

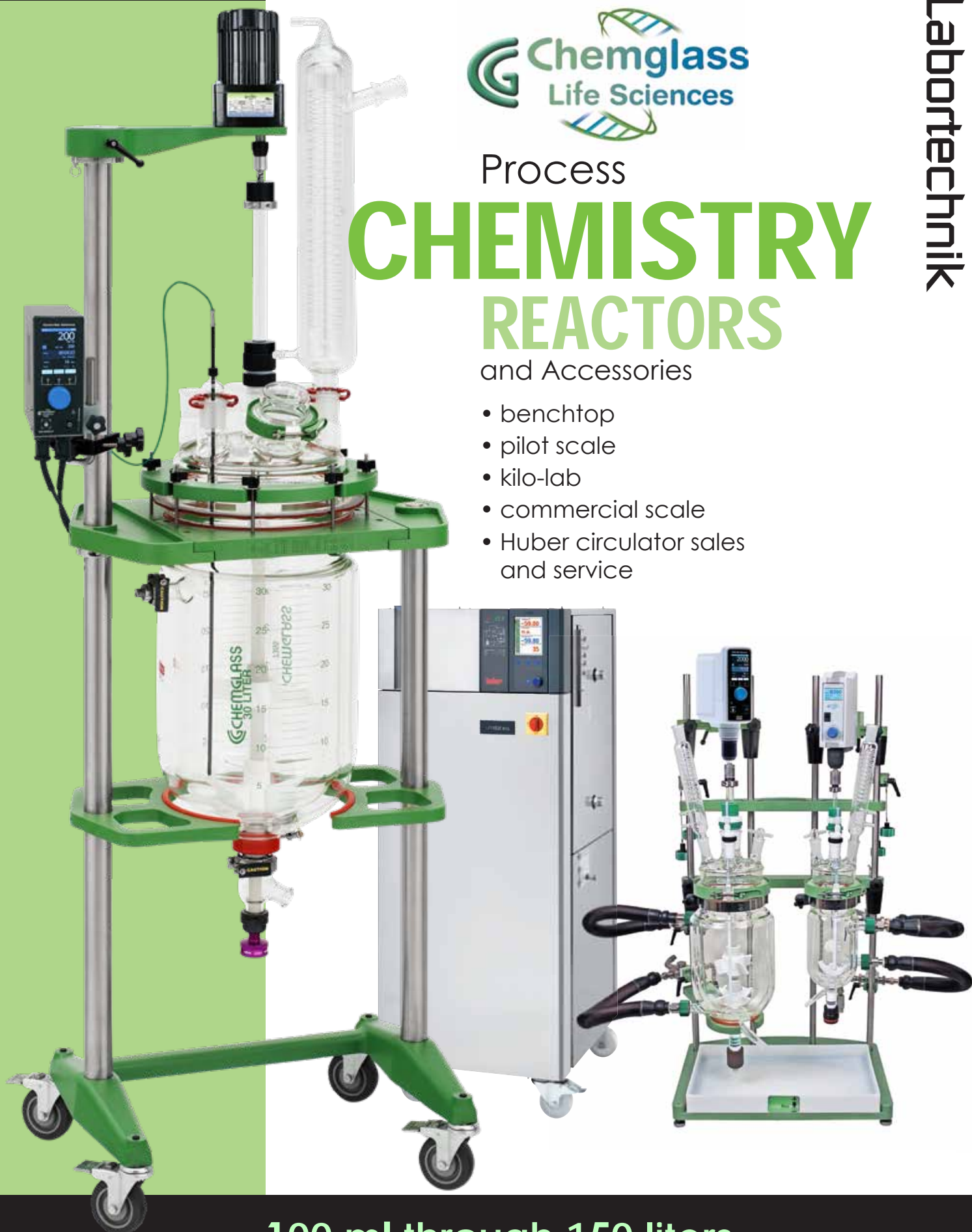


Process

CHEMISTRY REACTORS

and Accessories

- benchtop
- pilot scale
- kilo-lab
- commercial scale
- Huber circulator sales and service

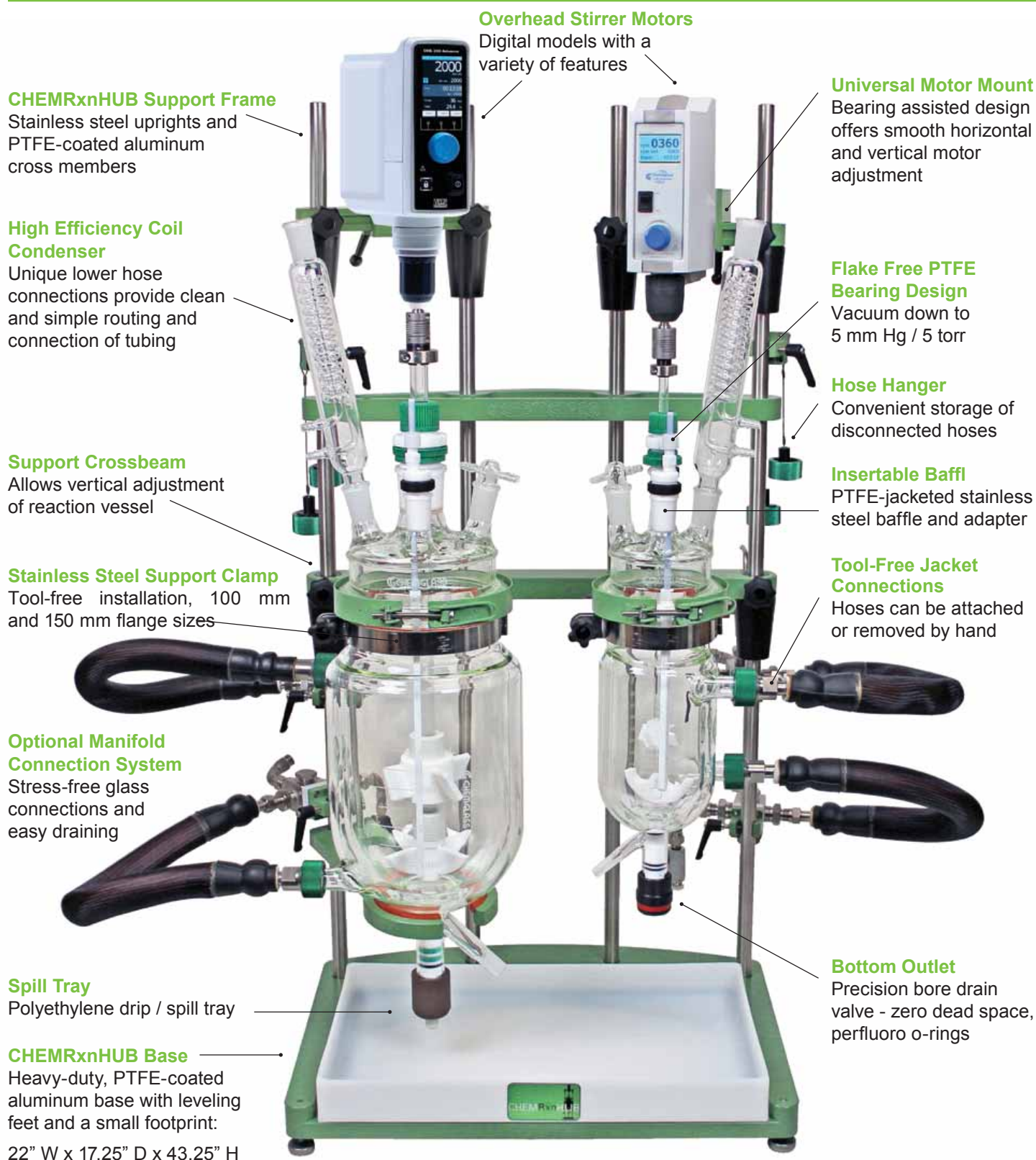


100 ml through 150 liters

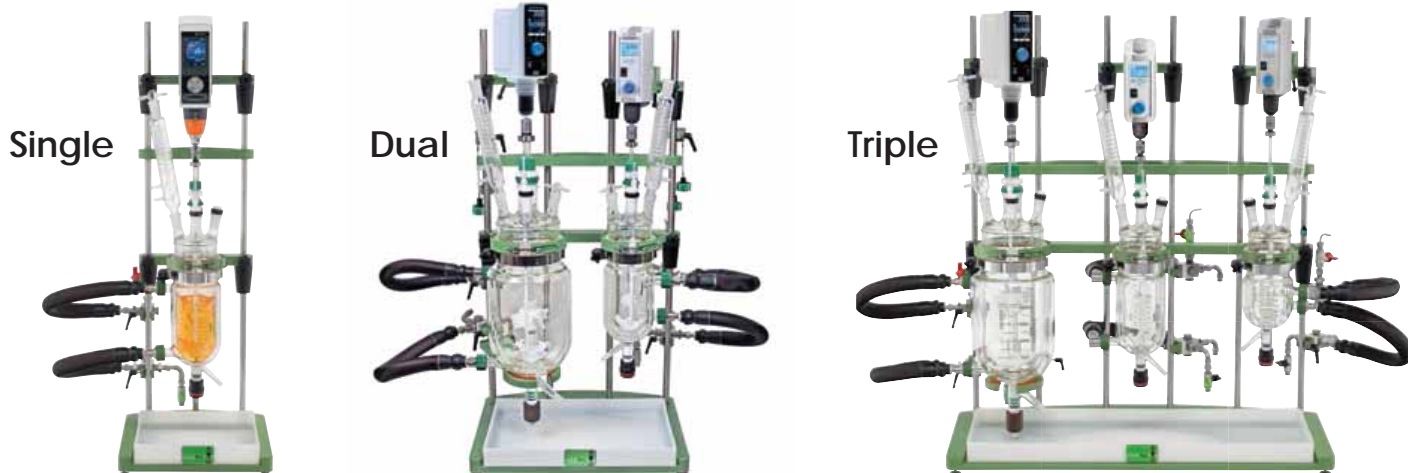


Benchtop Reactor Systems

- Jacketed borosilicate glass vessels from 300 ml to 5 liters
- Your choice of overhead stirrer motors
- Tool-free jacket connections
- Optional manifold connections for easy draining



Single, Dual and Triple Vessel, Benchtop Process Reactor Systems



Complete ChemRxnHub™ Systems with Tool-Free Jacket Connections

ChemRxnHub single, dual and triple reactor system workstations in **300 ml to 5 liter configurations**. Great for those who need complete, off-the-shelf systems that are quick to assemble, easy to operate and low on maintenance.

The unique design of the ChemRxnHub support stand and clamping system allows for **easy installation and removal of glassware**. These workstations also fit into most benchtop hoods.

The ChemRxnHub series of benchtop reactors is comprehensive, making it easy for you to get the vessel size and accessories you need.

Each system includes benchtop stand, overhead stirrer and glassware. Optional manifold connection and heat transfer fluid draining systems are available.

Contact our distributor for a **FREE quote**

Dunn Labortechnik GmbH

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CHEMRxnHUB
YOUR **R_x** FOR PROCESS CHEMISTRY



Unique clamp and support system provides simple installation and quick change-out.



Tool-free jacket fittings with hose hanger. Optional manifold system shown.

Borosilicate Glass Process Reactor Vessels from 10 to 150 liters

- Your choice of overhead stirrer motors - electric or air
- Optional components and custom systems
- Complete reactor and circulator packages

Our Glass Vessels

Unless otherwise noted, glass components are manufactured exclusively from Type I, Class A borosilicate glass meeting ASTM Specification E438. This glass type is used because of its **exceptional chemical and heat resistance**.

Open Frame Design

User-friendly support frames are designed with our “**open frame**” approach to **maximize user accessibility**. Frame components include PTFE-coated aluminum bases, cross supports and fittings combined with stainless steel uprights for the optimal level of strength and durability.

Common Usage

Chemglass process reactors are commonly used for chemical synthesis, process development, workup, filtration, purification, evaporation, stirring, dissolving, mixing, and extracting operations across a host of scientific disciplines. Our glass process reactor vessels range in size from **10 through 150 liters**; everything from pilot scale and kilo-lab to commercial scale production.

Affordable Custom Glass Reactor Systems

Designs, using a combination of custom and standard components, are **routinely designed in collaboration with our customers**. Whether you need a pre-configured benchtop workstation or a one-of-a-kind, custom chemical process reactor, specify Chemglass to be the catalyst for your next reactor.

Questions? Contact our distributor.

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Innovative Frame Design Provides Excellent Flexibility

10 and 20 liters Systems

Open Air, Auto-Center Stands for Ease and Accessibility

Auto-centering motor mount (brushless DC electric, air and explosion-proof motors available)

5-neck lid with large powder addition port

Optional Manifold



SS inlet / outlet adapters, available in M16 x 1 and M30 x 1.5, allow connection to cooling / heating circulator



Zero dead space, detachable drain valve with laser-etched directional arrows for open and close

Support frame with oversized, rugged SS uprights and heavy-duty, PTFE-coated aluminum fittings

Digital temperature monitor

Electric and XP motors have separate controllers with digital displays

Improved support clamp auto-centers reactor and lid allowing quick installation and removal of reactor

Perfluoro o-rings on 60 mm and 200 mm flanges

Reactor jacket graduation scale on both sides

Removable support used for side shelf and manifold

Lower support plate and PTFE ring have a v-shaped opening allowing an unobstructed view of bottom valve

Support bushings for optional safety shield

Heavy-duty, lockable casters



Smaller Footprint Saves Floor Space

30 and 50 liters Systems

300 mm Flange

Motor mount arm can unlock and swing out giving greater access to the reactor

Temperature monitor with digital display

Electric and XP motors have separate controllers with digital displays

Smaller footprint support frame with oversized, rugged, SS uprights and heavy-duty, PTFE-coated aluminum fittings

SS inlet / outlet adapters, available in M16 X 1 and M30 X 1.5, allow connection to cooling / heating circulator

Optional Manifold



Auto-centering motor mount (brushless DC electric, air and explosion-proof motors available)

Open frame design provides excellent accessibility

7-neck lid with large powder addition port

Removable plug allows motor mount arm to be installed on the right or the left

Reactor support plate holds reactor securely and allows easy installation / removal of reactor by one person

Reactor jacket graduation scale on both sides

Lower safety ring

2" beaded pipe drain



Zero dead space, detachable drain valve with laser-etched directional arrows for open and close

Heavy-duty, lockable casters

50 to 100 liters "Squatty" and 150 liters Systems with 400 mm Flanges

50, 100 l "Squatty" and 150 l Systems

400 mm for Better Interior Access

Brushless DC electric, air and explosion-proof motors available

Auto-centering motor mount arm can unlock and swing out giving greater access to reactor

Digital temperature monitor

Electric and XP motors have separate controllers with digital displays

Open frame design provides excellent accessibility

400mm Better Access!

High Flow Manifold Included with 100 l and 150 l System (Optional on 50 l Squatty Systems)

M30 x 1.5 circulator fittings and insulated hoses, -60 to +200°C

Smaller footprint support frame with oversized, rugged, SS uprights and heavy-duty, PTFE-coated aluminum fittings

Heavy-duty, lockable casters

Reactor jacket graduation scale on both sides

Safety shield on all four sides

Lower safety ring

3-inch Pipe Drain

Larger 3" beaded pipe drain with larger radial clearance

Zero dead space, detachable drain valve with laser-etched directional arrows for open and close

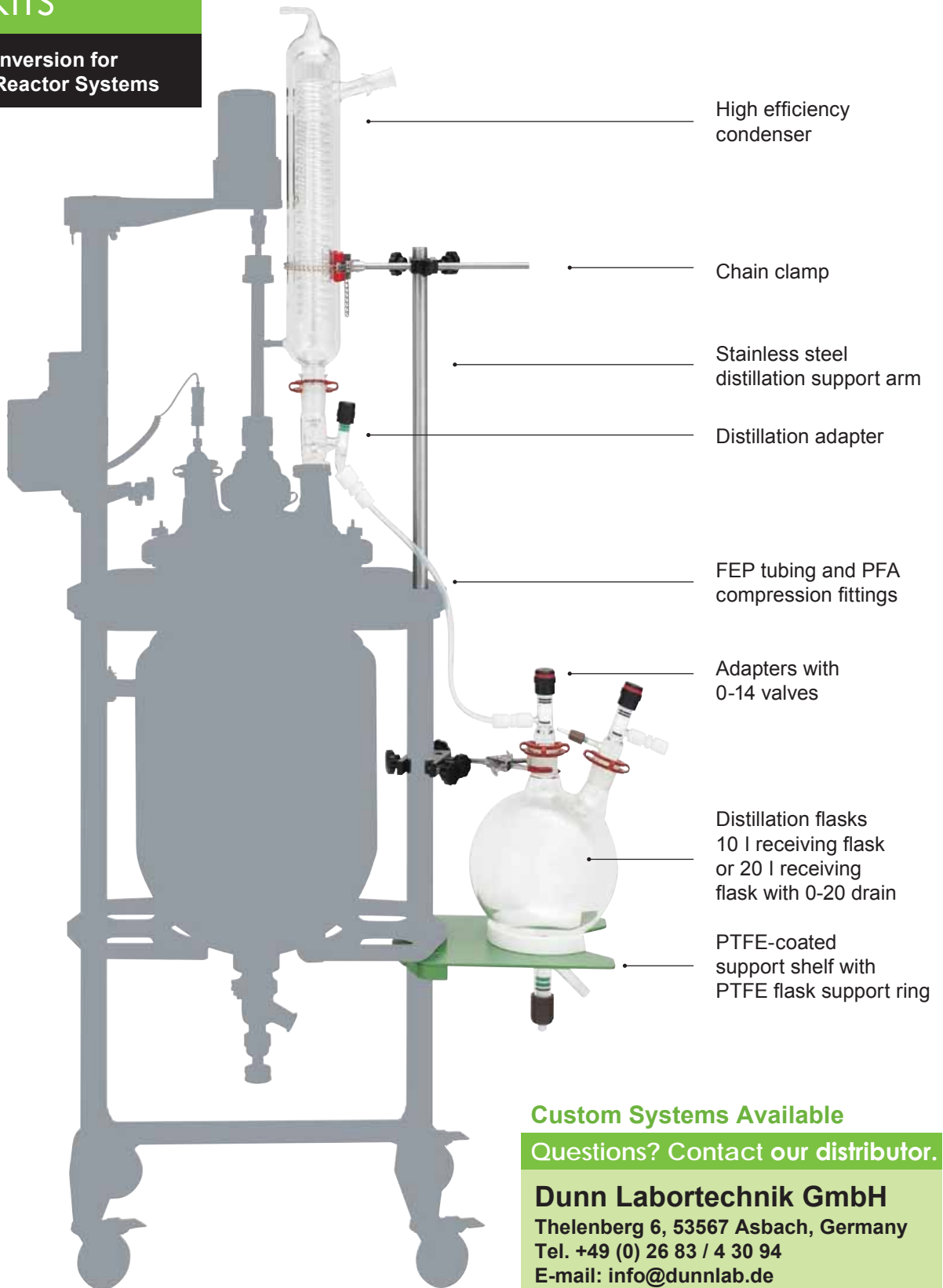
50 l Squatty System

Side Shelf Distillation Kits

Easy Conversion for
Chemglass Reactor Systems

Available for 10, 20, 30 and 50 l Reactor Systems

Custom Systems Available

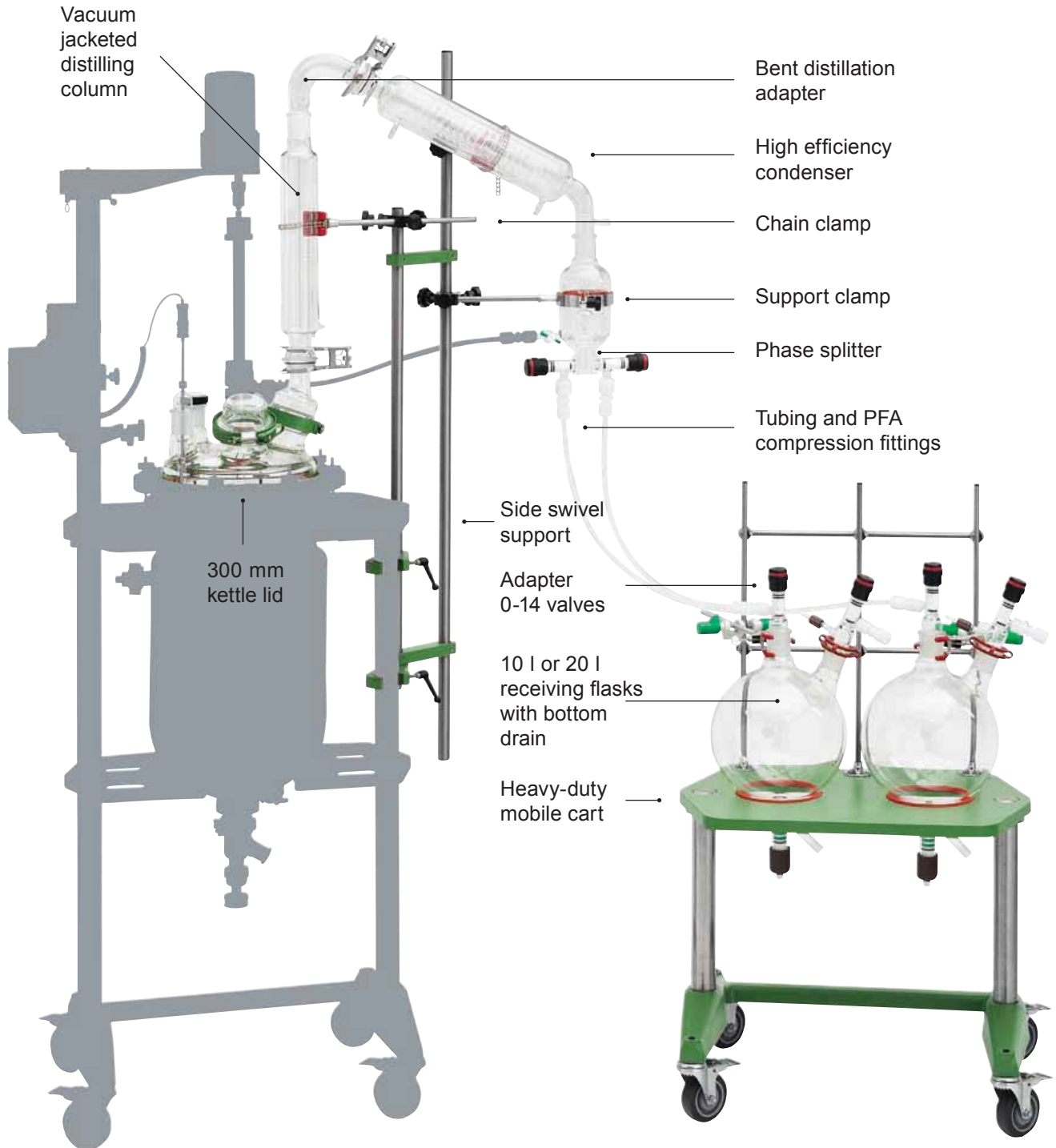


Available for 30 to 150 l Reactor Systems

Custom Systems Available

Cart Distillation Kits

Separate, Heavy-Duty Cart with
Two Receiving Flasks



Filter Reactors

1, 5, 10, 20 and 65 l Jacketed and Unjacketed Filter Reactors

1 & 5 Liter Unjacketed Benchtop Systems



Our unjacketed filter reactors can be used for single or multi-step reactions and filtrations in the same vessel, and large scale peptide synthesis. Filter base eliminates material transfers and significantly reduces losses. Complete 1 l and 5 l reactor systems include our ChemRxnHub stands.

For Single and Multi-Step Reactions in One Vessel

10 & 20 liter Jacketed and Unjacketed Systems

Open frame design for excellent accessibility

Support frame with oversized, rugged, SS uprights and heavy-duty PTFE-coated aluminum fittings

Mechanical seal stirrer bearing

SS inlet / outlet adapters available in M16 x 1 and M30

PTFE filter base

Detachable drain valve

Heavy-duty lockable casters

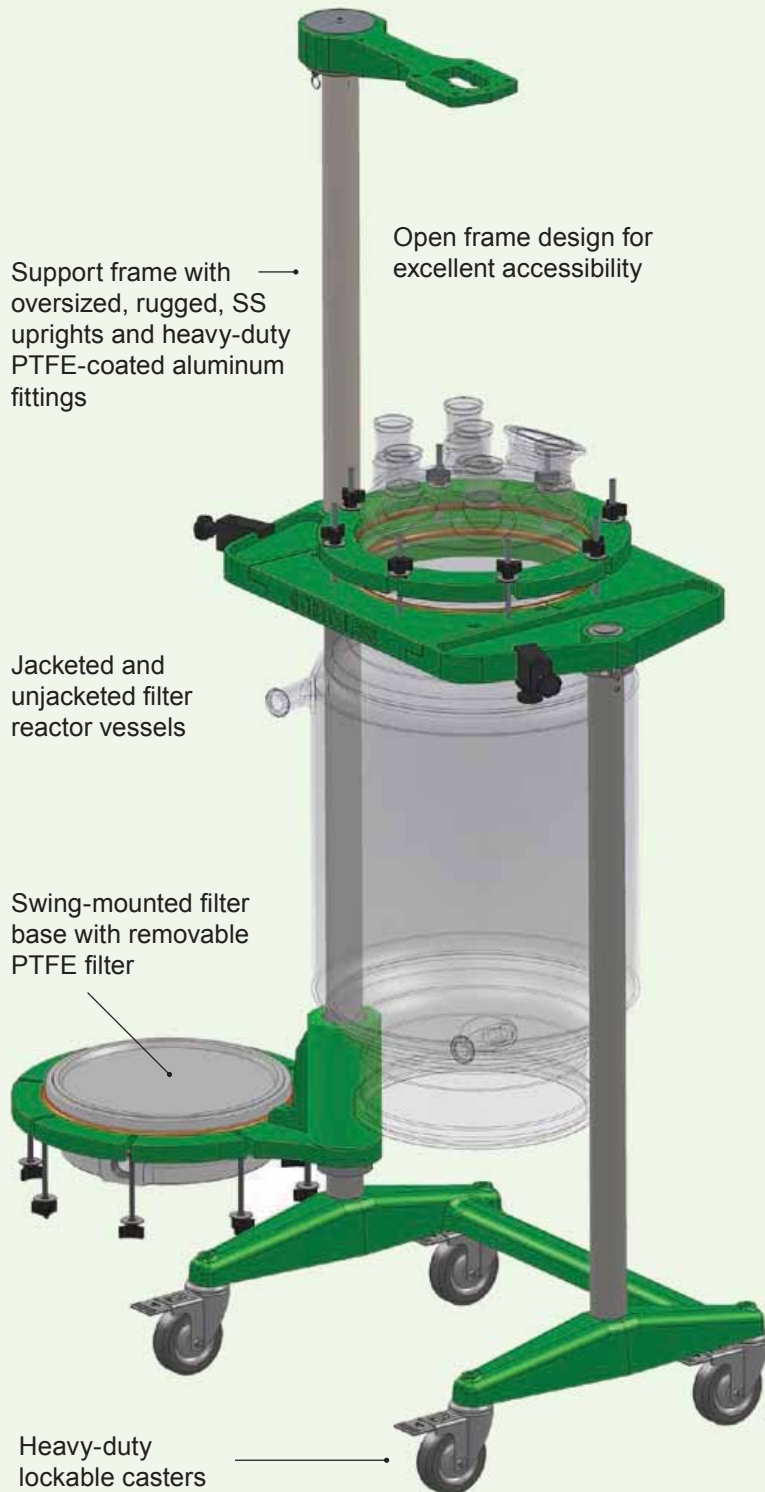


Patent Design Applied For Filter Base System

Custom Filter Reactors and Accessories

Manufacturing Expertise Makes All the Difference

- Extensive filter reactor design experience
- Open frame designs
- Jacketed and unjacketed
- Unique filter base design (Patent Applied For)



Filter Reactors

Larger Scale Custom Filter Reactors Up to 65 l



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Gas Scrubbers

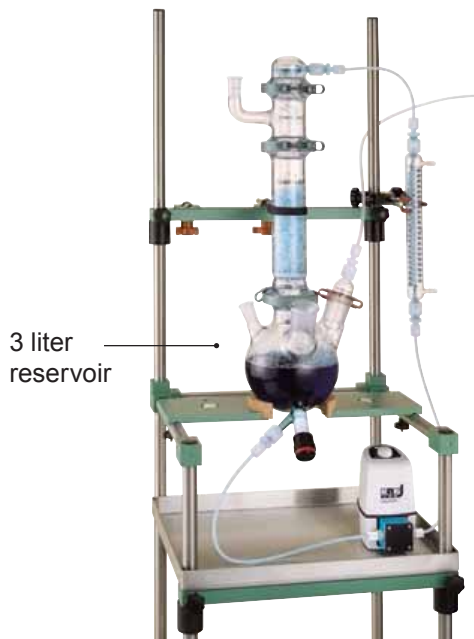
Complete Gas Scrubbers in Three Convenient Sizes

For Air and Exhaust Scrubbing

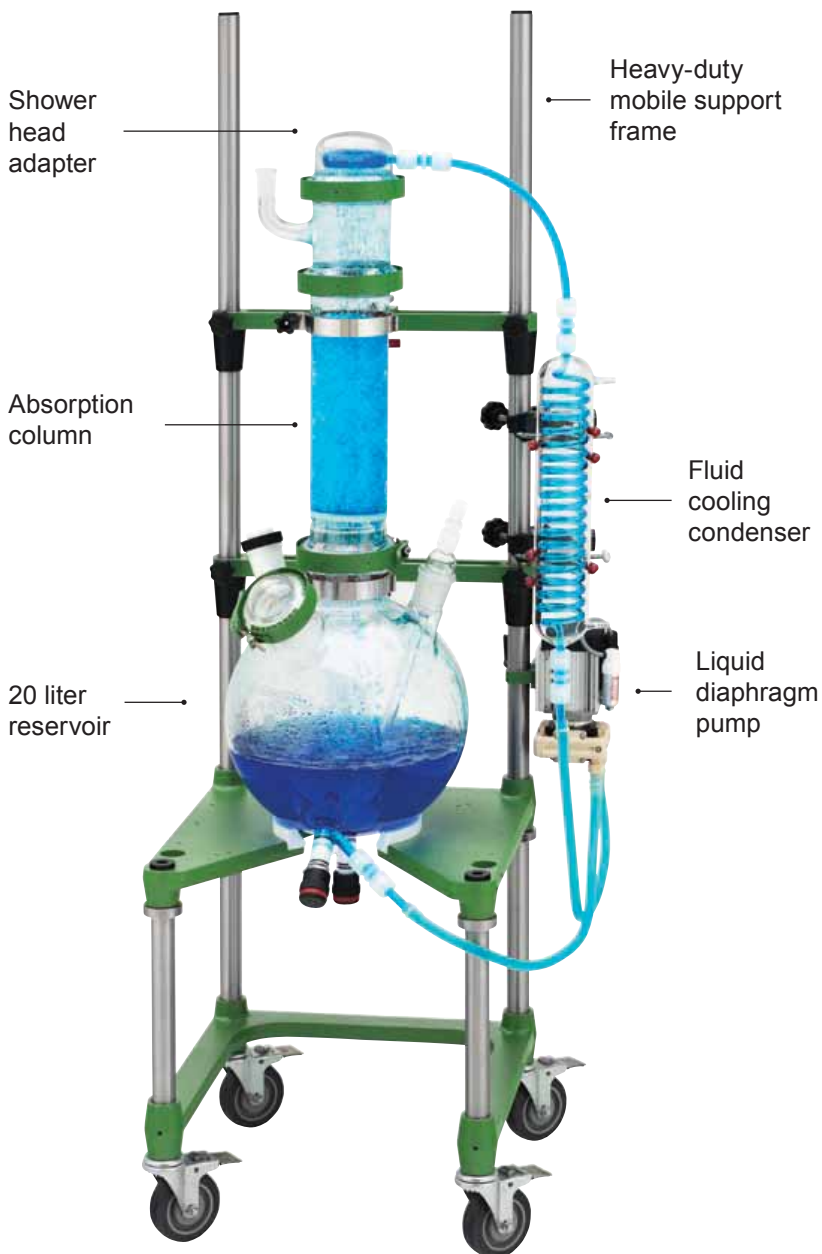
Laboratory scale gas scrubbers for use in many air and exhaust cleanup tasks.

Scrubbers are currently available in 3, 20 and 50 liter fluid reservoir size. The 3 liter is a compact design and will fit into any laboratory hood. It can also be used in walk-in hoods when assembled on our mobile or benchtop reactor stands.

Gas scrubbing takes place when the exhaust enters the inlet in the round bottom flask and travels upward through the absorption column. The scrubbing fluid is pumped from the round bottom flask upwards into the shower head adapter. It then flows counter-current to the exhaust gas, through the packed column, causing intensive contact between the two. Scrubbing can be accomplished by creating either a positive flow through the reaction vessel using a carrier such as nitrogen, or by connection of a vacuum source to the column adapter.



3 liter reservoir



Shower head adapter

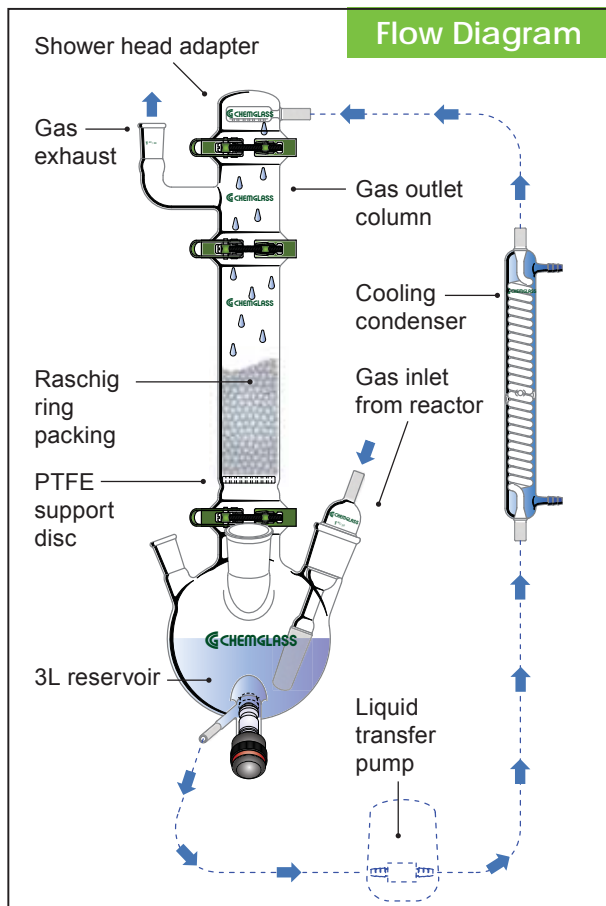
Heavy-duty mobile support frame

Absorption column

Fluid cooling condenser

20 liter reservoir

Liquid diaphragm pump



Flow Diagram

Shower head adapter

Gas exhaust

Gas outlet column

Cooling condenser

Raschig ring packing

PTFE support disc

Gas inlet from reactor

3L reservoir

Liquid transfer pump

Custom Reactors and Accessories

Chemglass Life Sciences has the experience and expertise to design and fabricate custom engineered solutions for any application.

- Custom reactor systems
- Large scale round bottom flask systems
- Stationary and tilting stands and supports
- Custom carts and frames for columns, flasks, feed vessels and receiver vessels
- Custom filter or mixing systems
- Accessories that interface with our reactor systems including bulk powder addition bags

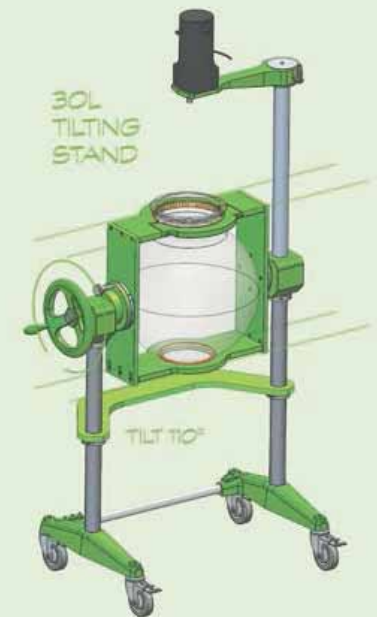
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Your Custom Resource

Reactors and Accessories



Reactor Accessories

These are just a few . . .

A large selection of Huber circulator adapters and fittings for converting metric to NPT as well as hoses and valves



← Polypropylene reactor funnels in a variety of sizes



↑ Air-operated drain valve

- opens quickly and easily
- great for solvent extractions and partitioning after a reaction



We're your Reactor Resource!



Manufacturing Experience

- Leading scientific glassware manufacturer for more than 70 years
- 12,000+ standard chemistry and life sciences products

Quality Products in Stock

- The most glass process reactor expertise, bar none, in the industry
- Thousands of systems installed worldwide
- Sizes from 100 ml to 150 l
- Standard, modified and custom reactor systems

Superior Customer Care

- Prompt, courteous, efficient customer service
- Dedicated technical service experts
- Design assistance for custom and oem glass components

Get in touch with our distributor

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Also available from Dunn Labortechnik:

Bioreactor Component Parts

Available in 2, 3, 5, 7 and 15 l Sizes

Like-for-like replacement parts for Applikon® Biotechnology and Broadley-James® brand bioreactors.

Agitator Assemblies designed to ensure a contamination-free seal around the shaft.

Electropolished Finish - Stainless steel components manufactured from 316L with an electropolished surface finish of 20Ra or better.

Headplates are weld-free and machined from a single piece of mirror polished stainless steel.

Clear Glass Vessels are made from heavy wall, borosilicate glass for superior visibility as well as resistance to thermal shock and corrosion. Marked with permanent, white graduations.

Impeller Blades - Rushton and Marine style available.

**Fully
Stocked
Ready to
ship!**



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Please contact Dunn Labortechnik for further information

Also available from Dunn Labortechnik:

Bioreactor Vessels, Spinner Flasks and Accessories



Bioreactor Vessels with four or six vertical side arms. Available from 3 to 36 liters, in high or low profile form.

Spinner Flasks with volumes from 25 ml to 36 liters. Unjacketed and jacketed flasks with height adjustable shafts or internal impeller assembly.

Overhead Stirrers for stirring from above or **Magnetic Stirrers** with multi positions for stirring from below.

Accessories like impeller blades, magnetic stir bars, port assemblies, thermowells, sparger and more.



Please contact Dunn Labortechnik for further information