuration Button - Displays the configuration popup.

The following controls are available only in the Advanced view:

- Pulse Rate On/Off Button - Turns the Pulse Rate on or off.
- Pulse Rate Up/Down Buttons - Sets the pulse rate.
- Pulse Time On Up/Down Buttons - Sets the time on percentage.
- Pulse Configuration Button - Displays the configuration popup.

Fragmentation Mode: LINEAR SUBMODE

Linear submode is very similar to the Fixed submode with the exception that the treadle start values for both vacuum and ultrasound power are fixed at 0.

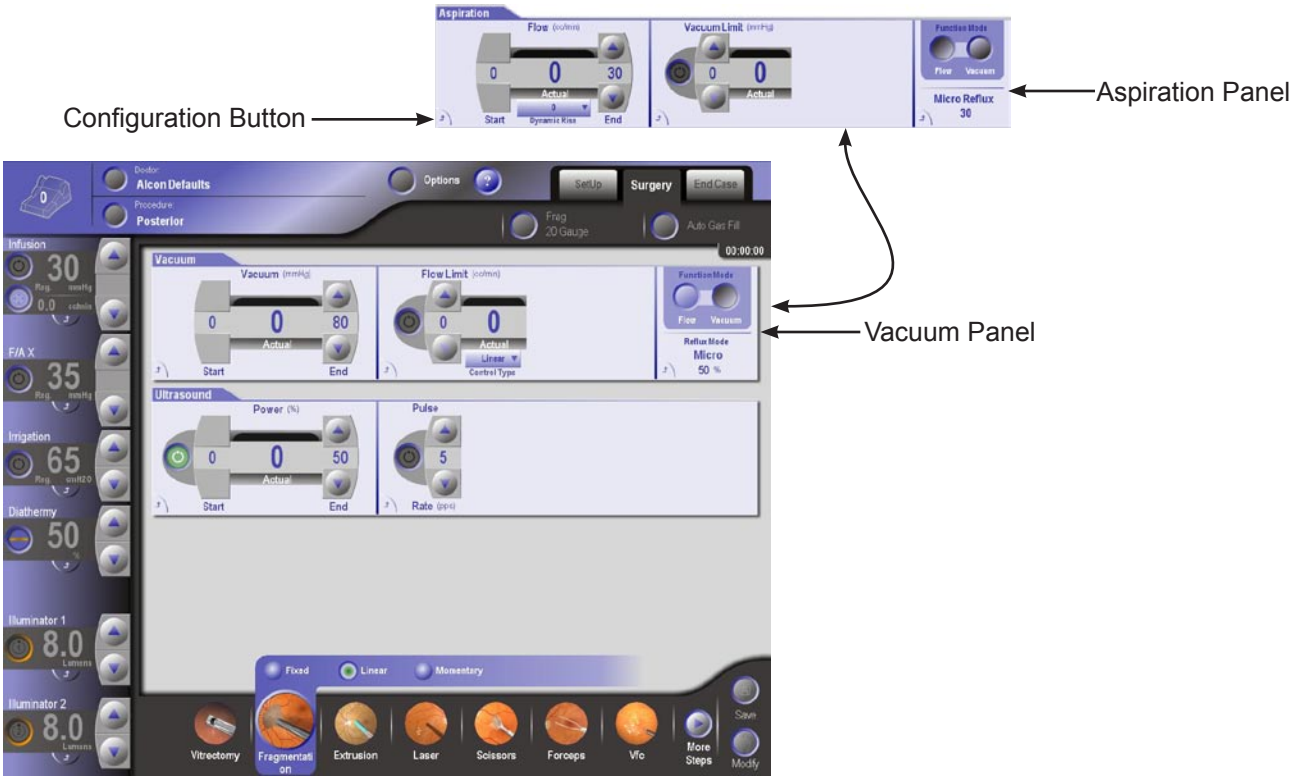


Figure 2-61 Surgery Screen: Fragmentation Mode - Linear Submode

Vacuum Panel:
Same as Fixed submode.

Flow Panel:
Same as Fixed submode.

Ultrasound Panel:
Same as Fixed submode except that the Start value is always zero instead of tracking with the End value.

Fragmentation Mode: MOMENTARY SUBMODE

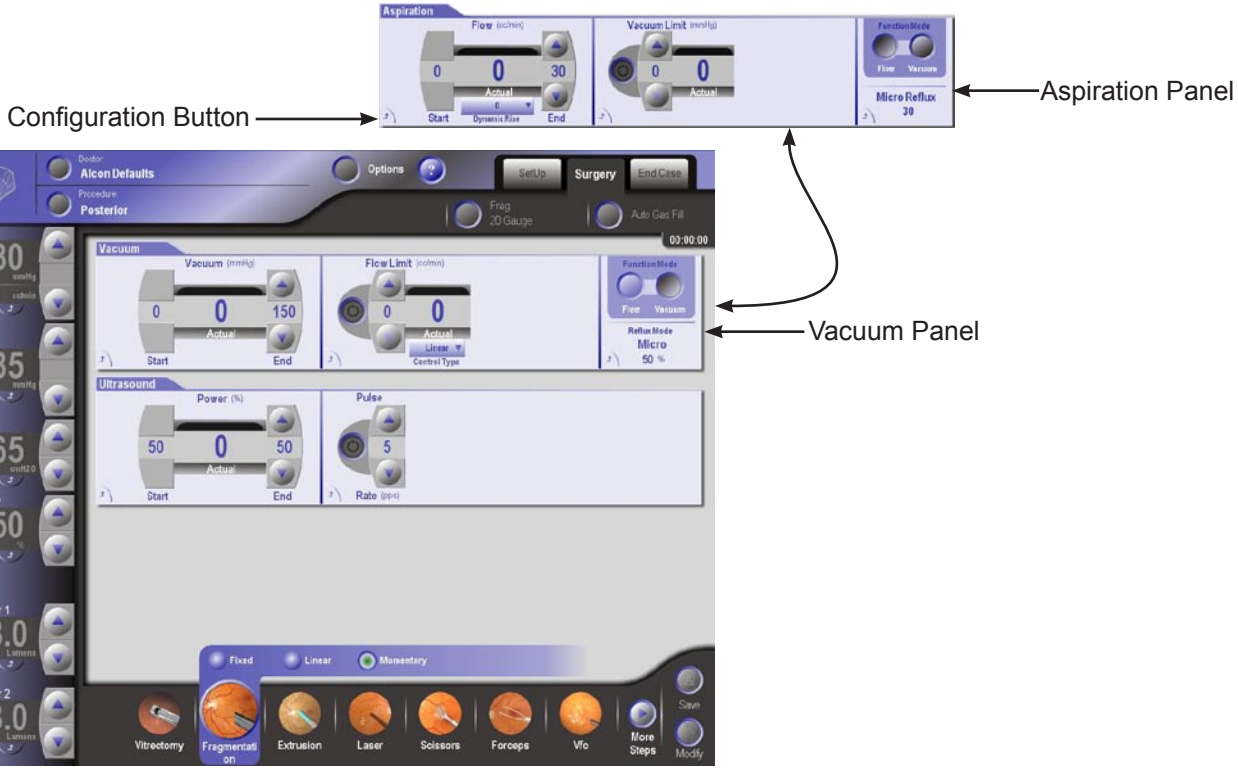


Figure 2-62 Surgery Screen: Fragmentation Mode - Momentary Submode

Momentary submode is similar to the Fixed Sub Mode with the exception that ultrasound is only active when the appropriate footswitch button is pressed.

Vacuum Panel:
Same as Fixed submode.

Flow Panel:

Figure 2-63 Surgery Screen: Irrigation/Aspiration Mode

Same as Fixed submode.

Ultrasound Panel:
Same as Fixed submode except that there is no On/Off button to turn U/S power Off.

Irrigation/Aspiration (IA) Mode

In IA mode, the Surgery screen contains panels for controlling an IA handpiece. The vacuum pressure is always controlled linearly and vacuum cannot be turned off. When the system detects an occlusion, the word "Occlusion" is displayed on the extraction panel (in either vacuum mode or flow mode) under the primary limit control's label and an alarm sounds.

In "Standard" display mode, only the Flow mode controls are available. The controls for each panel in IA mode have the following functions:

Vacuum Panel:

- Vacuum End Up/Down Buttons - Sets the vacuum level at full treadle.
- Vacuum Progress Bar and Numerical Value - Displays the current vacuum level
- Vacuum Configuration Button - Displays the configuration popup. Simplifies large value changes by providing slider controls. Also provides panel specific configuration capabilities such as Drainbag Change.

The following controls are available only in the Advanced view:

- Flow Limit On/Off Button - Turns flow limit on or off. When the maximum rate is reached, the vacuum level can no longer be increased. If the Flow Limit is turned off, the vacuum level is limited only by the Start and End values.
- Flow Limit Up/Down Buttons - Sets the maximum flow rate.
- Flow Limit Progress Bar and Numerical Value - Displays the current flow rate.
- Flow / Vacuum Toggle - Switches between Flow Mode and Vacuum Mode.
  Flow Limit Configuration Button - Displays the configuration popup.
- Flow Limit Control Drop Down List - Determines whether the flow limit is fixed or linear. In Fixed, the limit is constant regardless of the flow level. In Linear, the limit varies depending on the flow level.
- Reflux Label - Read Only display of the current reflux configuration together with its current value.
- Reflux Configuration Button - Displays the Reflux configuration popup.

Aspiration Panel:

- Flow End Up/Down Buttons - Sets the flow level at full treadle.
- Flow Progress Bar and Numerical Value - Displays the current flow level.
- Aspiration Configuration Button - Displays the configuration popup.
- Vacuum Limit On/Off Button - Turns vacuum limit on or off. When the maximum

rate is reached, the flow can no longer be increased. If the Vacuum Limit is turned off, the flow is limited only by the Start and End values.

•

The following controls are available only in the Advanced view:

• Vacuum Limit Up/Down Buttons - Sets the maximum vacuum value.

Figure 2-64 Surgery Screen: Extrusion Mode

• Vacuum Limit Progress Bar and Numerical Value - Displays the current vacuum level.
• Vacuum Limit Configuration Button - Displays the configuration popup.
• Flow / Vacuum Toggle - Switches between Flow Mode and Vacuum Mode.

Extrusion Mode

In Extrusion Mode the Surgery screen contains the Vacuum panel necessary for controlling an extrusion handpiece. The vacuum pressure is always controlled linearly and vacuum cannot be turned off.
In “Standard” display mode, only the Vacuum mode controls are available. The controls for each panel in Extrusion mode have the following functions:

Vacuum Panel:

• Vacuum End Up/Down Buttons - Sets the vacuum level at full treadle. The Start value is always zero.
• Vacuum Progress Bar and Numerical Value - Displays the current vacuum level
• Vacuum Configuration Button - Displays the configuration popup. Simplifies large value changes by providing slider controls. Also provides panel specific configuration capabilities such as Drainbag Change.

The following controls are available only in the Advanced view:

• Flow Limit On/Off Button - Turns flow limit on or off. When the maximum rate is reached, the vacuum level can no longer be increased. If the Flow Limit is turned

off, the vacuum level is limited only by the Start and End values.

- Flow Limit Up/Down Buttons - Sets the maximum flow rate.
- Flow Limit Progress Bar and Numerical Value - Displays the current flow rate.
- Flow / Vacuum Toggle - Switches between Flow Mode and Vacuum Mode.
  Flow Limit Configuration Button - Displays the configuration popup.
- Flow Limit Control Drop Down List - Determines whether the flow limit is fixed or linear. In Fixed, the limit is constant regardless of the flow level. In Linear, the limit varies depending on the flow level.
- Reflux Label - Read Only display of the current reflux configuration together with its current value.
- Reflux Configuration Button - Displays the Reflux configuration popup.

Aspiration Panel:

- Flow End Up/Down Buttons - Sets the flow level at full treadle.
- Flow Progress Bar and Numerical Value - Displays the current flow level.
- Flow Configuration Button - Displays the configuration popup.

The following controls are available only in the Advanced view:

- Vacuum Limit On/Off Button - Turns vacuum limit on or off. When the maximum rate is reached, the flow can no longer be increased. If the Vacuum Limit is turned off, the flow is limited only by the Start and End values.
- Vacuum Limit Up/Down Buttons - Sets the maximum vacuum value.
- Vacuum Limit Progress Bar and Numerical Value - Displays the current vacuum level.
- Vacuum Limit Configuration Button - Displays the configuration popup.

- Flow / Vacuum Toggle - Switches between Flow Mode and Vacuum Mode. Reflux Label - Read Only display of the current reflux configuration together with its current value.
- Reflux Configuration Button - Displays the Reflux configuration popup.

Cutting Panel:

- Cut Rate End Up/Down Buttons - Sets the cut rate.
- Cut Rate Progress Bar and Numerical Value - Displays the current cut rate.
- Cutting Configuration Button - Displays the configuration dialog.

Laser Mode

In Laser Mode the Surgery screen contains panels for controlling a laser probe as well as an aspirating handpiece (which could be the laser probe). The laser function has

Figure 2-65 Surgery Screen: Laser Mode

two modes: Ready and Firing.

Laser Modes:

- Ready Mode - Laser is ready to fire.
- Standby – Laser cannot be fired.

Treatment Mode:

- Repeat – Generates laser shots continuously when the footswitch treadle is down
- Single Shot – When the footswitch treadle is pressed down, the laser fires a single shot.
- Continuous – The laser keeps firing as long as the footswitch treadle is down.

In “Standard” display mode, only the Vacuum mode controls are available. The controls for each panel in Laser mode have the following functions:

Vacuum Panel:

- Vacuum End Up/Down Buttons - Sets the vacuum level at full treadle. The Start value is always zero.
- Vacuum Progress Bar and Numerical Value - Displays the current vacuum level
- Vacuum Configuration Button - Displays the configuration popup. Simplifies large value changes by providing slider controls. Also provides panel specific configuration capabilities such as Drainbag Change.

The following controls are available only in the Advanced view:

- Flow Limit On/Off Button - Turns flow limit on or off. When the maximum rate is reached, the vacuum level can no longer be increased. If the Flow Limit is turned off, the vacuum level is limited only by the Start and End values.
- Flow Limit Up/Down Buttons - Sets the maximum flow rate.
- Flow Limit Progress Bar and Numerical Value - Displays the current flow rate.
- Flow / Vacuum Toggle - Switches between Flow Mode and Vacuum Mode.
  Flow Limit Configuration Button - Displays the configuration popup.
- Flow Limit Control Drop Down List - Determines whether the flow limit is fixed or linear. In Fixed, the limit is constant regardless of the flow level. In Linear, the limit varies depending on the flow level.
- Reflux Label - Read Only display of the current reflux configuration together with its current value.
- Reflux Configuration Button - Displays the Reflux configuration popup.

Aspiration Panel:

- Flow End Up/Down Buttons - Sets the flow level at full treadle.
- Flow Progress Bar and Numerical Value - Displays the current flow level.
- Flow Configuration Button - Displays the configuration popup.

The following controls are available only in the Advanced view:

- Vacuum Limit On/Off Button - Turns vacuum limit on or off. When the maximum rate is reached, the flow can no longer be increased. If the Vacuum Limit is turned off, the flow is limited only by the Start and End values.
- Vacuum Limit Up/Down Buttons - Sets the maximum vacuum value.
- Vacuum Limit Progress Bar and Numerical Value - Displays the current vacuum level.
- Vacuum Limit Configuration Button - Displays the configuration popup.
- Flow / Vacuum Toggle - Switches between Flow Mode and Vacuum Mode.
  Reflux Label - Read Only display of the current reflux configuration together with its current value.
- Reflux Configuration Button - Displays the Reflux configuration popup.

Laser Panel:

- Laser Mode - Selects laser Standby or Ready mode.
- Port Selection - Selects the port used for treatment.
- Treatment Mode - Selects the Treatment mode: Repeat, Single Shot, or Continuous
- Power Up/Down Buttons - Adjusts the laser power level.

- Exposure Time Up/Down Buttons - Adjust the laser exposure time. Only available in Repeat or Single Shot modes.
- Interpulse Time Up/Down Buttons - Adjusts the laser interpulse time. Only available in Repeat mode.
- Aiming Beam Up/Down Buttons - Displays the current relative intensity of the aiming beam.
- LIO Illumination Intensity Up/Down Buttons - Adjusts the LIO illumination intensity.
- Shot Count Label - Displays the current shot count. Also allows for the shot count to be reset.
- Total Energy Label - Displays the total energy. Also allows for the total energy to be reset.
- Laser Configuration Button - Displays the configuration dialog. Simplifies large value changes by providing slider controls.

NOTE: In tethered mode, all front panel controls except for the emergency switch are disabled.

Forceps Mode

The Forceps Pressure Panel controls the pressure for opening and closing pneumatic forceps. Figure 2-66 shows the Forceps surgery screen. The controls for each panel in Forceps mode have the following functions:

Forceps Panel:

- Pressure Start Up/Down Buttons - Sets the pressure at treadle start.
- Pressure End Up/Down Buttons - Sets the pressure at full treadle.
- Pressure Progress Bar and Numerical Value - Displays the current pressure value.
- Forceps Configuration Button - Displays the configuration popup.

Figure 2-66 Surgery Screen: Forceps Mode

- Calibrate On/Off Button - Enters Calibration Mode allowing the user select and set the pressure at Start and Close.
  - When Start is selected, the Start pressure is applied to the port and the Start Up/Down buttons are active on the Pressure control to allow adjustment of the Start pressure.
  - When Close is selected, the Close pressure is applied to the port and the Close Up/Down buttons are active on the Pressure control to allow adjustment of the Close pressure.
  - Pressing the "Save Calibration Values" button saves these values.

Scissors Mode

The Scissors mode provides cutting capability using pneumatically powered scissors controlled by the footswitch. The pneumatically powered scissors uses a microscissors snapped onto the Alcon/Grieshaber pneumatic handpiece, which is con ble:

Figure 2-67 Surgery Screen: Scissors Mode - MultiCut

MultiCut and Prop (Proportional). In Scissors Mode the surgery screen contains panels for controlling scissors and bimanual forceps.

Scissors Mode: MULTICUT SUBMODE

In the MultiCut submode, pressing the footpedal activates the scissors at a Cut Rate proportional to the footpedal position up to the preset End limit, set by pressing the up/down buttons next to the End limit readout. Single cuts are possible by adjusting the cut rate to 1 cpm and momentarily pressing the footpedal.

The controls for each panel in Scissors MultiCut submode have the following functions:

Cutting Panel:

- Cut Rate End Up/Down Buttons - Sets the cut rate.

- Cut Rate Progress Bar and Numerical Value - Displays the current cut rate.
- Cutting Configuration Button - Displays the configuration popup.

Forceps Panel:

- Bimanual On/Off Button - Turning Bimanual mode on allows the control of the pneumatic forceps while the system is in Scissors mode. All controls function the same as when the system is in Forceps mode (see Forceps mode for a description).

Figure 2-68 Surgery Screen: Scissors Mode - Proportional

Scissors Mode: PROP SUBMODE

The Proportional submode provides proportional control of the opening and closing of the scissor blades, dependent upon the amount of footpedal depression. The amount of scissors closure is indicated in the Pressure panel. When the footpedal is fully depressed, the Close Limit is reached, and scissors should be fully closed. Pressing the On/Off button in the Calibration panel displays the Calibration panel that allows the user to adjust the scissors Start and Close Pressures.

The controls for each panel in Scissors Proportional submode have the following functions:

Cutting Panel:

- Pressure Start Up/Down Buttons - Sets the pressure at treadle start.
- Pressure End Up/Down Buttons - Sets the pressure at full treadle.
- Pressure Progress Bar and Numerical Value - Displays the current cut rate.
- Cutting Configuration Button - Displays the configuration popup.
- Calibrate On/Off Button - Enters Calibration Mode allowing the user select and

set the pressure at Start and Close.
- When Start is selected, the Start pressure is applied to the port and the Start Up/Down buttons are active on the Pressure control to allow adjustment of the Start pressure.
- When Close is selected, the Close pressure is applied to the port and the Close Up/Down buttons are active on the Pressure control to allow adjustment of the Close pressure.
- Pressing the "Save Calibration Values" button saves these values.

Forceps Panel:

- Bimanual On/Off Button - Turning Bimanual mode on allows the control of the pneumatic forceps while the system is in Scissors mode. All controls except for the footswitch function the same as when the system is in Forceps mode (see Forceps mode for a description).

Viscous Fluid Control (VFC) Mode

The VFC (Viscous Fluid Control) mode provides pressure at the front panel VFC connector for fluid injection (i.e., silicone oil), or vacuum for extraction, through the VFC tubing set to a syringe. Using vacuum, the VFC mode also provides a means of extruding fluid through the VFC consumables.

CAUTION

Always use Alcon-supplied Viscous Fluid Control Kits and follow all Directions for Use. Do not use VFC without the plunger/stopper supplied with the kit. Do not aspirate fluids directly into the console; this will cause damage to the console, increase risk of electrical shock, and void all warranties.

Viscous Fluid Control (VFC) Mode: Extract Submode

Figure 2-69 Surgery Screen: VFC Mode - Extract Submode

Vacuum for fluid extraction is provided to the syringe proportional to footpedal depression. Max Limit vacuum is reached at full depression. The controls on the Extraction panel have the following functions:

- Vacuum End Up/Down Buttons - Sets the vacuum level at full treadle. Start value is always zero.
- Vacuum Progress Bar and Numerical Value - Displays the current vacuum level.
- Extraction Configuration Button - Displays the configuration that simplifies large value changes by providing slider controls.

Viscous Fluid Control (VFC) Mode: Inject Submode

In this submode injection pressure to the syringe is provided proportional to the footpedal position up to the Max Limit setting. Vacuum is available in Bimanual mode by pressing the Bimanual On/Off button.

WARNINGS!

• Double check the cannula connected to the syringe for a tight connection. It must not be allowed to come loose.

• Adjust the Max Limit air pressure in accordance with the viscosity of fluids to be injected.

Vacuum Panel controls:

- Bimanual-Vacuum On/Off Button - Turns vacuum on or off. When Bimanual mode is on, the control displayed is a dual value control.
- Vacuum End Up/Down Buttons - Sets the vacuum level at full treadle. The Start value is always zero.
- Vacuum Progress Bar and Numerical Value - Displays the current vacuum level.

Figure 2-70 Surgery Screen: VFC Mode - Injection Submode

END CASE

The End Case Screen, selected by pressing the End Case tab, displays case related metrics as shown in Figure 2-71. It is comprised of a Summary panel area and a tabbed interface area for displaying the various metrics associated with the case. The screen also provides various controls for renaming the case, printing the End Case and Laser forms, and customizing the form's content and layout via the Setup Form popup.

Figure 2-71 End Case Screen: Anterior Tab

Viewing of the various metrics associated with the case is accomplished by selecting the associated tabs - Anterior, Posterior, Laser, or Consumables. Pressing the Rename button above the tabs, displays a keyboard which enables the user to rename the case from the default name (date of surgery).

The Print and Print Laser Form buttons are used to obtain a print-out of the End Case Form and Laser Form respectively. The Laser Form is comprised of the End Case Form's first header and the Laser metrics table only. Modification of the End Case Form's layout and content is accomplished using the Setup Form button. When pressed, the End Case Form Setup popup is displayed.

End Case Summary Panel

The Summary panel area lists those procedure steps that were used during the case along with their cumulative times. For a step to be included in the summary list, work must have been performed using the step. In most cases, work is performed when the treadle is depressed. Therefore, steps that are defined in the procedure but not actually used to perform work, are not be listed. This could occur, for example, if the surgeon used the 1st step of a procedure, selected the 2nd step but did not depress the treadle, and then proceeded ahead to the 3rd step to perform work. In this scenario, steps 1 and 3 would be included in the summary list, but step 2 would not be included in the summary since no work was performed with it.

In computing a step's cumulative time, it is necessary for work to be done while the step is selected in order for the current elapsed time to be added to the step's cumulative time. Therefore, a user may access a step and interact with the various touchscreen controls for an extended period of time but, unless the treadle is depressed, the current elapsed time will be discarded and will not be added to the step's cumulative time. If the step's cumulative time is zero, the step will not be shown in the step summary list.

Metrics Tabs

The End Case Metrics screens are accessed through the labeled tabs next to the Summary panel. Tabs are provided for Anterior, Posterior, Laser, and Consumables. When selected, each tabs displays the associated metrics for that tab as shown by the Anterior tab in Figure 2-71. The Consumables tab displays all consumable items that have been detected by the system.

Setup Form

The End Case Form Setup screen shown in Figure 2-72 is displayed by pressing the Setup Form button on the End Case Screen. The screen shows a picture of the End Case Form print-out and provides controls for navigating to other pages in the print-out and for customizing the layout/content of the print-out.

The buttons at the bottom of the Form Setup screen perform the following actions:

- Page arrow buttons - Pressing these buttons allows the user to move through each page of the printout.
- Close button - Pressing the Close button causes the system to save the various layout and content customization settings and return to the End Case screen.
- Cancel button - Returns the system back to the End Case screen without saving changes made to content and layout.

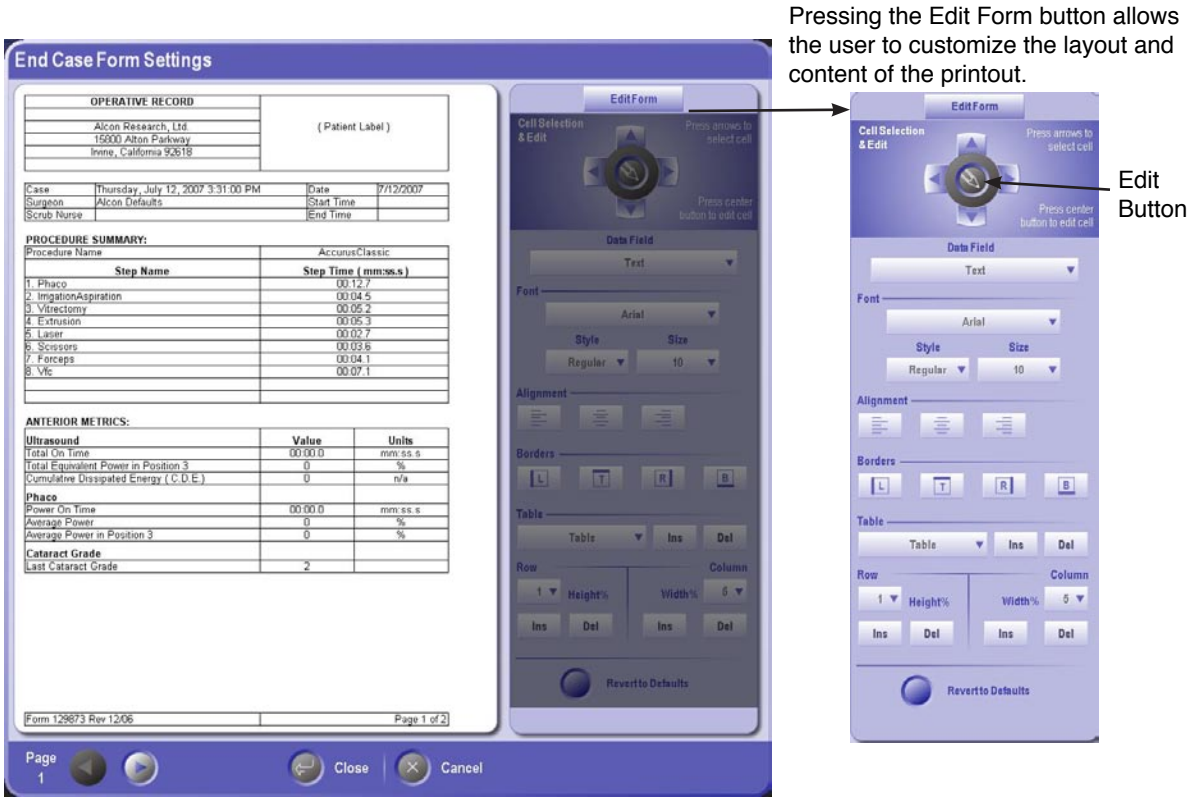


Figure 2-72 End Case: Setup Form Screen

Setup Form: Editing the Form

To modify the form, press the Edit Form button. When pressed, the "smoked glass" panel is retracted allowing access to the various customization controls. The editing controls on the dialog provide the following functionality:

- Cell navigation buttons including up, down, left, right.
- Cell text edit button.
- Drop list to permit the specification of a cell data fields.
- Cell appearance controls including font, point size, bold/italics, text alignment, and cell border lines (on/off).
- Table insertion/deletion controls
- Table row height, insertion, and deletion controls.
- Table column width, insertion, and deletion controls.

Setup Form: Editing the Form - Customizing Table Cells

The form is composed of a number of tables which are in turn composed of cells arranged in rows and columns. Each table cell provides various attributes that can be customized with respect to their appearance and content displayed. A cell can contain static text or it can be defined to include a data field whose text is determined at runtime. An example of a data field would be Surgeon Name.

To customize a cell follow these steps:

1. Select a table on the form by pressing on it. The table is then shown with selection handles. The active cell is shown in red.
2. Select the cell to be customized by using the Up, Down, Left, Right cell navigation buttons located in the Cell Selection & Edit panel.
3. To specify static text for a cell, press the Edit button (see Figure 2-72). When pressed, the keyboard popup is displayed allowing text to be entered by the user.
4. To specify a cell data field, press the Data Field drop list to display a list of available data field types including, but not limited to, Surgeon Name, Date, Procedure Name, etc. After selecting the desired data field, the associated data is automatically entered into the cell.
5. Specify the font and point size for a cell's text using the Font, Font Style, and Font Size drop list controls. The Font Style drop list control is used to apply bold and italics formatting to the cell's text.
6. Select the desired text alignment by pressing the Left Alignment, Center Alignment, or Right Alignment toggle buttons. The selected alignment will be highlighted.
7. Select the desired cell borders to show or hide by pressing the Bottom, Top, Left, or Right Border toggle buttons. If a border is on, it will be highlighted.

Setup Form: Editing the Form - Creating New Tables

To begin the customization process, the user must first select a table on the form by pressing on it. The table is then shown with selection handles and the active cell is shown in red.

To insert a new table after the selected table, follow these steps:

1. In the Table section of the Edit Form panel, press the Insert button (Ins). A table with two rows and three columns appears below the selected table and the new table is now the selected table. To delete the table, press the Delete button (Del).

   The Table Type is selected from the Type dropdown list in the Table section of the Edit Form panel. The default table type for new tables is Custom which contains no entries or formatting (see Customizing Table Cells for information on editing individual cells).

2. Select the type of table desired from the Type dropdown list. There are five preformatted tables available from the list which automatically pull data from the procedures performed. The Custom selection allows the user to create a custom table to meet their particular requirements. Preformatted tables may also be customized according to the users requirements.
3. To increase the height of the selected row, press the Height% dropdown button and select an entry between 1 and 20%. The default row height is 2, so selecting 1 will result in a smaller row height and all selections above 2 will result in a larger row height. The height of the selected row is displayed on the Height% button.
4. To insert or delete a row, press the Ins (insert) or Del (delete) button in the Row section of the Edit Form panel.
5. To increase the width of the selected column, press the Width% dropdown button and select an entry between 5 and 90%. The default column width is 30, so selecting 5 through 25 will result in a smaller column width and all selections above 30 will result in a larger column width. The width of the selected column is displayed on the Width% button.
6. To insert or delete a column, press the Ins (insert) or Del (delete) button in the Column section of the Edit Form panel.

PROBES AND HANDPIECES

Different probes and handpieces are required for each operating mode of the *Constellation®* Vision System. Following is a representative selection of probes and handpieces with a general description of each. See the Accessories and Parts section of this manual, or consult your Alcon representative, for a complete selection of all probes, handpieces, and handpiece tips available.

Vitrectomy Probes

- 20, 23, and 25 Ga UltraVit Probe
- 20 and 23 Ga AVIT UltraVit

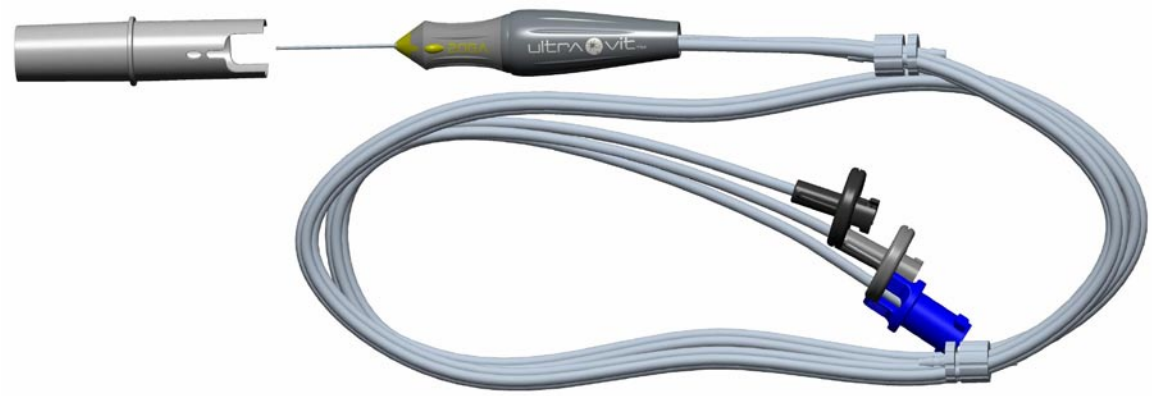


Figure 2-73 UltraVit Probes

Pneumatic Scissors

The Pneumatic Hanpiece is a multi-purpose tool that is designed to interface with a broad range of disposable DSP and reusable Quick Lock connector scissors and forceps tips to provide footpedal-driven membrane dissection and membrane/tissue manipulation. The console can drive these in multi-cut and proportional modes. Bimanual mode enables forceps activation during the first portion of footpedal travel and scissors activation during the second portion of footpedal travel

Figure 2-74 Pneumatic Scissors

Fragmentation Handpiece

The Fragmentation handpiece is configured to provide simultaneous vacuum and fragmentation, or vacuum only, depending upon the console setup. The handpiece has a stainless steel shell for improved reliability and durability. Other than attaching and removing the needle and aspiration line, no assembly or disassembly is required.

Figure 2-75 Fragmentation Handpiece

Phaco Ultrasound Handpieces

Alcon's phaco handpieces integrate irrigation, aspiration and emulsification. The three functions of the lens extraction step enable the surgeon to simultaneously maintain or inflate the anterior chamber, emulsify the lens, and aspirate the lens material from the eye.

These handpieces require no disassembly other than removal of the disposable tubing, the ultrasonic tip, and the infusion sleeve with bubble suppression insert.

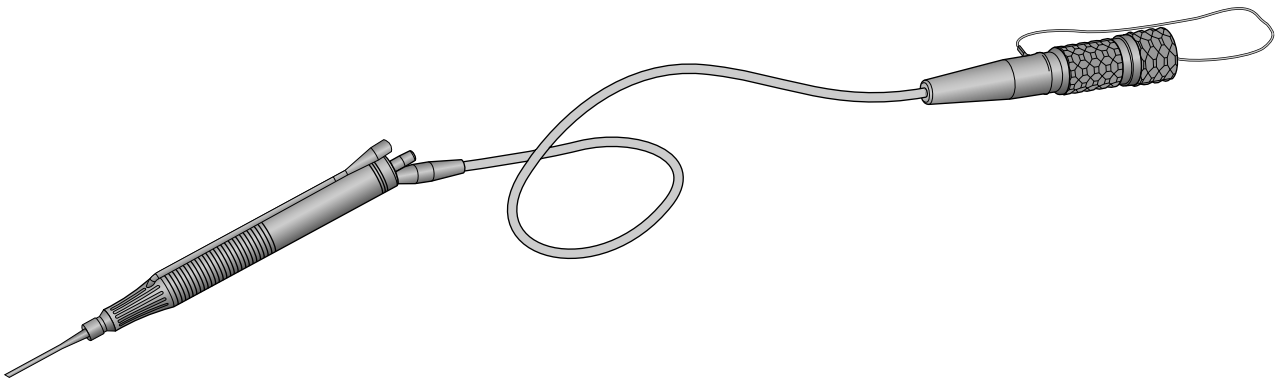


Figure 2-76 *Infiniti*™* Ultrasonic (U/S) Handpiece

- *Infiniti*™* Ultrasonic (U/S) Handpiece - This handpiece is used for ultrasonic applications on the *Constellation®* Vision System with 1.1 mm *TurboSonics®* tips or 0.9 mm *TurboSonics®* tips, including flared and/or *ABS®* tips.

CAUTIONS

Do not test or operate *U/S* handpieces unless the tip is immersed in *BSS®* sterile irrigating solution or distilled water or is in surgical use. Irreparable damage to the handpiece and tip can result if run dry.

Ensure that test chamber is filled with *BSS®* sterile irrigating solution before tuning *U/S* handpieces. Tuning a handpiece dry may result in premature tip failure and breakage.

WARNINGS!

Use of an ultrasonic handpiece other than the U/S, or use of a handpiece repaired without Alcon authorization, is not permitted, and may result in patient injury, including potential shock hazard to patient and/or operator.

Use of the U/S handpiece in the absence of irrigation flow and/or in the presence of reduced or lost aspiration flow can cause excessive heating and potential damage to the cornea and other tissues.

TurboSonics® Family of Tips

U/S tips are made of medical grade titanium alloy, and are attached to an U/S handpiece to deliver mechanical energy to the lens, assisting in its removal by aspiration. Depending on the needs and technique preferred by the surgeon, various styles of tips and tip bevels are available (see Figure 2-77). Various U/S tip styles are color coded.

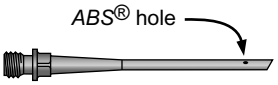
- 1.1 mm U/S Tips - The standard ultrasonic tips are the original 1.1 mm *TurboSonics*® tips. They are designed for use only with 1.1 mm infusion sleeves.
- 0.9 mm U/S Tips - The 0.9 mm ultrasonic tips are designed to allow entry through a smaller incision. They are designed for use only with 0.9 mm infusion sleeves.
- Aspiration Bypass System - Tips with the *ABS*® feature contain a small hole in the distal portion of the tip's wall. This helps to maintain flow through the system even during occlusion of the tip's main port.

WARNINGS!

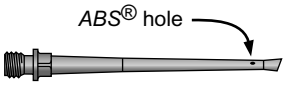
Use 0.9 mm tips with 0.9 mm infusion sleeves. Use 1.1 mm tips with 1.1 mm infusion sleeves. Mismatch of consumable components and use of settings not specially adjusted for a particular combination of consumable components may create a patient hazard.

Read all package label material printed on the consumable paks prior to their use.

Standard U/S Tips - The 1.1 mm *TurboSonics*® tip with the round shaft is the original, classical U/S tip shape. The 0.9 mm has a smaller diameter shaft.

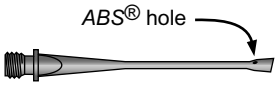


The Aspiration Bypass System - Tips with the *ABS*® feature contain a small hole in the distal portion of the tip's wall.



Tapered Tip - The tapered *ABS*® tip is a combination of the 0.9 mm tip and the flared *ABS*® tip. The shaft inner and outer diameters is equivalent to straight tips, while the distal end is comparable to flared tips. The tapered *ABS*® tip has the improved holding force of a flared tip, and the same aspiration flow characteristics as a straight tip.

***Kelman*® Tips** - The *Kelman*® tips have a bent shaft which generates transverse ultrasound motion, in addition to the conventional longitudinal motion, to enhance cutting efficiency. In addition, the bend allows better visibility during the surgical procedure.



Flared *ABS*® Tips - The flared tips have a larger proximal port, providing increased holding force. They narrow in the middle of the shaft, thus allowing smaller incisions and improving occlusion breaks by reducing outflow from the anterior chamber, following occlusion breaks. Flared tips also have the Aspiration Bypass System feature, to further enhance performance.

Figure 2-77 *TurboSonics*® Tips - Shown here are samples of U/S tips used with the U/S handpieces.

*MicroSmooth™** Infusion Sleeves

Infusion sleeves cover the tip of the handpiece to provide irrigation to the anterior chamber of the eye during surgery (see Figure 2-78). Infusion sleeves are used with the *Infiniti™** U/S handpiece, and with some *Ultraflow™** I/A handpieces. Infusion sleeves used with *Infiniti™** U/S handpieces require a BSI (bubble suppression insert). Infusion sleeves must be correctly matched to the specific tip type (see the following descriptions).

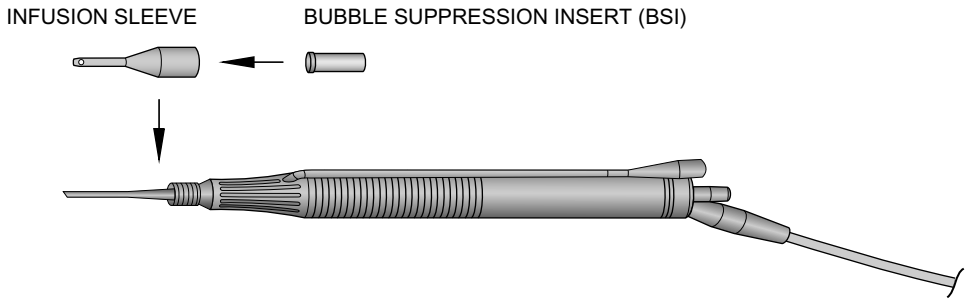


Figure 2-78 *Infiniti™ U/S Handpiece shown with Infusion Sleeve and Bubble**

Depending on the needs and technique preferred by the surgeon, various styles of infusion sleeves are available as listed in Table 2-2.

Table 2-2. MicroSmooth™* Infusion Sleeves

Infusion Sleeves	Sleeve Color		Recommended Incision Size
	0.9 mm	1.1 mm	
High Infusion	Semi-transparent	Semi-transparent blue	3.2 mm
Standard	--	Blue	3.0 mm
Micro	Purple	Blue/green	2.75 mm
Ultra	Red	Green	2.2 mm

*Ultraflow™** Handpieces and Tips

The *Ultraflow™** handpiece is used in I/A mode to maintain chamber pressure with irrigation while removing cortical material via aspiration. (See Figure 2-79 and note the band markings on the tips that identify size of tip aperture.) Some configurations of the *Ultraflow™** IT and SP handpieces also use infusion sleeves. The following *Ultraflow™** I/A handpieces and tips are available:

- *Ultraflow™** IT Handpiece and Interchangeable Tips - The *Ultraflow™** IT consists of a handpiece body that accepts interchangeable tips. These tips do not require an adapter or infusion sleeve as they contain a built-in metal infusion sleeve.

- *Ultraflow™** IT Handpiece and Threaded Tip Adapter - Reusable I/A tips with *TurboSonics®* silicone infusion sleeves can be used with the *Ultraflow™** IT handpiece with threaded tip adapter.

- *Ultraflow™** SP Handpiece (Single-Piece with fixed tips) - The *Ultraflow™** SP consists of a single-piece handpiece with irrigation tip, threaded tip adapter, or I/A tip with a built-in metal infusion sleeve. Various tip configurations are available.

WARNINGS!

Use of non-Alcon surgical reusable or disposable I/A handpieces that do not meet Alcon surgical specifications, or use of an Alcon handpiece not specified for use with the *Constellation*® Vision System, may result in a fluidic imbalance. This, in turn, may cause a shallowing or collapsing of the anterior chamber.

Exceeding the recommended level of 100 mmHg with a 0.5 mm or larger I/A tip may cause anterior chamber shallowing and/or incarceration or tearing of the posterior capsule.

I/A tips are not to be used with U/S handpieces.

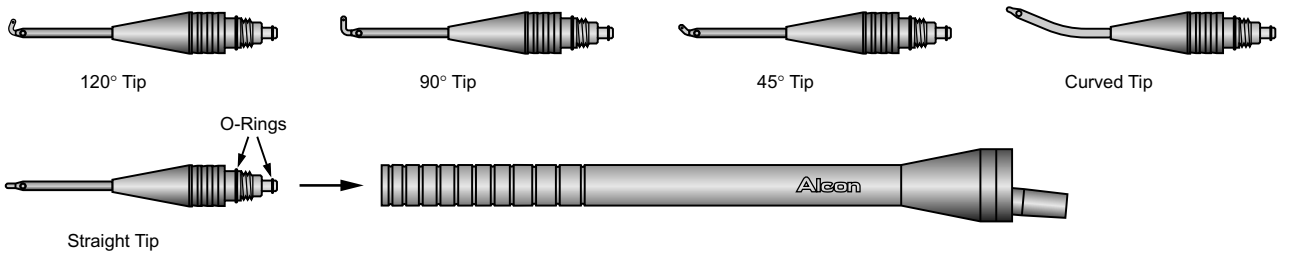


Figure 2-79 ***Ultraflow*™* IT handpiece and tips**

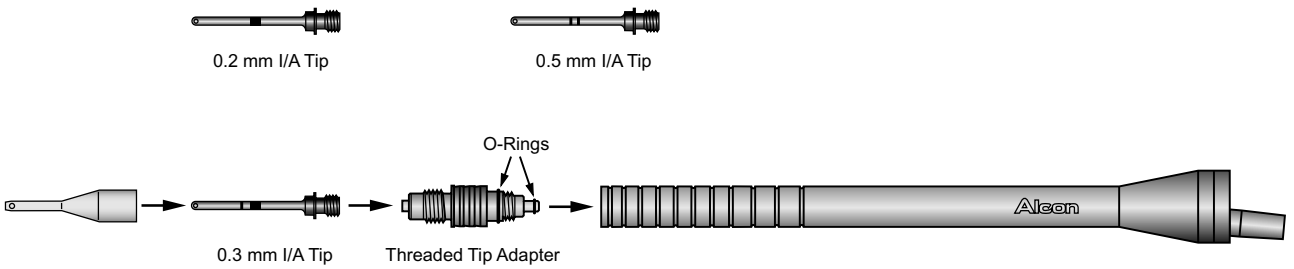


Figure 2-80 ***Ultraflow*™* IT handpiece with infusion sleeve, reusable I/A tip, and threaded tip adapter**

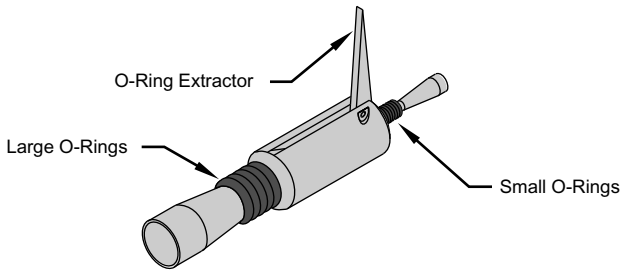


Figure 2-81 ***Ultraflow*™* O-ring tool with large and small O-rings**

Figure 2-82 ***Ultraflow*™* SP handpiece (handpiece shown with .3 mm 45° tip)**

Diathermy/Coagulation Handpieces

Single use Bipolar Coagulation Brushes are available in a wide variety of configurations: straight, curved, 20-gauge, 23-gauge, tapered, and widestroke. All single use bipolar accessories are available with and without cables. Also available are reusable and single-use bipolar cables.

Bipolar Coagulation Forceps are lightweight and ergonomically designed to reduce hand fatigue, as well as to provide precise control and safety. They are available in high-conductive non-stick alloy, titanium, or single-use configurations. They are also available with a wide variety of tip styles.

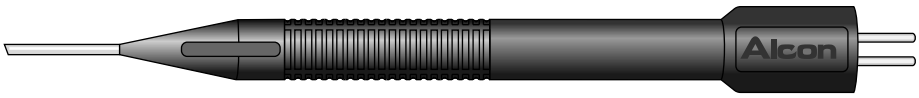


Figure 2-83 Single use bipolar brush