Thermo Fisher

# Sample processing & storage plates, seals, and sealers

Quality. Automation. Security.

thermo scientific

## High-quality polypropylene plates for reliable sample processing and storage

Thermo Scientific<sup>™</sup> MicroWell and DeepWell<sup>™</sup> polypropylene plates provide performance and value for sample storage, high-throughput screening and molecular diagnostic assays. Our 48-well, 96-well, and 384-well plates are made with high-quality virgin USP <661.1>, medical-grade polypropylene resin, and benefit from exceptional design and manufacturing advancements that help ensure sample integrity and aid in your workflow efficiency.

Choose from an extensive range of plate formats, well shapes, geometries and sealing options that ideally support even the most demanding environments in automated drug discovery, molecular biology and genomics applications.

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# **Reliability in demanding applications**







#### Benefits for high-throughput screening

- Shared-wall to help minimize plate height for higher volumes
- Low extractables and leachables
- Stacking ribs, molded slots and pads for automation grippers
- American National Standards Institute/Society for Laboratory Automation and Screening (ANSI/SLAS)-compliant

#### Benefits for molecular biology

- Magnetic bead and steel bead extractions
- Certified DNA-, DNase-, RNase-, and PCR inhibitor-free
- Color options for workflow tracking
- Inert PP use with DMSO, methanol, ethanol, and isopropanol

#### Benefits for compound management

- Visible alphanumeric grid
- Virgin resin USP <661.1> compliant
- Raised well rim for secure seals
- Peelable and pierceable seals and equipment



#### Benefits for general lab work

- Square and round wells
- 55µL–6mL volume range
- 48-well to 384-well plates
- White and black plates for luminescence
   and fluorescence assays
- Sterility of SAL 10<sup>-6</sup>

## Sample processing and storage plate features



#### Virgin polypropylene material

High-value compounds, cells, and reagents require the most inert material to reduce risk of interacting with any aspect of the storage vessel. Our high-quality plates are manufactured with strict quality control using only virgin medical grade polypropylene resins. This inert material helps ensure low extractables and leachables (E&Ls) and is suitable for use with DMSO, ethanol, and isopropanol. And because polypropylene is naturally low-binding, our plates support demanding applications such as molecular biology and diagnostic testing, and applications where nucleic acid processing requires special plate performance characteristics.

#### **Extractables and leachables**

When working with plastic labware, the presence of E&Ls can be a concern. Extractables are compounds released under harsh or extreme conditions, while leachables are compounds released during regular use. Analyzing E&Ls can reduce risk that the plastic labware could interfere with an assay or other application. Several different guidelines are available on how to test for E&Ls. USP <661.1> provides guidelines for analyzing the plastic resins, while chapter <665> uses a risk-based method to analyze the extractables from finished goods. As part of our commitment to helping customers deliver the best science through quality products and to identify products best suited for the intended application, we have already adopted these guidelines and validated our USP <661.1> and <665> procedures. With these validated procedures, we have performed testing on Thermo Scientific<sup>™</sup> Abgene<sup>™</sup> and Nunc<sup>™</sup> plates. The <661.1> reports for the resins used in the manufacturing of Nunc and Abgene storage plates and <665> reports for the storage plates with cap mats or a heat seal are available online.



#### **Designed for performance**

All of our sample processing and storage plates are designed to help ensure sample integrity and aid in workflow efficiencies. Our plates incorporate an alphanumeric grid for referencing sample location in manual work. Thermo Scientific Nunc plates innovated the sharewall technology to increase volume combined with lower overall plate height that helps optimize storage capacity. A raised chimney at the top of each well enables more reliable heat and adhesive sealing, and the design of the skirt geometry around the plate provides for stable stacking in storage. Automation slots molded in the skirt and deck help optimize compatibility with robotic grippers and arms. Finally, our plates are available as certified human DNA–free, DNase- and RNasefree, endotoxin-free, PCR inhibitor–free, and with a sterility assurance level (SAL) of 10<sup>-6</sup>.

### Clean room manufactured and sterility assurance level (SAL) of 10<sup>-6</sup>

Abgene plates are backed by industry-leading clean room manufacturing and are guaranteed human DNA–free, DNase-, RNase-, and PCR inhibitor–free, while Nunc microplates are available DNase-, RNase- and endotoxin-free with a sterility assurance level (SAL) of 10<sup>-6</sup>. We adhere to strict, industry-leading manufacturing processes and utilize only virgin, medical-grade polypropylene resins to ensure that our plates won't impact sample integrity or inhibit downstream analysis.

#### **Extensive selection**

Our portfolio of plates is structured to enable our customers with products that are ideally suited to their particular applications and workflow needs, while always delivering the assurance of quality, performance, and value. All of our plates are designed according to ANSI/SLAS guidelines and are compatible with both manual and automated processes. Select the plate best suited for your needs using the following available with our plates:

Selection criteria	Available options
Sterility level	<ul> <li>Non-sterile</li> <li>Sterile to SAL 10<sup>-6</sup></li> <li>Clean room certified: Human DNA–free, DNase-, RNase- and PCR inhibitor–free</li> </ul>
Format	<ul> <li>48-well</li> <li>96-well</li> <li>384-well</li> </ul>
Well shape	<ul> <li>Square – Maximizes volume in ANSI/SLAS-1 footprint</li> <li>Round – Maximizes sample mixing</li> </ul>
Well bottom geometry	<ul> <li>Round (U) – For best sample resuspension and mixing</li> <li>Conical/Pyramidal (V) – For best sample recovery, reduced dead volume</li> <li>Spindle (V) – Virtually eliminates dead volume</li> </ul>

#### Square Well

Square Well



U Bottom



V-conical

Square Well

Pyramidal



#### Round Well



V-spindle

Round Well



V-conical



#### Automation enabling

U Bottom

Customers using manual processes will appreciate quality design touches like built-in alpha-numeric grids for tracking, a higher rim for ease of sealing, and raised ribs for easier and more stable stacking. But perhaps a greater feature is that our entire portfolio of plates meets the recommendation of ANSI/SLAS to enable workflow automation. Select any Thermo Scientific plate and you can be assured that it is ready for incorporation into automated processes, whether barcoding and tracking, sealing or liquid handling, and is also compatible with automation equipment. You won't have to change your plate selection as you grow, scale or adopt new processes.

# Find exactly the right plate for your needs

Thermo Scientific 48-, 96-, and 384-well plates are an economical and reliable solution for sample storage and processing, high-throughput screening, and low-binding assays. Select from a large portfolio that includes choices of sterility, well shape, well-bottom geometries, and

volumes that are ideally suited to your needs. No matter what plate you choose, you can be assured of high quality and performance for even the most demanding applications, such as drug discovery, molecular biology, and genomics.

48-well	96-well	384-well
Available sterility choices		
<ul> <li>Clean room certified</li> <li>Human DNA-free</li> <li>DNase-, RNase-, PCR inhibitor-free</li> </ul>	<ul> <li>Clean room certified</li> <li>Human DNA-free</li> <li>DNase-, RNase-, PCR inhibitor-free</li> <li>Endotoxin-free</li> <li>Sterile</li> <li>Non-sterile</li> </ul>	<ul> <li>Clean room certified</li> <li>Human DNA-free</li> <li>DNase-, RNase-, PCR inhibitor-free</li> <li>Endotoxin-free</li> <li>Sterile</li> <li>Non-sterile</li> </ul>
Available well shapes		
Rectangular	<ul><li>Round</li><li>Square</li></ul>	<ul><li>Round</li><li>Square</li></ul>
Available well-bottom geometries		
Square Well	Round WellRound WellRound WellImage: Constraint of the second	Round Well     Square Well       Image: Well with the second secon
	Square Well Square Well V-conical U Bottom	Square WellSquare WellImage: Square WellI
Available well-bottom geometries		
6000 µL	200 μL-2200 μL	55 μL–252 μL
Brands		
Abgene	<ul><li>Nunc</li><li>Abgene</li></ul>	<ul><li>Nunc</li><li>Abgene</li></ul>

#### 48-and 96-Well DeepWell Plates

No. Of Wells	Max Well Volume (µL)	Color	Sterile	Well Shape	Well Bottom	Compatible Cap Mat	Human DNA– Free	DNase-/ RNase- Free	PCR Inhibitor– Free	Endotoxin- Free	Qty per Pack/ Case	Cat. No.
48	6000	Natural		Rectangular	Pyramidal		•	•	•		50/50	AB-0988
96	2200	Natural		Square	U	AB-0675	•	•	•		1/50	AB-0661
96	2200	Natural		Square	U	AB-0675	•	•	•		50/50	AB-0788
96	2200	Natural		Square	V-Conical	AB-0675	•	•	•		1/50	AB-0932
96	2200	Green		Square	V-Conical	AB-0675	•	•	•		1/50	AB-0932/G
96	2000	Natural		Square	U	4421, 4422	•	•		•	40/40	4221
96	2000	Natural	•	Square	U	4421, 4422	•	•		•	40/40	4222
96	2000	Natural	•	Round	U	276000, 276002, 276005, 276011	•	•	•	•	1/60	278743
96	2000	Natural		Round	U	276000, 276002, 276005, 276011	•	•	•		5/60	278752
96	2000	Natural		Square & Round	V-Conical	9503230, 9503233					5/50	95040452
96	2000	Natural	•	Square & Round	V-Conical	9503230, 9503233					5/50	95040462
96	1300	Natural	•	Round	U	276000, 276002, 276005, 276011	•	•	•	•	5/50	260251
96	1300	Natural		Round	U	276000, 276002, 276005, 276011	•	•	•		5/50	260252
96	1200	Natural		Round	U	AB-0566, AB-0566/SP, AB-0674	•	•	•		1/50	AB-0564
96	1200	Natural		Round	U	AB-0566, AB-0566/SP, AB-0674	•	•	•		50/50	AB-0787
96	1200	Green		Round	U	AB-0566, AB-0566/SP, AB-0674	•	•	•		50/50	AB-0787/G
96	1200	Natural		Square	U	AB-0675	•	•	•		1/50	AB-1127
96	1000	Natural		Round	U	4411-11, 4412-11	•	•		•	40/40	4211-11
96	1000	Natural	•	Round	U	4411-11, 4412-11	•	•		•	40/40	4212-11
96	800	Natural		Round	V-Conical	AB-0566, AB-0566/SP, AB-0674	•	•	•		1/50	AB-0765
96	800	Natural		Round	V-Conical	AB-0566, AB-0566/SP, AB-0674	•	•	•		50/50	AB-0859

#### 96-Well Xtreme DeepWell Plates for Steel Bead Extraction

No. of Wells	Max Well Volume (µL)	Color	Sterility	Well Shape	Well Bottom	Compatible Cap Mat	Human DNA– Free	PCR Inhibitor– Free	Qty per Pack	Qty per Case	Cat. No.
96	1200	Natural	Cleanroom	Round	U	AB-0566, AB-0566/SP, AB-0674	•	•	1	50	AB-5564
96	2200	Natural	Cleanroom	Square	U	AB-0675	•	•	50	50	AB-5788

#### 96-Well MicroWell Plates

		111000										
No. Of Wells	Max Well Volume (µL)	Color	Sterile	Well Shape	Well Bottom	Compatible Cap Mat	Human DNA– Free	DNase-/ RNase- Free	PCR Inhibitor– Free	Endotoxin- Free	Qty per Pack/ Case	Cat. No.
96	500	Natural		Round	U	276000, 276002, 276005, 276011		•			10/120	267245
96	500	Natural	•	Round	U	276000, 276002, 276005, 276011		•			10/120	267334
96	500	Black		Round	U	276000, 276002, 276005, 276011		•			10/120	267342
96	500	White		Round	U	276000, 276002, 276005, 276011		•			10/120	267350
96	500	Blue		Round	U	276000, 276002, 276005, 276011		•			10/120	267385
96	450	Red		Round	V-Conical	276000, 276002, 276005, 276011		•			20/120	249943
96	450	Natural		Round	V-Conical	276000, 276002, 276005, 276011		•			20/120	249944
96	450	Black		Round	V-Conical	276000, 276002, 276005, 276011		•			20/120	249945
96	450	Natural	•	Round	V-Conical	276000, 276002, 276005, 276011		•		•	20/120	249946
96	450	Yellow		Round	V-Conical	276000, 276002, 276005, 276011		•			20/120	249947
96	450	White		Round	V-Conical	276000, 276002, 276005, 276011		•			20/120	249949
96	450	Blue		Round	V-Conical	276000, 276002, 276005, 276011		•			20/120	249950
96	330	Natural		Round	U	AB-0566, AB-0566/SP, AB-0674	•	•	•		100/100	AB-0796
96	300	Natural		Round	V-Conical			•			5/60	442587
96	200	Natural		Round	V-Spindle	PCR Cap Strips	•	•	•		100/100	AB-1058

#### 384-Well DeepWell and MicroWell Plates

No. Of Wells	Max Well Volume (µL)	Color	Sterile	Well Shape	Well Bottom	Human DNA-Free	DNase-/ RNase- Free	PCR Inhibitor– Free	Qty per Pack/Case	Cat. No.
384	252	Natural		Square	U	•	•	•	10/120	269390
384	250	Natural		Square	V-Conical	•	•	•	10/120	AB-1178
384	120	Natural		Square	U		•		10/120	264573
384	120	Natural	•	Square	U		•		10/120	264574
384	120	White		Square	U		•		10/120	264575
384	120	Black		Square	U		•		20/120	264676
384	120	Blue		Square	U		•		20/120	264579
384	120	Natural		Square	Pyramidal	•	•	•	20/120	AB-0781
384	58	Natural	•	Square	U		•		20/120	267460
384	58	Black		Square	U		•		20/120	267461
384	58	White		Square	U		•		20/120	267462
384	55	Natural		Round	V-Spindle	•	•	•	20/120	AB-1056

### Sample processing and storage plate closures Versatile sealing options

A range of Thermo Scientific caps, cap mats, sealing tapes, and heat seals offers reliable options for maintaining the integrity of your plate contents, allowing you to store and process your samples confidently.

Seal	tun
Seal	

Cap mats

Heat seals

#### Key features

- Chemically resistant
  - Withstand low temperatures to -80°C
  - Protect contents from evaporation
  - Prevents contamination

Fast, secure sealing

#### Available options

- Pierceable
- Pre-slit
- Round or square well
- Individual caps, strips or cap mats
- ColorsSterile
- Human DNA-free
- DNase-/RNase-free
- PCR inhibitor-free
- Endotoxin-free
- Pierceable
- Peelable
- Foil or clear
- Sheets or rolls
- PCR- and qPCR-ready
- Breathable

- Lids
- Notches for quick orientation
- Robotic lids maximize space and ease
   of handling

Safe for temperature-sensitive samples

Designed for reliable performance with

Temperature ranges from -200°C to +120°C

Thermo Scientific ALPS instruments

- Lid height
- Corner configuration
- Condensation rings
- Evaporation barrier/rim
- Sterile
- Human DNA–free
- DNase-/RNase-free
- PCR inhibitor-free
- Pierceable
- Silver, white, black or clear
- PCR- and qPCR-ready
- Sterile
- Human DNA-free
- DNase-/RNase-free
- Breathable

#### Adhesive seals (Tapes)



- Wide range of adhesive seals for every assay, including gas permeable and sterile applications
- Effective for all microplate formats
- Pressure-sensitive adhesive is not tacky to touch, but forms a strong bond to the plate upon application of pressure
- Temperature ranges from –80 to +120° C

We offer a range of options to seal your sample processing and storage plates, compatible with both automated and manual processes. Select the type, format, materials, and other criteria that best suit the requirements of your application and processes.





Lids



Heat seals



Adhesive seals (Tapes)

#### Well caps

Available formats			
Cap mats	• Flat	Sheets	Sheets
Single well caps	Cut-off corners	Automation rolls	Pre-perforated rolls
Row caps (strips)	Condensation rings		
Plate compatibility			
• 96-well	• 96-well	All	All
• 384-well	• 384-well		
Temperature range			
-80°C to +120°C	-80°C to +60°C	-200°C to +120°C	-80°C to +120°C
Available materials	'	'	
Polypropylene	Polystyrene	Polypropylene adhesive layer	Acrylic and silicone adhesive
• TPE	Polypropylene		
Silicone			
Applications			
Long-Term Storage	Automated Assays	Long-Term Storage	Long-Term Storage
Short-Term Storage	Sample Protection	Short-Term Storage	Short-Term Storage
Automated Assays	Incubation	Automated Assays	Automated Assays
Sample Protection	• ELISA	Sample Protection	Sample Protection
Incubation	Cell Culture	Incubation	Incubation
Drug Discovery		PCR and qPCR	PCR and qPCR
		Drug Discovery	Drug Discovery
			• ELISA
			Cell Culture

#### **Adhesive Seals**

Material/Adhesive	Application	Color	Sterile	Pierceable	Human DNA-Free	DNase-/ RNase-Free	Temperature Range	Qty per Pack/Case	Cat. No.
PVC coated Polypropylene/Acrylic	Basic plate seal	Clear					-40°C to +80°C	100	AB-0580
Non-woven Rayon/ Acrylic	Gas permeable	White					-20°C to +80°C	50	AB-0718
Polyester/Acrylic	Short-term storage, ELISA	Clear					-40°C to +120°C	100	3501
Polyester/Acrylic	Short-term storage, ELISA	Clear					-40°C to +120°C	100	5701
Aluminum/Acrylic	PCR and storage in 96-well plates	Foil		•	•	•	-80°C to +120°C	100	232698
Aluminum/Acrylic	PCR and storage in 384-well plates	Foil		•	•	•	-80°C to +120°C	100	232699
Polypropylene/Acrylic	Low autofluorescence, DMSO compatible, microscopy	Natural			•	•	-70°C to +100°C	100	232701
Polypropylene/Acrylic	PCR, fluorescence assays, microscopy	Natural			•	•	-70°C to +100°C	100	232702
Polyethylene/Acrylic	Repeated piercing, low autofluorescence	Clear		•			-40°C to +90°C	100	235306
Polyolefin/Silicone	qPCR, long- term storage, crystallography, HPLC	Clear			•	•	-80°C to +105°C	100	235307
Vinyl/Acrylic	Luminescence, photosensitive samples	White					-40°C to +80°C	50	236272
Polyester/Acrylic	ELISA, general incubation	Clear	•				-40°C to +120°C	200/800	236366
Polyester/Acrylic	ELISA, general incubation	Clear					-40°C to +120°C	100	236370
Vinyl/Acrylic	Fluorescence, photosensitive samples	Black					-40°C to +80°C	50	236703
Polyester/Acrylic	Convenient roll dispenser, general purpose	Clear					-40°C to +120°C	1000	236707
Non-woven Rayon/ Acrylic	Breathable, cell culture	White	•	•			-20°C to +80°C	25/25	241205
Non-woven Rayon/ Acrylic	Breathable	White		•			-20°C to +80°C	50	249720
Aluminum/Acrylic	Chemically resistant, PCR, long-term storage	Foil		•	•	•	-80°C to +120°C	100	276014



#### **Cap Mats**

Color	Sterile	Compatible Plate	Cut-off Corners	Human DNA-Free	DNase-/ RNase-Free	PCR Inhibitor – Free	Endotoxin- Free	Qty per Pack/Case	Cat. No.
Natural		4221, 4222	A12	•	•		•	10/10	4421
Natural	•	4221, 4222	A12	•	•		•	10/10	4422
Natural	•	Nunc Shared Wall Plates	H1 & H12					1/50	276000
Natural		Nunc Shared Wall Plates	H1 & H12					5/50	276002
Blue		Nunc Shared Wall Plates	H1 & H12					5/50	276005
Natural		Nunc Shared Wall Plates	H1 & H12	•	•	•		10/50	276011
Natural		95040452, 95040462	H12					5/50	9503230
Natural	•	95040452, 95040462	H12					1/25	9503233
Natural		4211-11, 4212-11	A12	•	•		•	10/10	4411-11
Natural	•	4211-11, 4212-11	A12	•	•		•	10/10	4412-11
Natural		AB-0564, AB-0765, AB-0787, AB-0796, AB-0859	H1	•	•	•		50/50	AB-0566
Natural		AB-0564, AB-0765, AB-0787, AB-0796, AB-0859	H1	•	•	•		50/50	AB-0566/ SP
Natural		AB-0564, AB-0765, AB-0787, AB-0796, AB-0859	H1	•	•	•		50/50	AB-0674
Natural		AB-0564, AB-0765, AB-0787, AB-0796, AB-0859	H1	•	•	•		50/50	AB-0675
Natural		AB-1056 (384-well plate)	H1	•	•	•		5/5	AB-1176

#### Lids

Material	Color	Sterile	Compatible Plate	Cut-off Corners	Condensation Rings	Evaporation Barrier/Rim	Human DNA-Free	DNase-/ RNase- Free	PCR Inhibitor–Free	Height	Qty per Pack/ Case	Cat. No.
PS	Clear	•	All Plates							8.34 mm	20/60	250002
PS	Clear		All Plates							8.34 mm	20/60	250003
PS	Clear		All Plates							8.34 mm	20/180	250005
PS	Clear		All Plates			•				4.6 mm	25/100	253623
PS	Clear	•	All Plates			•				4.6 mm	25/100	253624
PS	Clear		96 Nunc	H1 & H12	•	•				7.9 mm	5/100	263339
PS	Clear	•	96 Nunc	H1 & H12	•	•				7.9 mm	1/50	261422
PS	Clear	•	384 Nunc	H1 & H12		•				7.9 mm	1/60	264611
PS	Clear		384 Nunc	H1 & H12		•				7.9 mm	20/180	264612
PS	Clear	•	384 Nunc	H1 & H12		•				7.9 mm	20/180	264616
PS	Clear	•	96 Nunc	H1 & H12	•	•				7.9 mm	20/60	264623
PS	Clear		Abgene	H1			•	•	•	8.25 mm	50	AB-0751
PP	Natural		Abgene	H1			•	•	•	9.25 mm	50	AB-0755

#### Heat Seals, Single Sheets for use with ALPS 25, ALPS 30, and ALPS 50V

Product Name	DMSO	Pierce	Peel	PCR	qPCR	Storage Temperature	Compatible Materials	Sheet Size	Qty per Case	Cat. No.
Thermo Seal	•	•	•	•		-80°C to +120°C	Polypropylene	80x135 mm	100	AB-0559
Easy Pierce	•	•	•	•		-80°C to +120°C	Polypropylene, Polyethylene	80x125 mm	100	AB-0757
Easy Pierce 20 µm	•	•	•	•		-80°C to +120°C	Polypropylene, Polyethylene	80x125 mm	100	AB-1720
Easy Peel	•		•	•		-200°C to +120°C	Polypropylene, Polyethylene	80x125 mm	100	AB-0745
Clear Seal	•	•	•	•	•	-80°C to +120°C	Polypropylene, Polyethylene, Polystyrene	80x125 mm	1000	AB-1797
Clear Diamond Seal	•		•	•	•	-80°C to +120°C	Polypropylene, Polyethylene, Polystyrene	80x125 mm	100	AB-0812

#### Automation Heat Seals, Rolls for use with ALPS5000 and ALPS3000

Product Name	DMSO	Pierce	Peel	PCR	qPCR	Storage Temperature	Compatible Materials	Roll Length	Cat. No.
Thermo Seal	•	•	•	•		-80°C to +120°C	Polypropylene	370 m	AB-3559
Easy Pierce	•	•	•	•		-80°C to +120°C	Polypropylene, Polyethylene	610 m	AB-3738
Easy Pierce 20 µm	•	•	•	•		-80°C to +120°C	Polypropylene, Polyethylene	610 m	AB-3720
Easy Peel	•		•	•		-200°C to +120°C	Polypropylene, Polyethylene	610 m	AB-3739
Clear Seal	•	•	•	•	•	-80°C to +120°C	Polypropylene, Polyethylene, Polystyrene	610 m	AB-3797
Clear Diamond Seal	•		•	•	•	-80°C to +120°C	Polypropylene, Polyethylene, Polystyrene	370 m	AB-3799



# Plate sealing at your fingertips

Heat sealing provides an extra level of security over sticky adhesive and cap mats due to the uniformity of sealing. Microplates are designed with a raised rim around each well that enables bonding of seal to well.







	ALPS5000	ALPS3000	ALPS 50V		
Cat. No.	AB-5000	AB-3000	AB-1443A		
Sealing Parameters					
Temp Max	199°C	200°C	200°C		
Time Max	9.9 s	4.0 s	9 s		
Seal Length	119-128 mm	119 mm	Precut Sheets		
Force	5-50 kg	80 kg			
Distance	10-50 µm				
Seals per Minute	2	6			
Plate height	8-46 mm	8-46 mm	14-46 mm		
Environmental Parameters					
Walk-up Use	Yes	Yes	Yes		
Integrated Use	Yes	Yes			
External Air Need	None	50 LPM @80 PSI	None		
Weight	25 kg	12 kg	7.2 kg		

### Thermo Scientific ALPS5000 Automated Plate Sealer Fast, reliable, customizable, and quiet automated plate sealing solution for any lab

The Thermo Scientific<sup>™</sup> ALPS5000<sup>™</sup> delivers the next generation in automated plate sealing equipment, efficiently sealing up to 5000 DeepWell, MicroWell, or PCR plates with a single roll of seal. The sealer's all electric operation offers a large touchscreen user interface, exceptional parameter customization, and quiet, energy efficient operation. The ALPS5000 heat sealer has a compact footprint with seals being easily loaded without the need of tools or access to the rear of the instrument.

The ALPS5000 is flexible in application workflow being fully automated via the communications port for high-throughput diagnostic work, or easily operated via the touchscreen for benchtop applications. The touchscreen is designed to intuitively customize sealing time, temperature, and sealing mode, and allows the adjustment of foil length to optimize for peelable applications versus automation workflows.

The configurable sealing modes available with the ALPS5000 include the standard force setting, but also the novel distance mode. This mode enables sealing of the same plate up to five times by precisely controlling the amount the melting distance of the well. With eco-mode that reduces energy use during downtime, and ability to save programs, the ALPS5000 is a purpose-built sealer that maximizes usability of the sealer across workflows and applications.

Scan for 3D Virtual Product Tour



Thermo Scientific ALPS5000 Specifications	
Dimension	235 mm (w) x 631 mm (d) x 525 mm (h)
Weight	25 kg
Speed	30 seconds per plate
Power Supply	110-240V AC, 50-60Hz
Air input Requirement	N/A
Vacuum source requirement	N/A
Operating temperature range	15°C to 40°C
Operating humidity range	10-80% non-condensing
Sealing plate height	8 mm to 46 mm
Customizable parameters	
Foil length per plate	119 mm–128 mm (1 mm increments)
Sealing temperature range	Ambient to 199°C (in 1° increments)
Sealing time	0.5–9.9 seconds (0.1s increments)
Sealing distance	10–50 μm (1 μm increments)
Sealing force	5–50 kg (1 kg increments) Sealing temperature range



### Thermo Scientific ALPS3000 Automated Plate Sealer Fast, reliable automated plate sealing for any lab

The Thermo Scientific<sup>™</sup> ALPS3000 is a fast and compact heat sealer designed to help provide heat sealing solutions to labs ranging from low throughput to high capacity automated environments. The Thermo Scientific ALPS3000 heat sealer has a compact footprint to help conserve precious bench space and top-loaded seals are easily accessible. With automated, pneumatically controlled microplate sealing, seal up to six plates per minute in a variety of handfed, benchtop or integrated high-throughput robotic applications.

Designed with onboard sensors to detect a microplate, heat seal and air inlet pressure the ALPS3000 heat sealer allows for completely autonomous operation while yielding minimal waste. The ALPS3000 fully automated sealer is equipped with both on-board touch screen operation for benchtop use and an RS232 port and included programming parameters for robotic integration.

Thermo Scientific ALPS 3000 Specifications				
Dimension	185 mm x 414 mm x 350 mm			
Weight	12 kg			
Speed	10 to 12 seconds per plate			
Power Supply	110–240 V AC, 50–60 Hz			
Air Requirement	50 liters per minute			
Air Input Pressure	5.5 bar (80 PSI) to 5.7 bar (87 PSI)			
Sealing Temperature Range	Ambient to 200°C			
Operating Temperature Range	15°C to 40°C			
Sealing Plate Height	8 to 46 mm			

### Thermo Scientific ALPS 50V Microplate Heat Sealer An excellent entry level solution for fast and reliable semi-automated plate sealing



With the semiautomated Thermo Scientific ALPS 50V microplate heat sealer, secure tight seals around individual wells to help eliminate sample loss through evaporation and cross contamination between wells.

Choose from a wide range of heat seals, including pierceable, optically clear, and permanent, for any application. Simple on-board touchpad controls adjust sealing temperature and time. Coupled with an audible alarm indicating sealing completion, the ALPS 50V sealer provides optimal sealing control and helps ensure consistency.

The counter lever handle design provides minimal strain when operating the instrument. Additionally, the ALPS 50V sealer weighs only 7.2 kg (15.9 lbs) for ease of placement and relocation.

Thermo Scientific ALPS 50V Specifications				
Dimension	220 mm x 321 mm x 425 mm			
Weight	15.9 lbs/ 7.2 kg			
Temperature Set Point Range	125°C to 200°C in 1°C increments			
Time Set Point Range	1 to 9 seconds in 0.5 second increments			
Operating Temperature Range	18°C to 30°C			
Power Supply	110–240 V AC, 50–60 Hz			

# Sample processing and storage product customization and OEM partnership

### Bring the power of customization to your process

Thermo Fisher Scientific is a leader in plastics and polymer engineering expertise. Many of the top-selling products offered under the Thermo Scientific brand have been in production for decades, while being subject to continuous improvement. The team behind the production and diagnostics plastics is driven to innovate: from improving product design based on customer feedback to increasing chemical compatibility or helping ensure the polymers used are in line with modern science on toxicity; helping our experts stay ahead of industry trends.

#### Manufacturing services:

- Worldwide manufacturing and supply-chain infrastructure to sustain business in the most challenging times
- Thousands of off-the-shelf products available to fit your needs
- Injection mold design, build, and qualify on-boarding
- Products made in cleanroom, sterile and non-sterile versions
- Custom sized, slit, and packaged sealing tapes, foils and films

#### Labelling, Barcoding, and Packaging services:

- Choose the style of code and design any additional labelling and flexible human-readable code and logo positions
- Label size, color, and position customizable according to requirements
- Barcode type and density Full Range available
- Blank or custom logo molded into plasticware
- ISTA and Simulated altitude testing

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#### Learn more at thermofisher.com/storageplates

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