Reactor-Ready Mini
Jacketed Lab Reactor

radleys
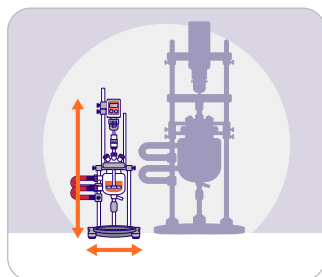accelerating chemistry

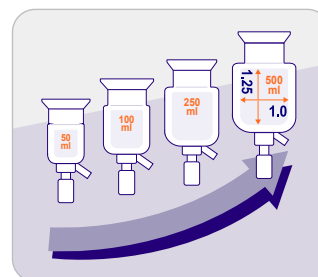**Small Footprint.
Precise Control.
Confident Scale-up.**

What makes Reactor-Ready Mini different?

Smart features
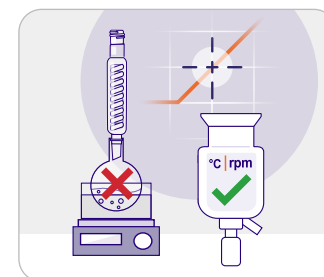## For small-scale chemistry

Small footprint, big performance

Maximise your fumehood space while enjoying the performance of a full-size jacketed lab reactor.
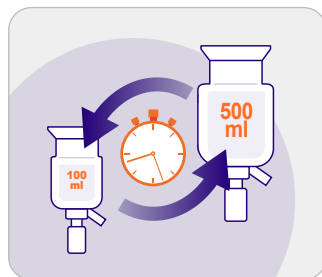

Scalable volumes from 50 to 500 ml

Same vessel geometry across the range (and beyond) for confident scaling up or down.

Precise control at a small scale

Swap round bottom flasks for a jacketed reactor with accurate temperature control & efficient stirring.
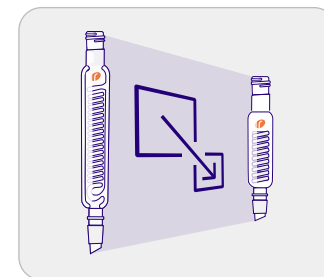

Rapid vessel exchange

Switch effortlessly between vessel sizes for different scales or projects.

Greener and more cost-effective

Reduce your solvent and material use and waste. Save money and work more sustainably.

Miniaturisation throughout

Dedicated 'mini' glassware and accessories matched to the smaller scale of the reactor.

Reactor-Ready Mini

At a glance

-70°C **230°C**

Compact footprint
- 270 mm wide
- 339 mm deep
- 824 mm high

Patented stirrer coupling
- Drop-in and self-aligning
- Tool-free
- Minimises PTFE shedding

Wide range of accessories
- Including condensers, stirrer shafts, funnels, adapters etc.

Compact stirrer support
- Simple, tool-free setup
- Accepts a range of compact overhead stirrers

Glass and PTFE lids
- Vacuum-tight sealing with FEP-encapsulated O-ring
- DN60 flange across all vessel sizes

PTFE vessel clamp
- Rapid vessel exchange
- Quick release and tool-free
- No metal-on-glass contact

Wide range of vessels
- 50 ml to 500 ml
- Vacuum jacketed option
- Vessel shape mimics plant scale geometry
- DN60 flange across the range

PEEK hose couplings
- Quick release - connect in seconds without tools
- Chemically resistant PEEK
- Lightweight and metal-free
- Jacket temperature range -70 °C to +230 °C

Zero dead space drain valve
- 15 mm bore - ideal for draining slurries
- Glass filled PTFE piston with replaceable FEP O-rings
- Design prevents over-tightening that can cause breakage

Draindown manifolds
- Rapid thermal fluid draindown
- Mess-free vessel exchange
- Manifolds support hoses, eliminating stress on the vessel sidearms

U-shaped base plate
- Compact and sturdy
- Polypropylene drip tray

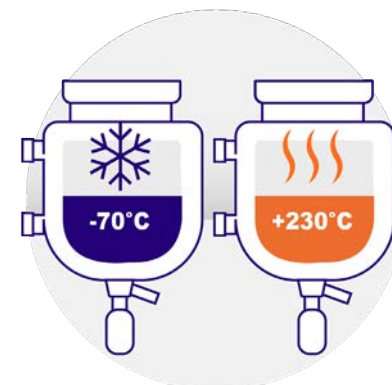# Why choose Reactor-Ready Jacketed Lab Reactors?
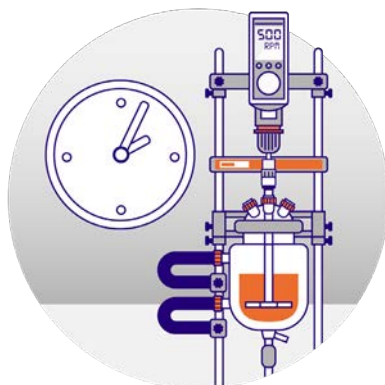
Compact and flexible for busy labs
Save time, space and money with a single workstation. Swap vessels between projects in minutes and without tools.

Scale without compromise
From 50 ml to 35 litres, the Reactor-Ready range lets you scale your chemistry easily, with a system for every stage.

Precise temperature control
Accurate and consistent temperature control thanks to optimised vessel geometry and jacket design.
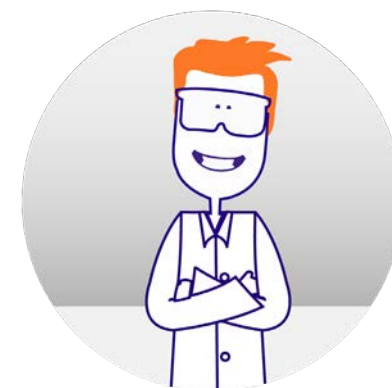
Control multi-device reactions
Effortlessly integrates with AVA software for safe and precise automated reaction control and data logging.

Proven success worldwide
Over 3,000 systems installed around the world. Trusted by top pharmaceutical companies.

Expert support at every step
Our experienced team offers practical advice to help accelerate your chemistry.

The Reactor-Ready range

	Reactor-Ready Mini	Reactor-Ready Flex	Reactor-Ready Filter	Reactor-Ready Duo	Reactor-Ready Pilot
Vessel volume range	50 ml to 500 ml	100 ml to 5 L	1 L to 2 L	100 ml to 5 L	5 L to 35 L
Vessels per framework	1	1	1	2	1
Temp Range	-70 ˚C to +230 ˚C	-70 ˚C to +230 ˚C	-30 ˚C to +180 ˚C	-70 ˚C to +230 ˚C	-70 ˚C to +230 ˚C
Rapid vessel exchange	✓	✓	✓	✓	✓
Dimensions (WxDxH)	270 x 339 x 824 mm	456 x 570 x 1103 mm	456 x 570 x 1208 mm	600 x 485 x 1103 mm	540 x 650 x 1884 mm
Lid Flange Size	DN60	DN100	DN100	DN100	DN200
Synthesis	✓	✓	✓	✓	✓
Filtration	✗	✗	✓	✗	✗
Reflux / Distillation	✓	✓	✓	✓	✓
Software Control	Optional	Optional	Optional	Optional	Optional

It's easy to configure your Reactor-Ready Mini

7 simple steps

1. Select Framework
2. Select Vessel Kits
3. Select Overhead Stirrer
4. Select Circulator
5. Select Software Control
6. Select Software Modules
7. Select Glassware & Accessories

1 Select Framework

2 Select Vessel Kits

3 Select Overhead Stirrer

4 Select Circulator

5 Select Software Control

6 Select Software Modules

7 Select Glassware & Accessories
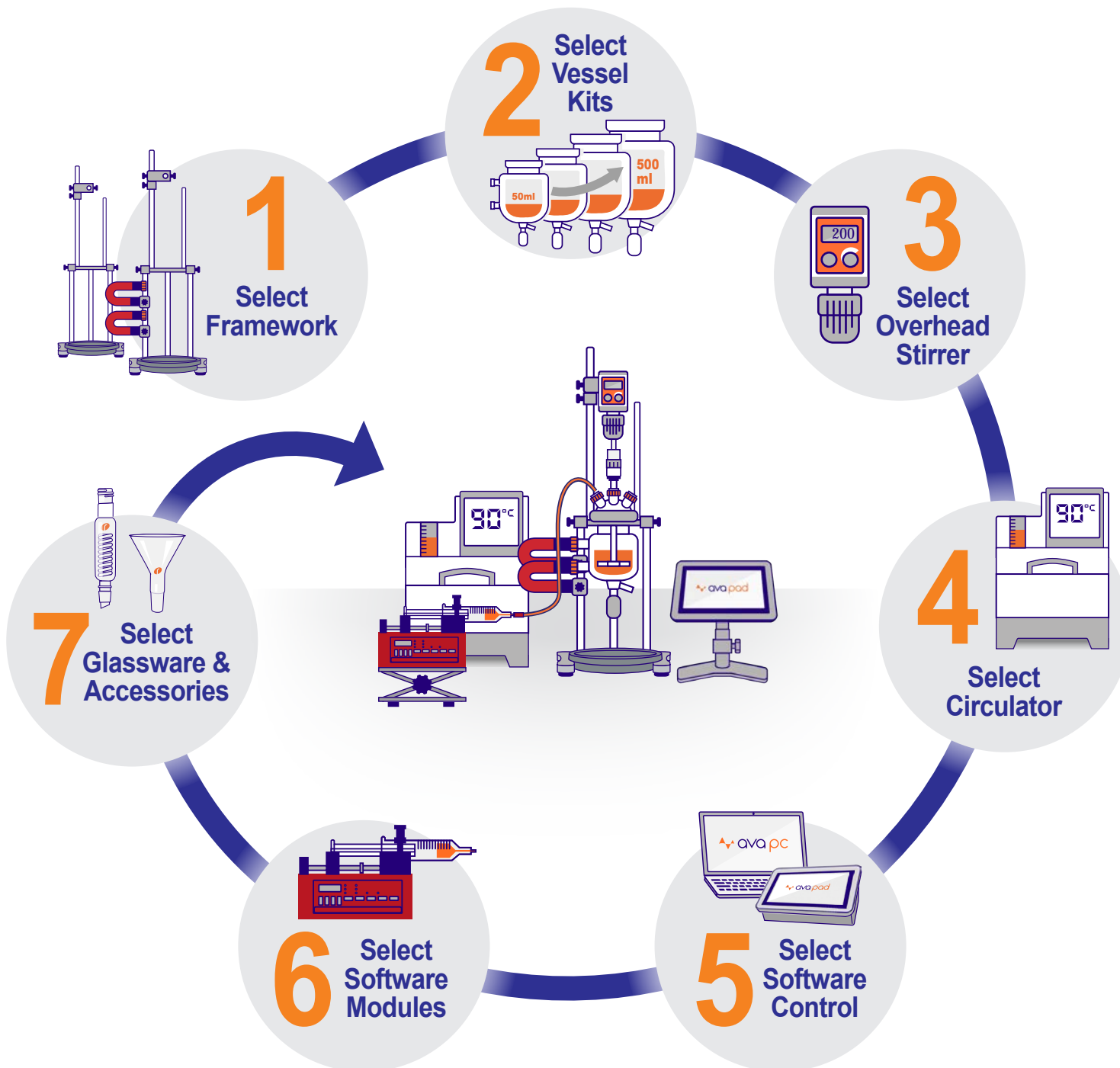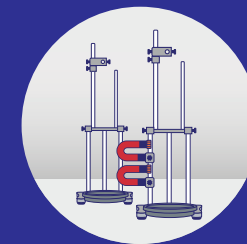
Reactor-Ready Mini Pro

With draindown manifolds for rapid, mess-free vessel exchange

Cat No	RR121500
Draindown Kit	Yes

Draindown Manifold Kit
- Easy thermal fluid draindown
- Rapid and mess-free vessel exchange
- Manifolds take the weight of the hoses
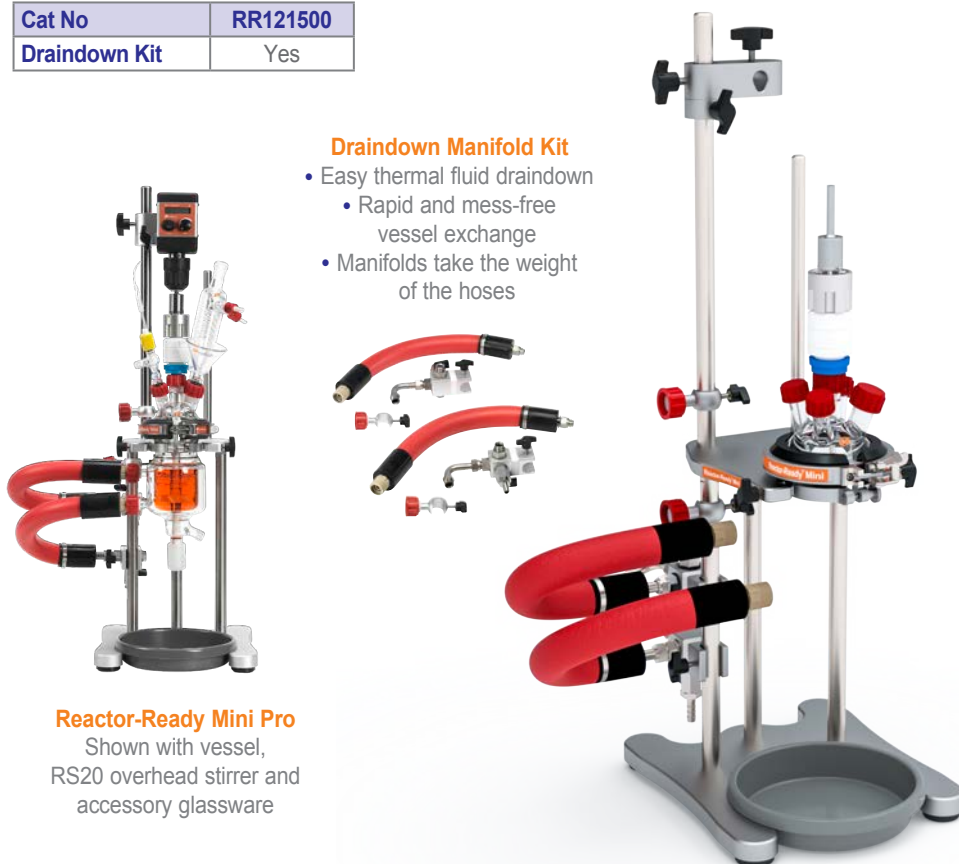
Reactor-Ready Mini Pro
Shown with vessel, RS20 overhead stirrer and accessory glassware

Reactor-Ready Mini Starter

For more limited budgets, connect your vessel directly to your circulator

Cat No	RR121501
Draindown Kit	No

Tool-free hose connectors
- Connect your vessel directly to your circulator hoses
- Chemically resistant PEEK sidearm connectors with no glass-to-metal contact
- Choose between M16 & NW12
- Must be ordered separately
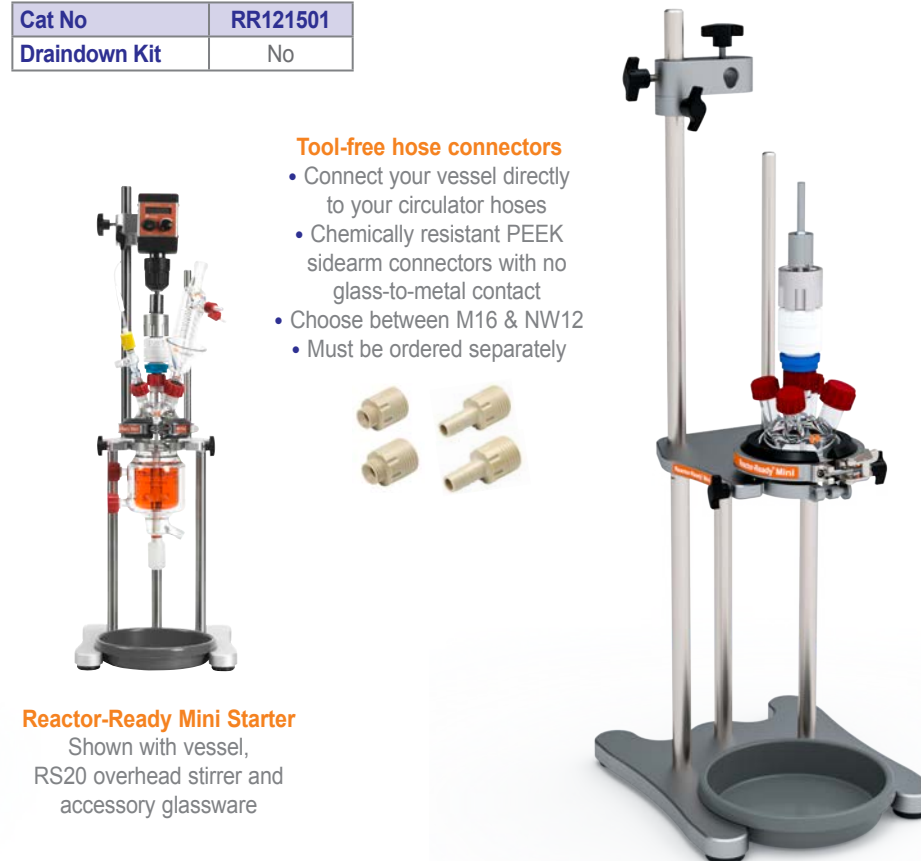
Reactor-Ready Mini Starter
Shown with vessel, RS20 overhead stirrer and accessory glassware

2. Select Vessel Kits

Vessel highlights:
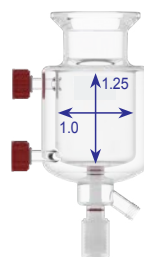
- Scale-up-friendly geometry with 1.25:1 height-to-diameter ratio and dish-shaped base
- Wide-bore tangential sidearms for enhanced heat transfer
- DN60 polished flat flange ensures a reliable, vacuum-tight seal
- 15 mm bore minimises sample hold-up and is ideal for slurries

Vessel kits make ordering vessels and accessories simple

Reaction Vessel Kits include:

- Glass reaction vessel with sidearm couplings
- PTFE turbine stirrer shaft (other types available separately)
- Pt1000 PTFE temperature probe with LEMO connector
- PTFE temperature probe adapter

Single Jacketed Vessel Kits	50 ml	100 ml	250 ml	500 ml
Cat No	RR120060	RR120063	RR120066	RR120069

Vacuum Jacketed Vessel Kits	50 ml	100 ml	250 ml	500 ml
Cat No	RR120061	RR120064	RR120067	RR120070

3. Select Overhead Stirrer

U-Shape

Retreat Curve

Turbine or Propeller

PTFE Stirrer Paddles

Radleys RS20 Control Mini

Lightweight and most compact stirrer with RS232 connectivity.

Heidolph Hei-TORQUE Core

Most powerful option. Ideal for larger volumes and mixing suspensions with its turbo function.
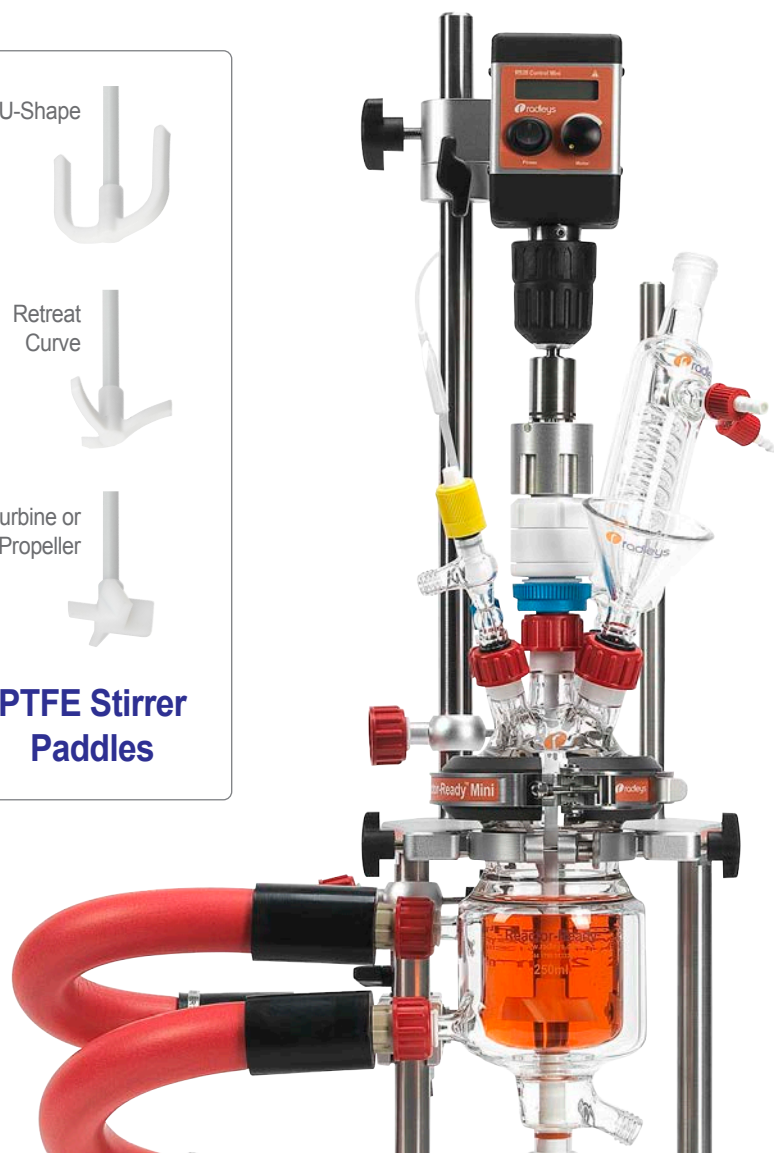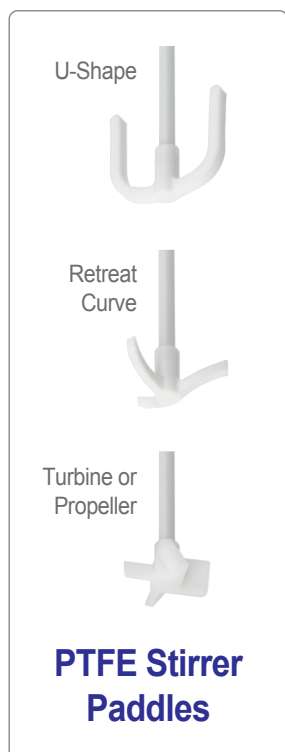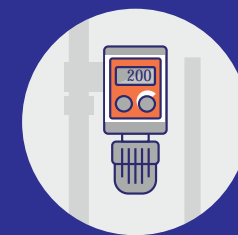
	Radleys RS20 Control Mini	Heidolph Hei-TORQUE Core
Cat No	RR150060	501-60410-00
Speed *	50 - 2,000 rpm	20 - 2,000 rpm
Digital Display	LCD	LCD
Torque	20 Ncm	40 Ncm
Torque Display	No	No
Chuck	Tool-free chuck	Tool-free chuck
Software Control	Yes (RS232)	No
Dimensions WxDxH	68 x 130 x 165 mm	70 x 195 x 282 mm
Weight	1.3 kg	2.3 kg

* The maximum recommended speed for Reactor-Ready Mini is 500 rpm for continuous use, and 800 rpm for short periods.

4. Select Circulator

	Huber CC-K6	Huber Ministat 230	Huber Ministat 240	Huber Petite Fleur	Huber Unistat 705
	Compact open bath unit suitable for less demanding applications	Open bath unit with good heating and cooling capability	The most popular Ministat, powerful and compact temperature control	The smallest Unistat, rapid temperature control for small and medium -sized vessels	Medium-sized Unistat for low temperatures
Cat No	HB2008.0005.01	HB2015.0005.01	HB2016.0005.01	HB1030.0001.01	HB1068.0019.01
Temperature Range	-25 °C to +200 °C	-40 °C to +200 °C	-45 °C to +200 °C	-40 °C to +200 °C	-75 °C to +250 °C
Example Performance (Process Temperature)	250 ml vessel: 20 °C to 120 °C in < 20 min 120 °C to 20 °C in <45 min 20 °C to 0 °C in ~20 min	250 ml vessel: 20 °C to 130 °C in ~30 min 130 °C to 20 °C in 45 min 20 °C to -20 °C in 32 min -20 °C to 20 °C in ~20 min	Awaiting data	250 ml vessel: 20 °C to 150 °C in 30 min 150 °C to 20 °C in 35 min 20 °C to -20 °C in 23 min -20 °C to 20 °C in <20 min	250 ml vessel: Min. temp. achieved: -68 °C 20 °C to -60 °C in <40 min -60 °C to 20 °C in 16 min
Heating capacity	1.6 - 2.1 kW	1.6 - 2.1 kW	1.8 - 2.1 kW	1.6 - 2 kW	1.5 kW (16 A power supply)
Cooling capacity	0.15 kW @ 0 °C	0.38 kW @ 0 °C	0.55 kW @ 0 °C	0.45 kW @ 0 °C	0.65 kW @ 0 °C
Connections	M16	M16	M16	M16	M24

4. Select Circulator Accessories

Pick a side arm connector size for
Reactor-Ready Mini Starter ONLY (not included)

Designed for use with Reactor-Ready Mini

PEEK Vessel Side Arm Connectors   Lightweight Insulated Hoses   Insulated Hoses

Cat No	RR121230	RR121233	RR121540	RR121541	HB9608	HB9609
Description	M16	NW12 Barb	M16 / 1 m, 10mm ID	M16 / 1.5 m, 10mm ID	M16 / 1 m, 12mm ID	M16 / 1.5 m, 12mm ID
Temperature Range	-70 °C to +230 °C	-70 °C to +230 °C	-70 °C to +230 °C	-70 °C to +230 °C	-50 °C to +200 °C	-50 °C to +200 °C

10 litres volume also available

Cat No	RR121547	RR121517	HB55018	HB6161	HB6163
Description	Mini Hose Support Kit	M16/1 90° Adapter	Control Cable (3m) RS232 / PC	SilOil 5 litres M40.165/220.10	SilOil 5 litres M20.195/235.20
Additional Information	Support the weight of the hose when connecting directly to the vessel	M16/1 Female to M16/1 Male	For software control with AVA	Temperature range -40 °C to 220 °C	Temperature range -20 °C to 235 °C

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5. Select Software Control

AVA Pad Reactor Controller
Compact all-in-one controller

Cat No	RR20230
Device Connectivity	Integrated
User Interface	10" Touchscreen
Multiple Reactor Control	No

Suitable for
• Single Reactor
• Dual Reactor

10" Touchscreen
• Graphical display
• Pinch zoom
• Supports USB keyboard & mouse

User Management
• Multiple user profiles
• Password protection per user

Subscription **FREE** Software

Integrated connections
• RS232 x 4
• Temp sensor ports x 2
• USB x 2
• Ethernet x 1
• HDMI Output x 1

Fumehood compatible with two mounting options
• Control Pad Benchtop Stand
• Control Pad Support Rod
- mount to a suitable stand or framework. (Not Reactor-Ready Mini framework)

AVA PC Reaction Control Software
PC based software

Cat No	RR20308
Device Connectivity	Via separate hub
User Interface	Laptop PC
Multiple Reactor Control	Yes - up to 4

Suitable for
• Single Reactor
• Dual Reactor
• Multiple reactors (up to 4)

Subscription **FREE** Software

Laptop PC Controller
• Full keyboard
• 16" LCD Display

User Management
• Single user software
• Single password protection

Separate Data Hub connections
• RS232 Ports x 4
• Temp sensor ports x 2
• Ethernet x 1

External to fumehood
• Remote connection to Data Hub via ethernet cable

Download FREE Demo Software www.radleys.com

'Anytime' Upgrade

AVA Pad Reactor Controller	AVA Pad 'Anytime' Software Upgrade	Control Pad Benchtop Stand	Control Pad Support Rod	Boss head 15-25mm, 8-12mm
RR20230	RR20235	RR20510	RR20512	RR20518
Compact 10" Touch Screen all-in-one Reactor Controller	Upgrade to the latest version of the AVA Pad Software	To raise the Pad and provide adjustable viewing angle	To mount the pad to a suitable stand or framework. (Not suitable for mounting on Reactor-Ready Mini)	Mounting boss for use with RR20512 Control Pad Support Rod

| AVA PC Reaction Control Software Kit	Driver Configuration Existing Category	Driver Configuration NEW Category	Data Hub 4-port	Ethernet Switch	Ethernet Cable	4-port USB Hub
RR20308	RR20217	RR20220	RR20200	RR20454	RR20212	RR20458
AVA PC Reaction Control Software, Laptop Controller, 4 Port Data Hub & 1 Year AVA Care Support	Driver Configuration Service - Existing Device Category	Driver Configuration Service - New Device Category	For the addition of more devices	To connect more than one Data Hub	Straight through 3 m	To connect more than one USB device

6. Select Software Modules
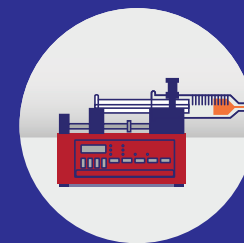
Reactor-Ready
Mini Pro with
AVA Pad

	pH Module	Syringe Pump Additions Module	Gravimetric Additions Module
	For the monitoring and logging of pH. Can be used for pH control when combined with an additions module.	For controlled, automated liquid dosing (by volume). Ideal for smaller volumes.	For controlled, automated liquid dosing (by mass). Ideal for larger volumes or continuous additions.
Cat No	RR20523	RR20505	RR20520
Dosing	pH control (acid or base dosing) possible with the addition of a syringe or peristaltic pump	0.1 µl - 60 ml	up to 500 ml
Flow Rate	n/a	up to 35 ml/min	up to 800 ml/min
Continuous	n/a	No	Yes
Includes	pH meter, cables, adapters and buffer solutions (pH probe not included)	Syringe pump, cable, and fixed additions tube kit	Peristaltic pump, balance, cables, tubing, adapters, bottle and stand
Safety	Safety feedback loops can be incorporated within the AVA Lab Control software to minimise exotherms.		

RR136050	RR121526	RR136060	RR136061	RR136331*	RR136333*
DN60 Glass 5 Neck Lid 3x B19, 2x B14 (supplied with Framework as standard)	FEP Encapsulated Silicone Vessel O-ring	DN60 PTFE 5 Neck Lid Assembly 3x B19, 1x B14, 1x 12mm	DN60 PTFE Lid with central B19 + 4 Threaded 1/2" NPT Ports	PTFE Lid Socket Adapters	PTFE Lid Compression Fittings

*Other styles and/or sizes are available

RR140005	RR139158*	RR139157*	RR139163*	RR121544	RR139374
PTFE Temp Probe Adapter	Enlarging Adapters	Reducing Adapters	Glass Cone Stoppers	Boss Head	Universal Clamp

RR139191	RR139164	RR139166*	RR139162	RR139175*	RR139176	RR139161	RR139010	RR139170*
Reflux Divider Kit	Condenser	Dropping Funnels	Oil Bubbler	Valved Inlet Adapters	Swan Neck Adapter	Solid Additions Funnel	Right Angle Adapter	Run-Off Adapters

Accelerating chemistry

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Chemistry equipment for safer, cleaner, greener and more productive chemical research.

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