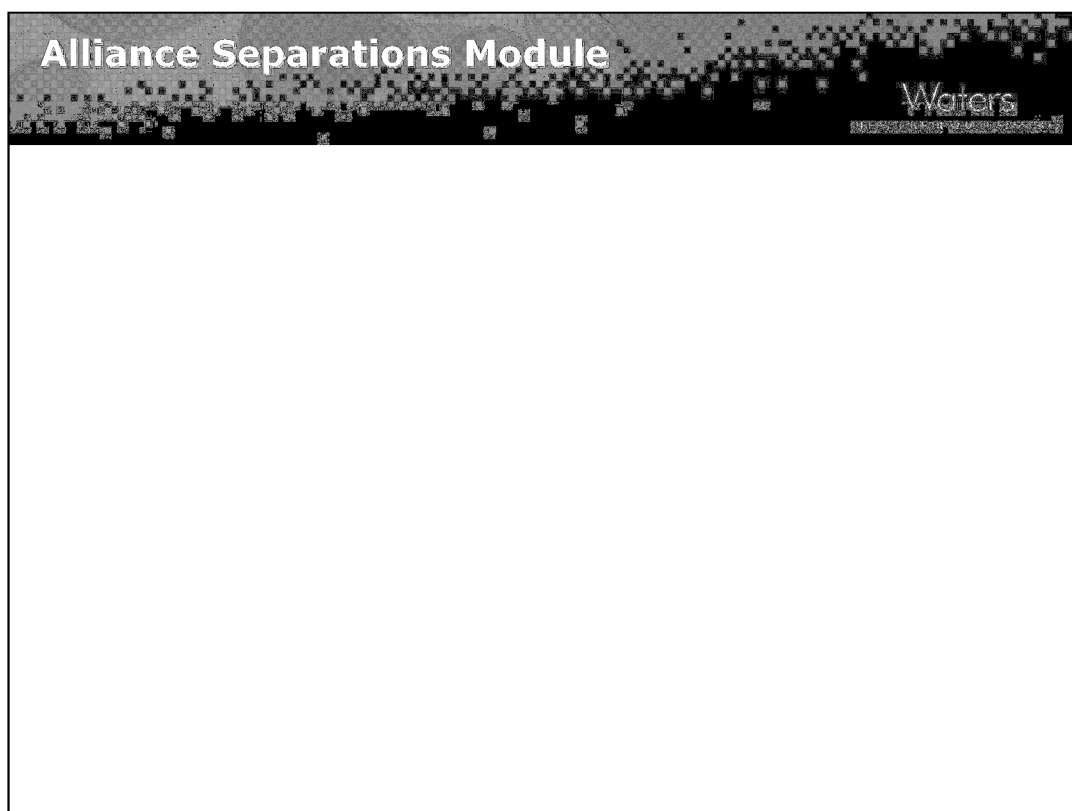
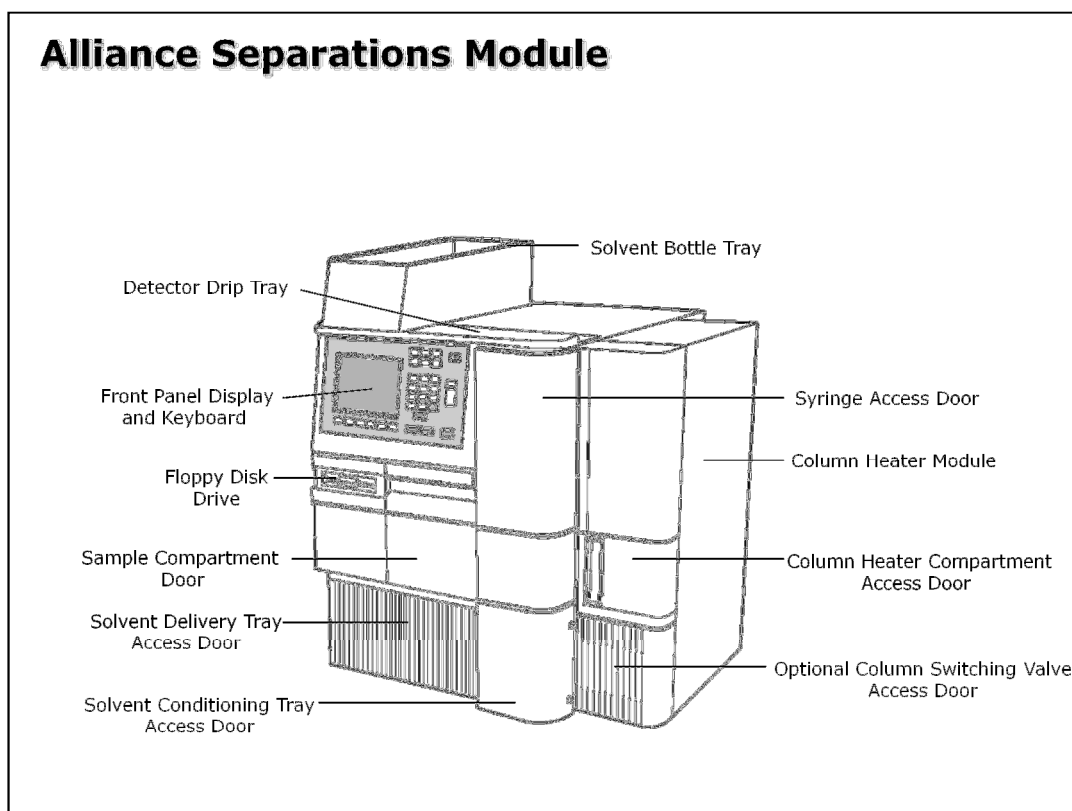
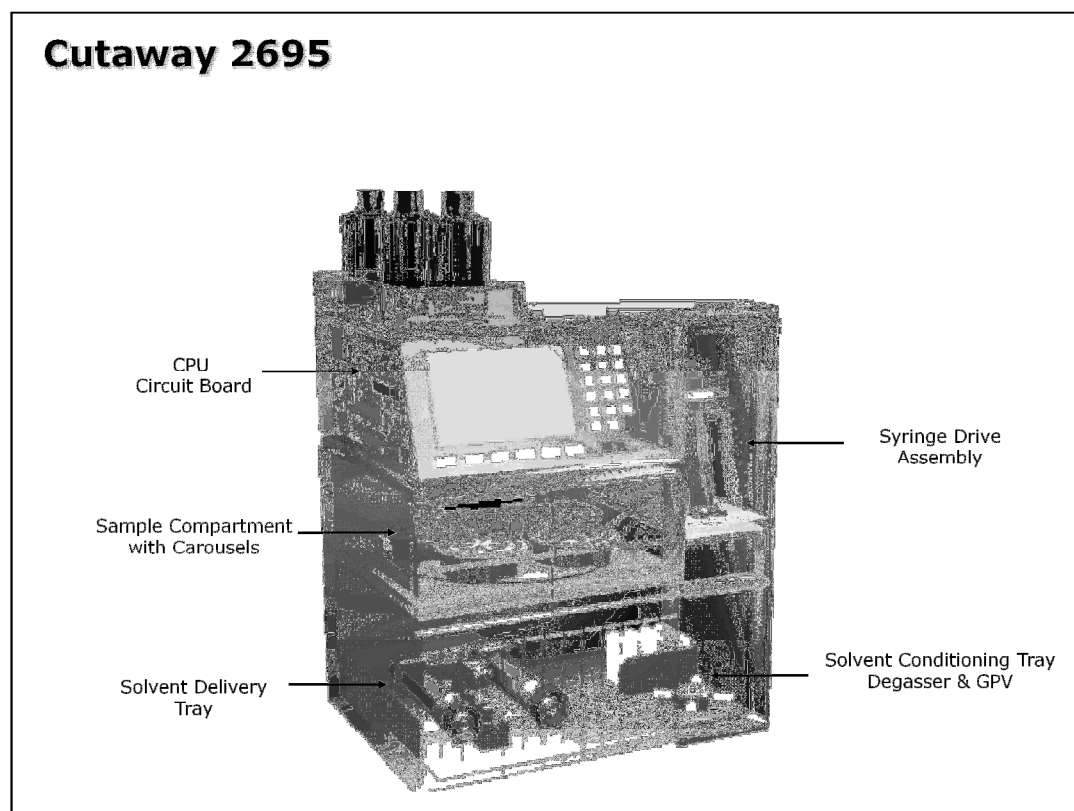






- This course introduces you to the Waters™ 2695 Separations Module.
- The Separations Module is an integrated solvent and sample management platform.
- The two primary configurations are as follows:
 - 2695 - Provides quaternary solvent, high performance solvent delivery, a four-channel in-line vacuum degasser, a sample heater/cooler, and an integral plunger seal-wash system, 120-vial capacity sample management system, liquid crystal display and keyboard user interface and floppy disk drive.



- Cut away view of the 2695 showing the location of various assemblies.

Options

- Sample heater / cooler
- Column heater
- Column heater / cooler
- Column switching valves
- Barcode reader

- Sample heater / cooler - can maintain sample compartment at temperatures from 4 °C to 40 °C.
- Type I Column heater - can maintain column temperature from 5 °C above ambient temperature (minimum 20 °C) to 60 °C.
- Type II Column heater - can maintain column temperature from 5 °C above ambient temperature to 65 °C.
- Column heater / cooler – can maintain column temperature from 4 °C to 65 °C
- Column switching valves - a motorized valve that allows flow to be switched to one of several columns, 4 types available

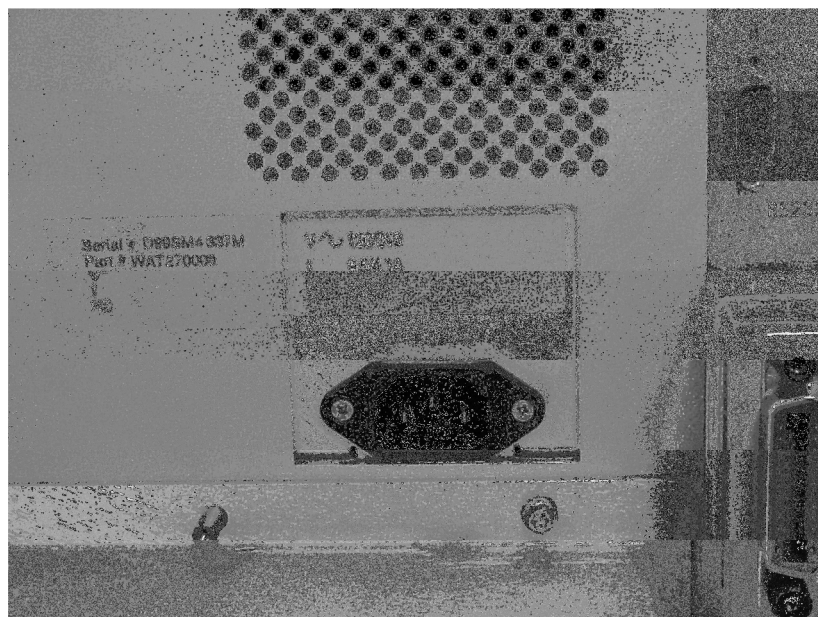
Description	Software Detection	Controlled by
2 Column (6port, 2 position)	No	I/O
3 Column	Yes	2695 Software
6 Column	Yes	2695 Software
2 Column – Regeneration	Yes	2695 Software

- Barcode reader - can read bar code 128C labels attached to the vial

Waters

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Power Connection



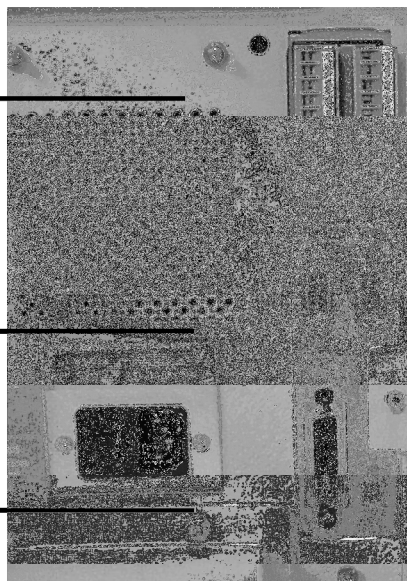
- The Alliance Separations Module uses a switching power supply, it senses whether it is connected to 120 V or 240 V and configures itself automatically.
- The power supply is short circuit protected and does not have external replacement fuses. The power supply is reset by power cycling the instrument.
- See Making Power Connections, in the Operator's Guide.

Signal Connections

- Analog I/O

- RS-232

- IEEE-488



- Analog I/O - Input; stop flow, hold inject and output; inject start, chart out, 4 switches, run stop.
- RS-232 - Two ports:
 - A connects to a Waters 746 Data Module or serial printer.
 - B connects to a non Waters or non-Micromass data system to control the Separations Module.
- IEEE-488 - Connects to a Waters detector (PDA, 2487, 486, 410 or 2410), Millennium or Empower data station, or Micromass MassLynx computer.
- See Digital Signal Connections, in the Operator's Guide

2690 / 2695 I/O Connections

2690 I/O CONNECTIONS			
Function	B	A	Function
Hold Inject 1 (In)	6	6	Switch 1 (Out)
Hold Inject 2 (In)	7	7	Switch 2 (Out)
Hold Inject 2+ (In)	8	8	Switch 4 (Out)
Hold Inject 2- (In)	9	9	Switch 4 (Out)

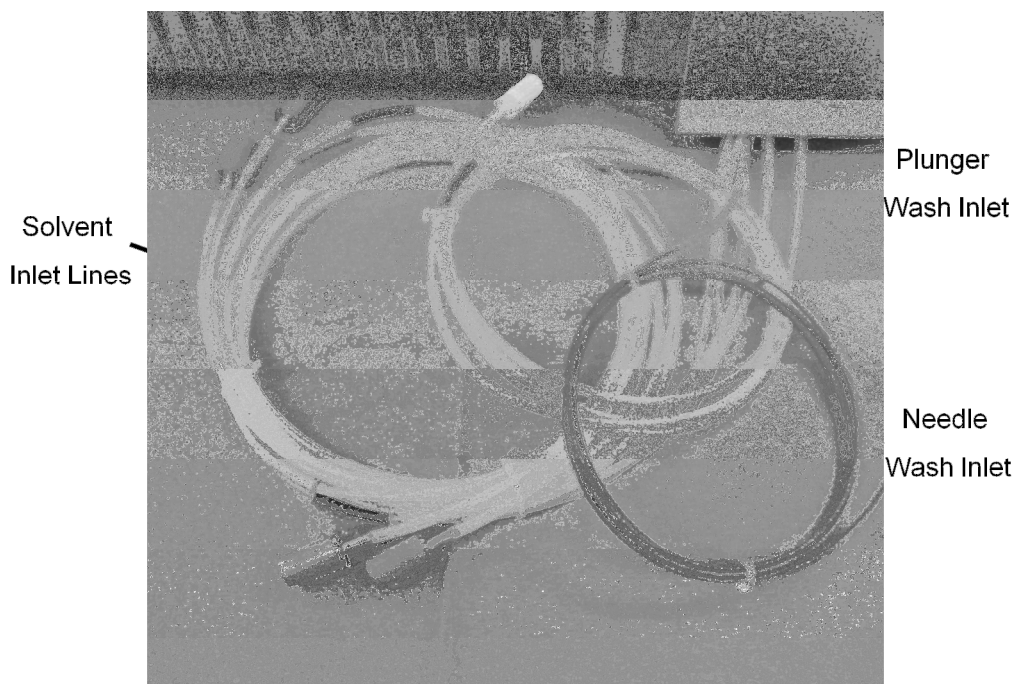
- The Analog Input / Output connections are the same on all the Alliance Separations Modules.
- See I/O Signal Connections, in the Operator's Guide.

Fluid Lines

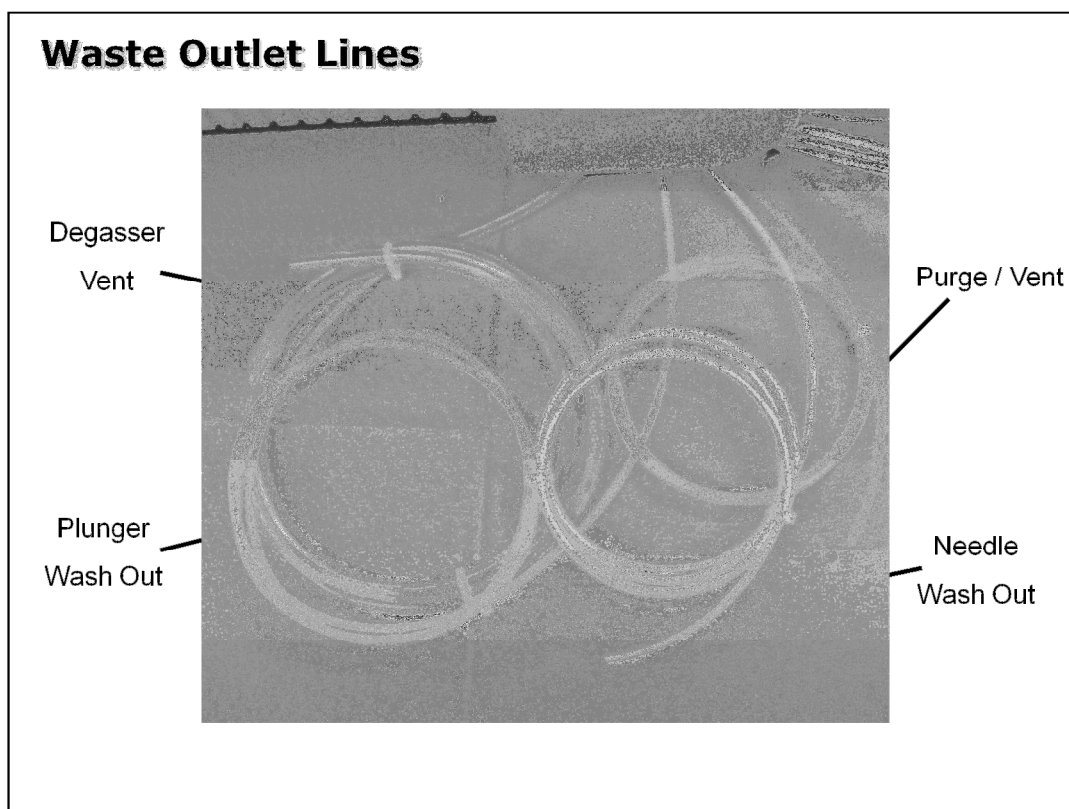
- Fluid Inlet lines
 - Solvents
 - Plunger (seal) wash
 - Needle wash
- Fluid Outflow lines
 - Purge/waste (from valve 3)
 - Needle wash
 - Plunger (seal) wash
 - Degasser vent

- See Making Fluid Connections, in the Operator's Guide.

Fluids Inlet Lines



- Solvent Lines: clear 1/8 inch OD tubing with stainless steel sinker/filter
 - Yellow Tag = Solvent A
 - Blue Tag = Solvent B
 - Red Tag = Solvent C
 - Green Tag = Solvent D
- Plunger Wash: clear 1/8 inch OD tubing
 - Green Tag with plastic sinker/filter
- Needle Wash: Green 1/16 inch OD tubing
- See Making Fluid Connections, in the Operator's Guide.



- Degasser Vent: Clear 1/4 inch OD
- Plunger Wash: Clear 1/8 inch OD
- Purge / Vent: Clear 1/16 inch OD
- Needle Wash: Yellow 1/16 inch OD
- See Making Fluid Connections, in the Operator's Guide.

Fluid Connection, to Column

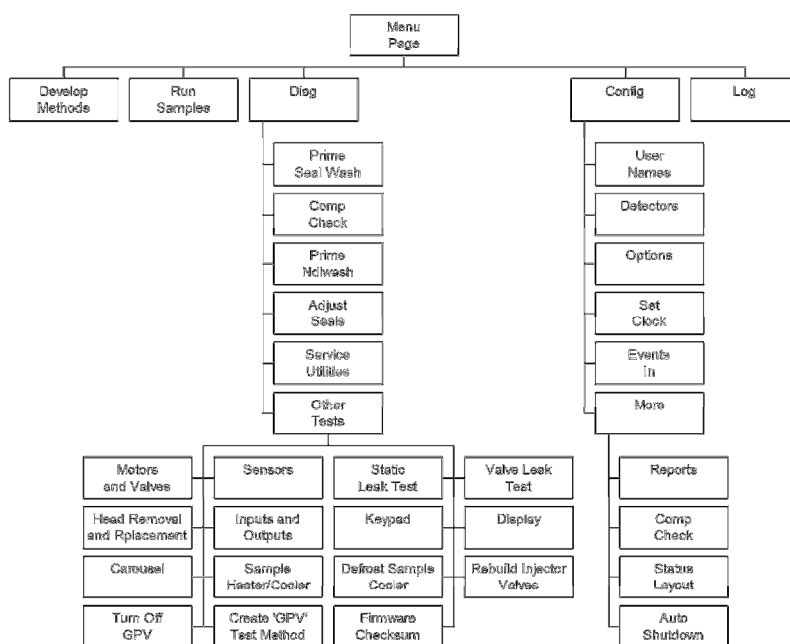
- Outlet to Column: 1/16 inch, OD, 0.009 inch ID stainless steel, Red Tag
- See Making Fluid Connections, in the Operator's Guide.

Start-up Diagnostics

CPU	OK	DISPLAY	OK	DSP	OK
ROM	OK	DMA	OK	FLOPPY	OK
RAM	OK	GPIB	OK	CLOCK	OK
KEYPAD	OK	FLASH	OK		

- When the Alliance Separations module is powered ON, several diagnostic routines are performed. Once these electronic tests are complete, the front panel screen displays the results.

2695 Menu Page Flow Chart



2695 Status Page Flow Chart