DEDICATED TO DISCOVERY. INSPIRED BY INNOVATION.

HAWKINS
LABORATORY FUME HOODS

FUME HOOD CATALOGUE | 05/01/23
FLOOR MOUNT | COMBINATION SASH

FLOOR MOUNT (WALK-IN)
FUME HOOD — COMBINATION SASHES

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| STANDARD FEATURES
DUAL COMBINATION SASH

HOOD TYPES

Hoods are available as:

- Constant Air Volume (CAV), Reduced By-Pass
- Variable Air Volume (VAV), Restricted By-Pass
- 1220mm (48”), 1525mm (60”), 1830mm(72”), 2440mm (96”) wide

FINISH

- Finish is an electrostatic powder coating applied to all surfaces. Parts are baked in a controlled high temperature gas oven with infrared preheat.
- Resultant finish has a hard and smooth laboratory grade chemical resisting finish.

1 SUPERSTRUCTURE

- Fully framed, self supporting
- Exterior panels fabricated from sheet steel with baked electrostatic powder coating
- Exterior front and upper side panels have hidden fasteners and are removable without tools
- Exhaust collars are round in configuration and do not require rectangular-to-round transitions

2 INTERIOR ACCESS PANELS

Fully framed, self supporting

- Flush mount
- Fully framed and air tight
- No gaskets required

3 SASHES

- 6mm (7/32”) laminated safety glass
- Full view type 1880mm (74”) high
- Type 316 stainless steel full length sash pulls
- Maximum sash opening height 1625mm (64”)
- Dual vertical rising with combination upper sash

4 FRONT FACE OPENING

- Aerodynamically angled top, and side openings reduce turbulence and eliminate reverse flows

5 INTERIOR LINER MATERIALS

- Polyresin
- Stainless Steel
- PVC
- Polypropylene
- Custom materials available to fit specific requirements

6 BAFFLES

- Five section baffle design with side, upper, center and lower exhaust slots
- Baffle plates are fixed and factory set for optimum containment per ASHRAE 110-2016 Tracer Gas Testing

7 LEVELING FEET

- Built in for ease of installation

8 ELECTRICAL

Standard electrical fixtures comprise:

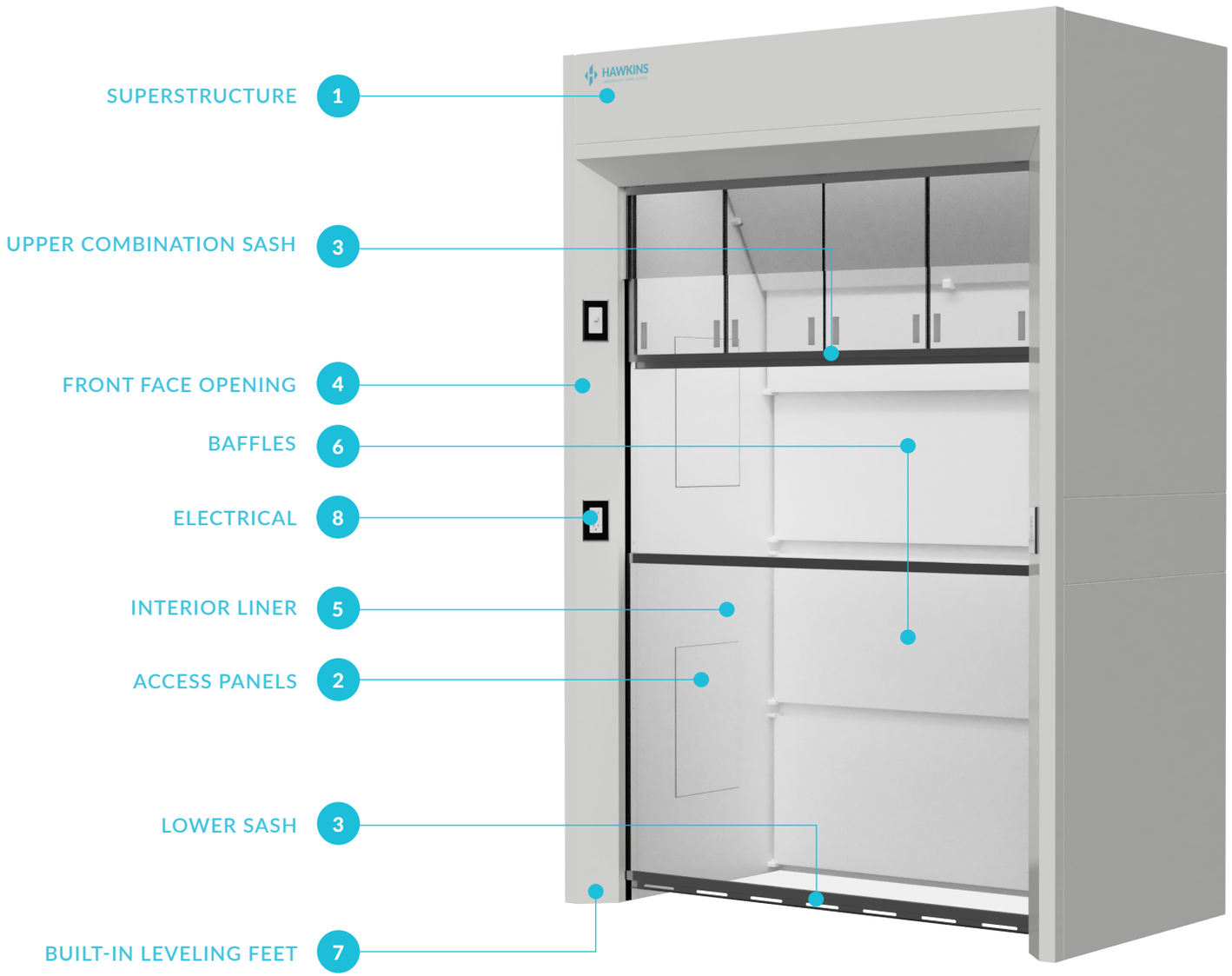
- Two 120V/20A duplex receptacles
- Vapour sealed LED lighting with light switch
- All fume hoods are factory pre-wired to a roof mounted junction box using only CSA/UL certified electrical components

APPROVALS

H.H.Hawkins Fume Hoods have been tested and certified for use in North America by Intertek Canada and designated with the cETLus mark. Certified to the following standards: CAN/CSA-C22.2 No. 61010-1-12 + UI; U2; AI UL61010-1:2012 Ed. 3+R21 Nov2018 and UL 1805:2002

TRACER GAS TESTING

Fume Hoods are tested to the ASHRAE 110-2016 Method of Testing Performance of Laboratory Fume Hoods and exceed ANSI/AIHA Z9.5, CSA Z316.5-15 and MD15128-2013 recommendations.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HAWKINS

1 CEILING CLOSURE PANEL

- Designed to enclose the top of the hood to the ceiling
- Encloses both sides and front
- Front panel is removable for access to the top of the fume hood
- Fabricated from the same material as the fume hood exterior
- Colour matched to the hood exterior colour

2 MECHANICAL SERVICES FIXTURES

- Remote controlled from the front face of the fume hood
- Front loaded valves
- Factory pre-piped, conforming to applicable codes
- Colour coded handles and interior fittings

3 PRE-PIPING

- Factory installed terminating above or below the hood superstructure
- Burning gas: corrugated stainless steel flexible tubing with connector, conforming to applicable codes
- Water and technical gases: SPX hose with stainless steel braiding and connector termination

4 LOW AIRFLOW ALARM/MONITORS

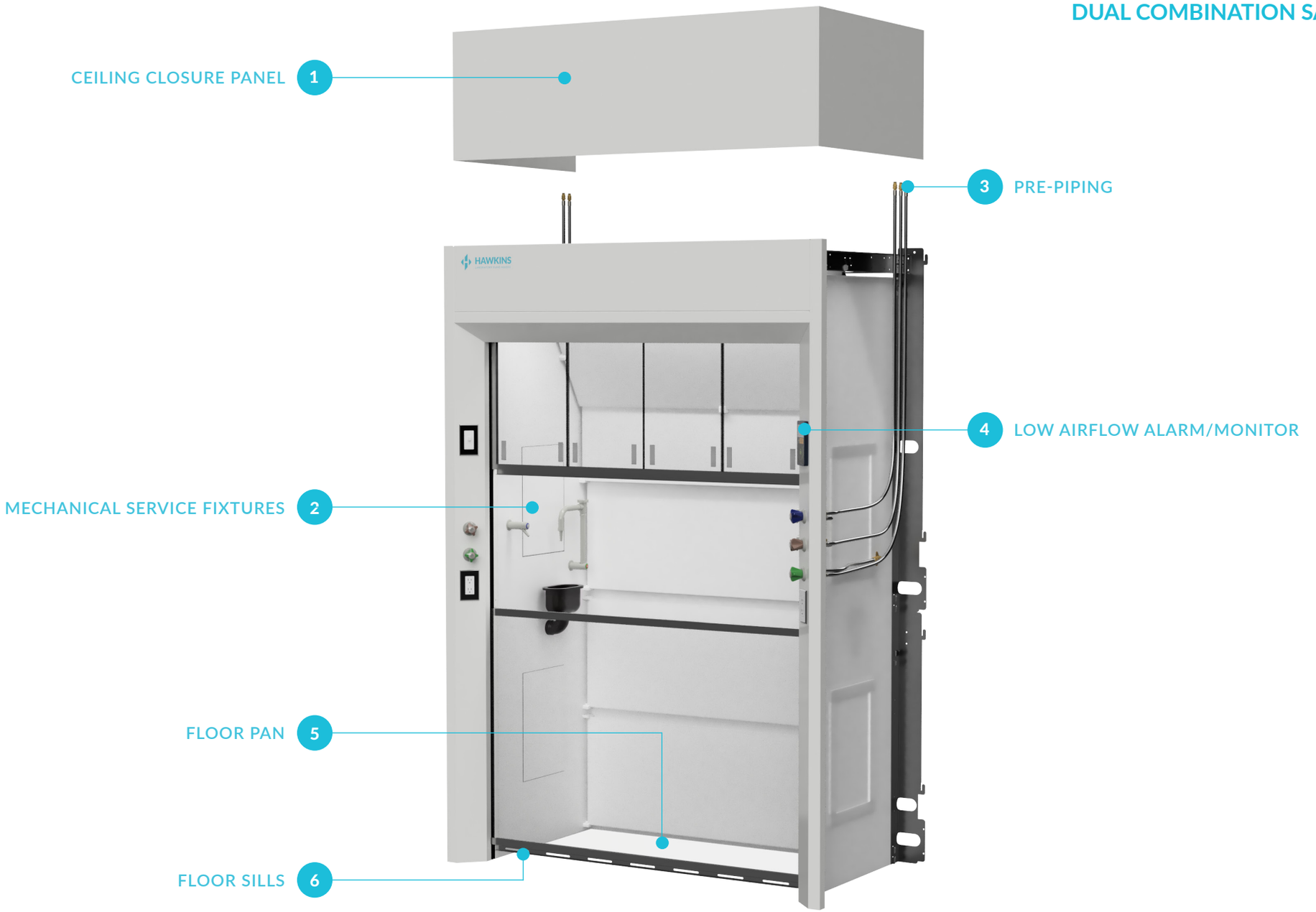
- Factory Installed
- Built in airflow sensor continuously monitors face velocity
- LED display indicates Safe and Alarm conditions
- Pushbutton calibration and configuration, password protection

5 FLOOR PANS

- To contain spills
- Raised edges 12mm (1/2")
- Liquid tight
- Type 304 or Type 316 18 gauge stainless steel
- Galvanized, 18 gauge
- Polyethylene

6 FLOOR SILLS

- Type 304 or Type 316 angled sill with floor pan for rolling equipment in and out of hood


CEILING CLOSURE PANEL
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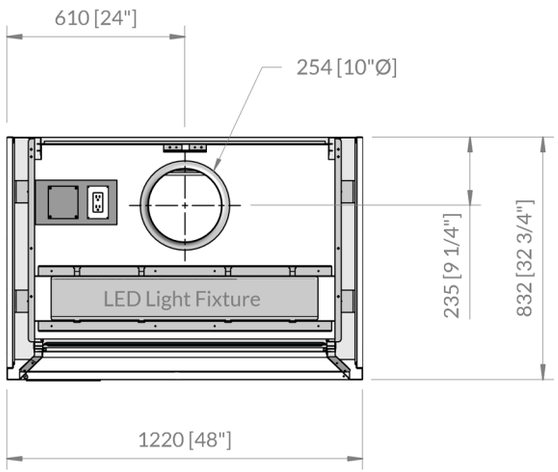
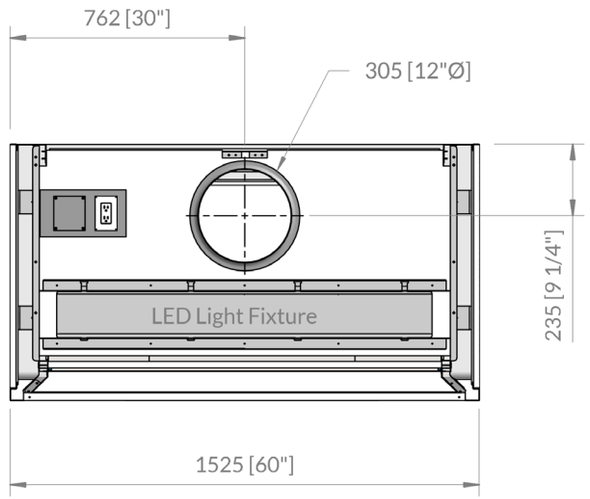
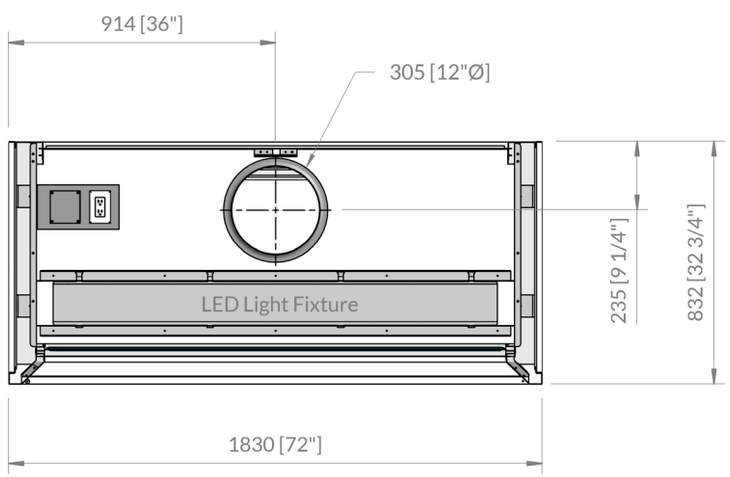
| EXHAUST COLLAR LOCATIONS / DIAMETERS
DUAL COMBINATION SASH



1220mm
(48”) WIDE

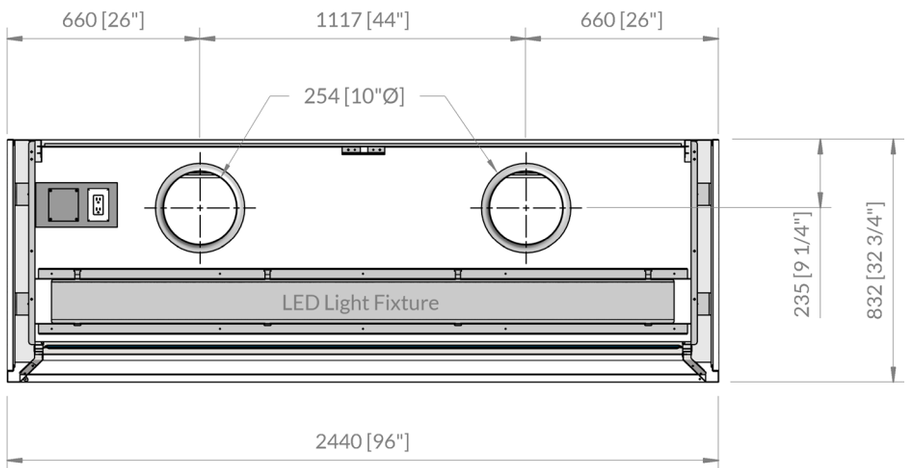


1525mm
(60”) WIDE

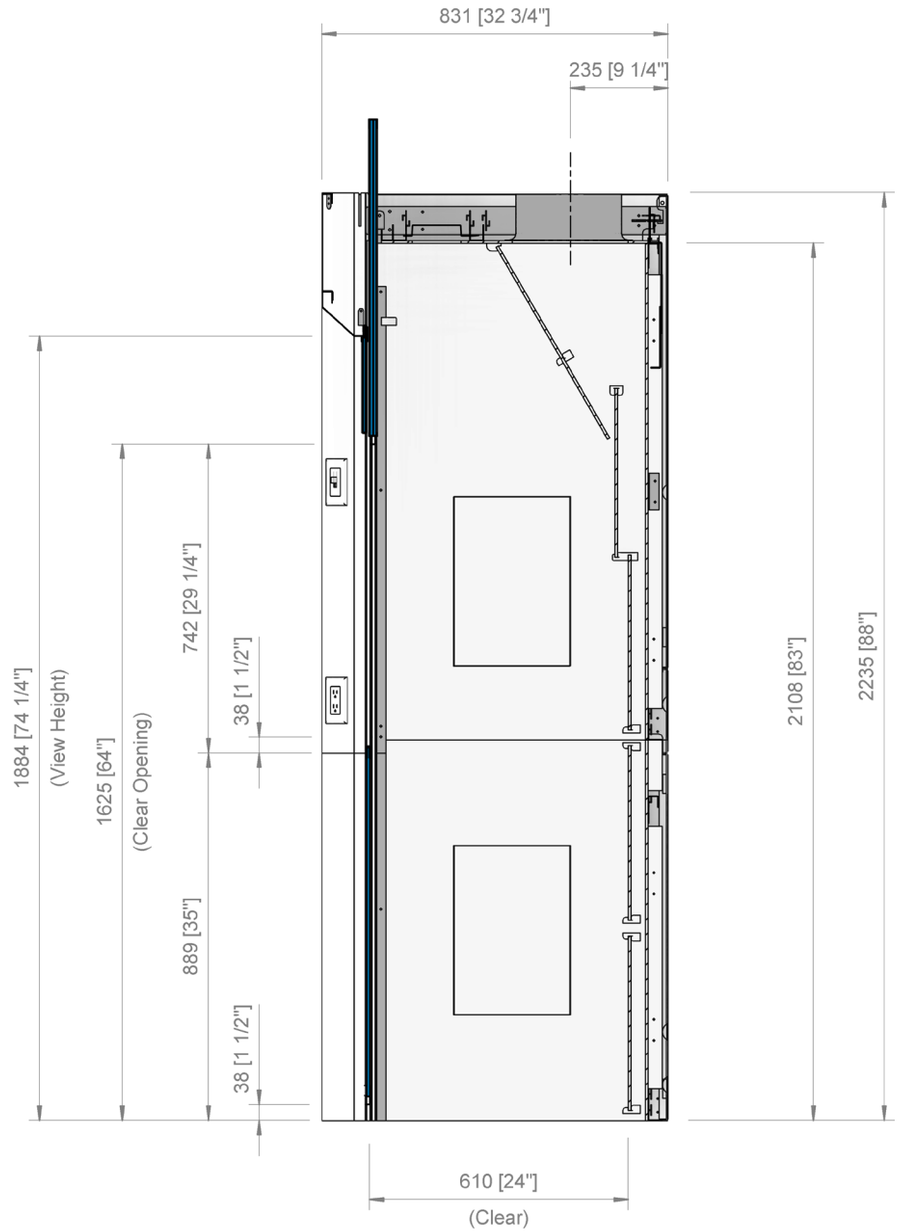


1830mm
(72”) WIDE

| EXHAUST COLLAR LOCATION



2440mm
(96”) WIDE



| CATALOG NUMBER EXPLANATION | INTERIOR LINER MATERIAL DUAL COMBINATION UPPER SASH

INTERIOR LINER MATERIALS

1 2 3 - 48 PR

HOOD EXHAUST TYPE

1 - Constant Air Volume (CAV), Full By-Pass
2 - Constant Air Volume (CAV), Reduced By-Pass
3 - Variable Air Volume (VAV), Restricted By-Pass

SASH TYPE

1 - Full View Dual Sash Assembly With Upper Fixed View Panel
2 - Full View Sash
3 - Horizontal Sliding Sash Panels
4 - Combination Vertical Rising Sash/Horizontal Sliding Panes Full View

SUPERSTRUCTURE TYPES

1 - Bench Mount - Standard Height
3 - Floor Mount (Walk-In)
4 - Radioisotope
5 - Perchloric Acid
6 - Accessible
7 - Distillation
12 - Pass Through (Double Sided)

HOOD WIDTH

1220mm (48")
1525mm (60")
1830mm (72")
2440mm (96")

INTERIOR LINER MATERIALS

PR Polyresin: 1/4" thick, solid fibreglass reinforced pressed thermoset resin board. Material offers superior chemical, solvent and corrosion resistance, negligible moisture absorption and a flame spread of less than 20 (UL 7231 ASTM E84-80). Flexural strength is a minimum of 19,000 PSI (D790). Material is white in colour throughout its thickness offering superior light levels. Maximum service temperature is 130 C (266 F). Exhaust collar is type 316 stainless steel.

ST Stainless Steel: Type 316 (ST6) or Type 304 (ST4) stainless steel, 16 gauge, number 4 finish. The sides and back of interior liner are formed in one piece with the top of the liner being stitch welded to the back and sides. Upper and lower sections are mechanically fastened together and sealed. Offers excellent heat and solvent resistance and good chemical resistance to most acids. Stainless steel is not recommended for use with chemicals such as Hydrochloric Acid, Hydrofluoric Acid, and Sulphuric Acid to 80% solution. Exhaust collar is stainless steel.

PP Polypropylene: 1/4" thick, solid, flame retardant, self extinguishing and stressed relieved polypropylene sheet. Liner is rigid and self supporting. Interior is metal-free. Material is white in colour throughout its thickness. Offers excellent corrosion resistance to a wide range of acids and solvents. Material has good impact resistance and structural integrity and has little or no water absorption. Maximum operating temperature is 82C (180F). Exhaust collar is PVC.

PV PVC: 1/4" thick, solid, flame retardant poly vinyl chloride sheet. Liner is rigid and self supporting. Interior is metal-free. Material is white in colour throughout its thickness. Offers excellent corrosion resistance to a wide range of acids but is not recommended for use with solvents. It has little or no water absorption and possesses natural flame resistant qualities. Flame resistance is rated at UL94V-O. Maximum service temperature is 60C (140F). Exhaust collar is PVC.

Technical specifications and chemical resistance chart are available upon request.

| CONSTANT AIR VOLUME (CAV), REDUCED BY-PASS DUAL COMBINATION SASH

Reduced By-Pass Constant Air Volume Fume Hoods incorporate a partial upper by-pass between the roof of the hood and the fully closed vertical sash assembly. This by-pass will draw air over the top of the sash assembly when the hood is being operated using the horizontal sliding sashes. This reduces the face velocity through the open horizontal sash openings. When the fume hood is being operated with the horizontal sliding sashes, the horizontal sash panes should not be closed completely. This will force the exhaust air through the lower air foil opening reducing the efficiency of the hood. **When using the fume hood in the vertical sash configuration, the horizontal sash panes must be closed.**

Superstructure is fully framed and self supporting with 45° front posts. Exterior panels are 18 gauge cold rolled steel, are attached with hidden fasteners and removable without tools. Finish is an electrostatic baked powder paint for maximum scratch and chemical resistance.

Standard electrical fixtures comprise two 120V/20A duplex receptacles, vapour sealed LED lighting and light switch. All fume hoods are factory pre-wired to a roof mounted junction box using only CSA/UL certified electrical components.

Face openings are angled to reduce turbulence and maintain smooth airflow into the hood.

| CONSTANT AIR VOLUME (CAV), REDUCED BY-PASS DUAL COMBINATION SASH

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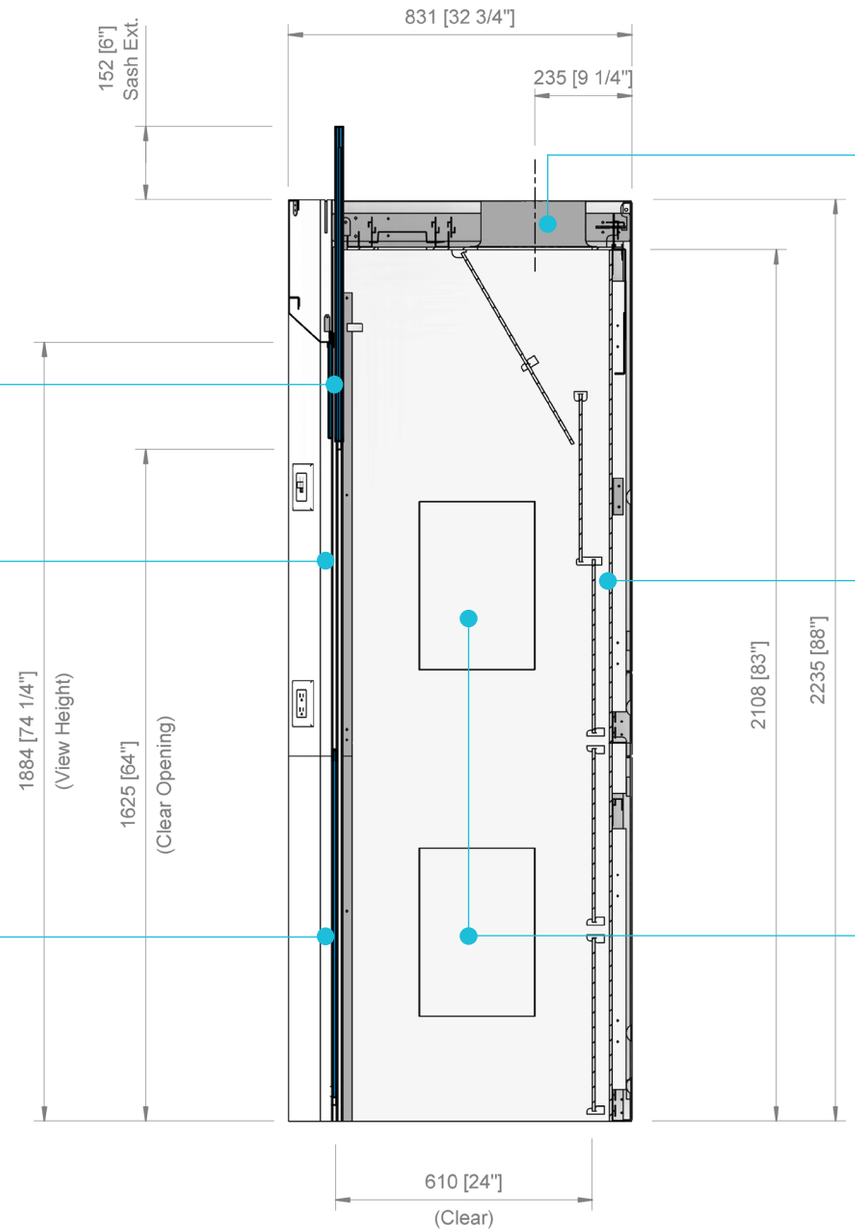
Fixed View Panel

Upper and lower sash assemblies are "Full View" type. Each are fully counter balanced using a single center hung weight Weight runs behind the hood with a continuous stainless steel cable on nylon ball bearing rollers. Assembly runs in full height PVC tracks.

Upper sash is a combination vertically rising assembly with horizontal sliding panes set in an I8 gauge, type 316 stainless number 4 finish frame. **Top hung horizontal sliding panes are unframed 6mm (1/4") laminated safety glass with polished edges. They are designed so that only a maximum of 50% of the sash can be opened at any one time. Sash panels are designed and sized to be used as a full height safety shield**

Lower sash assembly is a vertical rising single pane. Sash pull is a slotted low profile design, is full length and fabricated I8 gauge type 316, number 4 finish stainless steel.



NOTE: Hood is designed and intended to be used with only the upper sash open at the required sash operating height

Exhaust collar is bell shaped, round in configuration and does not require a rectangular-to-round transition.

Five piece baffles are factory set and fixed for optimum containment. Removable from interior of hood without tools to facilitate ease of cleaning.

Interior access panels are flush mounted, fully framed and air tight. No gaskets required.

Fume Hoods are tested to the ASHRAE 110-2016 Method of Testing Performance of Laboratory Fume Hoods and exceed ANSI/AIHA Z9.5, CSA Z316.5-15 and MD15128-2013 recommendations.

| CONSTANT AIR VOLUME (CAV), REDUCED BY-PASS DUAL COMBINATION SASH

1220mm (48”) WIDE

Polyresin	243-48PR
Stainless Steel Type 316 (Stitch Welded)	243-48ST6
Stainless Steel Type 304 (Stitch Welded)	243-48ST4
PVC	243-48PV
Polypropylene	243-48PP

1525mm (60”) WIDE

Polyresin	243-60PR
Stainless Steel Type 316 (Stitch Welded)	243-60ST6
Stainless Steel Type 304 (Stitch Welded)	243-60ST4
PVC	243-60PV
Polypropylene	243-60P

1830mm (72”) WIDE

Polyresin	243-72PR
Stainless Steel Type 316 (Stitch Welded)	243-72ST6
Stainless Steel Type 304 (Stitch Welded)	243-72ST4
PVC	243-72PV
Polypropylene	243-72PP

- *Other liner materials can be supplied to meet specific requirements.*
- *2745mm (108") wide and 3050mm (120") wide fume hoods also available.*
- *Custom designs available.*

2440mm (96") WIDE

Polyresin	243-96PR
Stainless Steel Type 316 (Stitch Welded)	243-96ST6
Stainless Steel Type 304 (Stitch Welded)	243-96ST4
PVC	243-96PV
Polypropylene	243-96PP

AIR EXHAUST VOLUME (CFM) AND STATIC PRESSURE LOSSES (SP)

HOOD WIDTH		48"	60"	72"	96"
SASH OPENING*		7.30 sq. ft.	9.60 sq. ft.	11.80 sq. ft.	16.30 sq. ft.
UPPER SASH FULL OPEN (27")	80 FPM	710 @ .14	815 @ .15	990 @ .22	1375 @ .18
	100 FPM	760 @ .16	1000 @ .22	1220 @ .34	1700 @ .24
SASH OPENING*		4.9 sq. ft.	6.4 sq. ft.	7.9 sq. ft.	10.9 sq. ft.
UPPER SASH 18" OPEN	80 FPM	415 @ .06	555 @ .09	675 @ .10	945@ .06
	l00 FPM	520 @ .08	695 @ .14	845 @ .17	1180 @ .10

** Includes middle and lower slots*

*** Exhaust Volume is calculated with the lower sash closed**

| VARIABLE AIR VOLUME (VAV), RESTRICTED BY-PASS COMBINATION SASH

Restricted By-Pass Variable Air Volume fume hoods are used in conjunction with an electronic control system* which will maintain a constant face velocity regardless of the sash opening.
As the vertical rising sash and the horizontal sliding panes are opened and closed, the VAV system will vary the exhaust volume of the hood in direct response to the sash opening.

* SUPPLIED BY OTHERS.

When the fume hood is being operated with the horizontal sliding sashes, the vertical sash assembly needs to be fully closed. The horizontal sash panes should not be closed completely as this will force all the exhaust air through the lower air foil opening reducing the efficiency of the hood.

Superstructure is fully framed and self supporting with 45° front posts. Exterior panels are 18 gauge cold rolled steel, are attached with hidden fasteners and removable without tools. Finish is an electrostatic baked powder paint for maximum scratch and chemical resistance.

Standard electrical fixtures comprise two 120V/20A duplex receptacles, vapour sealed LED lighting and light switch. All fume hoods are factory pre-wired to a roof mounted junction box using only CSA/UL certified electrical components.

All face openings are angled to reduce turbulence and maintain smooth airflow into the hood.

| VARIABLE AIR VOLUME (VAV), RESTRICTED BY-PASS COMBINATION SASH

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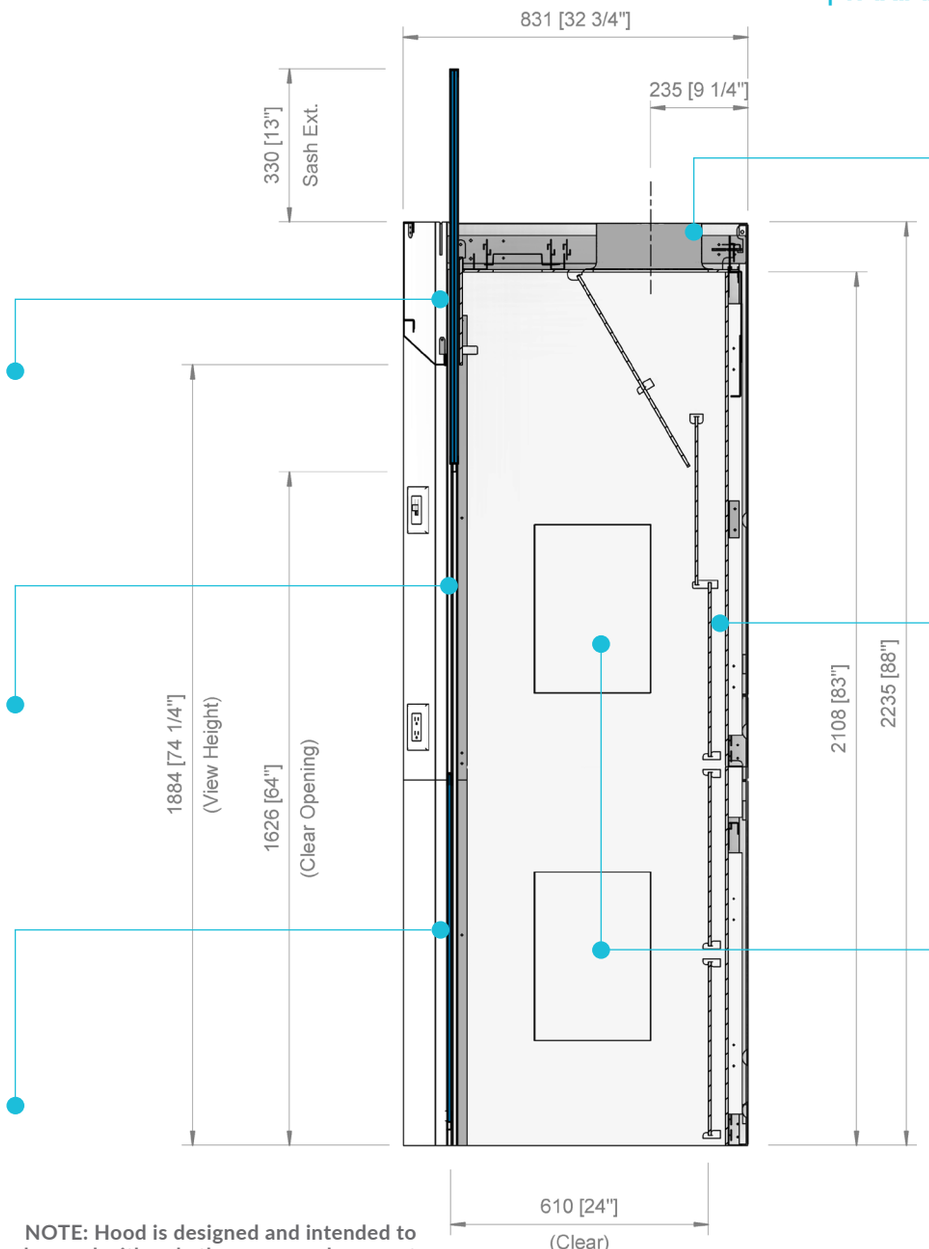
By-pass Blocker

Upper and lower sash assemblies are "Full View" type. Each are fully counter balanced using a single center hung weight Weight runs behind the hood with a continuous stainless steel cable on nylon ball bearing rollers. Assembly runs in full height PVC tracks.

Upper sash is a combination vertically rising assembly with horizontal sliding panes set in an 18 gauge, type 316 stainless number 4 finish frame. **Top hung horizontal sliding panes are unframed 6mm (1/4") laminated safety glass with polished edges. They are designed so that only a maximum of 50% of the sash can be opened at any one time. Sash panels are designed and sized to be used as a full height safety shield**

Lower sash assembly is a vertical rising single pane. Sash pull is a slotted low profile design, is full length and fabricated 18 gauge type 316, number 4 finish stainless steel.



NOTE: Hood is designed and intended to be used with only the upper sash open at the required sash operating height

Exhaust collars are bell shaped, round in configuration and does not require a rectangular-to-round transition.

Five piece baffles are factory set and fixed for optimum containment. Removable from interior of hood without tools to facilitate ease of cleaning.

Interior access panels are flush mounted, fully framed and air tight. No gaskets required.

Fume Hoods are tested to the ASHRAE 110-2016 Method of Testing Performance of Laboratory Fume Hoods and exceed ANSI/AIHA Z9.5, CSA Z316.5-15 and MD15128-2013 recommendations.

| VARIABLE AIR VOLUME (VAV), RESTRICTED BY-PASS COMBINATION SASH

1220mm (48”) WIDE

Polyresin	343-48PR
Stainless Steel Type 316 (Stitch Welded)	343-48ST6
Stainless Steel Type 304 (Stitch Welded)	343-48ST4
PVC	343-48PV
Polypropylene	343-48PP

1525mm (60”) WIDE

Polyresin	343-60PR
Stainless Steel Type 316 (Stitch Welded)	343-60ST6
Stainless Steel Type 304 (Stitch Welded)	343-60ST4
PVC	343-60PV
Polypropylene	343-60PP

1830mm (72”) WIDE

Polyresin	343-72PR
Stainless Steel Type 316 (Stitch Welded)	343-72ST6
Stainless Steel Type 304 (Stitch Welded)	343-72ST4
PVC	343-72PV
Polypropylene	343-72PP

- *Other liner materials can be supplied to meet specific requirements.*
- *2745mm (108") wide and 3050mm (120") wide fume hoods also available.*
- *Custom designs available.*

2440mm (96") WIDE

Polyresin 311-96PR	
Stainless Steel Type 316 (Stitch Welded)	343-96ST6
Stainless Steel Type 304 (Stitch Welded)	343-96ST4
PVC	343-96PV
Polypropylene	343-96PP

AIR EXHAUST VOLUME (CFM) AND STATIC PRESSURE LOSSES (SP)

HOOD WIDTH		48"	60"	72"	96"
SASH OPENING*		7.30 sq. ft.	9.60 sq. ft.	11.80 sq. ft.	16.30 sq. ft.
UPPER SASH FULL OPEN (27")	80 FPM	710 @ .14	815 @ .15	990 @ .22	1375 @ .18
	100 FPM	760 @ .16	1000 @ .22	1220 @ .34	1700 @ .24
SASH OPENING*		4.9 sq. ft.	6.4 sq. ft.	7.9 sq. ft.	10.9 sq. ft.
UPPER SASH 18" OPEN	80 FPM	415 @ .06	555 @ .09	675 @ .10	945@ .06
	l00 FPM	520 @ .08	695 @ .14	845 @ .17	1180 @ .10

** Includes middle and lower slots*

*** Exhaust Volume is calculated with the lower sash closed**

VERTICAL RISING COMBINATION SASH
BUILD YOUR FUME HOOD

YOUR RESEARCH DRIVES OUR INNOVATION.

HAWKINS

LABORATORY FUME HOODS

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