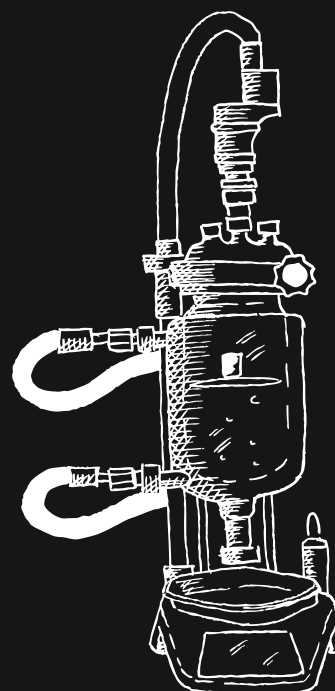




SYRRIS
Atlas HD

Product information



Fast, scalable, reproducible chemistry
with full automation

Atlas HD

Atlas HD is an automated and modular jacketed reactor system for R&D chemists and chemical engineers. Atlas HD enables supreme flexibility and easy cleaning with tool-free vessel changes from 50 mL to 5 L.

Atlas HD can be tailored to your chemistry needs with a temperature range of -90 to +250 °C, various stirring options, and pressures from vacuum to 200 bar.

A range of sensors including turbidity, temperature, pressure, and pH can be configured. Automated dosing is possible using the very successful Atlas Syringe Pump.

Enjoy fast, scalable, and reproducible chemistry, with Atlas HD.

syrris.com/atlas-hd



Why Atlas HD?

Atlas HD is easily configured for specific applications, including a jacketed reactor platform (Atlas HD Potassium); reaction calorimetry system (Atlas Calorimeter); parallel reactor system (Atlas Parallel); and high pressure systems (Atlas Sodium 200 Bar; Atlas 3 Bar).

Some of Atlas HD's key features and benefits include:

1. **Robust and reliable build quality**
2. **Full automation and touchscreen control at your fingertips**
3. **Powerful stirring up to 800 rpm & 11 Ncm (higher torque available)**
4. **Precise control for rapid heating with minimal overshoot**
5. **Easy to upgrade for future needs**
6. **Quick clamp enables fast vessel changes and easy cleaning**








“ We know that chemists have a job to do. Our products ensure our customers can spend time performing that job rather than setting up equipment.”

Dr. Stephen Heffernan, Batch Specialist



Specifications

	Vessel range	50 mL to 5 L
	Temp. range	-90 to 250 °C*
	Pressure range	Vacuum: ≤ 50 mbara. Max. pressure: 200 bar**
	rpm	800
	Torque	11 Ncm***

Dimensions

	h (mm)	w (mm)	d (mm)
DN80 System (50 mL to 2 L)	1230	540	470
DN150 System (1 L to 5 L)	1330	580	470

* Normal temperature range is -40 to 200°C. Temperatures outside of this range require an upgrade kit.

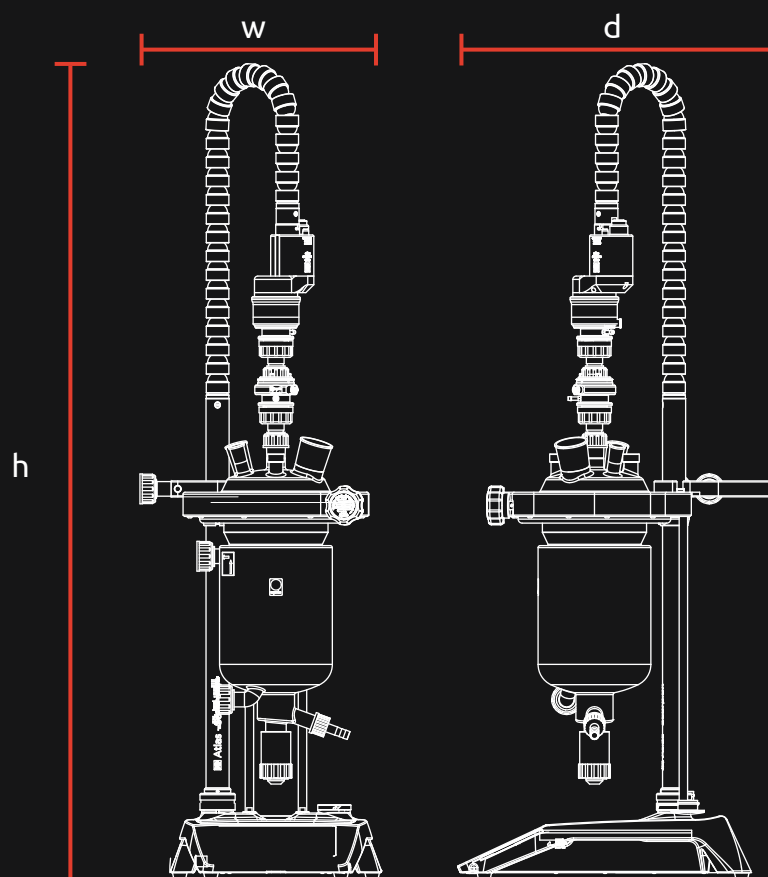
** Atlas HD Potassium: Vacuum (≤ 50 mbar) to 250 mbar. Lower vacuum is achievable with upgraded parts

Atlas HD 3 Bar: Vacuum (≤ 1 mbar) to 3 bar

Atlas Sodium 200 Bar (Stainless Steel): Vacuum (≤ 1 mbar) to 200 bar

*** High torque motors available

All dimensions in mm. Please allow a tolerance of +/- 20 mm.



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Vessels

Torispherical (available with vacuum jacket)

	100 mL	250 mL	500 mL	1 L	1 L	2 L	2 L	3 L	5 L
Catalogue no.	2200185	2200186	2200187	2200188	2201157	2200189	2201158	2201159	2201160
Working capacity (mL)	100	250	500	1,000	1,000	2,000	2,000	3,000	5,000
Flange ID (mm)	80				150	80	150		
Internal diameter (mm)	50	65	85	105	105	130	130	140	170
External diameter (mm)	85	105	125	145	145	170	170	180	215
Depth to nominal vol. (mm)	54	80	95	122	122	159	159	204	234
Jacket volume (mL)	155	348	492	730	824	1055	1192	1510	2549
Jacket connection thread	M16 x 1 (10 mm internal diameter)								
Outlet valve dia. (mm)	9				20	9	20		
Reactor material	Borosilicate glass 3.3								
Other wetted parts	PTFE, FEP, PFA & FFKM								

Round-bottom

	100 mL	250 mL	500 mL	1 L	2 L	3 L
Catalogue no.	2101525	2101528	2101530	2101532	2101534	2200261
Working capacity (mL)	100	250	500	1,000	2,000	3,000
Flange ID (mm)	80					
Internal diameter (mm)	50	60	80	105	120	150
External diameter (mm)	90	100	120	145	160	185
Depth to nominal vol. (mm)	58	98	113	133	197	195
Jacket volume (mL)	155	348	492	730	1055	1510
Jacket connection thread	M16 x 1 (10 mm internal diameter)					
Outlet valve dia. (mm)	9				20	
Reactor material	Borosilicate glass 3.3					
Other wetted parts	PTFE, FEP, PFA & FFKM					

Lids

	DN80 (EU)	DN80 (US)	DN150 (EU)	DN150 (US)
Catalogue no.	2101030	2101594	2201155	2201156
Vessel compatibility	All DN100	All DN100	All DN150	All DN150
Flange ID (mm)	80	80	150	150
Center port	RV24	RV24	RV24	RV24
Condenser port	1 x B19	1 x A19	1 x B29	1 x A29
Solid addition port	1 x B29	1 x A29	1 x B45	1 x A45
Baffle ports	1 x GL18	1 x GL18	2 x GL25	2 x GL25
Probe ports	2 x B19	2 x A19	2 x B19	2 x A19

Components

Base	Touch screen base for full reaction automation on Atlas HD. All Atlas HD systems include the Atlas HD Base Unit. Atlas Flasks and Vials and Atlas Sodium 200 Bar Pressure systems use the Atlas Classic Base with click wheel control.
Clamp	The Jacketed Vessel Clamp is a quick-release clamping mechanism for regular (not 3 bar rated) Atlas jacketed reactors. Designed to make changing reactors both quick and easy.
Stirrer motors	Quick-release high speed stirrer motor and coupling. The Scorpion Overhead Stirrer provides auto-aligning overhead stirring up to 800 rpm for Atlas Potassium or Sodium type systems.
Vessels	Choose from a range of handmade borosilicate glass jacketed reaction vessels and lids. Available in round bottom and torispherical with vacuum jacketed options for torispherical vessels.
Data logging	Automated data logging ensures safe keeping of data. Live graph visualization allows direct and quick monitoring of reaction parameters.
Oil Pipe Tidy	To allow leak-free storage of your oil pipes when changing vessels. The Oil Pipe Tidy is easily attached to the Scorpion Pole on the Atlas HD Base Frame.
Oil Drain Unit	The perfect accessory for those wishing to change vessels with as little fuss and mess as possible. The Oil Drain Unit provides the ability to drain oil from a Jacketed Reactor Vessel back into a recirculator without exposure to the oil.
Stirrers	Stirrers are available in anchor, Pitched Blade Turbine, and retreat curve impellor as standard. Also available are custom options as well as adjustable impellers.
Outlet valves	Syrris' spring-loaded outlet valves ensure leak-free operation at all temperature ranges. A range of seal kits are available for extreme temperatures.



Why choose Syrris?

R&D

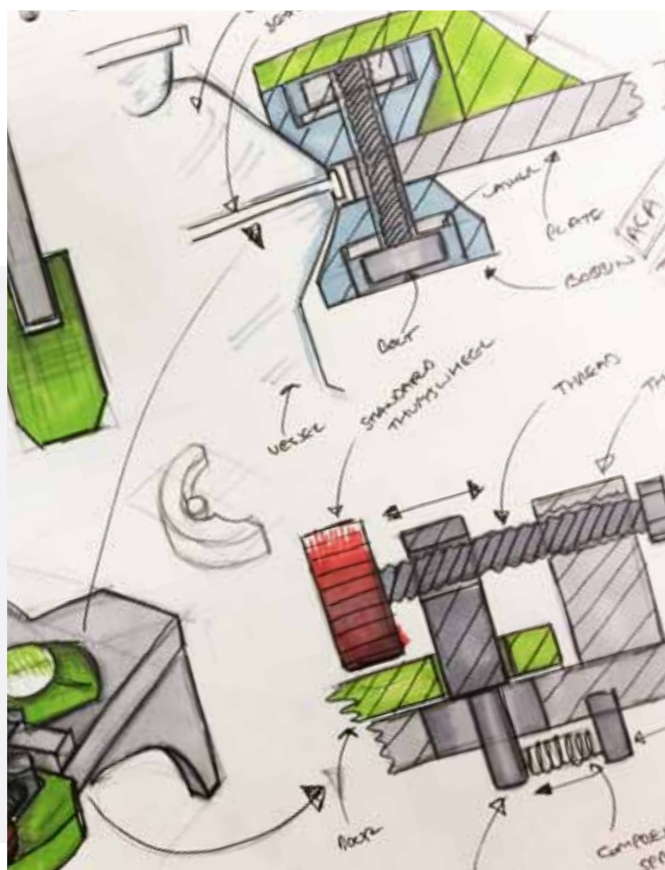
With 32 scientists and engineers and 2 R&D 100 Awards, the Syrris R&D team is comprised of world-leading experts in batch and flow chemistry, and calorimetry product development. To ensure products are finished to the highest quality, Syrris runs its development in a 4-phase system; each stage of development is checked by members of various teams.

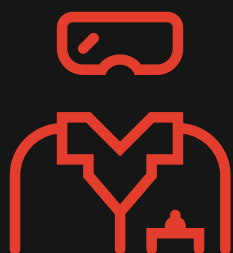
In addition to continuous product improvement and development, the R&D Team regularly work with customers to create custom solutions tailored to the exact needs of the lab.

Support

Syrris is on hand to help when you need it. From feasibility studies and proof of concept, through to on-site support by a Syrris engineer, our team are experienced chemists and are supported by a network of well-trained distributors in over 40 countries.

Built by our UK production team to the highest standard, with chemically resistant materials, Syrris products ensure years of continued service. A 1-year warranty as standard and the option to extend this further for complete peace of mind.





// With Atlas, we can leave experiments running all night and get a good result the next day, freeing up time to do other tasks. The system is easy to use and reliable"

Onofre Casanova, IFF, Benicarlo, Spain

// We have been delighted at the high demand our chemists have placed on Atlas. We are also very impressed with the speed and quality of the service and support"

Dr. Phil Peach, Process CRD, Pfizer, UK



350

Publications

Syrris products have been cited in over 350 peer-reviewed publications, demonstrating their viability for real-world chemistry

40

Distributors

Syrris works in partnership with over 40 distributors worldwide, offering expert knowledge and local support

1000s

of Users

Thousands of chemists and chemical engineers use Syrris products in their ground-breaking research and development, including at the world's top 20 pharmaceutical, chemical, and food and fragrance companies

Get in touch

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