

20L G3X-R

Benchtop Short Path
Distillation System



LAB SOCIETY®

By **AGRIFY™**



20L G3X-R

Upgrade kit \$9,000

Stand-alone starting at \$24,475

Turnkey starting at \$41,400



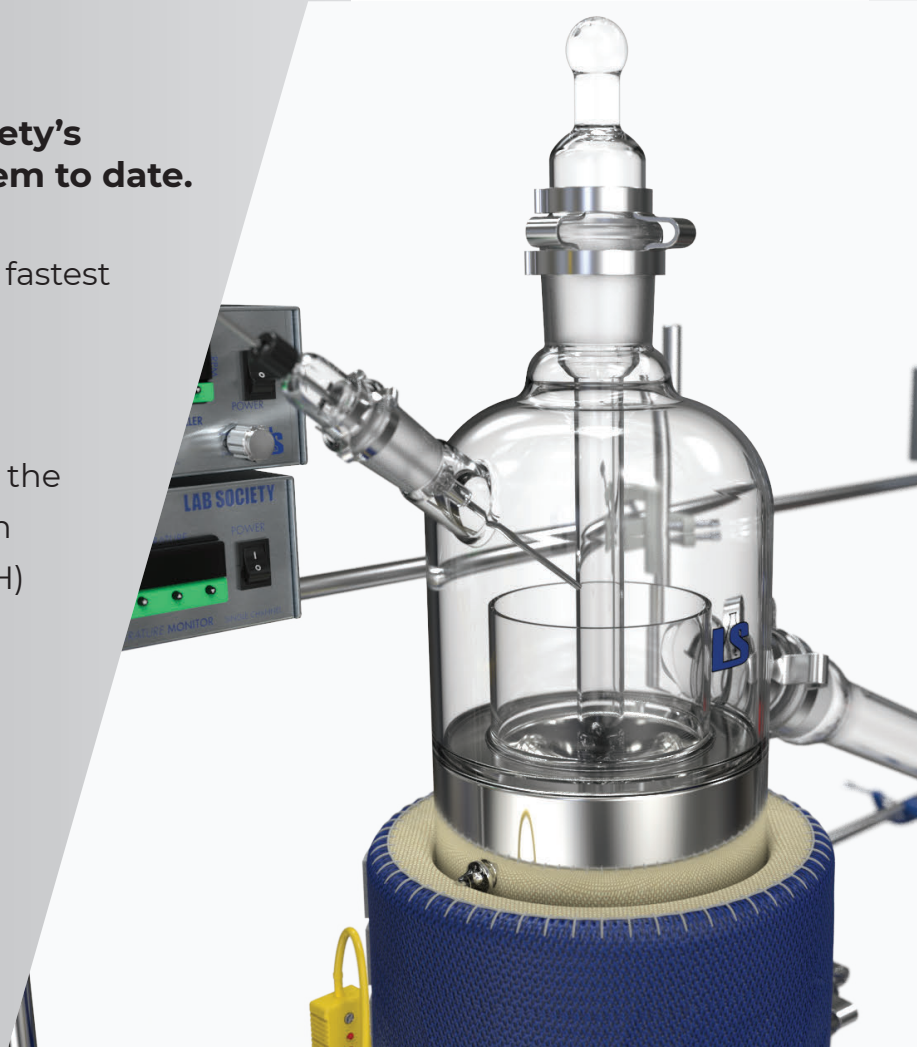
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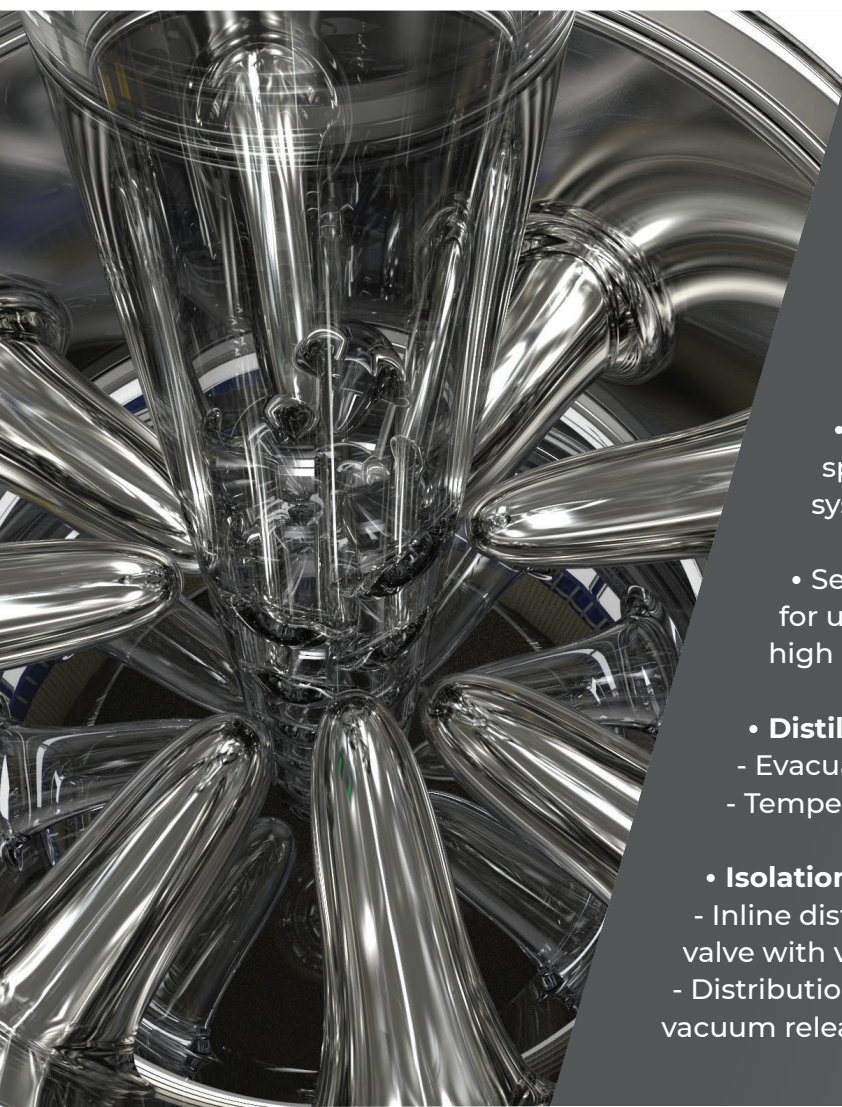
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The 20L G3X-R system is Lab Society's fastest benchtop distillation system to date. Featuring a 150mm reactor flanged distillation head with a 100mm-wide fractionating column, this system has the ability to perform sustained distillation speeds of up to 4.5 liters per hour (LPH) discharge during the main body fraction. The distillation head, DH-150HE is built upon Lab Society's patented high-efficiency distillation head technology.



G3X-R Features + Contents

- 150mm Reactor Flange distillation head (LS-DH-150HE) with 100mm distillation column
- All improvements and features from G3 series (see labsociety.com for full list)
- Fiberglass Insulator to retain radiant heat in space between silvered jacket and heating mantle system
- Secondary Cold Finger Condenser (LS-A90-VC45) for use with jacketless condenser, hot condenser, or high efficiency fraction collection within the system
- **Distillation head inserts (2):**
 - Evacuated, Vigreux-Indented Insert
 - Temperature-Controllable Fluid-Filled Finger Insert
- **Isolation Valves:**
 - Inline distribution adapter (swing arm/primary collection) valve with vacuum release for unlimited fraction collection
 - Distribution receiver (secondary collection) valve with vacuum release for unlimited fraction collection



Distillation Head Inserts

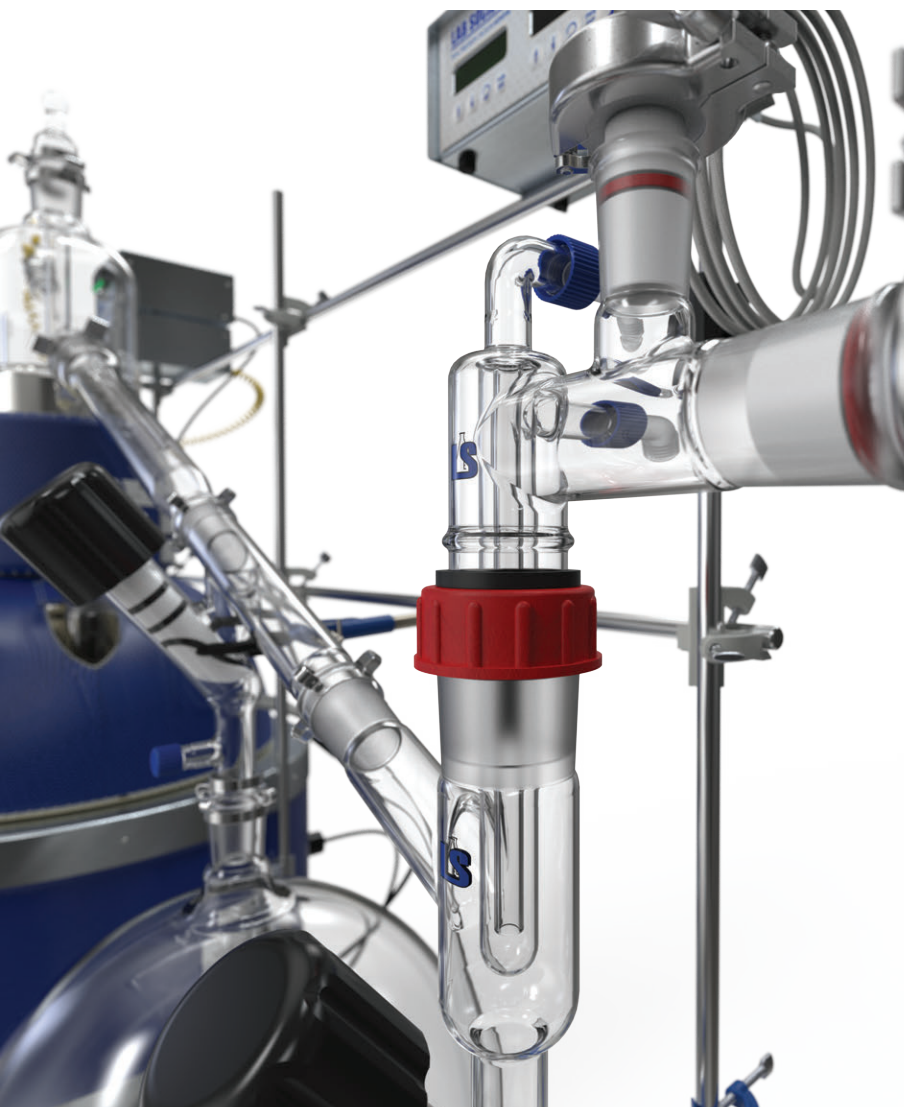
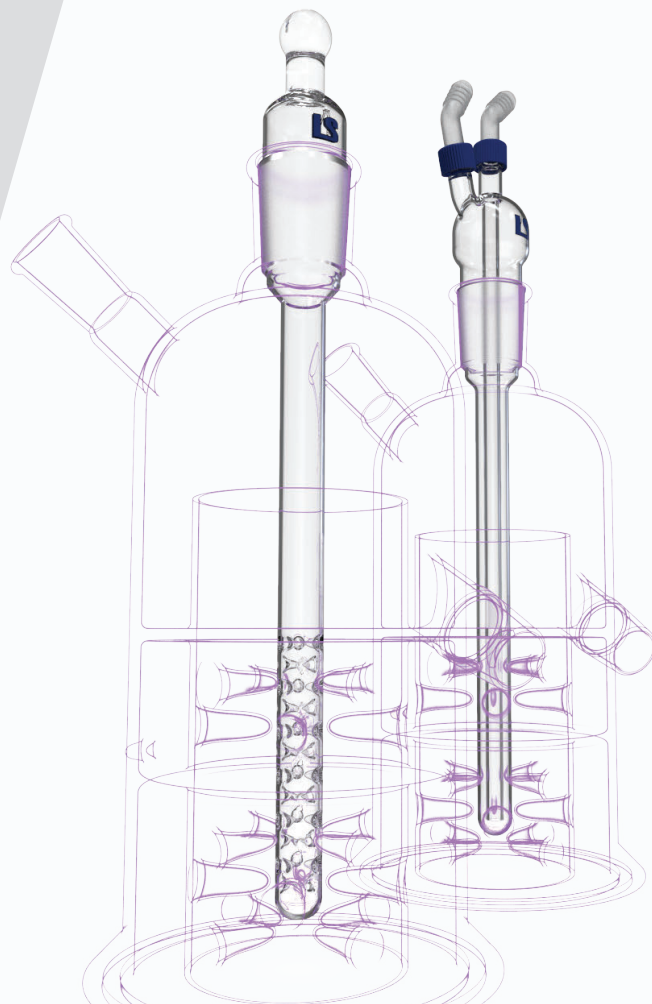
The G3X-R distillation head has a 45/50 joint placed directly above the vapor path. This gives users the ability to use different inserts which may extend into the distillation column to alter reflux ratios to aid in separation of compounds during distillation.

Evacuated, Vigreux-Indented Insert:

- Provides exceptional increase in surface area
- Minimizes heat transfer loss while increasing reflux ratio
- Increases separation of close boiling-point compounds

Fluid-Filled Finger Insert:

- Temperature controllable via external circulator (sold separately)
- Gives user ability to control condensate rejection via temperature
- Can be utilized to distill an array of compounds



G3X Platform + High Throughput Reactor-Flange Head

Fast distillation speeds require large receiving flasks - or the ability to switch collection flasks during live operation.

- Valve discharge points give users ability to have unlimited receiving capacity
- Ability to use smaller flasks to avoid having large, difficult-to-maneuver flasks
- Efficiency via jacketless condenser, which utilizes vapor temperature to heat condenser instead of circulator
- Primary/secondary condensing setups via liquid-cooled secondary condenser

SYSTEM SPECIFICATIONS

- **BATCH CAPACITY: 10,000mL**
(approx. 10,000g dewaxed oil)
- **OPTIMUM CAPACITY: 7,000 - 9,000mL**
- **ABSOLUTE MAX. CAPACITY: 12,000mL**
(approx. 12,000g dewaxed oil)
- **MAIN BODY FRACTION FLOW RATE:**
2,000 - 4,500g/hour
- **BATCH DURATION: 4-10 Hours**
(Estimated - batch durations are dependent upon primary extraction method, pre-processing methodology and material composition.)
- **BENCHTOP SIZE: 45" x 27" x 42"**
(not including pump/trap/circulator)
- **DISTILLATION HEAD: DH-150HE**
- **AMERICAN-MADE GLASSWARE AND CONTROLLERS**

OPTIONAL ADD ONS

- Discharge Pump Kit (DPK)
- Modular Condenser Kit (MCK)
- Hot Condenser Mantle Kit (HCK)

SYSTEM REQUIREMENTS AND ACCESSORIES

- **VACUUM PUMP:**
 - Pair with: LS-RV-18, LS-RV-25, LS-RV-36, LS-RV-50, CRVpro16 (3161-01), CRVpro24 (3241-01), CRVpro30 (3301-01)
 - Optimal Ultimate Pressure Rating: 20 Micron
 - Free Air Displacement: min. 5 cfm. / Max. 50 cfm
- **VACUUM/COLD TRAP:**
 - Mechanical Cold Trap: T80 with Stainless Steel Cold Trap Insert or MAXTRAP 105
- **LIQUID CIRCULATOR:**
 - Pair with: MX07R, SD07R, AD07R, Kiss K-6, CD-200F
 - Chiller Temp. Requirement: 32°F, 0°C or below



EliteLab Compatibility

- **TCM** (Temperature Controller/Monitor)
- **DTM-1** (Digital Temperature Monitor)
- **PVM-2** (Precision Vacuum Monitor - Dual)
- **DSC-1** (Digital Stir Controller)

SYSTEM AND ELECTRICAL PARAMETERS

- **HEATING MANTLE**
 - 1750w, 120V, 15.2 amps / EU 1750w, 230V, 7.7 amp
 - Max. System Temperature: 260°C (PTFE/PFA temp. limit)
- **STIRRING MOTOR**
 - 110 - 240V, 50/60 Hz, 2 amp
 - Speed Range: 100-1850 rpm
- **VACUUM MONITORING**
 - 100 - 240V, 50/60 Hz, 0.3 amp
 - Range: 1 mTorr - 760 Torr
- **TEMPERATURE MONITORING**
 - 100-240V, 50/60 Hz, 1 amp

CERTIFICATIONS

- **Complete System:** Peer-Reviewed, GMP Compliant
- **Heating Mantles:** CSA
 - CAN/CSA C284101, C22.2 No. 88
- **Temperature Controller:** NRTL, QPS, CE, Constructed with 100% UL and CSA listed parts.
 - UL 61010-1; 61010-2-201
 - CAN/CSA 61010-1, C22.2
- **Temperature Monitor:** CE, Constructed with 100% UL and CSA listed parts.
- **Stir Controller:** CE, Constructed with 100% UL and CSA listed parts.
- **Vacuum Monitor RoHS / CE / NRTL**
- **Glassware:** Meets ASTM specification E438, type 1, class A, Kimble Kimax or Schott Duran Glass

WHAT'S IN THE BOX

- Documentation & SOPs for GMP integration
 - Electronic controllers & monitors
 - Glassware, supports, & clamps
 - Technical Support & Warranties
- G3X-R also includes:**
- LS Evacuated, Structured Head Insert
 - LS Cold Finger Head Insert
 - LS Fiberglass Insulator for Distillation Head
 - LS Jacketless Condenser
 - LS 90° Adapter with Vertical Condenser
 - LS Swing Arm with Angled Take-Off Valve
 - LS Distribution Adapter with Angled Take-Off Valve

All Benchtop Kit purchases come with a 1 year license (\$299.99 Value). Now available on macOS, Windows 10+, and Linux.

Learn more at labsociety.com/elitelab