

4s3™ Semi-Automatic Sheet Heat Sealer

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The 4s3™ is a semi-automatic sheet heat sealer which is compatible with a wide range of seals and plates of differing designs and heights.

With variable temperature and time settings, sealing conditions are easily optimised to produce a 100% tight seal, eliminating sample loss.

Plate and seal are placed on the holder, the "Operate" button pressed and the drawer automatically closes. The sealing process is controlled by an electric mechanism. This feature eliminates operator variation, giving a consistent seal every time and reducing the damage caused to microplates by over-sealing.

- Automatic sealing process for unmatched sealing consistency
- Variable temperature and time settings for easy optimisation of sealing conditions
- Simple, single button operation
- Rapid heating element for fast start up
- Real-time temperature display
- Auto stand-by function to save energy
- Auto switch off function for added safety
- Compatible with a wide variety of consumables
- RS-232 serial port enables full integration with robotic automation systems
- Full range of heat seals available
- Small footprint
- Low temperature sealing for use with adhesive seals



Figure 10: Real-time temperature display

Features



Real Time Display

- The rapid heating element allows for a quick start up within minutes
- The temperature is displayed in real time so that the heating up process can be monitored



Energy Saving Functions

- When the unit is left idle it automatically switches into standby mode, during which the temperature of the heating element is reduced to 60°C to save energy
- When the sealer is left idle for longer periods it switches off automatically for added safety
- The times at which the unit switches into standby and switch off modes can be adjusted to suit the user's needs



RS-232 Port for Automation Integration

- The 4s3™ has an RS-232 port to enable it to be integrated into most automated systems
- SiLA compatible – quick and easy integration with other SiLA compliant devices using the SiLA driver

SiLA Rapid Integration®

The 4s3™ is compatible with a wide range of seals and plates of differing designs and heights



Adaptors

The 4s3™ employs a unique and cost saving adaptor system

- Deep well plates and most other skirted plates can be sealed on the standard plate support adaptor (4ti-0615)
- For all other 96 well PCR plates, an additional plate support adaptor (4ti-0625, optional extra) must be used
- Both adaptors can also be combined for easier handling of shallow plates such as 384 well PCR plates.
- For best sealing results with the Random Access seals, adaptors 4ti-0613 and 4ti-0614 offer the perfect plate support and seal alignment

Sealing Aids

For better sealing of films which have a tendency to curl, 4titude® offer sealing aids.

- A weighted platen (4ti-0602) for use with deep well blocks can be ordered separately
- A sealing frame for use with all other plate designs is supplied when ordering the optional 4ti-0625 plate support adaptor



Figure 11: 4ti-0615 Plate Support Adaptor, Standard



Figure 12: 4ti-0625 Plate Support Adaptor, Standard PCR 96



Figure 13: 4ti-0613 Plate Support Adaptor, Random Access, Low Profile



Figure 14: 4ti-0614 Plate Support Adaptor, Random Access, Standard Profile



Figure 15: 4ti-0602 Weighted Sealing Platen



Figure 16: 4ti-0612 Sealing Frame



Plate Formats

The following plate formats can be used with the appropriate plate adaptor:

- Standard SBS footprint PP & PS plates & deepwell blocks
- PCR plates (skirted, semi-skirted and non-skirted formats)

FrameSeal™ Heat Sealing Frames

4titude® offers heat sealing sheets held within a disposable, rigid, stackable frame that are compatible with the 4s3™ heat sealer. Please see page 13.



Figure 17: FrameSeal™

Technical Specifications

Parameter	Specification
Dimensions (W x L x H)	181 x 275 x 310 mm
Sealing Temperature Range	60-200°C
Sealing Time Range	0-10 sec
Weight	9 kg
Power Supply	110/230V
Power Consumption	300 W (max)
Connection	RS-232 serial port

4s3™ Semi-Automatic Sheet Heat Sealer

Includes: Universal power supply, power cord, manual, plate support adaptor standard (4ti-0615), 12 months parts and labour warranty

Code	Details	Qty
4ti-0655	4s3™ Semi-Automatic Sheet Heat Sealer	1

Accessories

Code	Details	Qty
4ti-0615	4s3 Plate Support Adaptor, Standard, supplied with the unit, for skirted 96 and 384 well plates	1
4ti-0616	4s3 Plate Support Adaptor, Roche 1536, for Roche 1536 well PCR plates	1
4ti-0625	4s3 Plate Support Adaptor, PCR 96, for 96 well PCR plates	1
4ti-0613	4s3 Plate Support Adaptor, Random Access, Low Profile, for low profile plates	1
4ti-0614	4s3 Plate Support Adaptor, Random Access, Standard Profile, for standard profile plates	1
4ti-0602	4s3 Weighted Sealing Platen	1
4ti-0612	4s3 Sealing Frame, for use with Plate Support Adaptor, PCR 96 (4ti-0625)	1