

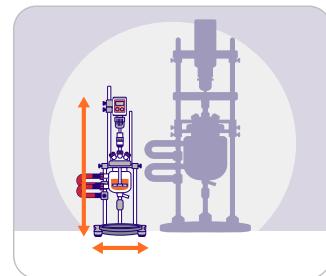
Reactor-Ready Mini Jacketed Lab Reactor



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

What makes Reactor-Ready Mini different?

Smart features For small-scale chemistry



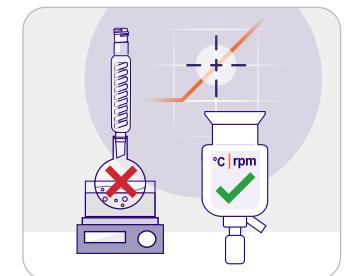
Small footprint, big performance

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



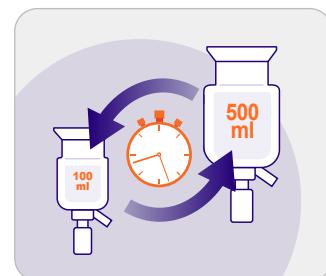
Scalable volumes from 50 to 500 ml

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

Compact stirrer support

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

PTFE vessel clamp

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

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

Draindown manifolds

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

Compact footprint

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

Patented stirrer coupling

- Drop-in and self-aligning
- Tool-free
- Minimises PTFE shedding

Glass and PTFE lids

- Vacuum-tight sealing with FEP-encapsulated O-ring
- DN60 flange across all vessel sizes

Wide range of vessels

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

Zero dead space drain valve

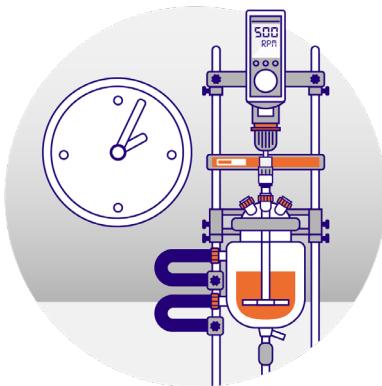
- 15 mm bore - ideal for draining slurries
- Glass filled PTFE piston with replaceable FEP O-rings
- Design prevents over-tightening that can cause breakage

U-shaped base plate

- Compact and sturdy
- Polypropylene drip tray

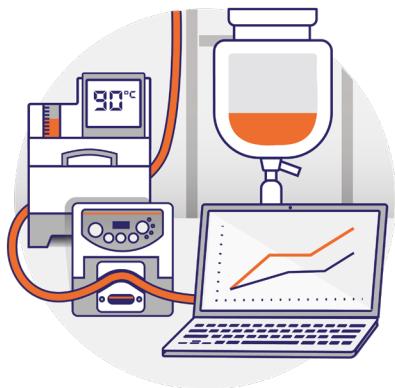
-70°C **230°C**

Why choose Reactor-Ready Jacketed Lab Reactors?



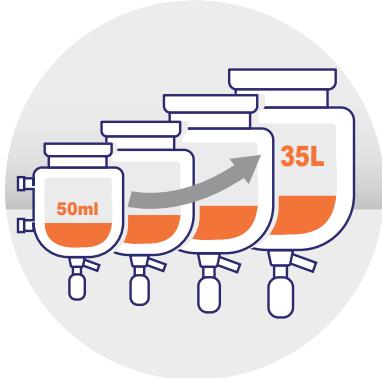
Compact and flexible for busy labs

Save time, space and money with a single workstation. Swap vessels between projects in minutes and without tools.



Control multi-device reactions

Effortlessly integrates with AVA software for safe and precise automated reaction control and data logging.



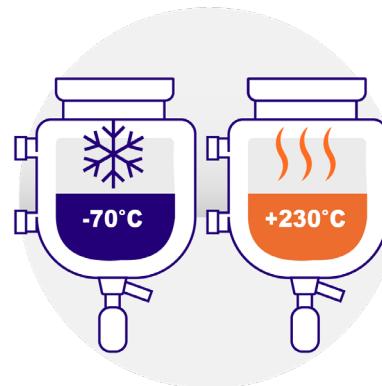
Scale without compromise

From 50 ml to 35 litres, the Reactor-Ready range lets you scale your chemistry easily, with a system for every stage.



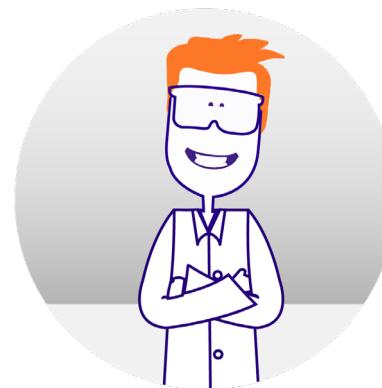
Proven success worldwide

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



Precise temperature control

Accurate and consistent temperature control thanks to optimised vessel geometry and jacket design.



Expert support at every step

Our experienced team offers practical advice to help accelerate your chemistry.

The Reactor-Ready range



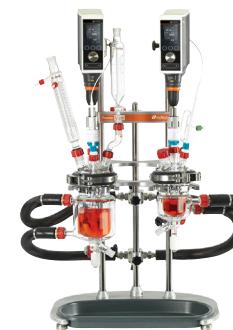
Reactor-Ready Mini



Reactor-Ready Flex



Reactor-Ready Filter



Reactor-Ready Duo



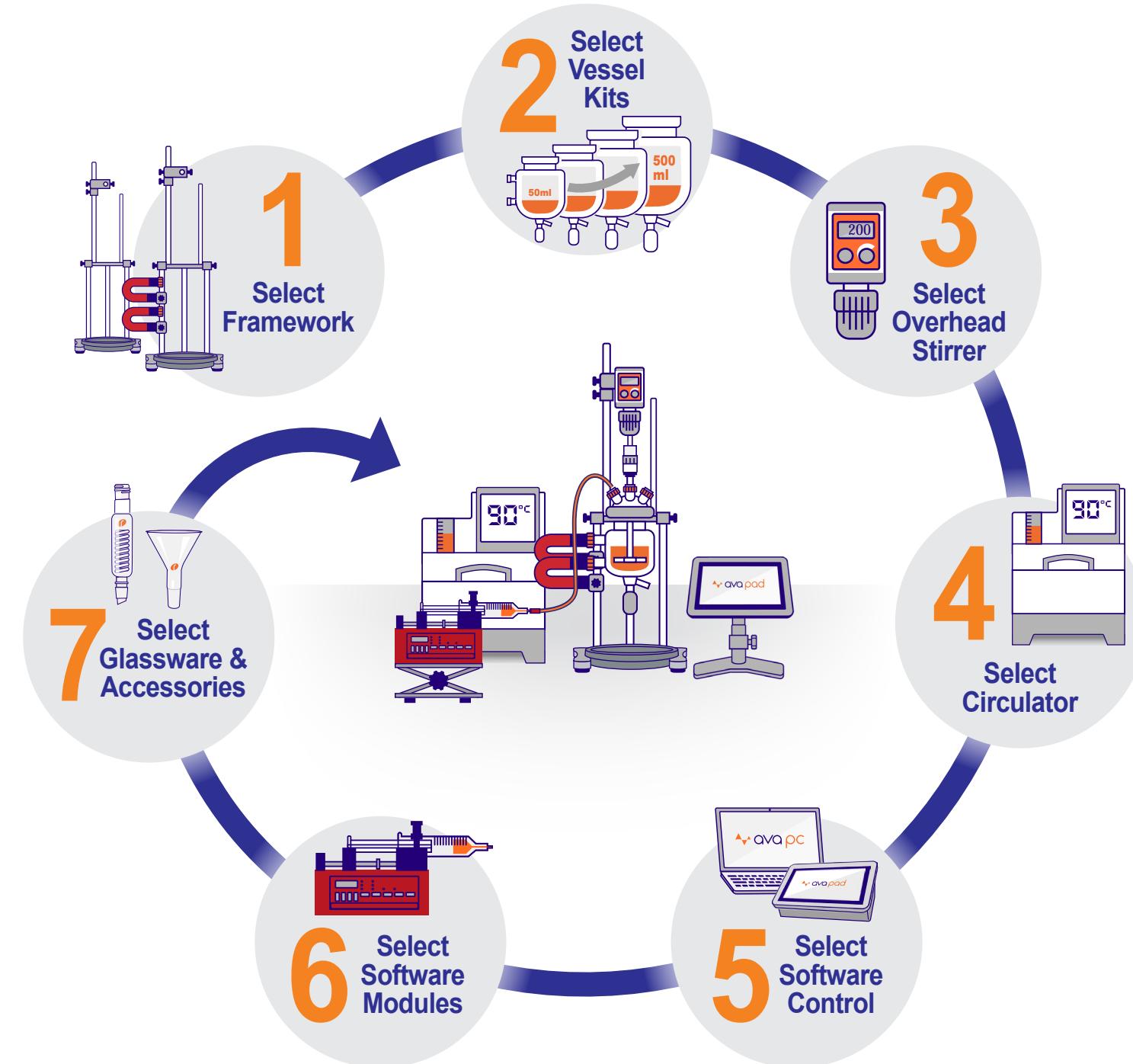
Reactor-Ready Pilot

| 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 |

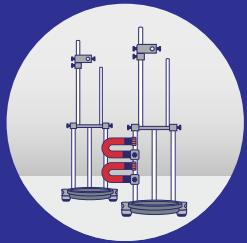
It's easy to configure your Reactor-Ready Mini

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



Reactor-Ready Mini Pro

With draindown manifold for rapid, mess-free vessel exchange

| Cat No | RR121500 |
|---------------|----------|
| Draindown Kit | Yes |



Reactor-Ready Mini Pro

Shown with vessel,
RS20 overhead stirrer and
accessory glassware

Draindown manifold kit

- Easy thermal fluid draindown
- Rapid and mess-free vessel exchange
- Manifolds take the weight of the hoses



Reactor-Ready Mini Starter

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

| Cat No | RR121501 |
|---------------|----------|
| Draindown Kit | No |



Reactor-Ready Mini Starter

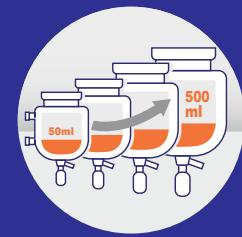
Shown with vessel,
RS20 overhead stirrer and
accessory glassware

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

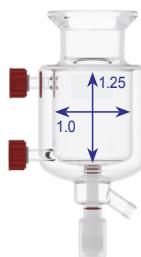


2. Select Vessel Kits



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

| Cat No | RR120060 | RR120063 | RR120066 | RR120069 |
|--------|----------|----------|----------|----------|
|--------|----------|----------|----------|----------|

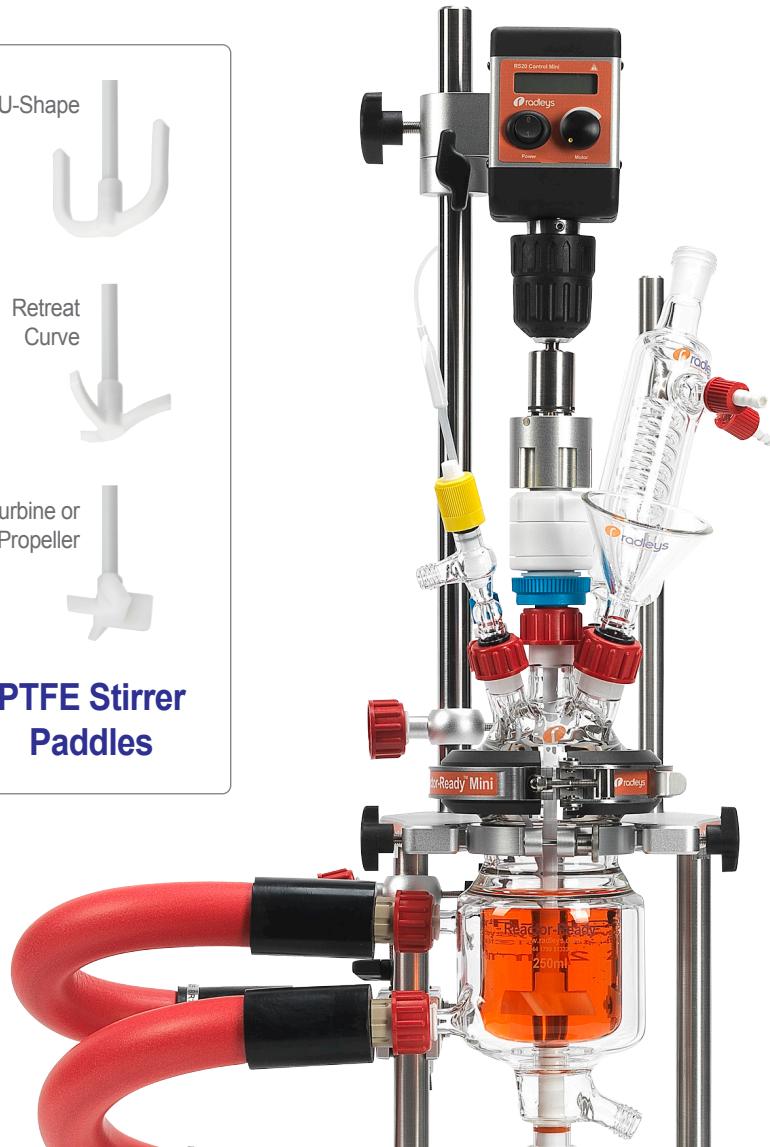
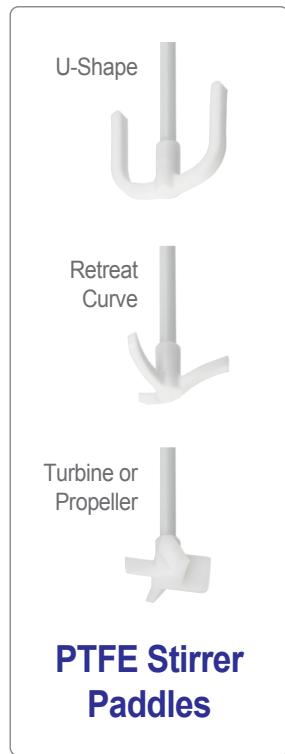


Vacuum Jacketed Vessel Kits

| Cat No | RR120061 | RR120064 | RR120067 | RR120070 |
|--------|----------|----------|----------|----------|
|--------|----------|----------|----------|----------|



3. Select Overhead Stirrer



**Radleys
RS20 Control
Mini**

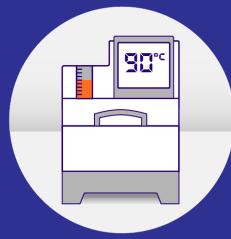


**Heidolph
Hei-TORQUE
Core**

| | | |
|---|--|---------------------|
| Lightweight and most compact stirrer with RS232 connectivity. | Most powerful option. Ideal for larger volumes and mixing suspensions with its turbo function. | |
| 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**

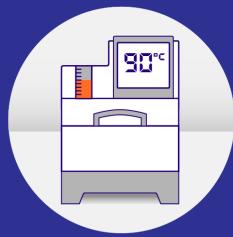


**Huber
Petite Fleur**



**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)



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 |



| 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 |

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



AVA pad

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)

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



AVA pc

Download FREE Demo Software
www.radleys.com



External to fumehood

- Remote connection to Data Hub via ethernet cable

5. Select Software Control



**AVA Pad
Reactor
Controller**

‘Anytime’ Upgrade
**AVA Pad
‘Anytime’ Software
Upgrade**



**Control Pad
Benchtop
Stand**

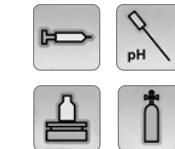


**Control Pad
Support
Rod**



**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**



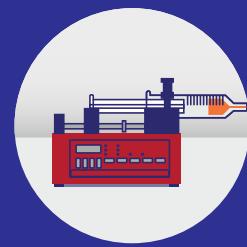
**Ethernet
Cable**



**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. | | |

7. Select Glassware & Accessories



| 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 |

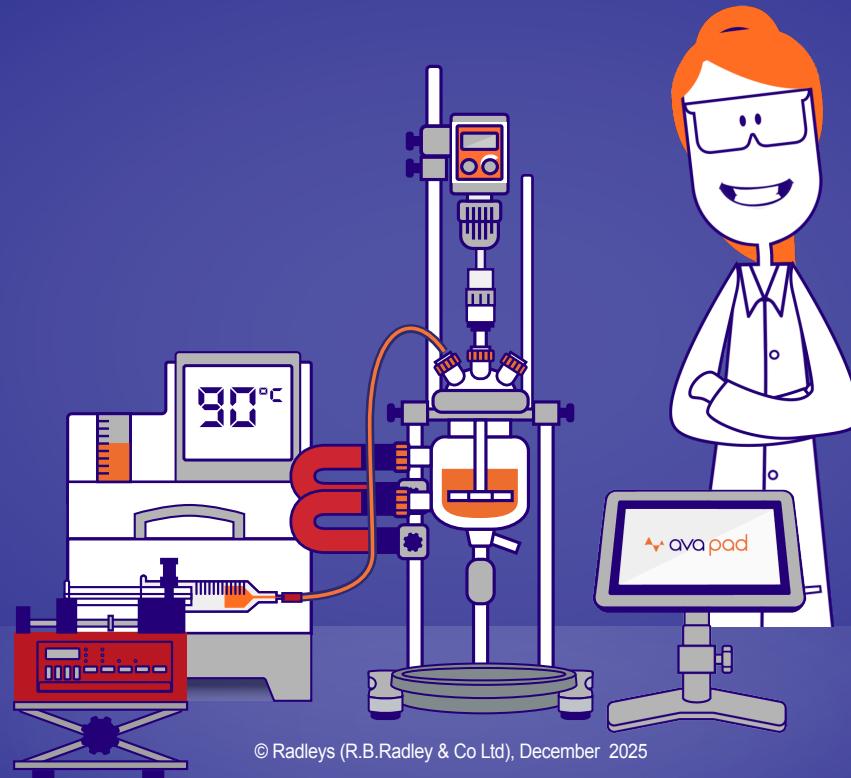


| RR139191 | RR139164 | RR139166* | RR139162 | RR139175* | RR139176 | RR139161 | RR139010 | RR139170* |
|--------------------|-----------|---------------------|----------------|--------------------------|----------------------|---------------------------|------------------------|---------------------|
| 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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