

B/R 9600 Steel Fractional Distillation Systems

**Fractional Distillation
for the Laboratory
and Industry**



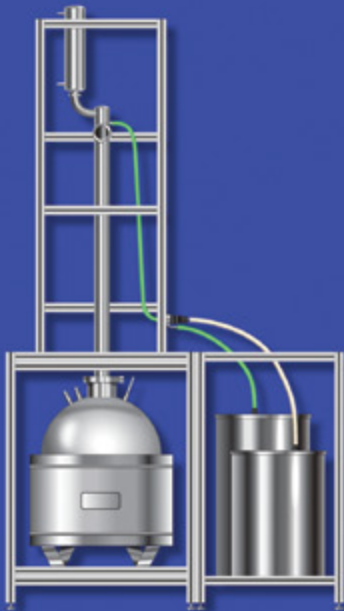
9600 Steel Fractional Distillation Systems



Steel distillation systems are:

- **Rugged:** Tough steel construction is nearly impossible to damage. Steel won't crack or suffer thermal stress like glass. A steel fractional distillation system is ideal for industrial environments and large boiler volumes.
- **Safe:** A thick wall of steel safely contains the distillation process. The entire distillation process is safe inside the steel distillation system.
- **Efficient:** The standard configuration is a 15 theoretical plate distillation column capable of producing high purity results. Distillation columns can be stacked to give 30 or 45 theoretical plates.

Boiler Styles



Spherical Boiler

Empty with "Dip Tube"

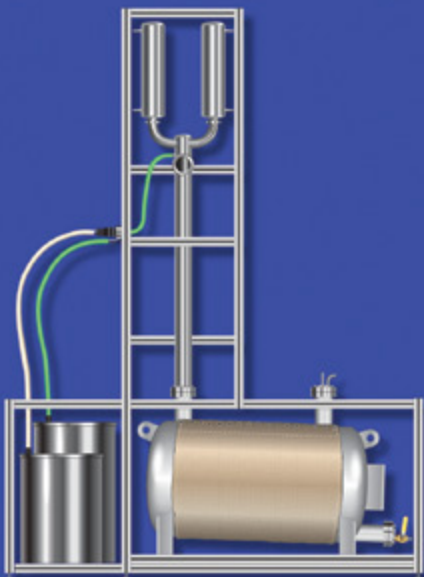
- Economical
- Minimum Height
- Optional Magnetic Stirring from bottom
- Available up to 100 liter boiler size



Spherical Boiler

Bottom Drain Valve

- Easy to Empty (bottom drain valve)
- Optional Overhead Stirrer
- Available up to 500 liter boiler size



Cylindrical Boiler

Slightly Angled with Drain at Bottom

- Easy to Empty (drain at lowest point)
- Optional Overhead Stirrer
- Available up to 2000 liter boiler size

9600 Steel Fractional Distillation Features

Feature	Specification	Benefit
Distillation Column Diameters	15, 25, 36, 50, 70, 100, 150, 250 mm	Large Diameter Provides Maximum Throughput
Maximum Theoretical Plates	Standard Columns are 15 Plates. 2 or 3 Columns can be Stacked for Higher Efficiency	High Efficiency Separation Combined with High Throughput
Distillation Column Jacket	Distillation Columns are Insulated Heated Column Jackets are Available	Minimizes Heat Loss from Distillation Column Heated Jackets Provide Further Heat Loss Prevention
Condenser	Inner Coil and Outer Jacket	High Surface Area for Efficient Condensing
Secondary Condenser	Cools Distillate Further Before Going to Receiver	Distillate in Receiver is Close to Room Temperature
Boiler Heater	Electrical	Clean, Safe Heating of Boiler
Boiler Sizes	1, 2, 3, 5, 12, 22, 50, 72, 100, 200, 300, 500, 1000, 2000 liters	Available in Stainless Steel in all Sizes Available in Glass up to 50 liters
Receivers	Various Sizes and Styles Available	Choose the Size and Style that fits your needs
Column Packing Types	Propak, Helipak, Wiremesh, Raschig Rings, Structured Packing and More	Select the Packing Type that is Best for your Application
Options	Boiler Sterring Spherical or Cylindrical Boiler Viewing Windows	Promotes Even Boiling and Gentle Heat Transfer Choose the Shape that Fits Your Needs Add Viewing Windows to the Boiler, Column or Receivers
Fraction Collector	Standard 2 Place Optional 4 Place and 8 Place	Automatically Collect Fractions According to Vapor Temperature
Vacuum Operation	Optional Vacuum System <ul style="list-style-type: none"> • 100-1 mmHg Range • Other Ranges Available 	Automatic Control of Vacuum Level. Vacuum Reduces Boiling Points. Ideal for Thermally Sensitive Samples or High Boiling Materials
Automatic Controller	Provides Automatic Control of the Entire Distillation Process	Start the Distillation and Walk Away
PC	Optional Control From PC	Perform a Distillation from a PC. Analyze Distillation Results using our "Data View" Program.
Safety Marks	CE Marked CTICK (Australia/NZ)	Safe for Laboratory and Industrial Use
Utilities Required	Cooling Water or Circulating Bath Electrical Power	For Condenser 240/220 VAC 50/60Hz

Improve Performance with these Options



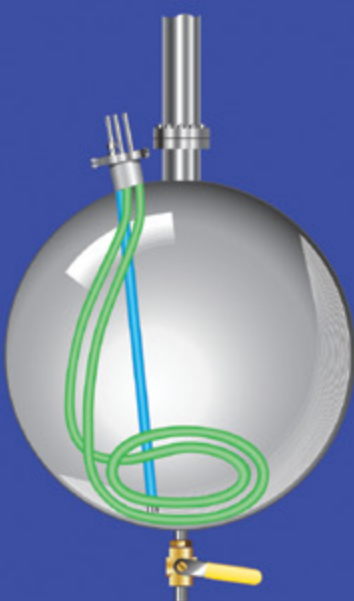
View Windows

Add viewing windows to the column, boiler, receiver to see what is happening inside.



Stirring

Add overhead stirrers to any boiling flask for better heat transfer and a smoother distillation.



Quench Coil

A quench coil allows quick cooling of the boiler contents at the end of the distillation. Compressed air or water can be circulated through the coil to cool the boiler residue quickly. Saves time.

Distillation Column Efficiency

**Standard
15 Plate
Distillation
Column**



**45 Plate
Distillation
Column
(three
15 plate
sections)**



Distillation Column Efficiency

Standard distillation columns are 15 theoretical plates. This is enough efficiency for most separations. If more efficiency is needed, columns can be stacked to give 30 or even 45 theoretical plates. Standard Distillation column packing is Pro-pak.



B/R Instrument Corporation

B/R Instrument was founded in 1966 by Roger Roark, Sr. and Harry Brown, Jr. The name B/R comes from the first letter of each founder's last name, **B**rown and **R**oark – **BR**. Originally a manufacturer of general glassware, the company began to specialize in the manufacture of spinning band distillation systems in 1968 under a DuPont patent. Since then the company has grown steadily in the distillation and laboratory equipment markets and now distributes products to customers throughout the world.

Located in Easton, Maryland on the beautiful Eastern Shore of the Chesapeake Bay, the B/R facility encompasses 14,700 square feet (1,370 square meters) and houses manufacturing, sales, engineering, service and administrative divisions.



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Glass Distillation Systems

B/R has a full line of distillation systems made of glass. Glass distillation systems are well suited for smaller boiling flask sizes and distilling corrosive materials.

Choose from:

- Packed column or spinning band distillation columns
- 10ml to 50 liter boiling flask sizes
- A variety of optional fraction collectors, receivers, cooling baths and other options.