mott MANUFACTURING

new england lab laboratory furniture systems

QUALITY BY DESIGN

RFV2™ BENCH - VERTICAL SASH

Designed to deliver competitive containment performance and energy efficiency, the RFV2™ operates with exhaust volumes significantly lower than conventional fume hoods. Providing the fume hood operator with a secure and reliable operation environment while providing considerable capital and operating cost savings. This hood is designed to meet most laboratory Constant Air Volume (CAV) or Variable Air Volume (VAV) requirements and includes restricted by-pass panel. The RFV2™ bench mounted fume hood is supplied with the following standard features:

Face Velocities - Tested to both standard and modified ASHRAE procedures at face velocities as low as 50 fpm.
Baffle Design - Downflow rear baffle is biased to the bottom, drawing fumes downward away from the user and counteracts the normal upward flow of vapors and prevents contaminated air build up behind the closed sash. Supplementary mechanical fans not required.
Chain Drive Sash - Chain and sprocket mechanism that delivers the easiest and most reliable sash operation available with an exceptionally long life span.
Full Viewing Sash - Provides a clear and unobstructed side to side view of fume hood interior, with a 34" high viewing area. 6mm laminated safety glass is provided with a stainless steel handle and side runners, optional tempered glass or polycarbonate available for special applications.
Performance Sash Handle - Powder coated stainless steel handle incorporates an airfoil design and provides improved airflow along the lower edge of the sash to prevent turbulence from resulting in a hazardous release.
Self-Lowering Sash System - Sash latch temporarily secures the sash in the full open position for setup and tear down operations. When the sash is freed, it automatically returns to the 18" open operational position which offers extra protection to the operator and helps reduce energy consumption. Below 18" the sash is equally balanced.
Flush Airfoil - Low-profile, hinged, type 316 powder coated stainless steel airfoil is flush with the work surface to provide ergonomic and unobstructed access to the interior. Power cords can be run through the sill to the electrical outlets on the hood posts.
Spill Trough - Designed to provide secondary containment in the event a spill escapes the primary containment work top.
Electrical - Two UL/CSA approved duplex receptacles provided for 120 volt service. UL/CSA approved LED light module and switch provided.
Plumbing - Front post is pre-punched to accept four fixtures per side. Factory pre-plumbing is available as well as plumbing fixtures from a variety of manufacturers to meet most plumbing needs.
Access Panels - Interior gasketed access panels provide convenient access and prevent fume leakage outside the hood chamber. Exterior side panels are also removable for ease of access to plumbing and electrical service fixtures.
Stainless Steel Exhaust Collar - Wide rectangular exhaust duct connection improves airflow distribution across hood width.
Agency Approvals - UL 1805 Classified, CSA certified to UL 61010 and tested in accordance with ASHRAE 110. Test results available upon request.

Vertical Raising Sash (Chain & Sprocket Sash System)					
Width	**FRP**	**PVC**	**Epoxy**	**316 S/S Square Corners**	**316 S/S Radius Corners**
48"	72F1040	72F3040	72F6040	72F4040	72F5040
60"	73F1040	73F3040	73F6040	73F4040	73F5040
72"	74F1040	74F3040	74F6040	74F4040	74F5040
96"	75F1040	75F3040	75F6040	75F4040	75F5040

Exhaust Transition			
Width	**Item Number**	**Duct Size**	**Base Size**
48" with SM option	EXT0324	10"	3" x 24"
48"	EXT0036	10"	3" x 36"
60"	EXT0036	10"	3" x 36"
72"	EXT0036	10"	3" x 36"
96"	EXT2336	12"	3" x 36"

Exhaust Transition
- Fits over exhaust collar on RFV2™ hoods
- Exhaust transitions (rectangular duct to round duct) are available in 18 gauge, type 316 stainless steel and fits over exhaust collar
- SM option code: Automatic Sash Operator 2 Plus (ASO2 Plus)

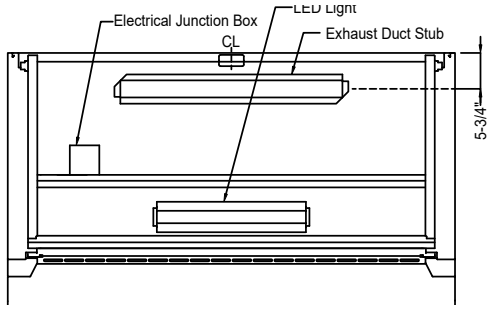
RFV2™ BENCH - VERTICAL SASH

Exhaust Parameters

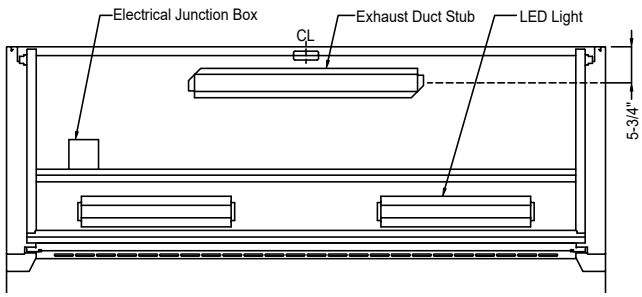
Hood Size	Duct Diameter	100 FPM 18" Max Sash Opening CFM	SP**	80 FPM 18" Max Sash Opening CFM	SP**	80 FPM 28-1/2" Max* Sash Opening CFM	SP**	60 FPM 18" Max Sash Opening CFM	SP**	60 FPM 28-1/2" Max* Sash Opening CFM	SP**	50 FPM 18" Max Sash Opening CFM	SP**	50 FPM 28-1/2" Max* Sash Opening CFM	SP**
48"	3" x 36"	481	0.08	385	0.05	610	0.07	289	0.04	457	0.06	241	0.03	381	0.05
60"	3" x 36"	631	0.13	505	0.05	800	0.11	379	0.04	600	0.06	316	0.03	500	0.05
72"	3" x 36"	781	0.11	625	0.07	990	0.17	469	0.04	742	0.10	391	0.03	618	0.07
96"	3" x 36"	1081	0.21	865	0.13	1370	0.33	649	0.07	1027	0.19	541	0.05	856	0.13

* 28-1/2" max sash opening is recommended for set-up and tear down only
** Does not include transition

Typical Roof Details

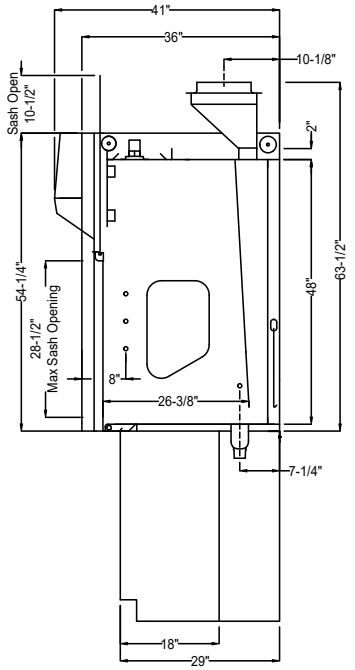


Single Collar Rough-In



Dual Collar Rough-In

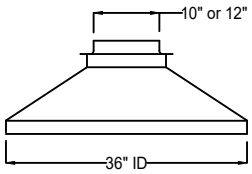
Side Section Details

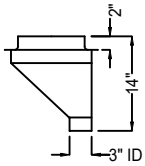


Shown with optional transition, must be ordered separately

Note: The above side section detail drawing is shown with the optional transition, this must be ordered separately.

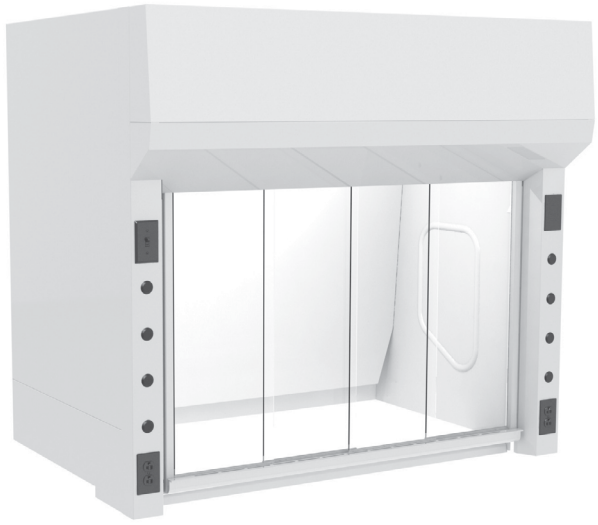
Optional Exhaust Transition Details





RFV2™ BENCH - COMBINATION SASH

Designed to deliver competitive containment performance and energy efficiency, the RFV2™ operates with exhaust volumes significantly lower than conventional fume hoods. Providing the fume hood operator with a secure and reliable operation environment while providing considerable capital and operating cost savings. This hood is designed to meet most laboratory Constant Air Volume (CAV) or Variable Air Volume (VAV) requirements and includes restricted by-pass panel. The RFV2™ bench mounted fume hood is supplied with the following standard features:



Face Velocities - Tested to both standard and modified ASHRAE procedures at face velocities as low as 50 fpm.
Baffle Design - Downflow rear baffle is biased to the bottom, drawing fumes downward away from the user and counteracts the normal upward flow of vapors and prevents contaminated air build up behind the closed sash. Supplementary mechanical fans not required.
Full Viewing Sash - Provides a clear and unobstructed side to side view of fume hood interior, with a 34" high viewing area. 6mm laminated safety glass is provided with a stainless steel handle and side runners, optional tempered glass or polycarbonate available for special applications. Hoods are supplied with a combination vertical rising and horizontal sliding sashes.
Chain Drive Sash - Chain and sprocket mechanism that delivers the easiest and most reliable sash operation available with an exceptionally long life span.
Performance Sash Handle - Powder coated stainless steel handle incorporates an airfoil design and provides improved airflow along the lower edge of the sash to prevent turbulence from resulting in a hazardous release.
Self-Lowering Sash System - Sash latch temporarily secures the sash in the full open position for setup and tear down operations. When the sash is freed, it automatically returns to the 18" open operational position which offers extra protection to the operator and helps reduce energy consumption. Below 18" the sash is equally balanced.
Flush Airfoil - Low-profile, hinged, type 316 powder coated stainless steel airfoil is flush with the work surface to provide ergonomic and unobstructed access to the interior. Power cords can be run through the sill to the electrical outlets on the hood posts.
Spill Trough - Designed to provide secondary containment in the event a spill escapes the primary containment work top.
Electrical - Two UL/CSA approved duplex receptacles provided for 120 volt service. UL/CSA approved LED light module and switch provided.
Plumbing - Front post is pre-punched to accept four fixtures per side. Factory pre-plumbing is available as well as plumbing fixtures from a variety of manufacturers to meet most plumbing needs.
Access Panels - Interior gasketed access panels provide convenient access and prevent fume leakage outside the hood chamber. Exterior side panels are also removable for ease of access to plumbing and electrical service fixtures.
Stainless Steel Exhaust Collar - Wide rectangular exhaust duct connection improves airflow distribution across hood width.
Agency Approvals - UL 1805 Classified, CSA certified to UL 61010 and tested in accordance with ASHRAE 110. Test results available upon request.

Combination Sash (Chain & Sprocket Sash System)						Horizontal Glass Panels			
Width	FRP	PVC	Epoxy	316 S/S Square Corners	316 S/S Radius Corners	Panel Width	Width Opening	Height Opening	Number of Panels
48"	72F1050	72F3050	72F6050	72F4050	72F5050	9-3/4"	16"	32"	4
60"	73F1050	73F3050	73F6050	73F4050	73F5050	12-3/4"	22"	32"	4
72"	74F1050	74F3050	74F6050	74F4050	74F5050	15-3/4"	28"	32"	4
96"	75F1050	75F3050	75F6050	75F4050	75F5050	14-13/16"	38-7/8"	32"	6

Exhaust Transition		
Width	Item Number	Duct Size
48"	EXT0036	10"
60"	EXT0036	10"
72"	EXT0036	10"
96"	EXT2336	12"

Exhaust Transition

- Fits over exhaust collar on RFV2™ hoods
- Exhaust transitions (rectangular duct to round duct) are available in 18 gauge, type 316 stainless steel and fits over exhaust collar
- Base size 3" x 36"

RFV2™ BENCH - COMBINATION SASH

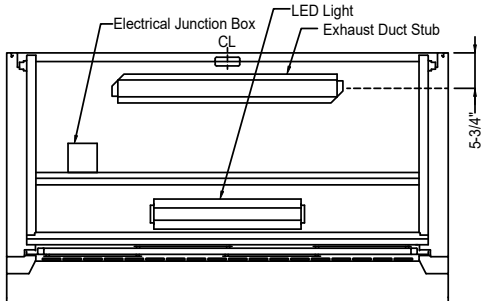
Exhaust Parameters

Hood Size	Duct Diameter	100 FPM 18" Max Sash Opening CFM	SP**	100 FPM Sash Open Horizontal Only CFM	SP*	80 FPM 18" Max Sash Opening CFM	SP**	80 FPM Sash Open Horizontal Only CFM	SP**
48"	3" x 36"	481	0.08	457	0.05	385	0.08	363	0.04
60"	3" x 36"	631	0.13	600	0.07	505	0.05	483	0.04
72"	3" x 36"	781	0.11	742	0.10	625	0.07	603	0.06
96"	3" x 36"	1081	0.21	1027	0.20	865	0.13	843	0.13

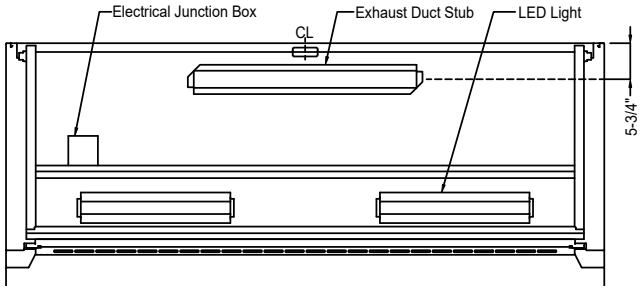
* 28-1/2" max sash opening is recommended for set-up and tear down only
** Does not include transition

Hood Size	Duct Diameter	60 FPM 18" Max Sash Opening CFM	SP**	60 FPM Sash Open Horizontal Only CFM	SP*	60 FPM 28-1/2" Max* Sash Opening CFM	SP**	50 FPM 18" Max Sash Opening CFM	SP**	50 FPM Sash Open Horizontal Only CFM	SP*	50 FPM 28-1/2" Max* Sash Opening CFM	SP**
48"	3" x 36"	289	0.02	289	0.02	457	0.05	241	0.03	227	0.03	408	0.04
60"	3" x 36"	379	0.03	379	0.03	600	0.07	316	0.03	302	0.03	535	0.05
72"	3" x 36"	469	0.04	469	0.04	742	0.10	391	0.03	377	0.04	662	0.08
96"	3" x 36"	649	0.08	649	0.08	1027	0.20	541	0.05	527	0.05	916	0.15

Typical Roof Details

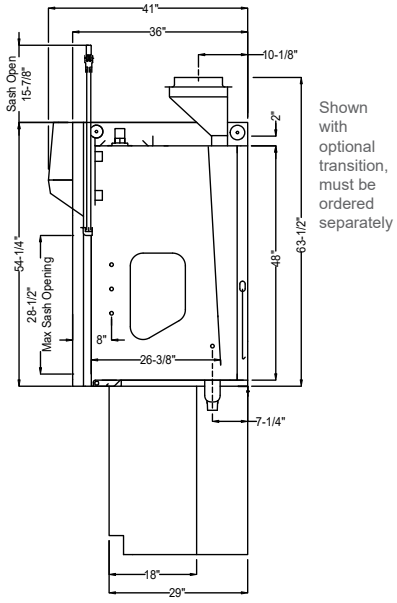


Single Collar Rough-In



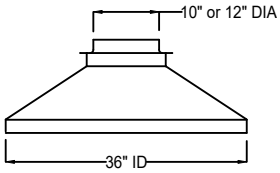
Dual Collar Rough-In

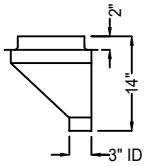
Side Section Details



Shown with optional transition, must be ordered separately

Optional Exhaust Transition Details





Note: The above side section detail drawing is shown with the optional transition, this must be ordered separately.