

SISTEMAS DE AIRE SUPERIOR

Acerca de los sistemas TopAir

TopAir Systems es un fabricante y proveedor de soluciones superiores de contención y aire limpio. Las soluciones de aire limpio de TopAir se utilizan en laboratorios e instalaciones de fabricación dentro de plantas químicas/biológicas, universidades, instalaciones de investigación y desarrollo y hospitales, así como en las industrias electrónica, de semiconductores y farmacéutica. La empresa tiene una base de clientes en todo el mundo, con ventas activas en Europa, América del Norte y del Sur y África.

Para TopAir Systems la satisfacción del cliente es lo primero: la empresa aplica un enfoque flexible, personalizando los productos de acuerdo con las solicitudes de los clientes en cuanto a dimensiones, especificaciones técnicas y accesorios. Además, TopAir Systems ofrece una variedad de productos y modelos para adaptarse y cubrir las necesidades del cliente. Finalmente, la empresa desarrolla soluciones rentables y de la más alta calidad, para garantizar la satisfacción del cliente.

La seguridad del producto es una prioridad absoluta: se implementan las directrices más estrictas para garantizar el bienestar del personal de laboratorio y de fabricación, y los productos cumplen con las certificaciones internacionales pertinentes.

Todos los productos se pueden pedir con protección PPS o ESD.



Campana extractora metálica

Las campanas de extracción metálicas Topair protegen al personal de laboratorio de los humos nocivos cuando trabaja con ácidos, gases peligrosos, disolventes orgánicos, etc. Los humos químicos nocivos y desagradables se eliminan del entorno controlado para facilitar un entorno de trabajo seguro y agradable.

La campana extractora canaliza los vapores químicos hacia el exterior del edificio mediante un ventilador externo instalado en el tejado o en una pared exterior.

La estructura del capó es de metal recubierto de epoxi, mientras que la estructura interna es de HPL de 6 mm.

Las campanas son **EN-14175 / CE / ASHRAE 110-1995 certificado**.

- Estructura metálica templada al horno con recubrimiento epoxi
- Hoja frontal corredera de cristal templado
- Aspiración de aire desde el panel superior y posterior
- Iluminación LED a 800 LUX, con protección contra roturas opcional
- Velocidad del flujo de aire de $0,5 \pm 0,1$ m/s, 100 ± 20 FPM
- Paredes laterales revestidas con HPL de 6 mm para mayor durabilidad y fácil limpieza, opción de polipropileno/acero inoxidable
- Encimera de cerámica con bordes elevados, con opciones de HPL/acero inoxidable/polipropileno/epoxi
- Pantalla táctil en color de 7" que controla la iluminación y la alimentación. Sistema VAV opcional.
- Incluye armario bajo metálico
- **Certificado EN-14175 / CE / ASHRAE 110-1995**



Modelos

Especificación/Modelo	FH-120	FH-150	FH-180	FH-200	FH-250
Dimensiones exteriores	1200 x 800 x 2350 mm	1500 x 800 x 2350 mm	1800 x 800 x 2350 mm	2000 x 800 x 2350 mm	2500 x 800 x 2350 mm
An x Pr x Al	47,2 x 31,5 x 92,5".	59 x 31,5 x 92,5".	70,9 x 31,5 x 92,5".	78,7 x 31,5 x 92,5".	98,4 x 31,5 x 92,5".
Espacio de trabajo	950 x 630 x 1145 mm	1250 x 630 x 1145 mm	1550 x 630 x 1145 mm	1750 x 630 x 1145 mm	2250 x 630 x 1145 mm
(An x Pr x Al)	37,4 x 24,8 x 45".	49,2 x 24,8 x 45".	61 x 24,8 x 45".	68,9 x 26,7 x 45".	88,5 x 26,7 x 45".

**PODEMOS PERSONALIZARLO A CUALQUIER TAMAÑO, ¡INCLUSO UNA SOLA UNIDAD!
CONTÁCTENOS PARA MÁS DETALLES**

Apertura máxima de la hoja frontal	860 mm / 33,8"
Producción / prueba Estándar	EN-14175 / CE / ASHRAE 110-1995
Velocidad del aire	0,5±0,1 m/s, 100±20 FPM
Material de la capucha	Revestimiento interior - HPL de 6 mm; Exterior - Acero laminado en frío, recubierto de polvo estático
Mesa de trabajo	HPL/ Cerámica / Epoxi / PP / Acero inoxidable
Control opcional Sistema	Sistema VAV con pantalla táctil en color de 9"
Opcional	Grifo de agua / grifo de gas / grifo de vacío / fregadero pp / cristal triplex / luz antideflagrante
Fuente de alimentación	110 / 220V, 50/60 Hz. Incluye una fuente de alimentación monofásica. Se puede solicitar especialmente una fuente de alimentación trifásica.
Iluminación	800 LUX

Descripción	Modelo
El kit para campana extractora incluye: 1 grifo de agua, 1 grifo de gas, 1 fregadero de vasos y 4 tomas de corriente	FH-KIT
Grifo de gas	FH-GTAP
Grifo de agua	FH-WTAP
Fregadero de taza de polipropileno	FH-PP-SINK
Fregadero de polipropileno 30 x 40	FH-SINK-3040
Toma de corriente	FH-SOCKET
Monitor de flujo de aire con alarma sonora VAV+VFD instalado, incluye pantalla táctil LCD de 9" controller	FH-VAV
Ventilador centrífugo 0,75 kw 2800 RPM/IE3	FH-FAN-750
Ventilador centrífugo 1,1 KW 2800 RPM/IE3 DIA 300 mm	FH-FAN-1100-300

CERTIFICATE OF TYPE TESTING IN ACCORDANCE WITH ASHRAE 110 & SEFA 1

CERTIFICATE & REPORT NO: INV/ASHRAE110/1012

DATE: 8th June 2023

Fume Hood Manufacturer:
Topair Systems INC
300 First Avenue, Suite 102
Needham
MA 02494
USA



Fume Hood Model-Type:
FH-120 - 120cm wide bench-type

External Dimensions:

Width = 1200mm

Height = 2310mm

Depth = 835mm

Internal Dimensions:

Width = 1000mm

Height = 1170mm (max)

Depth = 585mm (baffle-sash)

640mm (wall-sash)

Test Opening:

Width: 1000mm

Height: 500mm

Fume Hood Flow:

Face velocity: 99fpm (0.50m/s)

Flow rate: 570cfm (970m³/hr)

Fume Hood Containment:

At all test positions: <0.010ppm

Test opening scans: <0.050ppm

Sash movement effect: <0.010ppm

This is to certify that the fume hood described above has been type tested in accordance with ASHRAE 110-2016, as required by SEFA 1-2010, and resulted in performance characteristics given in test report INV/ASHRAE110/1012.

Tested and Certified by: Dr A F Bicen



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**CERTIFICATE OF TYPE TESTING IN
ACCORDANCE WITH ASHRAE 110 & SEFA 1**
CERTIFICATE & REPORT NO: INV/ASHRAE110/1013
DATE: 9th June 2023

Fume Hood Manufacturer:
Topair Systems INC
300 First Avenue, Suite 102
Needham
MA 02494
USA



Fume Hood Model-Type:
FH-150 - 150cm wide bench-type

External Dimensions:

Width = 1500mm

Height = 2310mm

Depth = 835mm

Internal Dimensions:

Width = 1300mm

Height = 1170mm (max)

Depth = 585mm (baffle-sash)

640mm (wall-sash)

Test Opening:

Width: 1300mm

Height: 500mm

Fume Hood Flow:

Face velocity: 100fpm (0.51m/s)

Flow rate: 750cfm (1280m³/hr)

Fume Hood Containment:

At all test positions: <0.010ppm

Test opening scans: <0.050ppm

Sash movement effect: <0.010ppm

This is to certify that the fume hood described above has been type tested in accordance with ASHRAE 110-2016, as required by SEFA 1-2010, and resulted in performance characteristics given in test report INV/ASHRAE110/1013.

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**CERTIFICATE OF TYPE TESTING IN
ACCORDANCE WITH ASHRAE 110 & SEFA 1**
CERTIFICATE & REPORT NO: INV/ASHRAE110/1014
DATE: 9th June 2023

Fume Hood Manufacturer:
Topair Systems INC
300 First Avenue, Suite 102
Needham
MA 02494
USA



Fume Hood Model-Type:
FH-180 - 180cm wide bench-type

External Dimensions:

Width = 1800mm

Height = 2310mm

Depth = 835mm

Internal Dimensions:

Width = 1600mm

Height = 1170mm (max)

Depth = 585mm (baffle-sash)

640mm (wall-sash)

Test Opening:

Width: 1600mm

Height: 500mm

Fume Hood Flow:

Face velocity: 100fpm (0.51m/s)

Flow rate: 930cfm (1590m³/hr)

Fume Hood Containment:

At all test positions: <0.010ppm

Test opening scans: <0.050ppm

Sash movement effect: <0.010ppm

This is to certify that the fume hood described above has been type tested in accordance with ASHRAE 110-2016, as required by SEFA 1-2010, and resulted in performance characteristics given in test report INV/ASHRAE110/1014.

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**CERTIFICATE OF TYPE TESTING IN
ACCORDANCE WITH ASHRAE 110 & SEFA 1**
CERTIFICATE & REPORT NO: INV/ASHRAE110/1015
DATE: 9th June 2023

Fume Hood Manufacturer:
Topair Systems INC
300 First Avenue, Suite 102
Needham
MA 02494
USA



Fume Hood Model-Type:
FH-200 - 200cm wide bench-type

External Dimensions:

Width = 2000mm

Height = 2310mm

Depth = 835mm

Internal Dimensions:

Width = 1800mm

Height = 1170mm (max)

Depth = 585mm (baffle-sash)

640mm (wall-sash)

Test Opening:

Width: 1800mm

Height: 500mm

Fume Hood Flow:

Face velocity: 100fpm (0.51m/s)

Flow rate: 1030cfm (1770m³/hr)

Fume Hood Containment:

At all test positions: <0.010ppm

Test opening scans: <0.050ppm

Sash movement effect: <0.010ppm

This is to certify that the fume hood described above has been type tested in accordance with ASHRAE 110-2016, as required by SEFA 1-2010, and resulted in performance characteristics given in test report INV/ASHRAE110/1015.

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**CERTIFICATE OF TYPE TESTING IN
ACCORDANCE WITH ASHRAE 110 & SEFA 1**
CERTIFICATE & REPORT NO: INV/ASHRAE110/1016
DATE: 12th June 2023

Fume Hood Manufacturer:
Topair Systems INC
300 First Avenue, Suite 102
Needham
MA 02494
USA



Fume Hood Model-Type:
FH-220 - 220cm wide bench-type

External Dimensions:

Width = 2200mm

Height = 2310mm

Depth = 835mm

Internal Dimensions:

Width = 2000mm

Height = 1170mm (max)

Depth = 585mm (baffle-sash)

640mm (wall-sash)

Test Opening:

Width: 2000mm

Height: 500mm

Fume Hood Flow:

Face velocity: 100fpm (0.51m/s)

Flow rate: 1070cfm (2010m³/hr)

Fume Hood Containment:

At all test positions: <0.010ppm

Test opening scans: <0.050ppm

Sash movement effect: <0.010ppm

This is to certify that the fume hood described above has been type tested in accordance with ASHRAE 110-2016, as required by SEFA 1-2010, and resulted in performance characteristics given in test report INV/ASHRAE110/1016.

Tested and Certified by: Dr A F Bicen

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Certificate of Compliance



No. 0D190812.TSQT23

Technical Construction File no. TP-19000807-1, TP-19000807-2

Certificate's
Holder:

Topair Systems, Inc.
626 Rexcorp Plaza Uniondale New York 11556 USA

Certification ECM
Mark:



Product:
Model(s):

Fume Hood
(see the following annex I)

Verification to:

Standard:
EN 61010-1:2010+A1:2019, EN 61326-1:2013,
EN IEC 61000-3-2:2019, EN 61000-3-3:2013

related to CE Directive(s):
2014/35/EU (Low Voltage)
2014/30/EU (Electromagnetic Compatibility)

Remark: The product(s) has been verified on a voluntary basis. The product(s) satisfies the requirements of the Certification Mark of ECM, in reference to the above listed Standard(s). The above Compliance Mark can be affixed on the product(s) accordingly to the ECM regulation about its release and its use. The regulation can be found at www.entecerma.it. This Certificate of Compliance can be checked for validity at www.entecerma.it

This verification doesn't imply assessment of the production of the product(s).

Additional information, clarification about the **CE** Marking:



We attest that a TCF for the **CE** Marking process is in place. Whereas the Manufacturer is Responsible to start the **CE Marking Certification Procedure** and to perform all the necessary activities, as required by the Directive before placing the **CE** Mark on the product(s).

Date of issue 12 August 2019

Expiry date 11 August 2024

Chief Manager
Marco Morina

Deputy Manager
Amanda Payne

Annex I



No. 0D190812.TSQT23

Technical Construction File no. TP-19000807-1, TP-19000807-2

Model(s): FH-090, FH-120, FH-130, FH-140, FH-150, FH-160, FH-170, FH-180, FH-190, FH-200, FH-220, FH-250, FH-270, FH-300, FH-090-PP, FH-120-PP, FH-130-PP, FH-140-PP, FH-150-PP, FH-160-PP, FH-170-PP, FH-180-PP, FH-190-PP, FH-200-PP, FH-220-PP, FH-250-PP, FH-270-PP, FH-300-PP, FH-090-PP-ACT, FH-120-PP-ACT, FH-130-PP-ACT, FH-140-PP-ACT, FH-150-PP-ACT, FH-160-PP-ACT, FH-170-PP-ACT, FH-180-PP-ACT, FH-190-PP-ACT, FH-200-PP-ACT, FH-220-PP-ACT, FH-250-PP-ACT, FH-270-PP-ACT, FH-300-PP-ACT, FH-090-WI, FH-120-WI, FH-150-WI, FH-180-WI, FH-200-WI, FH-250-WI, FH-090-WI-PP, FH-120-WI-PP, FH-150-WI-PP, FH-180-WI-PP, FH-200-WI-PP, FH-250-WI-PP, FH-120-WS, FH-150-WS, FH-180-WS, FH-200-WS, FH-250-WS, FH-090-HCV, FH-120-HCV, FH-150-HCV, FH-180-HCV, FH-200-HCV, FH-250-HCV

CERTIFICATE OF TYPE TESTING IN ACCORDANCE WITH EN 14175, PART 3

CERTIFICATE & REPORT NO: INV/EN14175/1007

DATE: 6th June 2023

Fume Hood Manufacturer:
Topair Systems INC
300 First Avenue, Suite 102
Needham
MA 02494
USA



Fume Hood Model:
FH-120
Fume Hood Type:
120cm wide bench-type

External Dimensions:
Height = 2310mm
Width = 1200mm
Depth = 835mm
Internal Dimensions:
Height = 1170mm
Width = 1000mm
Depth = 640mm (wall-sash)
Depth = 585mm (baffle-sash)

Test Opening:
Width: 1000mm
Height: 500mm

Fume Hood Flow:
Volume flow rate: 970m³/hr (+/-3%)
Face velocity: 0.50m/s (+/-5%)

Fume Hood Containment: Inner-plane containment:
C1: <0.010ppm at all locations
Outer-plane containment:
C2, C3, C4, C5: <0.010ppm
Robustness of containment:
Cr: <0.010ppm (+/-30%)

This is to certify that the fume hood described above has been type tested in accordance with Part 3 of EN 14175, in compliance with the requirements of Part 2 and with reference to Part 1, and resulted in performance characteristics given in test report, INV/EN14175/1007.

Tested and Certified by:
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Dr A F Bicen

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CERTIFICATE OF TYPE TESTING IN ACCORDANCE WITH EN 14175, PART 3

CERTIFICATE & REPORT NO: INV/EN14175/1008

DATE: 6th June 2023

Fume Hood Manufacturer:
Topair Systems INC
300 First Avenue, Suite 102
Needham
MA 02494
USA



Fume Hood Model:
FH-150
Fume Hood Type:
150cm wide bench-type

External Dimensions:
Height = 2310mm
Width = 1500mm
Depth = 835mm
Internal Dimensions:
Height = 1170mm
Width = 1300mm
Depth = 640mm (wall-sash)
Depth = 585mm (baffle-sash)

Test Opening:
Width: 1300mm
Height: 500mm

Fume Hood Flow:
Volume flow rate: 1290m³/hr (+/-3%)
Face velocity: 0.51m/s (+/-5%)

Fume Hood Containment:
Inner-plane containment:
C1: <0.010ppm at all locations
Outer-plane containment:
C2, C3, C4, C5: <0.010ppm
Robustness of containment:
CR: 0.011ppm (+/-30%)

This is to certify that the fume hood described above has been type tested in accordance with Part 3 of EN 14175, in compliance with the requirements of Part 2 and with reference to Part 1, and resulted in performance characteristics given in test report, INV/EN14175/1008.

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CERTIFICATE OF TYPE TESTING IN ACCORDANCE WITH EN 14175, PART 3

CERTIFICATE & REPORT NO: INV/EN14175/1009

DATE: 7th June 2023

Fume Hood Manufacturer:
Topair Systems INC
300 First Avenue, Suite 102
Needham
MA 02494
USA



Fume Hood Model:
FH-180
Fume Hood Type:
180cm wide bench-type

External Dimensions:
Height = 2310mm
Width = 1800mm
Depth = 835mm
Internal Dimensions:
Height = 1170mm
Width = 1600mm
Depth = 640mm (wall-sash)
Depth = 585mm (baffle-sash)

Test Opening:
Width: 1600mm
Height: 500mm

Fume Hood Flow:
Volume flow rate: 1580m³/hr (+/-3%)
Face velocity: 0.51m/s (+/-5%)

Fume Hood Containment:
Inner-plane containment:
C1: <0.010ppm at all locations
Outer-plane containment:
C2, C3, C4, C5: <0.010ppm
Robustness of containment:
CR: 0.013ppm (+/-30%)

This is to certify that the fume hood described above has been type tested in accordance with Part 3 of EN 14175, in compliance with the requirements of Part 2 and with reference to Part 1, and resulted in performance characteristics given in test report, INV/EN14175/1009.

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CERTIFICATE OF TYPE TESTING IN ACCORDANCE WITH EN 14175, PART 3

CERTIFICATE & REPORT NO: INV/EN14175/1010

DATE: 7th June 2023

Fume Hood Manufacturer:
Topair Systems INC
300 First Avenue, Suite 102
Needham
MA 02494
USA



Fume Hood Model:
FH-200
Fume Hood Type:
200cm wide bench-type

External Dimensions:
Height = 2310mm
Width = 2000mm
Depth = 835mm
Internal Dimensions:
Height = 1170mm
Width = 1800mm
Depth = 640mm (wall-sash)
Depth = 585mm (baffle-sash)

Test Opening:
Width: 1800mm
Height: 500mm

Fume Hood Flow:
Volume flow rate: 1750m³/hr (+/-3%)
Face velocity: 0.50m/s (+/-5%)

Fume Hood Containment:
Inner-plane containment:
C1: <0.010ppm at all locations
Outer-plane containment:
C2, C3, C4, C5: <0.010ppm
Robustness of containment:
CR: 0.016ppm (+/-30%)

This is to certify that the fume hood described above has been type tested in accordance with Part 3 of EN 14175, in compliance with the requirements of Part 2 and with reference to Part 1, and resulted in performance characteristics given in test report, INV/EN14175/1010.

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**EN 14175, Part 3 Type Test Report for 220cm Wide
Bench Type Fume Hood of Topair Systems INC**

Ref: EN 14175, Part 3

Model: FH-220

by

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INV/EN14175/1011

Date: 8th June 2023

1. INTRODUCTION

EN 14175, Part 3 type tests carried out to 220cm wide bench type fume hood of Topair Systems INC are reported. General information on the test methods and procedures can be found in reference 1.

2. DESCRIPTION OF TEST ROOM FACILITIES

The test room was approx 10.0m long, 5.0m wide and 4.0m high. The tests facilities include a variable-speed extract air system to adjust the flow rate to the required value. The extract flow rate is measured by a venturimeter with an accuracy of better than 3%. The make-up air was brought in through the perforated ceiling tiles opposite the fume hood so as to allow a test room pressure in the range of -1Pa to -5Pa. The test room differential pressure, temperature, relative humidity and velocity during tests were:

Room differential pressure:	-3Pa (+/-10%)
Room air temperature:	21°C (+/-10%)
Room air relative humidity:	55% (+/-10%)
Room air velocity:	much less than 0.1 m/s

3. DESCRIPTION OF FUME HOOD

The fume hood tested is a 220cm wide bench-type hood, designed & built by Topair Systems INC, **Model FH-220**.

External dimensions:	Width = 2200mm Height = 2310mm Depth = 835mm
Internal dimensions:	Width = 2000mm Height = 1170mm Depth (wall to sash) ~ 640mm Depth (baffle to sash) = 585mm
Baffle dimensions:	Inclined baffle top gap ~ 40mm Back baffle gap from work top = 150mm Back baffle gap from back wall ~ 55mm Baffle side gaps = 15mm
Other dimensions:	Sash opening width = 2000mm Sash opening height = 500mm from bottom cill Sash internal top gap when sash at 500mm ~ 20mm Sash gap from bottom cill when sash closed ~ 20mm Bottom cill air gap ~ 20mm

4. EN 14175 PART 3 TYPE TESTS

4.1 VELOCITY TESTS

Velocity tests were carried out in accordance with the procedure described in reference 1. Tests were performed for a sash opening of 500mm from the bottom cill airfoil. The velocity type-test grid for this opening is shown in Figure 1. Figure 1 also summarises the test results.

4.2 CONTAINMENT TESTS

Containment tests were performed using the procedures described in reference 1.

4.2.1 Inner Measurement Plane Tests

Figure 2 shows the positionings of the test system with respect to the test opening. Figure 2 also summarises the test results, C_1 and protection factor PF_1 .

4.2.2 Outer Measurement Plane Tests

Figure 3 shows the positioning of the test system with respect to the test opening and summarises the test results, C_2 , C_3 , C_4 & C_5 and protection factors PF_2 , PF_3 , PF_4 & PF_5 .

4.2.3 Robustness of Containment Test

Figure 4 shows the positioning of the test system with respect to the test opening and summarises the test results, C_R and protection factor PF_R .

4.3 AIR EXCHANGE RATE TEST

Air exchange rate test was performed us 1980m³/hr (+/-3%) The measured purge time was 6 (+/-1sec) which results in an air exchange rate of approx 600.

4.4 SASH SUSPENSION TEST

The sash suspension test was carried out as required by 6.1 of EN 14175, Part 2, see reference 2. The sash remains in its test position when one of the suspension devices is disconnected.

4.5 SASH DISPLACEMENT TEST

The sash displacement force was measured as required by reference 2. The maximum force for sash closing and opening was approx 30N (+/-10%).

4.6 PROTECTION AGAINST SPLASHES

Good protection. The sash closes with a minimum gap of 20mm from the bottom cill airfoil.

4.7 OTHER OBSERVATIONS

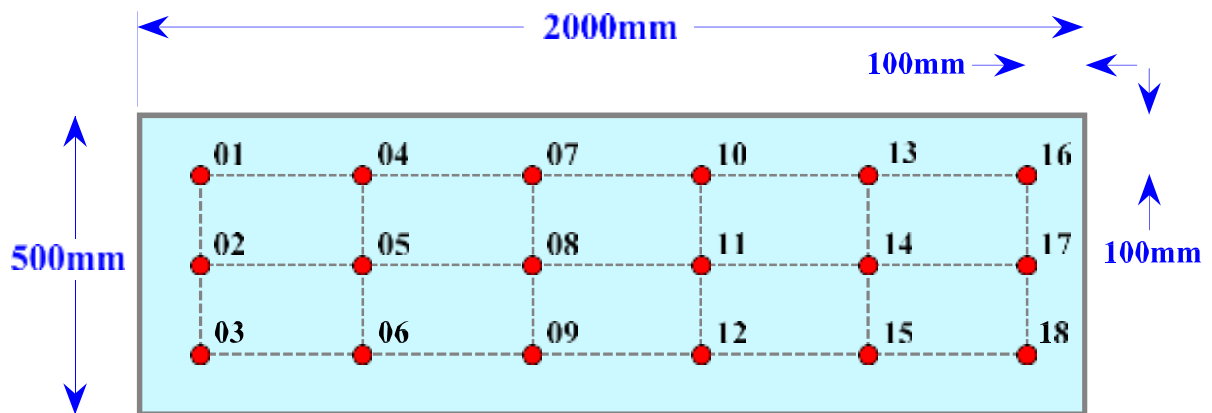
1. Low volume flow visualisation tests indicated that smoke moves inward at boundaries with no apparent flow reversals.
2. Work surface has a raised edge for spillage retention.
3. There is no "keep sash closed when not in use" marking.
4. Hood is not fitted with a pressure relief device.

REFERENCES

1. *BS EN 14175, Fume Cupboards-Part 3: Type Test Methods*, 2019.
2. *BS EN 14175, Fume Cupboards-Part 2: Safety and Performance Requirements*, 2003.
3. *BS EN 14175, Fume Cupboards-Part 1: Vocabulary*, 2003.

List of instrumentation used during tests:

1. Miran 205-B infrared gas analyser - SN: 76185-382
2. Critical orifice for inner-plane test gas metering: SN: 053
3. Critical orifice for outer-plane and robustness test gas metering: SN: 065
4. VelociCalc 9545-A: SN: 0713014
5. Smoke pen



Grid point	01	04	07	10	13	16
Mean velocity (m/s)	0.52	0.51	0.49	0.50	0.51	0.54
Grid point	02	05	08	11	14	17
Mean velocity (m/s)	0.50	0.49	0.48	0.49	0.50	0.52
Grid point	03	06	09	12	15	18
Mean velocity (m/s)	0.53	0.50	0.49	0.49	0.50	0.54
Average Face Velocity = 0.51m/s (+/-5%)						

Figure 1 Velocity type-test results
(see 5.2 of EN 14175, Part 3).

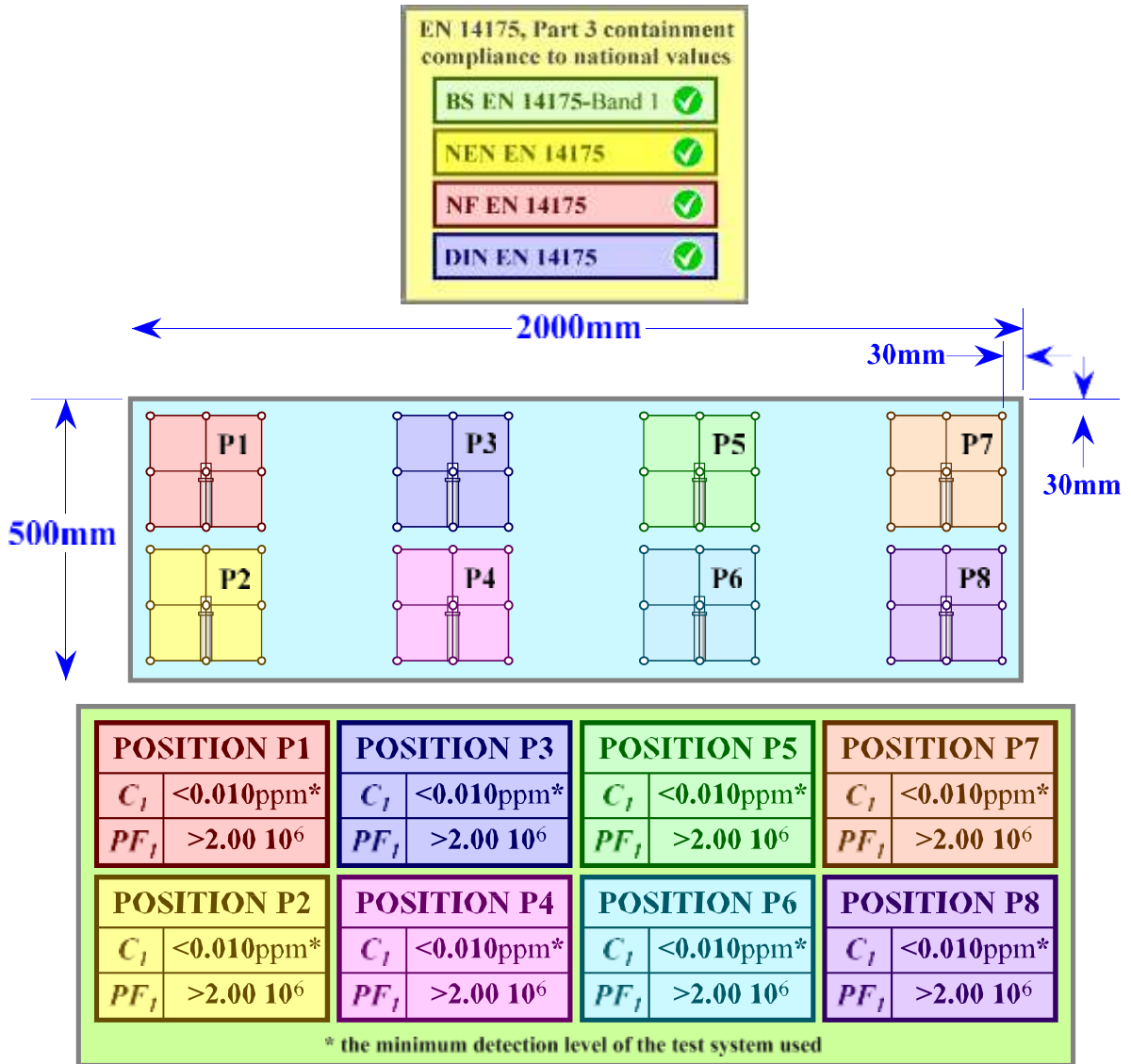


Figure 2 Inner plane containment test results
(see 5.3 of EN 14175, Part 3).

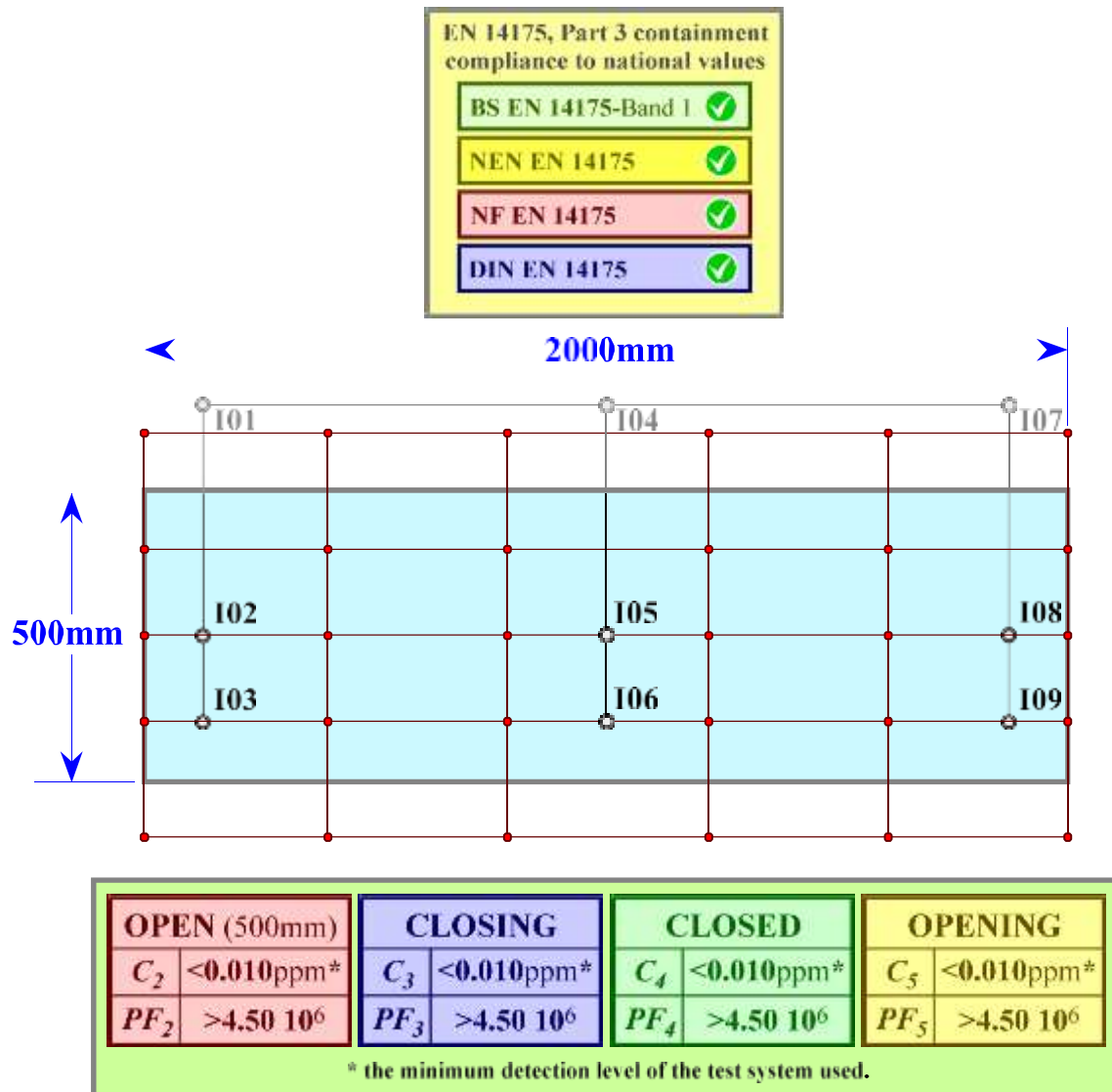


Figure 3 Outer plane containment test results
(see 5.3 of EN 14175, Part 3).

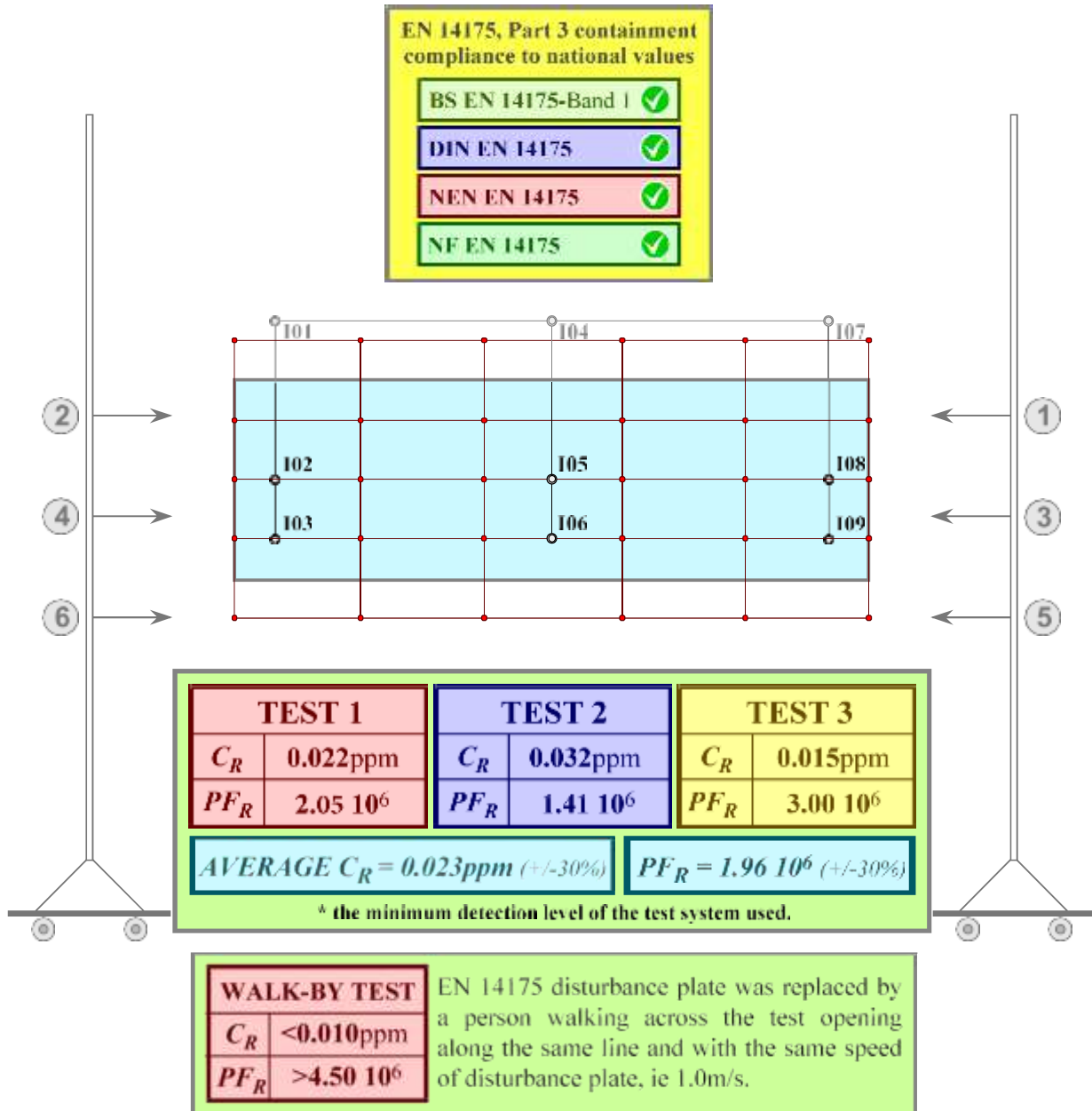


Figure 4 Robustness of containment test results.
(see 5.4 of EN 14175, Part 3).

CERTIFICATE OF TYPE TESTING IN ACCORDANCE WITH EN 14175, PART 3

CERTIFICATE & REPORT NO: INV/EN14175/1011

DATE: 8th June 2023

Fume Hood Manufacturer:
Topair Systems INC
300 First Avenue, Suite 102
Needham
MA 02494
USA



Fume Hood Model:
FH-220
Fume Hood Type:
220cm wide bench-type

External Dimensions:
Height = 2310mm
Width = 2200mm
Depth = 835mm
Internal Dimensions:
Height = 1170mm
Width = 2000mm
Depth = 640mm (wall-sash)
Depth = 585mm (baffle-sash)

Test Opening:
Width: 2000mm
Height: 500mm

Fume Hood Flow:
Volume flow rate: 1980m³/hr (+/-3%)
Face velocity: 0.51m/s (+/-5%)

Fume Hood Containment:
Inner-plane containment:
C1: <0.010ppm at all locations
Outer-plane containment:
C2, C3, C4, C5: <0.010ppm
Robustness of containment:
CR: 0.023ppm (+/-30%)

This is to certify that the fume hood described above has been type tested in accordance with Part 3 of EN 14175, in compliance with the requirements of Part 2 and with reference to Part 1, and resulted in performance characteristics given in test report, INV/EN14175/1011.

Tested and Certified by:
Invent UK Ltd, 85 Southdown Road,
Harpenden, Herts AL5 1PR
t: +44 (0) 7785 245077
email: bicen@invent-uk.com

Dr A F Bicen

A handwritten signature in blue ink that reads 'A.F. Bicen'.



Appendix A

EN 14175, PART 3: FUME HOOD CONTAINMENT BORDER VALUES IN EUROPE

	Border Value (SF6 concentration)	Protection Factor
GERMANY outer plane & robustness of containment	0.650ppm	0.07 10 ⁶
FRANCE inner plane	0.100ppm	0.20 10 ⁶
NETHERLANDS outer plane - <i>open & closing</i>	0.020ppm	2.25 10 ⁶
NETHERLANDS robustness of containment	0.650ppm	0.07 10 ⁶

BS EN 14175, PART 3: FUME HOOD CONTAINMENT BORDER VALUES IN THE UK (*draft*)

	Border Value (SF6 concentration)	Protection Factor
RESEARCH LABS UK - BAND 1 inner plane	0.010ppm	2.00 10 ⁶
UK - BAND 1 outer plane - <i>open, closed, closing</i>	0.010ppm	4.50 10 ⁶
UK - BAND 1 outer plane - <i>opening</i>	0.020ppm	2.25 10 ⁶
UK - BAND 1 robustness of containment	0.100ppm	0.45 10 ⁶
TEACHING LABS UK - BAND 2 inner plane	0.020ppm	1.00 10 ⁶
UK - BAND 2 outer plane - <i>open, closed, closing</i>	0.020ppm	2.25 10 ⁶
UK - BAND 2 outer plane - <i>opening</i>	0.040ppm	1.13 10 ⁶
UK - BAND 2 robustness of containment	0.200ppm	0.23 10 ⁶
SCHOOL LABS UK - BAND 3 inner plane	0.040ppm	0.50 10 ⁶
UK - BAND 3 outer plane - <i>open, closed, closing</i>	0.040ppm	1.13 10 ⁶
UK - BAND 3 outer plane - <i>opening</i>	0.080ppm	0.56 10 ⁶
UK - BAND 3 robustness of containment	0.400ppm	0.11 10 ⁶

TOPAIR CLEAN AIR SOLUTIONS CATALOG



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