

# " الجامعة الأردنية "

التاريخ : / / 1445هـ

الموافق : / / 2024م

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الجامعة الأردنية

لجنة الشراء الفرعية

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- ❖ رقم العطاء : (2023/529) .
  - ❖ موضوع العطاء : توريد وتركيب وتشغيل وصيانة أجهزة حاجة البحث العلمي .
  - ❖ القيمة الاجمالية للعطاء : (13457.276) ثلاثة عشر الفاً وأربعمائة وسبعة وخمسون ديناراً ومائتان وستة وسبعون فلساً .
  - ❖ رقم قرار الاحالة : ( / / 2024) .
  - ❖ تاريخ الإعلان عن العطاء في الصحف المحلية : 2023/12/4م.
  - ❖ تاريخ فتح العروض : 2024/1/3م .
  - ❖ تاريخ جلسة لجنة الشراء الفرعية : 2024/1/3م .
  - ❖ رقم الجلسة : (2024/500) .
  - ❖ رقم طلبات الشراء : ( 233193،240839 ) بقيمة (13500.000) ثلاثة عشر الفاً وخمسمائة دينار .
- \*\*\* العروض التي وردت بشأن هذا العطاء :

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1. المؤسسة الحديثة للتوريدات العلمية.
2. شركة الجينوم الطبية .
3. شركة اليمامة للمشاريع الصحية والبيئية .
4. شركة الريان الدولية العلمية للتجهيزات المخبرية .
5. مؤسسة ساندرافنية للوازم المخبرية .
6. مواهب الشرق الاوسط للتجهيزات المخبرية والعلمية .
7. شركة الفيحاء للتجهيزات العلمية والمخبرية .
8. شركة واحة العلوم للتجارة .
9. مؤسسة الوحدة للتجهيزات العلمية .
10. شركة الوراثة للتكنولوجيا الحيوية .
11. شركة الجين التقنية للمستلزمات الطبية .
12. الجودة الالمانية لتجارة المواد الصحية .
13. مؤسسة طبريا للمستهلكات الطبية .

## قرار لجنة الشراء الفرعية

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رقم القرار : ( 2024/525/ )
رقم الجلسة : (2024/525)
تاريخ الجلسة: 2024/4/17م

مضمون القرار :

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**اولاً :** قررت اللجنة إحالة البنود المبينة في الكشف المرفق رقم (1) على السادة شركة الريان الدولية العلمية

للتجهيزات المخبرية وذلك وفقاً للأسعار والمواصفات الواردة في عرضهم رقم (-2023) المؤرخ في

2023/12/27, وكتابهم اللاحق رقم(بلا) تاريخ 2024/4/21 ، وكما هو مبين تالياً :

❖ **بقيمة إجمالية مقدارها : (5999.636) خمسة الاف وتسعمائة وتسعة وتسعون ديناراً وستمائة وستة وثلاثون فلساً .**

❖ **الأسعار :** شاملة الرسوم الجمركية، شاملة الضريبة العامة على المبيعات، شاملة التوريد والتركيب والتشغيل،

وشاملة الصيانة المجانية الشاملة لقطع الغيار لمدة عام من تاريخ التشغيل ، واصلة مستودعات الجامعة الاردنية،

وغير شاملة رسوم الإحالة والطابع بحيث تدفع عند تبلغ قرار الإحالة والتوقيع عليه وحسب الأصول .

❖ **التسليم :** (2-3) شهور من تاريخ التبليغ بالاحالة النهائية .

❖ **أسباب الإحالة :** ارضص المطابق .

**ثانياً :** قررت اللجنة إحالة البنود المبينة في الكشف المرفق رقم (2) على السادة المؤسسة الحديثة للتوريدات العلمية

وذلك وفقاً للأسعار والمواصفات الواردة في عرضهم رقم (JU/5666/Tend/A/23) المؤرخ في

2023/12/27, وكتابهم اللاحق رقم (JU/5666/Tend/N/24) تاريخ 2024/4/23 ، وكما هو مبين تالياً :

❖ **بقيمة إجمالية مقدارها : (4478.670) اربعة الاف واربعمائة وثمانية وسبعون ديناراً وستمائة وسبعون فلساً .**

❖ **الأسعار :** شاملة الرسوم الجمركية، شاملة الضريبة العامة على المبيعات، شاملة التوريد والتركيب والتشغيل

والتدريب للفنيين في الموقع ، وشاملة الصيانة المجانية الشاملة لقطع الغيار لمدة عام من تاريخ التشغيل ، واصلة

مستودعات الجامعة الاردنية، وغير شاملة رسوم الإحالة والطابع بحيث تدفع عند تبلغ قرار الإحالة والتوقيع

عليه وحسب الأصول .

❖ **التسليم :** (3-6) شهور من تاريخ التبليغ بالاحالة النهائية .

❖ **أسباب الإحالة :** ارضص المطابق .

صفحة رقم (2) من قرار الإحالة رقم ( 2024/ )

أ ط

- ثالثاً:** قررت اللجنة إحالة البنود المبينة في الكشف المرفق رقم (3) على السادة شركة الفيحاء للتجهيزات العلمية والمخبرية وذلك وفقاً للأسعار والمواصفات الواردة في عرضهم رقم (QTN-AF-2023-04349) المؤرخ في 2023/12/24، وكتابهم اللاحق رقم (AF-T-2024-0078) تاريخ 2024/4/23، وكما هو مبين تالياً :
- ❖ **بقيمة إجمالية مقدارها : (2978.880) الفان وتسعمائة وثمانية وسبعون ألفاً وثمانمائة وثمانون فلساً .**
  - ❖ **الأسعار :** شاملة الرسوم الجمركية، شاملة الضريبة العامة على المبيعات، شاملة التوريد والتكيب والتشغيل، وشاملة الصيانة المجانية الشاملة لقطع الغيار لمدة عام من تاريخ التشغيل ، وأصلة مستودعات الجامعة الأردنية، وغير شاملة رسوم الإحالة والطابع بحيث تدفع عند تبلغ قرار الإحالة والتوقيع عليه وحسب الأصول .
  - ❖ **التسليم :** كما هو بالكشف رقم (3) .
  - ❖ **أسباب الإحالة :** ارضص المطابق .

### • ملاحظة الغاء البنود رقم (2 ، 5 ، 6)

### شروط قرار الإحالة للعطاء رقم (2023/529)

- أولاً : يعتبر نظام المشتريات الحكومية رقم (8) لسنة 2022م وتعديلاته وتعليماته التنفيذية جزءاً لا يتجزء من قرار الإحالة .
- ثانياً : تسليم البنود المطلوبة خلال الفترة الزمنية المحددة لذلك .
- ثالثاً : تقديم كفالة حسن تنفيذ بنسبة (10%) من القيمة الإجمالية للإحالة، ويشترط في الكفالة أن تتضمن عبارة " تجدد الكفالة تلقائياً لحين ورود ما يبين تحقق الغاية منها حسب الأصول من الجهة المعنية " .
- رابعاً : يفرم المتعهد نسبة واحد بالألف من قيمة البنود المتأخر في تسليمها عن كل يوم تأخير في التسليم، وعلى أن لا تتجاوز قيمة الغرامة (15%) من قيمة الإحالة.

- خامساً : يلتزم المتعهد إلتزاماً تاماً بما ورد في قرار الإحالة رقم ( 2024/ ) وبما ورد في عرضه من حيث الأسعار والكميات والكتالوجات والمواصفات والعينات والشروط العامة والخاصة لهذا العطاء وفي حالة مخالفته لما ورد في قرار الإحالة يطبق عليه جميع أو بعض نصوص النظام النافذ للمشتريات الحكومية .
- سادساً : يحق للجامعة زيادة أو تخفيض الكميات وبموافقة المتعهد وفقاً للمادة رقم (15) من الملحق رقم (1) إدارة العقد، من النظام النافذ للمشتريات الحكومية.
- سابعاً : يتم دفع رسوم الإحالة والطوابع (خلال عشرة أيام) من تاريخ تبلغ قرار الإحالة، وبعكس ذلك يطبق قانون الرسوم والطوابع .
- ثامناً : تقديم كفالة صيانة بنسبة (5%) من القيمة الاجمالية للاحالة سارية المفعول لمدة عام من تاريخ التشغيل ، ويشترط في الكفالة ان تتضمن عبارة " تجدد الكفالة تلقائيا لحين ورود ما يبين تحقق الغاية منها وحسب الاصول" .
- تاسعاً : أجور الإعلان على من يرسو عليه العطاء مهما تعددت مرات الإعلان .
- عاشراً : يلتزم المتعهد بتقديم كفالة خطية مصدقة من كاتب العدل لضمان سوء المصنعية بكامل قيمة البنود الموردة مضافاً إليها (15%) من قيمتها لمدة سنة ميلادية من تاريخ الإستلام النهائي، وبحيث يلتزم المتعهد خلالها باستبدال البنود التي ثبت سوء مصنعيها ببنود جديدة وعلى نفقته خلال شهرين من تاريخ إشعاره بذلك من قبل الجامعة.
- احد عشر : يخضع هذا القرار للتصديق من الجهة المخولة بالتصديق عليه بمقتضى أحكام نظام المشتريات الحكومية رقم (8) لسنة 2022م وتعديلاته وتعليماته التنفيذية، ولا يعتبر ساري المفعول إلا بعد المصادقة عليه حسب الأصول .

لجنة الشراء الفرعية في جلستها ذات الرقم (2024/525)  
المنعقدة بتاريخ 2024/4/17م، للعتاء رقم (2023/529)

عضو	رئيس لجنة الشراء الفرعية
( السيد نهاد اسماعيل عبيدات )	( السيد بكر إبراهيم البدر )
عضو	أمين السر
( السيد محمد سليمان العدوان )	( السيد أحمد كامل عبد الرحيم )

كشف رقم (1-1) يبين البنود المحالة على السادة شركة الريان الدولية العلمية للتجهيزات المخبرية بموجب العطاء رقم (2023/529)

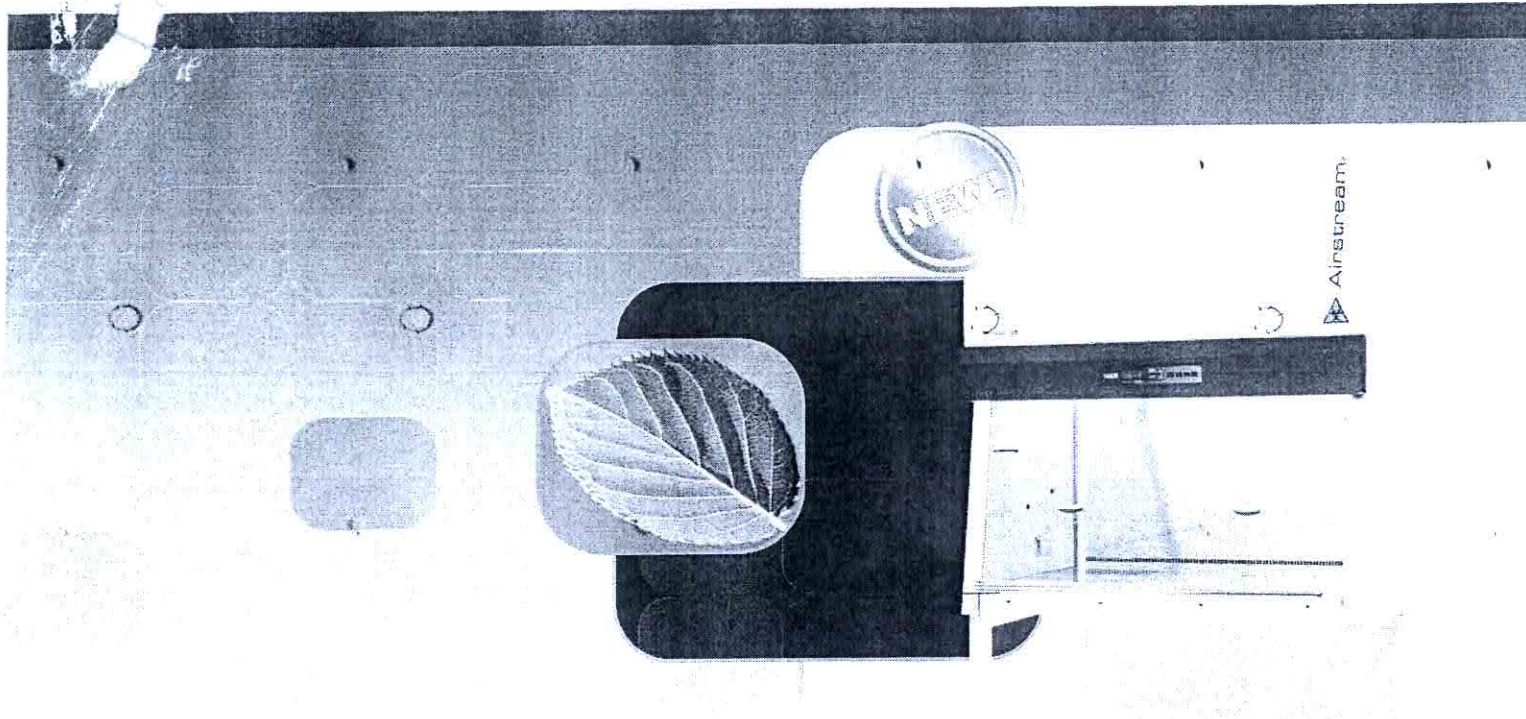
Item	Description Of Articles	UNIT	QTY	U. Price	U.Price After Discount	Tax 16%	T. Price With Tax16%	Manufacturer
3	<p><b>Airstream® Class II, Biological Safety Cabinet (S-Series) NS, 4ft/1.2m</b>  <b>Cat.No:AC2-4S8-NS</b></p> <p><b>Features:</b></p> <ul style="list-style-type: none"> <li>• <b>Sentinel™ Gold Microprocessor Control system</b> <ul style="list-style-type: none"> <li>✓ Has audible and visual alarms</li> <li>✓ Displays all safety information on one screen</li> <li>✓ Centered and angled down for easy reach &amp; viewing</li> <li>✓ Selectable Quickstart mode for fast operation</li> </ul> </li> <li>• <b>DC-ECM Blower</b> <ul style="list-style-type: none"> <li>✓ Energy-efficient with 70% energy savings compared to AC motor</li> </ul> </li> <li>• <b>ULPA Filter</b> <ul style="list-style-type: none"> <li>✓ 10 x filtration efficiency compared to HEPA filter</li> <li>✓ 99.999% at 0.1 to 0.3 micron, ULPA as per IEST-RP-CC001.3 USA or &gt;99.999% at MPPS, H14 as per EN 1822 EU</li> </ul> </li> <li>• <b>Single-piece Wall</b> <ul style="list-style-type: none"> <li>✓ Easy to reach service fixture and outlets</li> <li>✓ Large radius for easy cleaning</li> </ul> </li> <li>• <b>Single-piece work tray</b> <ul style="list-style-type: none"> <li>✓ Recessed to contain spillage</li> <li>✓ Sloped perimeter that's easy to wipe</li> </ul> </li> <li>• <b>Isocide™ Antimicrobial Powder Coating</b> <ul style="list-style-type: none"> <li>✓ Eliminates 99.9% of surface bacteria within 24 hours of exposure</li> </ul> </li> </ul> <p><b>Specifications:</b></p> <ul style="list-style-type: none"> <li>• Work space: 120cm - 0.56 m2</li> <li>• Airstream design was optimized to give large performance envelope, that provides operator and product protection at wide Inflow and Downflow variation from the Nominal point.</li> </ul>	Unit	1	5431.100	5172.100	827.536	5999.636	ESCO Singapore/ Indonesia World Wide

كشف رقم (2-1) يبين البنود المحالة على السادة شركة الريان الدولية العلمية للتجهيزات المخبرية بموجب العطاء رقم (2023/529)

Item	Description Of Articles	UNIT	QTY	U. Price	Tax 16%	T. Price With Tax16%	Manufacturer
	<ul style="list-style-type: none"> <li>• Standards Compliance: Biosafety Cabinets: NSF / ANSI 49 NSF*</li> <li>• Cabinet construction:</li> <li>✓ Work Zone:</li> <li>✓ 1.5 mm (0.06") / 16 gauge, SS 304, 4B finish</li> <li>✓ Single Piece Stainless Steel Work Tray</li> <li>• Front Window:</li> <li>✓ Tempered Glass Sliding Sash Window</li> <li>• ULPA Filter Typical Efficiency: &gt;99.99% on 0.3 micron size particles by PAO test (filter leakage test according to NSF49)</li> <li>• Sound Emission per NSF / ANSI 49*: 57.5 dBA</li> <li>• Fluorescent Lamp Intensity: 1025 lux</li> <li>• Cabinet Construction:</li> <li>✓ Main body: 1.2 mm (0.05") / 18 gauge EG Steel with IsocideTM Oven-Baked</li> <li>✓ Epoxy-Polyester Powder Coating</li> <li>✓ Work Zone 1.5 mm (0.06") / 16 gauge, SS 304, 4B finish</li> <li>✓ Side Walls 1.5 mm (0.06") / 16 gauge, SS 304, 4B finish</li> </ul> <p><u>Includes:</u></p> <ul style="list-style-type: none"> <li>✓ European Style Service Fixture with 20mm Thread Length – Gas</li> <li>✓ European Style Service Fixture with 20mm Thread Length – Vacuum</li> <li>✓ IV Bar 1215mm</li> <li>✓ Direct Mounted Electrical Outlet - Plug Code D</li> <li>✓ UV Lamp 30W</li> <li>✓ Support Stand with Caster Wheels (Height 28") for 4ft cabinets</li> </ul>						
<b>TOTAL PRICE WITH TAX 16% : (5999.636) JD</b>							

صورة عن مواصفات الجهاز المحال على السادة شركة الريان الدولية العلمية للتجهيزات المخبرية  
بموجب العطاء رقم (2023/529)





Airstream®

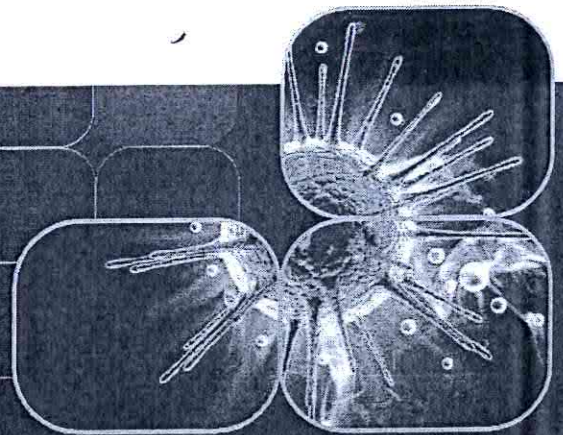
Airstream®



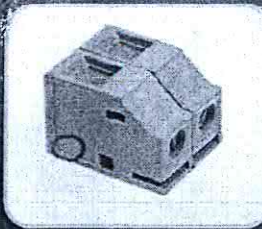
Model AC2-4S-NS

## Class II Type A2 Biological Safety Cabinets

The World's Leading Compact, Energy-Efficient,  
and Quiet Biosafety Cabinet



**ESCO**  
SCIENTIFIC



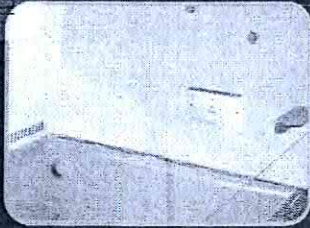
### RS 232 Serial Interface Port and Voltage Free Relay Contact

- Send operational information to Building Management System (BMS)
- Zero Volt Relay Contact to turn ON/OFF exhaust blower and signal the building alarm



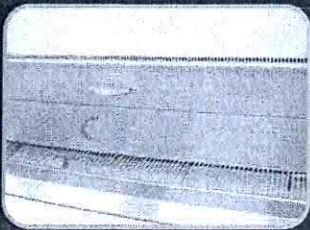
### Sentinel™ Gold Microprocessor Controller

- Displays all safety information on one screen
- Centered and angled down for easy reach & viewing
- Selectable Quickstart mode for fast operation



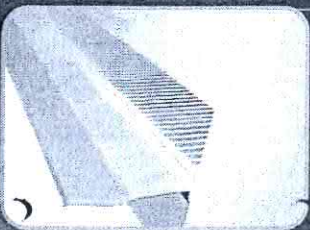
### Single-Piece Wall

- Easy to reach service fixture and outlets
- Large radius for easy cleaning



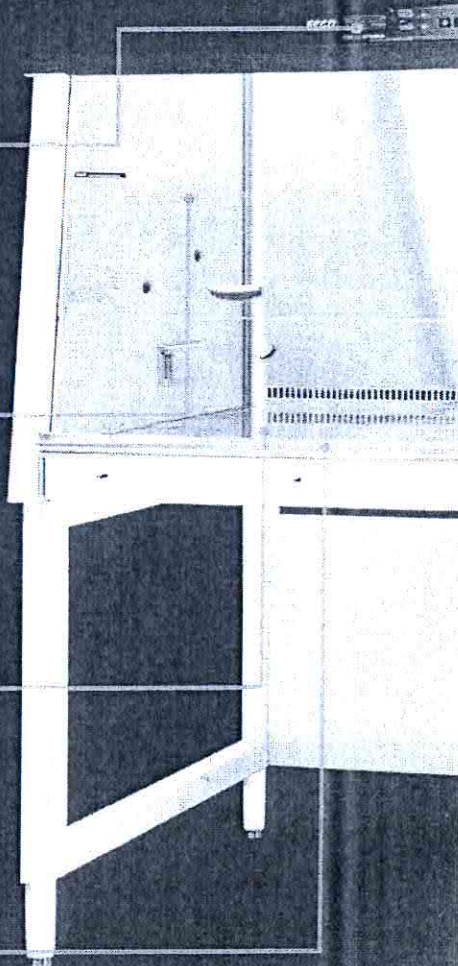
### Single-Piece Work Tray

- Recessed to contain spillage
- Sloped perimeter that's easy to wipe



### Raised Arm Rest

- Helps prevent grille blocking
- Comfortable working posture



Available in 0.9, 1.2, 1.5 and 1.8 meter width (3', 4' 5" and 6')



NSF 49



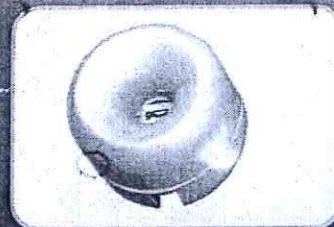
UL 61010

Airstream®

Class II Type A2 • Biological Safety Cabinets

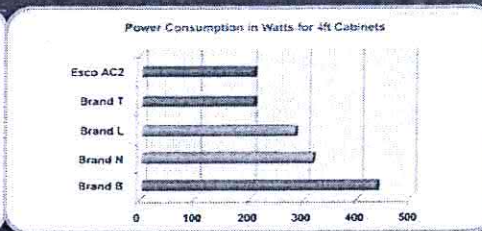
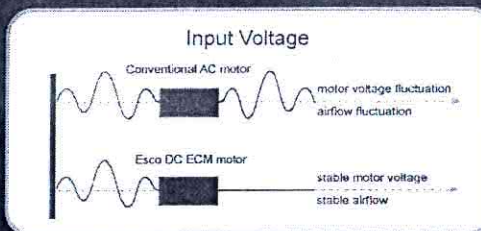
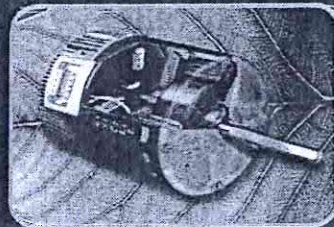
### Airflow Sensor

- Monitors real-time airflow for safety
- Alert the user if airflow is insufficient



### Energy-Efficient DC ECM Motor

- The leading energy efficient Class II Type A2 Biosafety Cabinet in the world with 70% Energy savings compared to AC motor
- Stable airflow, despite building voltage fluctuations & filter loading
- Stand by mode to further reduce power consumption by 60%

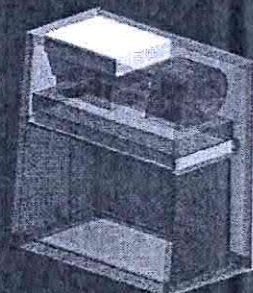


### ULPA Filter

- 10x Filtration efficiency of HEPA filter
- Creates ISO Class 3 work zone instead of industry-standard ISO Class 5

### Dynamic Chamber™

- Blower plenum and side walls are surrounded by negative pressure
- Prevent contaminants from escaping outside



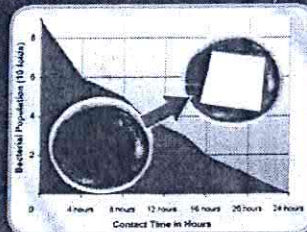
- Positive pressure
- Negative pressure

### Angled Sash

- 5° angled front to optimize user comfort, reduce glare and maximize reach into the work area

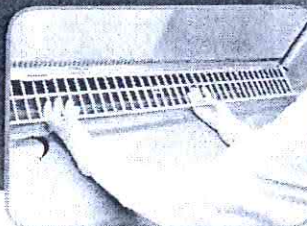
### ISOCIDE™ Powder Coat

- Silver-ion impregnated powder coat
- Inhibit microbial growth to improve safety



### Removable Paper Catch

- Easy to clean
- Optional pre-filter can be fitted



### Certification

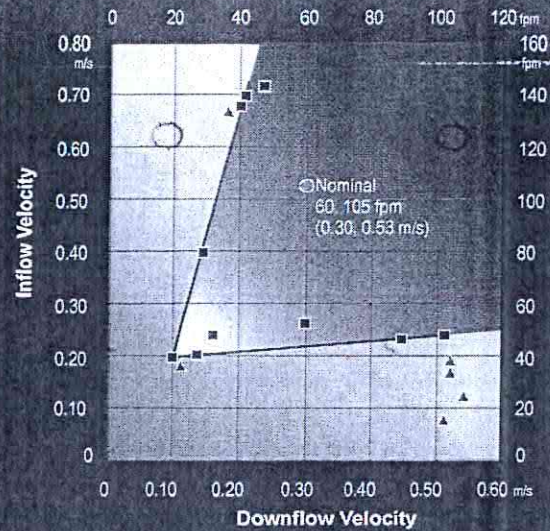
	Biosafety Cabinets	Air Quality	Filtration	Electrical Safety
Standards Compliance	NSF / ANSI 49 NSF	ISO 14644.1, Class 3, Worldwide JIS B9920, Class 3, Japan BS5295, Class 3, UK US Fed Std 209E, Class 1 USA	EN-1822 (H14), Europe IEST-RP-CC001.3, USA IEST-RP-CC007, USA IEST-RP-CC034.1, USA	UL-61010A-1, USA CSA 22.2, No.1010-192, Canada EN-61010-1, Europe IEC61010-1, Worldwide

## Cabinet Filtration System

- Ambient air is pulled through front grille to create inflow, without going into the work surface. Inflow is joined by half of the downflow, to create front air curtain that is fine-tuned to create a large performance envelope. The combined air stream travels through the back air column towards the blower.
- Approximately 1/3 of the air in the common plenum is exhausted through the ULPA filter to the room. The remaining 2/3 of the air is passed through the downflow ULPA filter and into the work area as a vertical laminar flow air to create ISO Class 3 work surface and prevents cross contamination.
- Near the work surface, the downflow splits. About Half goes to the front grille, and half goes to the rear grille. A small portion enters the side capture zones to prevent dead air corners (small blue arrows)
- The design was optimized to give large performance envelope, that provides operator and product protection at wide Inflow and Downflow variation from the Nominal point.

*Dynamic air barrier, where inflow and forward-directed downflow air converge*

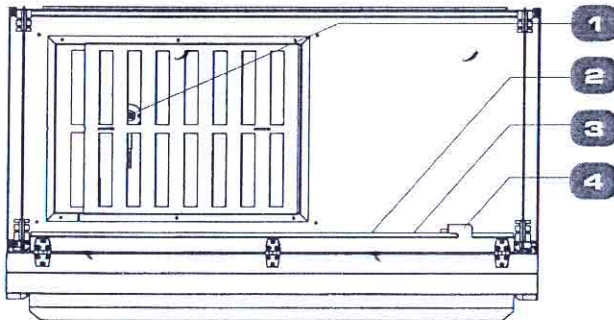
## Performance Envelope Test of AC2-NS



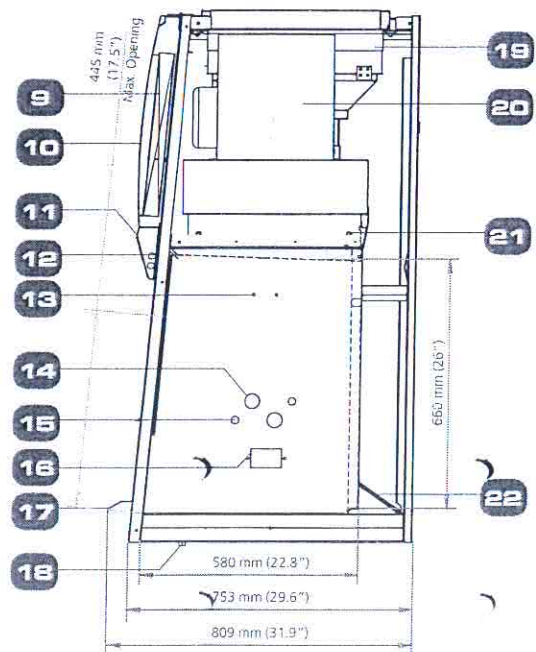
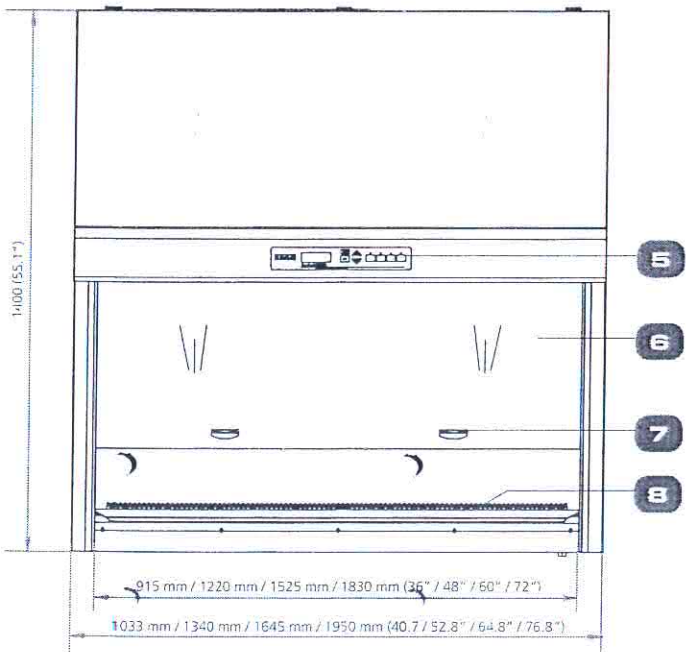
- Nominal Airflow
- Personnel / Product Protection
- Area of Personnel and Product Protection
- △ NO Personnel / Product Protection
- Area of NO Personnel and Product Protection

- ULPA-filtered air
- Unfiltered / potentially contaminated air
- Room air / Inflow air

## AC2-NS Engineering Drawing



1. Airflow Sensor
2. Voltage Free Relay Contact
3. RS232 Port
4. Power Inlet
5. Esco Sentinel™ Gold Microprocessor Control System
6. Tempered Glass Sliding Sash Window
7. Ergonomic Sash Handle
8. Single Piece Stainless Steel Work Tray
9. Electrical Panel
10. Curved Front Panel
11. Control Panel
12. Energy-efficient T5 Fluorescent Lamps
13. IV Bar Retrofit Kit Provision
14. Steris VHP / Bioquell HPV Provision (Optional)
15. Provision for Service Fixtures (2 on each side)
16. Duplex GFCI Electrical Outlets (1 on each side)
17. Stainless Steel Arm Rest
18. Drain Hole
19. Exhaust ULPA / H14 Filter
20. DC ECM Blower (Energy Efficient & Self-Compensating)
21. Downflow ULPA / H14 Filter
22. Paper Catch



Airstream®

Class II Type A2 • Biological Safety Cabinets

## TECHNICAL SPECIFICATIONS

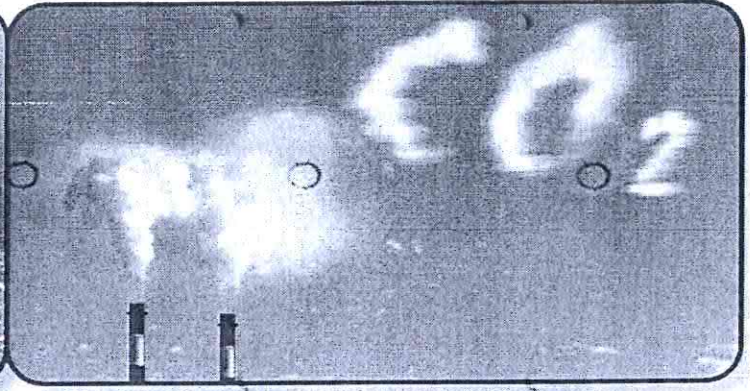
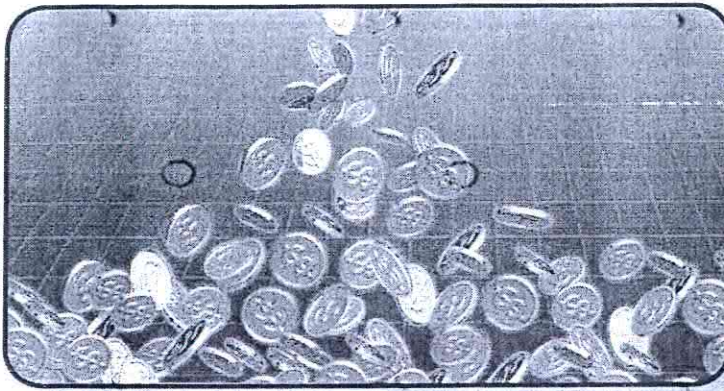
Model	220-240 VAC, 50/60Hz	AC2-358-NS 2010946	AC2-458-NS 2010747	AC2-558-NS 2010978	AC2-658-NS 2010963
	110-130 VAC, 50/60 Hz	AC2-359-NS 2010945	AC2-459-NS 2010752	AC2-559-NS 2010977	AC2-659-NS 2010925
External Dimensions (W x D x H)		1035 x 753 x 1400 mm (40.7" x 29.6" x 55.1")	1340 x 753 x 1400 mm (52.8" x 29.6" x 55.1")	1645 x 753 x 1400 mm (64.8" x 29.6" x 55.1")	1950 x 753 x 1400 mm (76.8" x 29.6" x 55.1")
Gross Internal Dimensions (W x D x H)		915 x 580 x 660 mm (36.0" x 22.8" x 26.0")	1220 x 580 x 660 mm (48.0" x 22.8" x 26.0")	1525 x 580 x 660 mm (60.0" x 22.8" x 26.0")	1830 x 580 x 660 mm (72.0" x 22.8" x 26.0")
Usable Work Area		0.42 m <sup>2</sup> (4.5 ft <sup>2</sup> )	0.56 m <sup>2</sup> (6.0 ft <sup>2</sup> )	0.70 m <sup>2</sup> (7.5 ft <sup>2</sup> )	0.86 m <sup>2</sup> (9.3 ft <sup>2</sup> )
Tested Opening	203 mm (8")				
Average Inflow Velocity	0.53 m/s (105 fpm)				
Average Downflow Velocity	0.30 m/s (60 fpm)				
Airflow Volume	Inflow	354 cmh (208 cfm)	473 cmh (280 cfm)	591 cmh (348 cfm)	709 cmh (417 cfm)
	Downflow	553 cmh (325 cfm)	738 cmh (434 cfm)	922 cmh (543 cfm)	1107 cmh (652 cfm)
	Exhaust	354 cmh (208 cfm)	473 cmh (278 cfm)	591 cmh (348 cfm)	709 cmh (417 cfm)
	Required Exhaust with Optional Thimble Exhaust Collar	531 cmh (313 cfm)	710 cmh (418 cfm)	887 cmh (522 cfm)	1064 cmh (626 cfm)
	Static Pressure For Optional Thimble Exhaust Collar	32 Pa / 0.12 in H <sub>2</sub> O	45 Pa / 0.18 in H <sub>2</sub> O	57 Pa / 0.23 in H <sub>2</sub> O	68 Pa / 0.27 in H <sub>2</sub> O
ULPA Filter Typical Efficiency	>99.999% at 0.1 to 0.3 micron, ULPA as per IEST-RP-CC001.3 USA >99.999% at MPPS, H14 as per EN 1822 EU >99.99% on 0.3 micron size particles by PAO test (filter leakage test according to NSF49)				
Sound Emission per NSF / ANSI 49*	57.5 dBA		58.5 dBA	60.5 dBA	
Fluorescent Lamp Intensity	982 lux (91 foot candles)	1025 lux (95 foot candles)	880 lux (82 foot candles)	1035 lux (96 foot candles)	
Cabinet Construction	Main body	1.2 mm (0.05") / 18 gauge EG Steel with Isocide™ Oven-Baked Epoxy-Polyester Powder Coating			
	Work Zone	1.5 mm (0.06") / 16 gauge, SS 304, 4B finish			
	Side Walls	1.5 mm (0.06") / 16 gauge, SS 304, 4B finish			
Electrical 220-240 VAC, 50/60 Hz	Cabinet Full Load Amps (FLA)	8.5	8.6	9.5	12
	Heat Load (BTU / Hr)	472	569	613	849
	Nominal Power Consumption (W)	150	181	195	270
Electrical 110-130 VAC, 50/60 Hz	Cabinet Full Load Amps (FLA)	11	11.5	12.5	15
	Heat Load (BTU / Hr)	503	628	698	999
	Nominal Power Consumption (W)	160	200	222	318
Net Weight**	188 Kg (414 lbs)	230 Kg (507 lbs)	288 Kg (634 lbs)	346 Kg (763 lbs)	
Shipping Weight**	216 Kg (476 lbs)	285 Kg (628 lbs)	356 Kg (784 lbs)	428 Kg (944 lbs)	
Shipping Dimensions, Maximum (W x D x H)**	1120 x 820 x 1760 mm (44.0" x 32.3" x 69.3")	1450 x 820 x 1760 mm (57.0" x 32.3" x 69.3")	1720 x 820 x 1760 mm (68.0" x 32.3" x 69.3")	2050 x 820 x 1760 mm (81.0" x 32.3" x 69.3")	
Shipping Volume, Maximum**	1.62 m <sup>3</sup> (57 ft <sup>3</sup> )	2.09 m <sup>3</sup> (74 ft <sup>3</sup> )	2.48 m <sup>3</sup> (87 ft <sup>3</sup> )	2.96 m <sup>3</sup> (105 ft <sup>3</sup> )	

Specifications are subject to change without notice.

\*Noise reading in open field condition / anechoic chamber. Noise reading in normal room varies by room size, layout, and background noise, but may reach roughly 3-4 dBA above these values.

\*\*Cabinet only, excludes optional stand.

## AC2 Cabinets Save Money and Environment



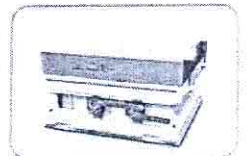
Description	AC2-4S9 with DC ECM blower	AC2-4S8 with DC ECM blower	Typical BSC with AC Blower	Savings		Units
				AC2-4S9	AC2-4S8	
Instantaneous Power	200	160	800	600	640	Watt
Hours of Operation in a year	2000					Hours
Energy	400	320	1600	1200	1280	kWh
Energy cost in USA at \$ 0.10 / kWh	40	32	160	120	128	USD
Energy cost in EU at € 0.20 / kWh	80	64	320	240	256	Euro
CO <sub>2</sub> released in USA at 1 lbs / kWh	400	320	1600	1200	1280	lbs
CO <sub>2</sub> emission in EU at 0.35 Kg / kWh	140	112	560	420	448	Kg

### Accessories for AC2-NS Biological Safety Cabinets

Cabinet	Standard Unit	AC2-3S8-NS 2010946	AC2-4S8-NS 2010747	AC2-5S8-NS 2010978	AC2-6S8-NS 2010963
			AC2-3S9-NS 2010945	AC2-4S9-NS 2010752	AC2-5S9-NS 2010977
Cabinet	Unit with Cable Port	AC2-3S8-NS-PORT 2011010	AC2-4S8-NS-PORT 2011011	AC2-5S8-NS-PORT 2011012	AC2-6S8-NS-PORT 2011013
		AC2-3S9-NS-PORT 2011014	AC2-4S9-NS-PORT 2011015	AC2-5S9-NS-PORT 2011016	AC2-6S9-NS-PORT 2011017
Exhaust Ducting	Anti-blowback Valve 10 inches	ABBV-10P 5170352			
	Tri-safe Exhaust Collar with Alarm	TEM-4 2010606			
	Thimble Exhaust Collar with Alarm	ECO-A-AC23 5170618	ECO-A-AC24 5170619	ECO-A-AC25 5170620	ECO-A-AC26 5170621
	Exhaust Damper	B2-DAMPER 5170352			



ABBV-10P



TEM-4

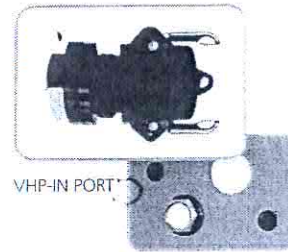


ECO-A-AC2



B2-DAMPER

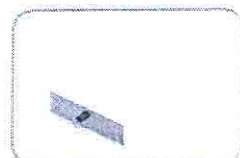
Hydrogen Peroxide Decontamination Kit	VHP In Port (Ø 1")	VHP-IN PORT 5170552			
	VHP Out Top Box for Cabinet WITH Exhaust Collar Installed (Ø 1")	VHP-ECO/OUT 5170554	VHP-ECO/OUT 5170615	VHP-ECO/OUT 5170616	VHP-ECO/OUT 5170617
	VHP Out Top Box for Cabinet WITHOUT Exhaust Collar Installed (Ø 1")	VHP OUT TOP BOX 3ft 5170553	VHP OUT TOP BOX 4ft 5170612	VHP OUT TOP BOX 5ft 5170613	VHP OUT TOP BOX 6ft 5170614
Work Zone	UV Lamp	UV-15A 5170251	UV-30A-L 5170255		
	IV Bar	IV-910 5170499	IV-1215 5170231	IV-1520 5170500	IV-1825 5170501
	Pre-filter	PF-41 5090061	PF-42 5090062	PF-43 5090063	PF-44 5090064
Electrical Outlet	Direct Mounted / GFCI	EO-			
Service Fixtures	EU SF-Gas-20 mm	SF-1G20 5170410			
	EU SF-Vacuum-20 mm	SF-1V20 5170457			
	EU SF-Air-20 mm	SF-1A20 5170502			
	EU SF-Nitrogen-20 mm	SF-1N20 5170503			
	EU SF-Water-20 mm	SF-1W20 5170458			
	EU SF-Universal-22 mm	SF-2U22 5170504			
Support Stands, Ships Flat	Fixed Stand with Leveling Feet, 28" height	SAL-3A0 Gen 2 5130170	SAL-4A0 Gen 2 5130134	SAL-5A0 Gen 2 5130171	SAL-6A0 Gen 2 5130172
	Fixed Stand with Leveling Feet, 34" height	SAL-3B0 Gen 2 5130174	SAL-4B0 Gen 2 5130175	SAL-5B0 Gen 2 5130176	SAL-6B0 Gen 2 5130177
	Fixed Stand with Caster Wheels, 28" height	SPC-3A0 Gen 2 5130155	SPC-4A0 Gen 2 5130152	SPC-5A0 Gen 2 5130162	SPC-6A0 Gen 2 5130154
	Fixed Stand with Caster Wheels, 34" height	SPC-3B0 Gen 2 5130165	SPC-4B0 Gen 2 5130166	SPC-5B0 Gen 2 5130167	SPC-6B0 Gen 2 5130168
	Telescopic Stand with Leveling Feet, 1" adjustment	STL-3A0 5130050	STL-4A0 5130051	STL-5A0 5130052	STL-6A0 5130053
	Telescopic Stand with Caster Wheels, 1" adjustment	STC-3A0 5130055	STC-4A0 5130056	STC-5A0 5130057	STC-6A0 5130058
	Motorized height Stand with Caster Wheels, 39.5" height	SPM-3A2 5130093	SPM-4A2 5130047	SPM-5A2 5130100	SPM-6A2 5131141
Misc	IQ/OQ Protocol	9010179			



VHP-IN PORT



VHP-ECO/OUT



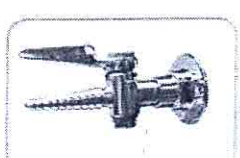
VHP OUT TOP BOX



UV\_A-L



IV\_-



SF\_-



EO-H\_



IQ OQ



SPC\_A0 Gen2



SAL\_A0 Gen2

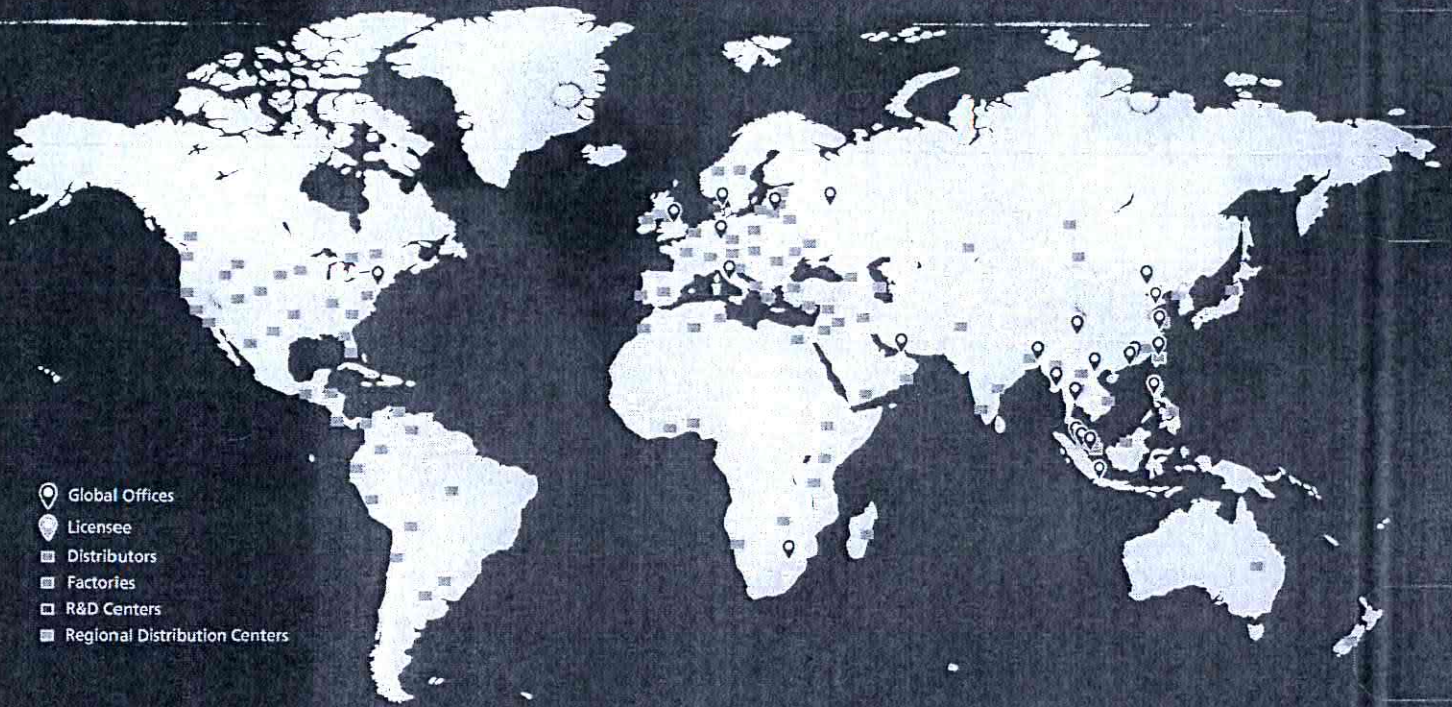


STC\_A0



SPM\_A\_

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كشف رقم (2) يبين البنود المحالة على السادة المؤسسة الحديثة للتوريدات العلمية بموجب العطاء رقم (2023/529)

<i>1. Descriptions</i>	<i>Qty</i>	<i>U.Price</i> <i>JOD</i>	<i>Sales Tax</i> <i>16%</i>	<i>T.Price</i> <i>JOD</i>
<b><i>Item No.4</i></b>				
<b>Incubator</b>				
<b>IF260</b>	<b>1</b>	<b>3861.000</b>	<b>617.760</b>	<b>4478.760</b>

Temperature

<b>Setting temperature range</b>	+20 to +80 °C
<b>Working temperature range</b>	min. 10°C above ambient up to +80°C
<b>Setting accuracy temperature</b>	0.1 °C
<b>Temperature sensor</b>	1 Pt100 sensor DIN class A in 4-wire-circuit

Control technology

<b>Control</b>	<b>COCKPIT</b> SingleDISPLAY. Adaptive multifunctional digital PID-microprocessor controller with high-definition TFT-colour display
<b>Timer</b>	Digital backwards counter with target time setting, adjustable from 1 minute to 99 days
<b>Function</b>	the process time does not start until the set temperature is reached
<b>Setpoint</b>	<b>WAIT</b>

**Calibration** three freely selectable temperature values

**adjustable parameters** temperature (Celsius or Fahrenheit), fan speed, air flap position, programme time, time zones, summertime/wintertime

#### Ventilation

---

**Fan** forced air circulation by quiet air turbine, adjustable in 10 % steps

**Fresh air** Admixture of pre-heated fresh air by electronically adjustable air flap

**Vent** vent connection with restrictor flap

#### Safety

---

**Temperature control** adjustable electronic overtemperature monitor and mechanical temperature limiter TB, protection class 1 according to DIN 12880 to switch off the heating approx. 20°C above nominal temperature

**Autodiagnostic system** for fault analysis

#### Standard equipment

---

**Works calibration certificate** incl. works calibration certificate for +37°C

**Door** fully insulated stainless steel door with 2-point locking (compression door lock)

**Door** inner glass door

**Internals** 2 stainless steel grid(s), electropolished

Stainless steel interior

**Interior** easy-to-clean interior.made of stainless steel,  
reinforced by deep drawn ribbing with integrated  
and protected large-area heating on four sides

**Volume** 256 l

**Max. number of internals** 9

**Max. loading of chamber** 300 kg

**Max. loading per internal** 20 kg

Textured stainless steel casing

**Housing** rear zinc-plated steel

Electrical data

**Voltage Electrical** 230 V, 50/60 Hz

<i>2. Descriptions</i>	<i>Qty</i>	<i>U.Price</i> <i>JOD</i>	<i>Sales Tax</i> <i>16%</i>	<i>T.Price</i> <i>JOD</i>
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**Extra**

➤ **Stainless steel grids, electropolished**

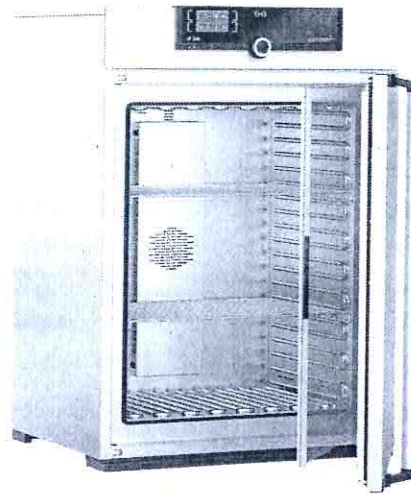
1	FOC	FOC	FOC
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**TOTAL PRICE WITH TAX 16% : (4478.760) JD**

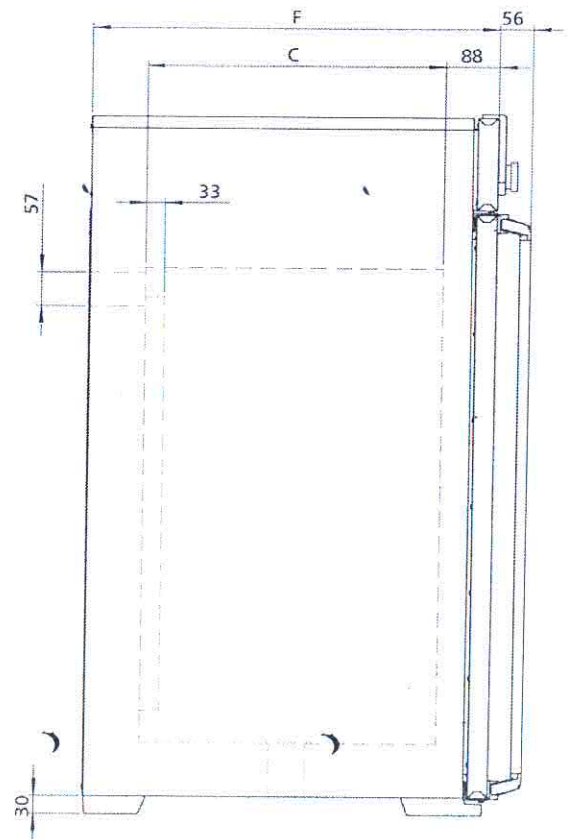
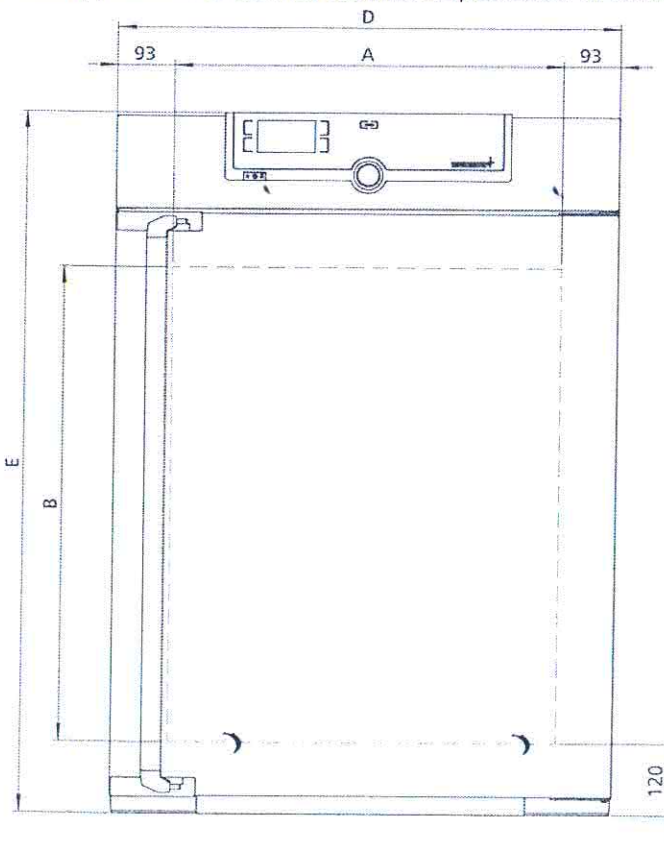
صورة عن مواصفات الجهاز المحال على السادة المؤسسة الحديثة للتوريدات العلمية  
بموجب العطاء رقم (2023/529)

## IF260

The incubator I is perfect for the world of research, medicine, pharmaceuticals and food analytics, as well as food chemistry.



The heating of this incubator is optimally tuned for forced air circulation; the fan can also be switched off completely, and valuable chamber loads for research, pharmaceuticals, medicine and food chemistry are warmed up very carefully. On this page, you can find all the essential technical data on our incubator. Our customer relations team will be pleased to help if you want further information. If you should require a customised special solution, please contact our technical specialists at [sales@memmert.com](mailto:sales@memmert.com).



### Stainless steel interior

Dimensions	$w_{(A)} \times h_{(B)} \times d_{(C)}$ : 640 x 800 x 500 mm (d less 39 mm for fan)
Interior	easy-to-clean interior, made of stainless steel, reinforced by deep drawn ribbing with integrated and protected large-area heating on four sides
Volume	256 l
Max. number of internals	9
Max. loading of chamber	300 kg
Max. loading per internal	20 kg

### Textured stainless steel casing

Dimensions	$w_{(D)} \times h_{(E)} \times d_{(F)}$ : 824 x 1183 x 684 mm (d +56mm door handle)
Housing	rear zinc-plated steel

### Electrical data

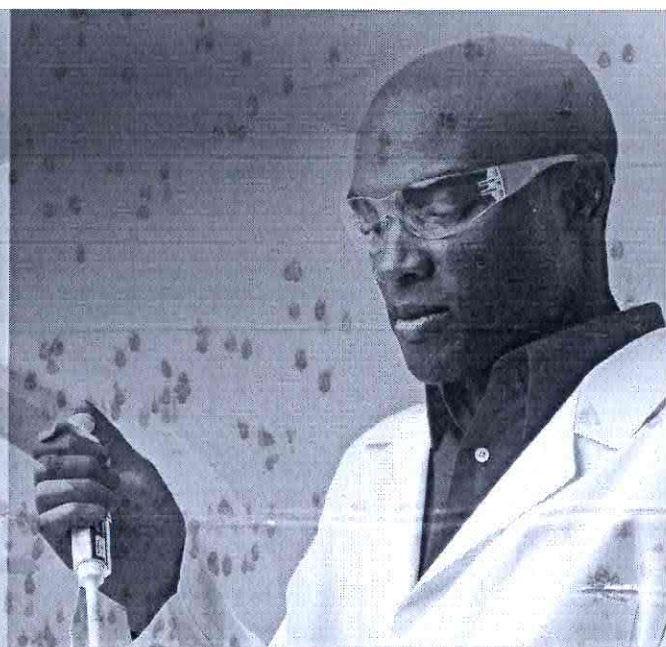
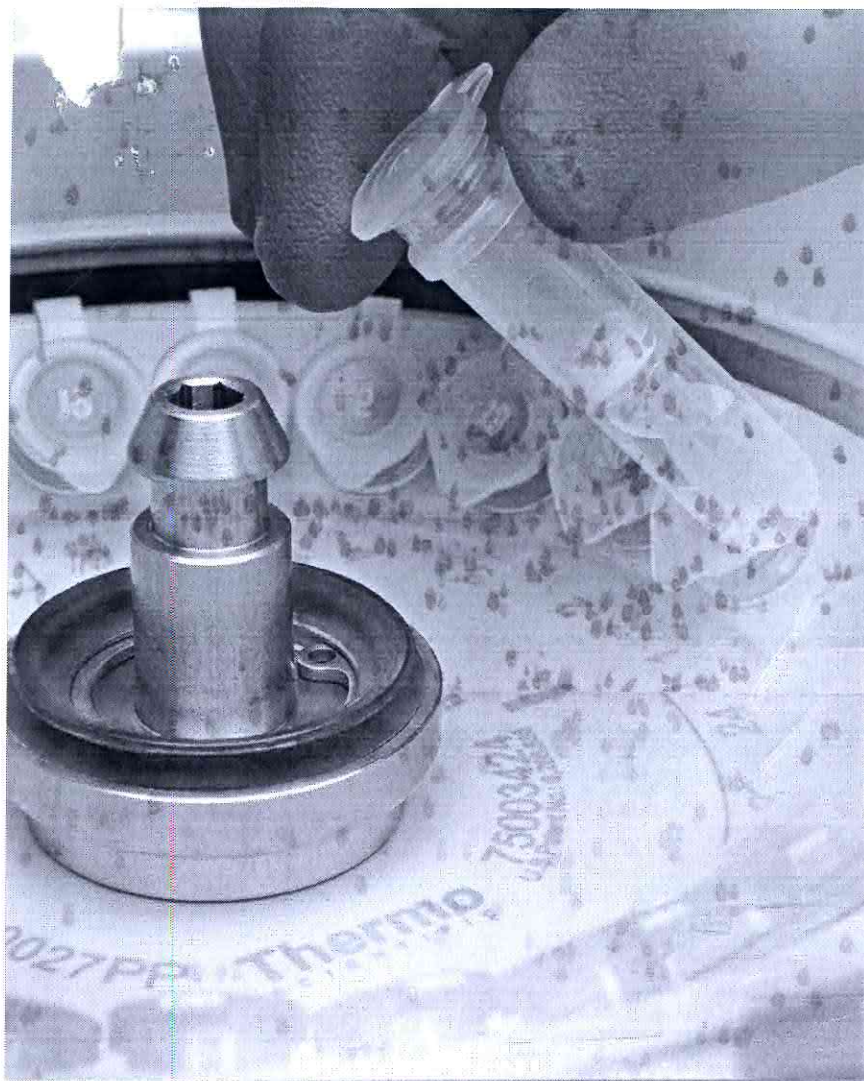
Voltage	230 V, 50/60 Hz
Electrical load	approx. 1700 W
Voltage	115 V, 50/60 Hz
Electrical load	approx. 900 W

### Ambient conditions

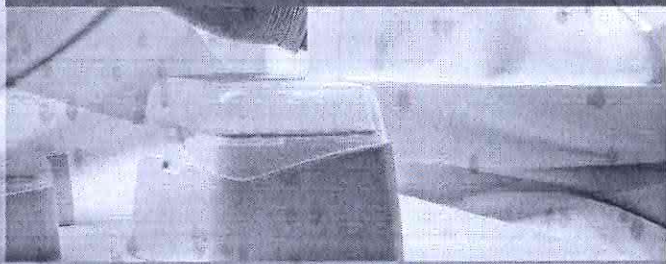
Set Up	The distance between the wall and the rear of the appliance must be at least 15 cm. The clearance from the ceiling must not be less than 20 cm and the side clearance from walls or nearby appliances must not be less than 5 cm.
Altitude of installation	max. 2,000 m above sea level
Ambient temperature	+5 °C to +40 °C
Humidity rh	max. 80 %, non-condensing
Overvoltage category	II
Pollution degree	2

### Packing/shipping data

Transport information	The appliances must be transported upright
Customs tariff number	8419 8998
Country of origin	Federal Republic of Germany
WEEE-Reg.-No.	DE 66812464
Dimensions approx incl. carton	w x h x d: 930 x 1380 x 930 mm
Net weight	approx. 110 kg
Gross weight carton	approx. 161 kg

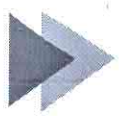


Thermo Scientific™ Pico and  
Fresco Microcentrifuge Series



---

Fits in.  
**Stands out.**



# Thermo Scientific™ Pico and Fresco Microcentrifuges

## Fits in.

- ▶ To your space, with compact footprints
- ▶ To your micro-volume protocols:
  - Choose from 7 optional rotors to find the ideal fit for your application
  - Two speed options, and both ventilated and refrigerated models available

## Stands out.

- ▶ Simplify operation with intuitive controls, easy-to-read displays and fast one-click centrifuge lid closure
- ▶ Fast acceleration and deceleration, and outstanding corrosion resistance with lightweight engineered polymer rotors
- ▶ Ergonomic one-click rotor opening and closing, as well as transparent design for added safety with certified<sup>1</sup> Thermo Scientific™ ClickSeal™ biocontainment lids
- ▶ Eliminate the need for adapters with unique dual row rotor

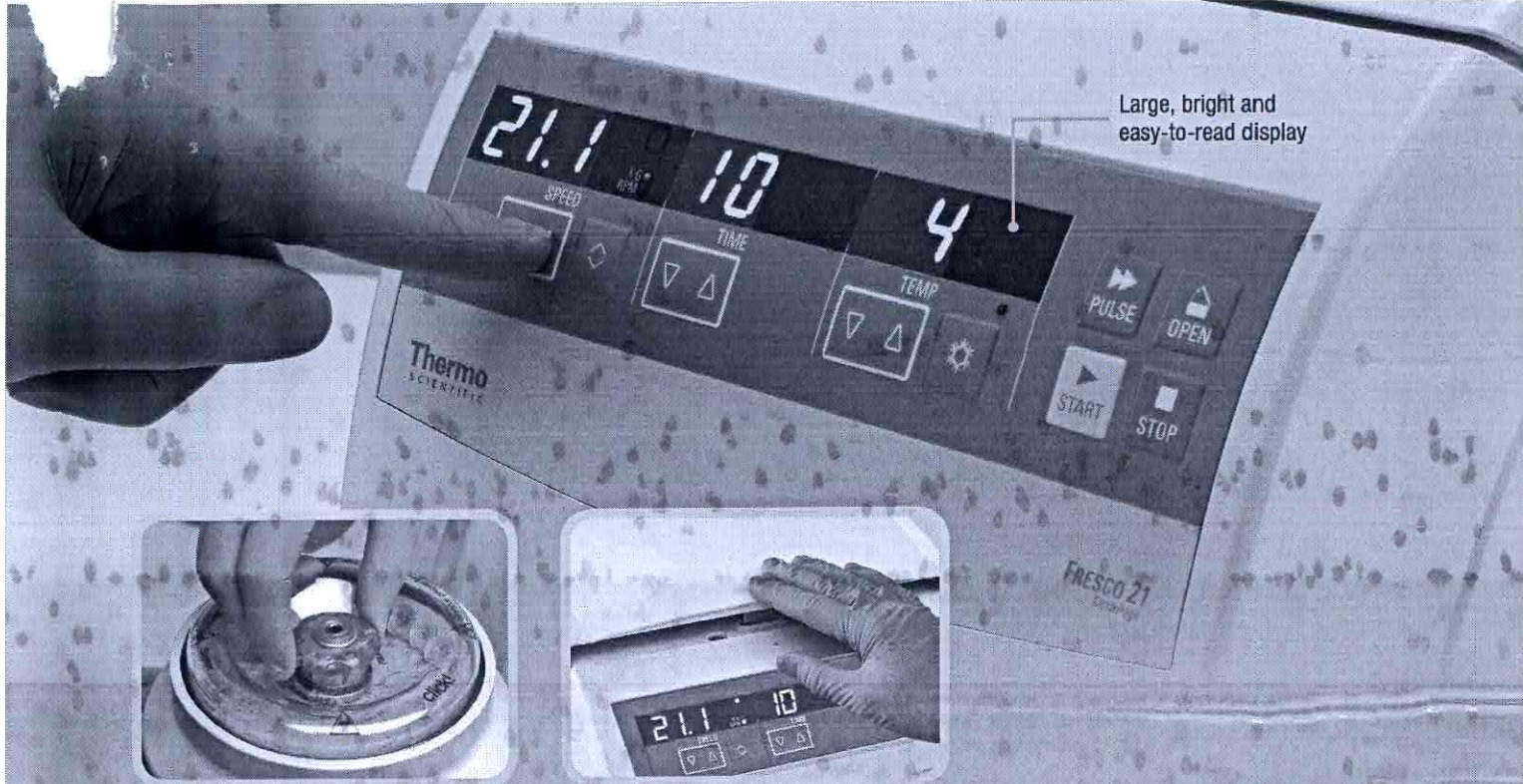


<sup>1</sup>Biocontainment certification by Public Health England, Porton Down, UK on all rotors with ClickSeal biocontainment lids, except for the 10 x 5 mL rotor.



Watch them in action at  
[www.thermoscientific.com/microcentrifuge](http://www.thermoscientific.com/microcentrifuge)

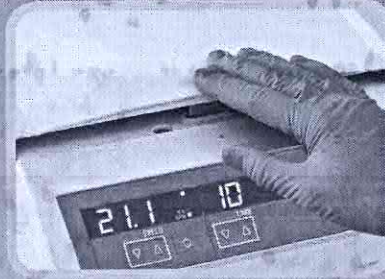




Large, bright and easy-to-read display



Transparent ClickSeal biocontainment lids



Fast one-click centrifuge lid closure

## ► safe, powerful, versatile, easy-to-use

The **Thermo Scientific™ Pico™ and Fresco™ 17 microcentrifuges** are excellent for routine laboratory work, while the **Pico and Fresco 21 microcentrifuges** are ideal for high-end research applications, reducing spin times by up to 20%.<sup>2</sup>

### Perform both complex and simple protocols:

- The standard rotor runs 24 tubes in a single row with equalized g-forces for reproducibility, from 1.5 to 2.0 mL tubes to mini-preps and spin columns
- Eliminate the need for adapters with the unique dual row rotor, which holds 18 tubes of both 1.5/2.0 mL and 0.5 mL in the same run
- Maximize your micro-volume capacity with the new 10 x 5 mL rotor with ClickSeal biocontainment lid, separating samples at g-force up to 20,326 x g
- Wide variety of rotors support 0.5 mL microtubes, 0.2 mL PCR tubes and hematocrit capillary tubes

### Save time with fast sample processing









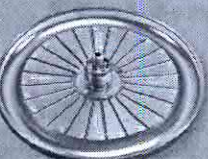
- Lightweight rotors are designed to provide acceleration up to 21,100 xg in 12 seconds
- Refrigerated versions offer cooling from room temperature to set temperature in just 9 minutes
- Fast one-click centrifuge lid closure

### Ideal for everyday laboratory use:

- High performance engineered polymer rotors are designed for outstanding chemical resistance to minimize corrosion from aggressive reagents
- ClickSeal biocontainment lids shorten retrieval time with one-click opening, compared to screw-on lids
- Transparent PPSU rotor lids enable viewing for added safety and convenience
- Quiet performance (<56 dBA ventilated and <50 dBA refrigerated) promotes a safe and reduced stress environment
- Conforms to the latest clinical and safety standards, including 98/79/EC In Vitro Diagnostic Directive

<sup>2</sup>Compared to Pico and Fresco 17 microcentrifuges.

## Thermo Scientific Microcentrifuge Rotors and Accessories

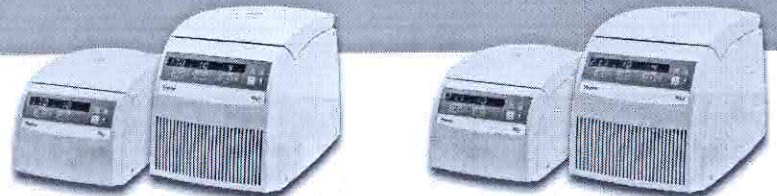
Description	Rotor Capacity	Max Tube Dimensions	Max Speed (rpm)	Max RCF (xg)	Cat. No.	
 <p><b>24 x 1.5/2.0 mL rotor with ClickSeal biocontainment lid</b> </p> <p>Standard rotor with exceptional versatility – 24 tubes per run from basic microtube processing to mini-preps and spin columns and additional flexibility with available adapters.</p>	24 x 1.5/2.0	11 x 50	14,800	21,100	75003424	
	0.5/0.6 mL microliter tube adapters, pack of 24	24 x 0.5/0.6	7 x 32	14,800	21,100	76003252
	0.25/0.4 mL microliter tube adapters, pack of 24	24 x 0.25/0.4	6 x 24	14,800	21,100	76003251
	0.2 mL PCR tube adapters, pack of 24	24 x 0.2	6 x 24	14,800	21,100	76003250
 <p><b>Dual Row 18 x 2.0/0.5 mL rotor with screw-on lid</b></p> <p>Accommodate two different size tubes in one rotor without using adapters.</p>	18 x 2.0/ 18 x 0.5	11 x 50	14,800	20,800	75003418	
 <p><b>36 x 0.5 mL rotor with screw-on lid</b></p> <p>Increase throughput for smaller microtubes.</p>	36 x 0.5	7 x 32	14,800	19,300	75003436	
 <p><b>10 x 5 mL rotor with ClickSeal biocontainment lid<sup>3</sup></b></p> <p>Increase your nucleic acid sample separation.</p>	10 x 5	17 x 62	14,800	20,326	75003465	
 <p><b>PCR 8 x 8 rotor with screw-on lid</b></p> <p>Centrifuge up to 8 PCR strips at one time.</p>	64 x 0.2	6 x 24	14,800	17,100	75003489	
 <p><b>PCR 4 x 8 rotor with ClickSeal biocontainment lid</b> </p> <p>Process up to 4 PCR strips with certified<sup>1</sup> sample protection.</p>	32 x 0.2	6 x 24	14,800	16,200	75003440	
 <p><b>Hematocrit rotor</b></p> <p>Achieve fast capillary separations with included linear scale to read results.</p>	24 Capillaries		14,800	16,800	75003473	
	Capillaries, pack of 100 (included with hematocrit rotor #75003473)	24 Capillaries			76000923	
	Linear scale reading graph (included with hematocrit rotor #75003473)				76000938	

Replacement Lids	Cat. No.
ClickSeal biocontainment lid*	75003410
Replacement O-ring set for ClickSeal lid – 75003410	75003405
Screw-on lid	75003406

<sup>1</sup>Biocontainment certification by Public Health England, Porton Down, UK.  
<sup>3</sup>Tested for aerosol-tight seal.

\*Used with rotors 75003424, 75003440 and 75003465

**Thermo Scientific  
Pico and Fresco Microcentrifuges**



Specifications	Pico and Fresco 17	Pico and Fresco 21
<b>Max RCF</b>	17,000 xg	21,100 xg
<b>Max Speed</b>	13,300 rpm	14,800 rpm
<b>Max Noise Level</b>	56 dBA (ventilated); 50 dBA (refrigerated)	
<b>Acceleration/Deceleration Rates</b>	11/12 seconds (ventilated); 10/12 seconds (refrigerated)	
<b>Time Set Range</b>	1 min - 99 min; 1 min increments + HOLD mode	
<b>Temperature Range<sup>4</sup></b>	Set from -9 °C to +40 °C per 1 °C increment	
<b>Certifications</b>	CSA certified, CE marked, IVD compliant, Certified biocontainment <sup>1</sup>	
<b>Technical Standards</b>	IEC 61010-1, IEC 61010-2, IEC 61010-020	
<b>Dimensions, H x W x D</b>		
<b>Pico 17/21 centrifuges</b>	225 x 243 x 352 mm (8.86 x 9.56 x 13.8 in)	
<b>Fresco 17/21 centrifuges</b>	330 x 295 x 445 mm (12.9 x 11.6 x 17.5 in)	

<sup>1</sup>Biocontainment certification by Public Health England, Porton Down, UK.

<sup>4</sup>Fresco centrifuges only.

Ordering Information	230V 50/60 Hz	120V 60 Hz	230V 50/60 Hz	120V 60 Hz
	Pico 17		Fresco 17	
<b>Thermo Scientific microcentrifuge</b> , includes 24 x 1.5/2.0 mL rotor with ClickSeal biocontainment lid	75002410	75002411	75002420	75002421
<b>Thermo Scientific microcentrifuge</b> , includes hematocrit rotor	75002491	75002492	N/A	N/A
<b>Thermo Scientific microcentrifuge</b> , includes dual row 18 x 2.0/0.5 mL rotor with screw-on lid	75002414	75002401	75002423	75002402
	Pico 21		Fresco 21	
<b>Thermo Scientific microcentrifuge</b> , includes 24 x 1.5/2.0 mL rotor with ClickSeal biocontainment lid	75002415	75002416	75002425	75002426
<b>Thermo Scientific microcentrifuge</b> , includes dual row 18 x 2.0/0.5 mL rotor with screw-on lid	75002553	75002554	75002555	75002556
<b>Thermo Scientific microcentrifuge</b> , includes 24 x 1.5/2.0 mL rotor with ClickSeal biocontainment lid and dual row 18 x 2.0/0.5 mL rotor with screw-on lid	75002475	75002477	75002476	75002478

## Support your micro-volume separation needs

with a complete family of Thermo Scientific microcentrifuges that fits in and stands out.



## Thermo Scientific™ Microcentrifuges

### mySPIN™ mini centrifuge series

- ▶ Enjoy convenience at your personal workstation with our most compact centrifuges
- ▶ Designed for quick and pulse spins
- ▶ Ideal for PCR, microfilter cell separation, and HPLC protocols
- ▶ Spin 6 x 2 mL at 2,000 x g or 12 x 2 mL at up to 9,800 x g

### Pico and Fresco 17 and 21 microcentrifuge series

- ▶ Perform routine separations with our standard microcentrifuges
- ▶ Fast acceleration and deceleration, and outstanding corrosion resistance with lightweight engineered polymer rotors
- ▶ Maximize your micro-volume separation capabilities with the 10 x 5 mL rotor with ClickSeal biocontainment lid
- ▶ Spin 24 x 2 mL at up to 21,100 x g

### Megafuge™ 8 small benchtop centrifuge series

- ▶ More than a microcentrifuge—benefit from increased flexibility in your multi-discipline lab
- ▶ Easily change rotors with innovative Thermo Scientific™ Auto-Lock™ rotor exchange
- ▶ Choose from 13 optional rotors, including 30 x 2 mL fixed angle rotor and 4 x 145 mL swinging bucket rotor
- ▶ Spin 24 x 2 mL at up to 30,279 x g

[www.thermoscientific.com/microcentrifuge](http://www.thermoscientific.com/microcentrifuge)

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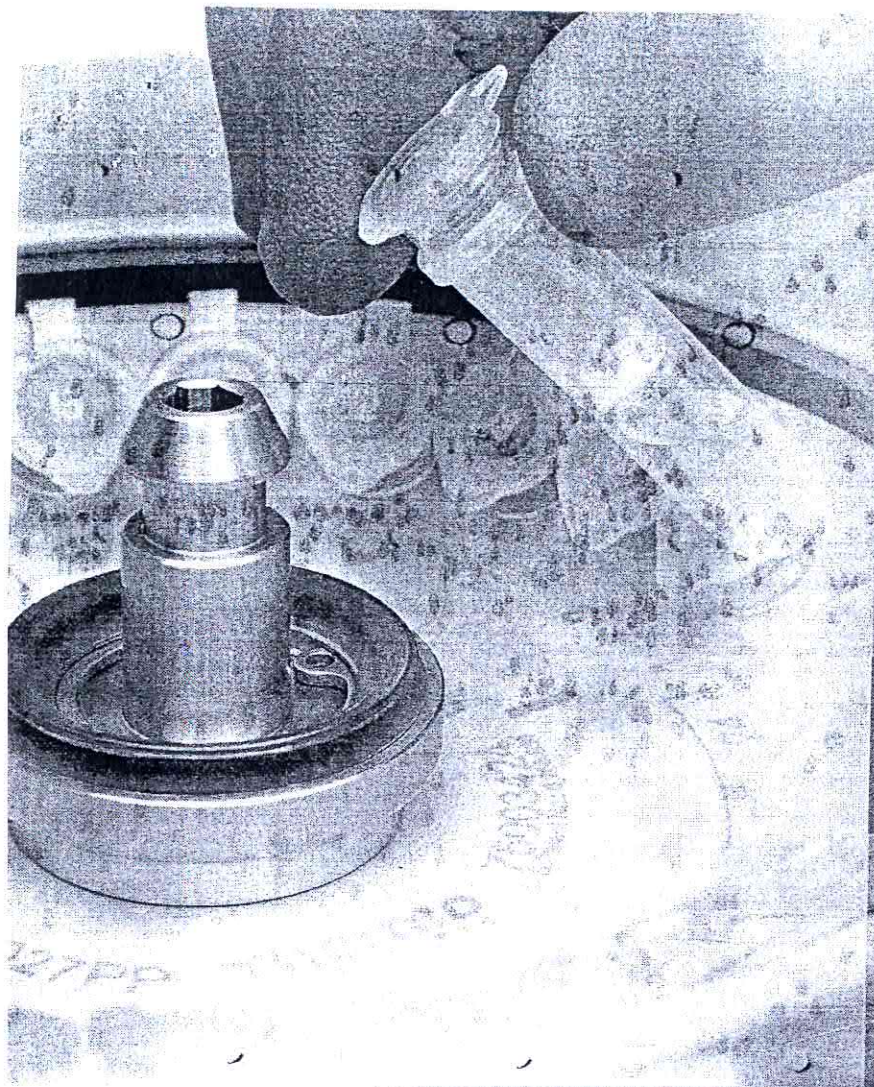
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كشف رقم (3) يبين البنود المحالة على السادة شركة الفحاء للتجهيزات العلمية والمخبرية بموجب العطاء رقم (2023/529)

No.	Description	Unit	Qty	U.Price	U. Price after Discount	Tax	Total
1	<p>Cat NO. 75002425 Thermo Fisher Scientific FRESKO 21 W ROTOR 24X1 5/2ML</p> <p><b>Description :</b> Rotor 24 x 1.5/2 mL Rotor with Clickseal Biocontainment Lid Capacity 24 x 1.5/2 mL Product Line Thermo Scientific Max. Speed 14,800 rpm Max. RCF 21,100 x g Noise Level 50 dB(A) Temperature Range -9°C to +40°C Certifications/Compliance CSA, CE, IVD Type Benchtop Centrifuge Includes 24 x 1.5/2.0mL rotor with ClickSeal biocontainment lid Refrigerated Yes Run Time 1 to 99 min. (1 min. increments); HOLD Standards IEC61010-1, IEC61010-2-020 (refer to manual for more details) Dimensions (HWD) (33.0 x 29.5 x 44.5 cm)</p> <p>Lead Time: 2-4 weeks Brand: Thermo Fisher Scientific Country Of Origin: Germany</p>	Each	1	2350.000	1968.000	314.880	2282.880
1.1	<p>Cat NO. 75003440 Thermo Fisher Scientific, 10 X 5 ML ROTOR EA Thermo Fisher Scientific, 10X5ML ROTOREA Lead Time: 8-12 weeks Brand: Thermo Fisher Scientific Country Of Origin: Germany</p>	Each	1	792.000	600.000	96.000	696.000
<b>TOTAL PRICE WITH TAX 16% : (2978.880) JD</b>							

صورة عن مواصفات الجهاز المحال على السادة شركة الفيحاء للتجهيزات العلمية والمخبرية  
بموجب العطاء رقم (2023/529)



Thermo Scientific™ Pico and  
Fresco Microcentrifuge Series

Fits in.  
**Stands out.**

# Thermo Scientific™ Pico and Fresco Microcentrifuges

## Fits in.

- ▶ To your space, with compact footprints
- ▶ To your micro-volume protocols:
  - Choose from 7 optional rotors to find the ideal fit for your application
  - Two speed options, and both ventilated and refrigerated models available

## Stands out.

- ▶ Simplify operation with intuitive controls, easy-to-read displays and fast one-click centrifuge lid closure
- ▶ Fast acceleration and deceleration, and outstanding corrosion resistance with lightweight engineered polymer rotors
- ▶ Ergonomic one-click rotor opening and closing, as well as transparent design for added safety with certified<sup>1</sup> Thermo Scientific™ ClickSeal™ biocontainment lids
- ▶ Eliminate the need for adapters with unique dual row rotor

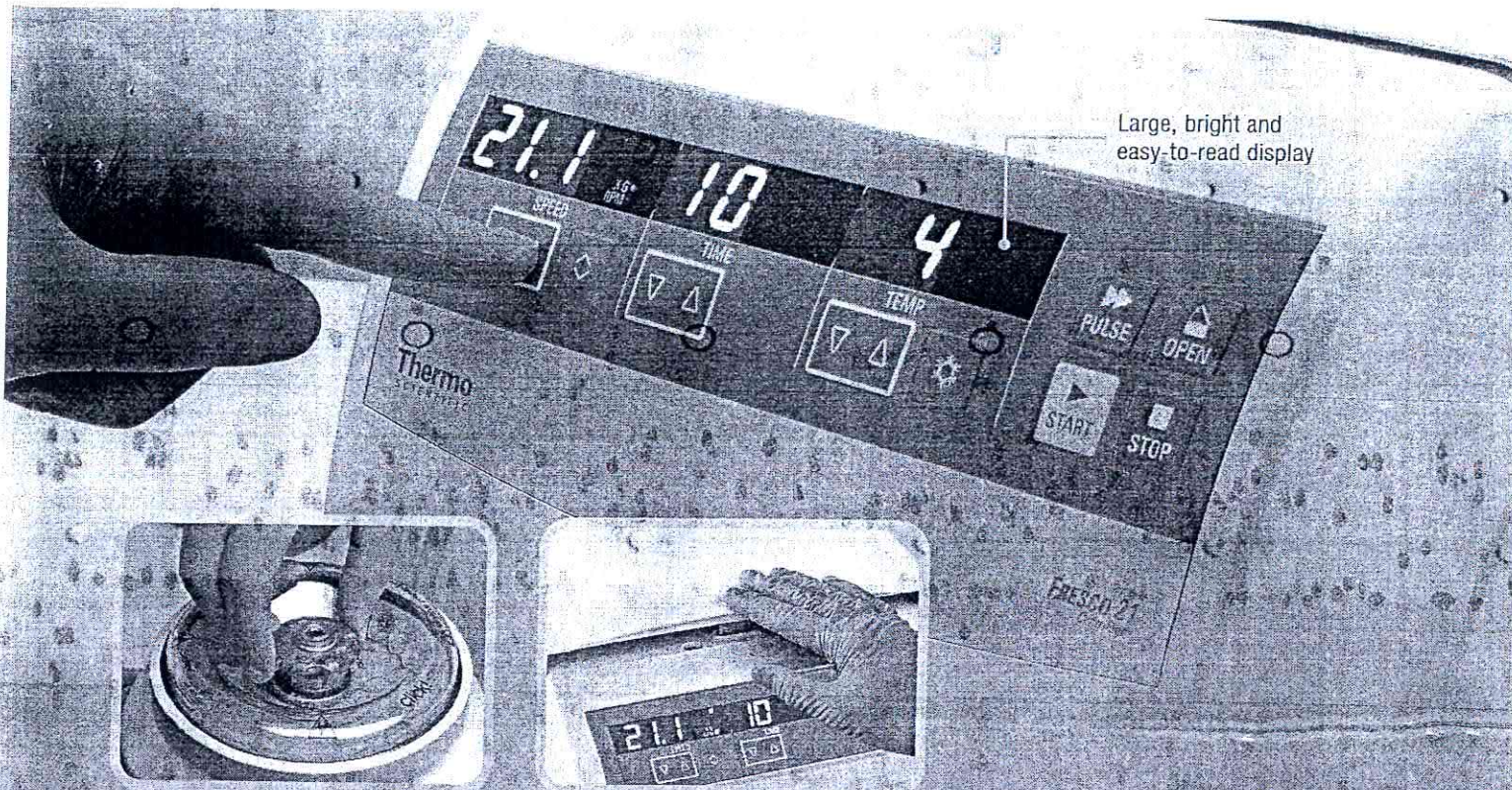


<sup>1</sup>Biocontainment certification by Public Health England, Porton Down, UK on all rotors with ClickSeal biocontainment lids, except for the 10 x 5 mL rotor.

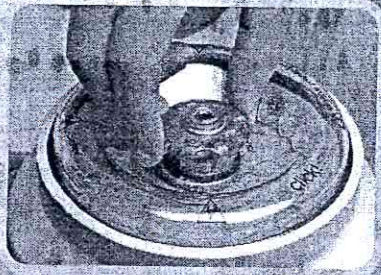


Watch them in action at  
[www.thermoscientific.com/microcentrifuge](http://www.thermoscientific.com/microcentrifuge)





Large, bright and easy-to-read display



Transparent ClickSeal biocontainment lids



Fast one-click centrifuge lid closure

## ► safe, powerful, versatile, easy-to-use

The **Thermo Scientific™ Pico™ and Fresco™ 17 microcentrifuges** are excellent for routine laboratory work, while the **Pico and Fresco 21 microcentrifuges** are ideal for high-end research applications, reducing spin times by up to 20%.<sup>2</sup>

### Perform both complex and simple protocols:

- ▶ The standard rotor runs 24 tubes in a single row with equalized g-forces for reproducibility, from 1.5 to 2.0 mL tubes to mini-preps and spin columns
- ▶ Eliminate the need for adapters with the unique dual row rotor, which holds 18 tubes of both 1.5/2.0 mL and 0.5 mL in the same run
- ▶ Maximize your micro-volume capacity with the new 10 x 5 mL rotor with ClickSeal biocontainment lid, separating samples at g-force up to 20,326 x g
- ▶ Wide variety of rotors support 0.5 mL microtubes, 0.2 mL PCR tubes and hematocrit capillary tubes

### Save time with fast sample processing









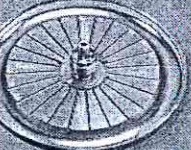
- ▶ Lightweight rotors are designed to provide acceleration up to 21,100 xg in 12 seconds
- ▶ Refrigerated versions offer cooling from room temperature to set temperature in just 9 minutes
- ▶ Fast one-click centrifuge lid closure

### Ideal for everyday laboratory use:

- ▶ High performance engineered polymer rotors are designed for outstanding chemical resistance to minimize corrosion from aggressive reagents
- ▶ ClickSeal biocontainment lids shorten retrieval time with one-click opening, compared to screw-on lids
- ▶ Transparent PPSU rotor lids enable viewing for added safety and convenience
- ▶ Quiet performance (<56 dBA ventilated and <50 dBA refrigerated) promotes a safe and reduced stress environment
- ▶ Conforms to the latest clinical and safety standards, including 98/79/EC In Vitro Diagnostic Directive

<sup>2</sup>Compared to Pico and Fresco 17 microcentrifuges.

# Thermo Scientific Microcentrifuge Rotors and Accessories

Description	Rotor Capacity	Max Tube Dimensions	Max Speed (rpm)	Max RCF (xg)	Cat. No.
 <p><b>24 x 1.5/2.0 mL rotor with ClickSeal biocontainment lid</b> </p> <p>Standard rotor with exceptional versatility – 24 tubes per run from basic microtube processing to mini-preps and spin columns and additional flexibility with available adapters.</p>	24 x 1.5/2.0	11 x 50	14,800	21,100	75003424
0.5/0.6 mL microliter tube adapters, pack of 24	24 x 0.5/0.6	7 x 32	14,800	21,100	76003252
0.25/0.4 mL microliter tube adapters, pack of 24	24 x 0.25/0.4	6 x 24	14,800	21,100	76003251
0.2 mL PCR tube adapters, pack of 24	24 x 0.2	6 x 24	14,800	21,100	76003250
 <p><b>Dual Row 18 x 2.0/0.5 mL rotor with screw-on lid</b></p> <p>Accommodate two different size tubes in one rotor without using adapters.</p>	18 x 2.0/ 18 x 0.5	11 x 50	14,800	20,800	75003418
 <p><b>36 x 0.5 mL rotor with screw-on lid</b></p> <p>Increase throughput for smaller microtubes.</p>	36 x 0.5	7 x 32	14,800	19,300	75003436
 <p><b>10 x 5 mL rotor with ClickSeal biocontainment lid<sup>3</sup></b></p> <p>Increase your nucleic acid sample separation.</p>	10 x 5	17 x 62	14,800	20,326	75003465
 <p><b>PCR 8 x 8 rotor with screw-on lid</b></p> <p>Centrifuge up to 8 PCR strips at one time.</p>	64 x 0.2	6 x 24	14,800	17,100	75003489
 <p><b>PCR 4 x 8 rotor with ClickSeal biocontainment lid</b> </p> <p>Process up to 4 PCR strips with certified<sup>1</sup> sample protection.</p>	32 x 0.2	6 x 24	14,800	16,200	75003440
 <p><b>Hematocrit rotor</b></p> <p>Achieve fast capillary separations with included linear scale to read results.</p>	24 Capillaries		14,800	16,800	75003473
Capillaries, pack of 100 (included with hematocrit rotor #75003473)	24 Capillaries				76000923
Linear scale reading graph (included with hematocrit rotor #75003473)					76000938

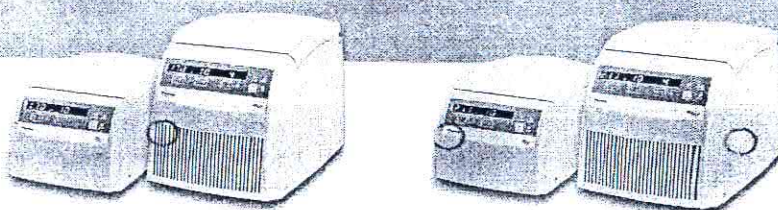
Replacement Lids	Cat. No.
ClickSeal biocontainment lid*	75003410
Replacement O-ring set for ClickSeal lid – 75003410	75003405
Screw-on lid	75003406

<sup>1</sup>Biocountainment certification by Public Health England, Porton Down, UK

<sup>3</sup>Tested for aerosol-tight seal.

\*Used with rotors 75003424, 75003440 and 75003465

## Thermo Scientific Pico and Fresco Microcentrifuges



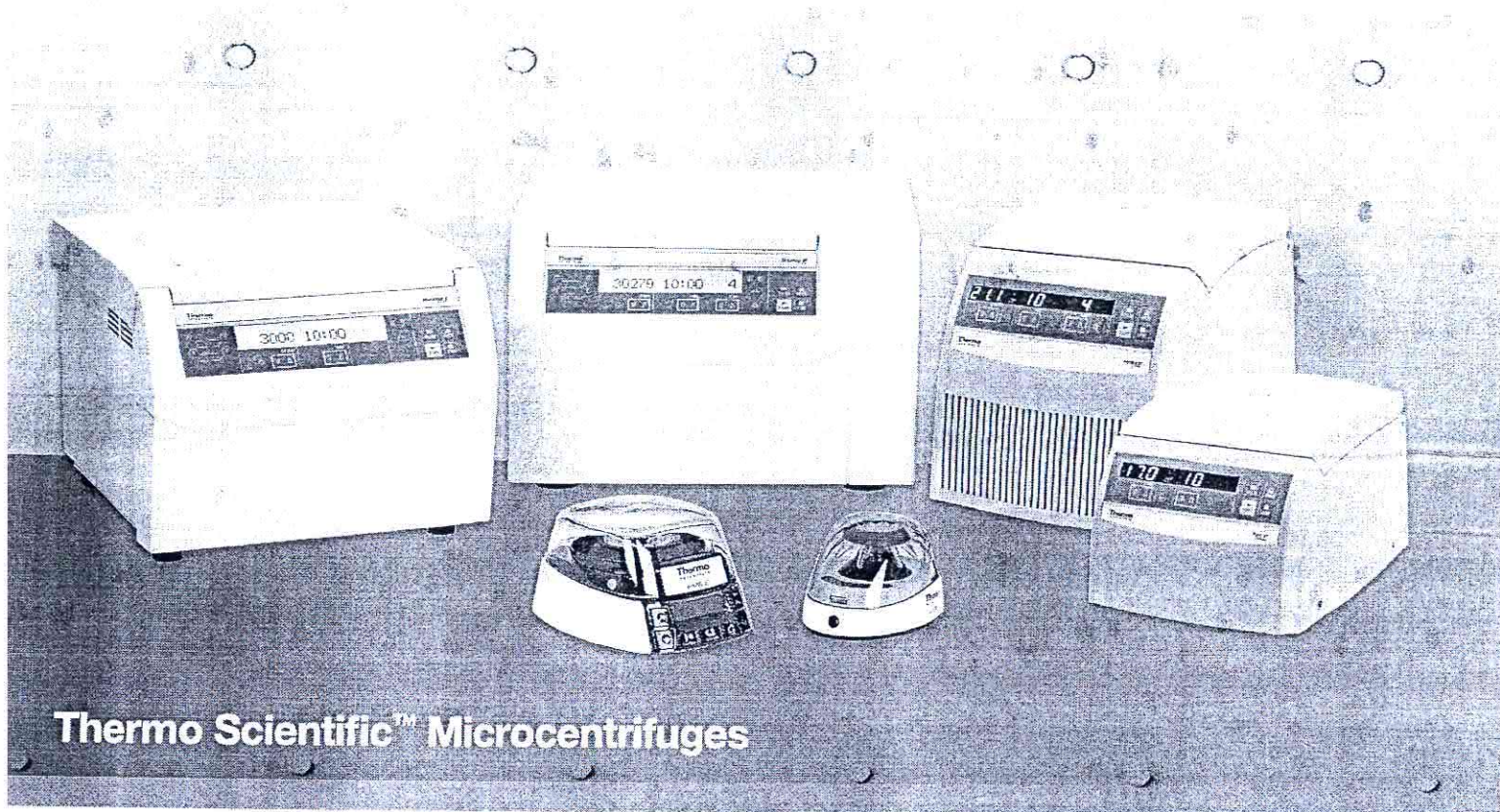
Specifications	Pico and Fresco 17	Pico and Fresco 21
Max RCF	17,000 xg	21,100 xg
Max Speed	13,300 rpm	14,800 rpm
Max Noise Level	56 dBA (ventilated); 50 dBA (refrigerated)	
Acceleration/Deceleration Rates	11/12 seconds (ventilated); 10/12 seconds (refrigerated)	
Time Set Range	1 min - 99 min; 1 min increments + HOLD mode	
Temperature Range <sup>4</sup>	Set from -9 °C to +40 °C per 1 °C increment	
Certifications	CSA certified, CE marked, IVD compliant, Certified biocontainment <sup>1</sup>	
Technical Standards	IEC 61010-1, IEC 61010-2, IEC 61010-020	
Dimensions, H x W x D		
Pico 17/21 centrifuges	225 x 243 x 352 mm (8.86 x 9.56 x 13.8 in)	
Fresco 17/21 centrifuges	330 x 295 x 445 mm (12.9 x 11.6 x 17.5 in)	

<sup>1</sup>Biocontainment certification by Public Health England, Porton Down, UK.

<sup>4</sup>Fresco centrifuges only.

Ordering Information	230V 50/60 Hz	120V 60 Hz	230V 50/60 Hz	120V 60 Hz
	Pico 17		Fresco 17	
Thermo Scientific microcentrifuge, includes 24 x 1.5/2.0 mL rotor with ClickSeal biocontainment lid	75002410	75002411	75002420	75002421
Thermo Scientific microcentrifuge, includes hematocrit rotor <sup>*</sup>	75002491	75002492	N/A	N/A
Thermo Scientific microcentrifuge, includes dual row 18 x 2.0/0.5 mL rotor with screw-on lid	75002414	75002401	75002423	75002402
	Pico 21		Fresco 21	
Thermo Scientific microcentrifuge, includes 24 x 1.5/2.0 mL rotor with ClickSeal biocontainment lid	75002415	75002416	75002425	75002426
Thermo Scientific microcentrifuge, includes dual row 18 x 2.0/0.5 mL rotor with screw-on lid	75002553	75002554	75002555	75002556
Thermo Scientific microcentrifuge, includes 24 x 1.5/2.0 mL rotor with ClickSeal biocontainment lid and dual row 18 x 2.0/0.5 mL rotor with screw-on lid	75002475	75002477	75002476	75002478

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with a complete family of Thermo Scientific microcentrifuges  
that fits in and stands out.



## Thermo Scientific™ Microcentrifuges

### mySPIN™ mini centrifuge series

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- ▶ Ideal for PCR, microfilter cell separation, and HPLC protocols
- ▶ Spin 6 x 2 mL at 2,000 x g  
12 x 2 mL at up to 9,800 x g

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