

ADAPTABLE
SYSTEMS
CATALOG

ENDEAVOR[®]
DISTINCTION[™]

2026
VOLUME 1



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ADAPTABLE SYSTEMS

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Endeavor™ & Distinction™ Bench Systems

These modular, self-contained laboratory bench systems are expertly engineered to address the evolving needs of modern laboratories. Designed for adaptability, they seamlessly accommodate changes in equipment, instrumentation, personnel, research activities, and room layouts with minimal downtime, cost, and effort.

Key features include:

- Bench structures built with adjustable-height work surfaces and shelving to support ergonomic and functional flexibility.
- Self-contained bench configurations housing pre-piped and pre-wired services for efficient setup and streamlined operations.
- Repositionable components designed for quick adaptations to laboratory needs without requiring extensive modifications.
- Service lines equipped with quick-connect fittings that integrate seamlessly with overhead service distribution panels for simplified utility routing.
- Guaranteed compatibility across components, ensuring continuity through non-generational designs and long-term availability.

Customization and Options

Follow the steps in this section to select the best style for a particular application, then fit it out with appropriate options and accessories to build your system:

IMPORTANT: This catalog includes service fixtures designed for Hamilton Laboratory Solutions workstations, delivering advanced utility capabilities tailored to modular systems. Additionally, casework, fume hoods, fixtures, and accessories for expanded functionality can be found in other Hamilton product catalogs.



Bench Components

Left | Right Single Frame Assemblies

Endeavor single structural frame assemblies become freestanding structures when combined with two-post bench frames and are available in powder coated steel. Frames can have none, one, two or three 1/4" diameter tubing service lines with chrome plated brass fittings. Unions, reducers, disconnects and service fixtures are field installed.

An Endeavor mobile single-frame version with leveling and locking casters is also available up to 72" wide, providing enhanced versatility. When paired with the mobile leg set, the system offers true mobility and flexibility, allowing you to easily adapt your workspace to meet changing needs and collaboration goals.

Raceway Outlets

Raceways for the single frames have standard 20amp duplex outlets in the horizontal raceway and 20 amp GFCI outlet located in the vertical upright under the work surface.

Single frames are equipped with 16 amp, twist-lock power cords:

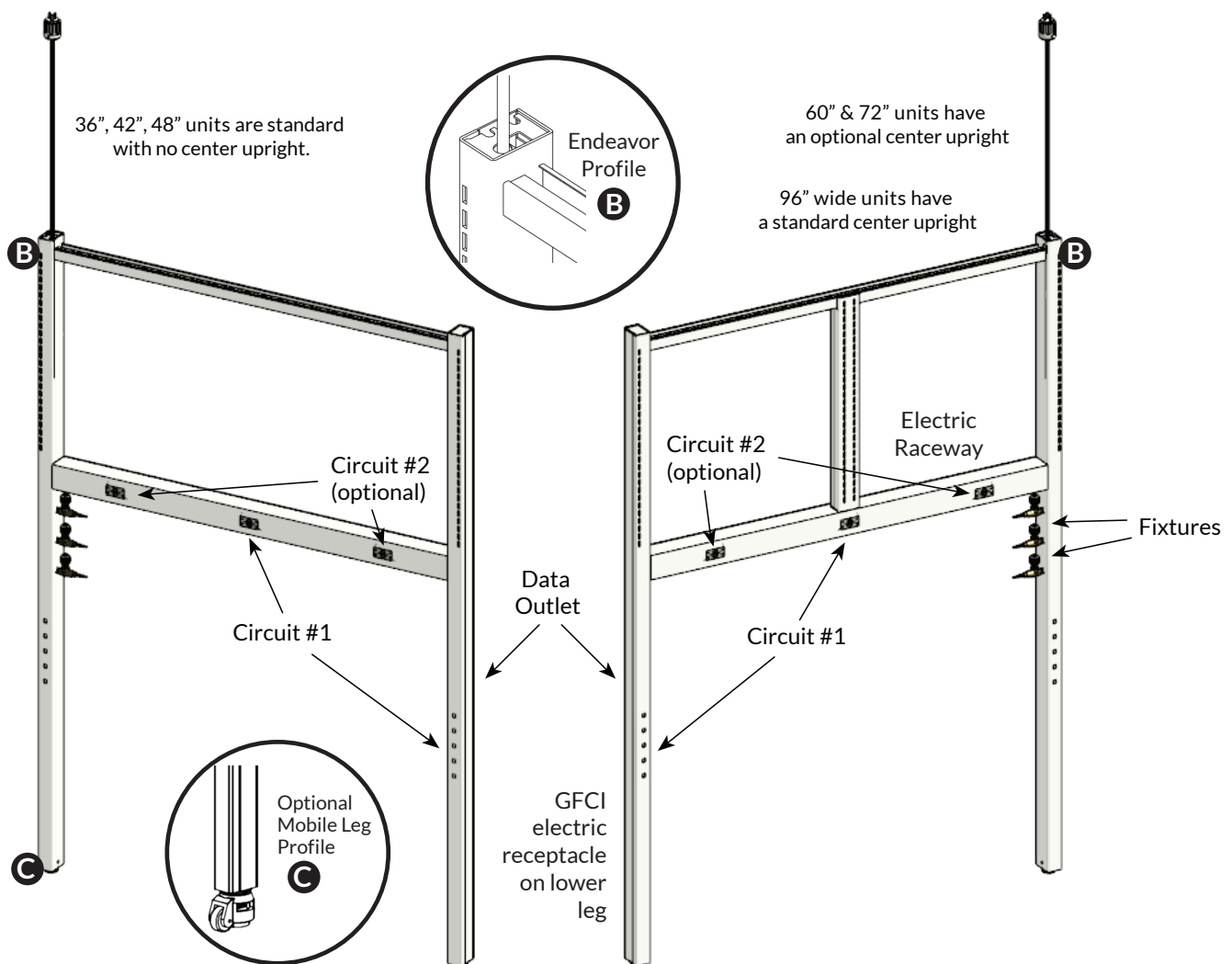
Standard: 1 Circuit - single cord and 3-prong (NEMA L5-20R)

Optional: 2 Circuit - single cord and 4-prong (NEMA L14-20R)

Color

All duplexes are black in color.

WIDTH	(DUPLEX) ELECTRICAL	(DOUBLE) TELECOMMUNICATIONS
36"	2	1
42"	2	1
48"	2	1
60"	3	1
72"	3	1
96"	3	1



Dimensions are nominal. Illustrations and specifications are based on the latest product information available at the time of publication.



Bench Components

Left | Right Single Frame Assemblies

Distinction single structural frame assemblies become freestanding structures when combined with two-post bench frames and are available in powder coated steel. Frames can have none, one, two or three 1/4" diameter tubing service lines with chrome plated brass fittings. Unions, reducers, disconnects and service fixtures are optional.

A Distinction mobile single-frame version with leveling and locking casters is also available up to 72" wide, providing enhanced versatility. When paired with the mobile leg set, the system offers true mobility and flexibility, allowing you to easily adapt your workspace to meet changing needs and collaboration goals.

Raceway Outlets

Raceways for the single frames have standard 20amp duplex outlets in the horizontal raceway and 20 amp GFCI outlet located

in the vertical upright under the work surface.

Single frames are equipped with 16 amp, twist-lock power cords:

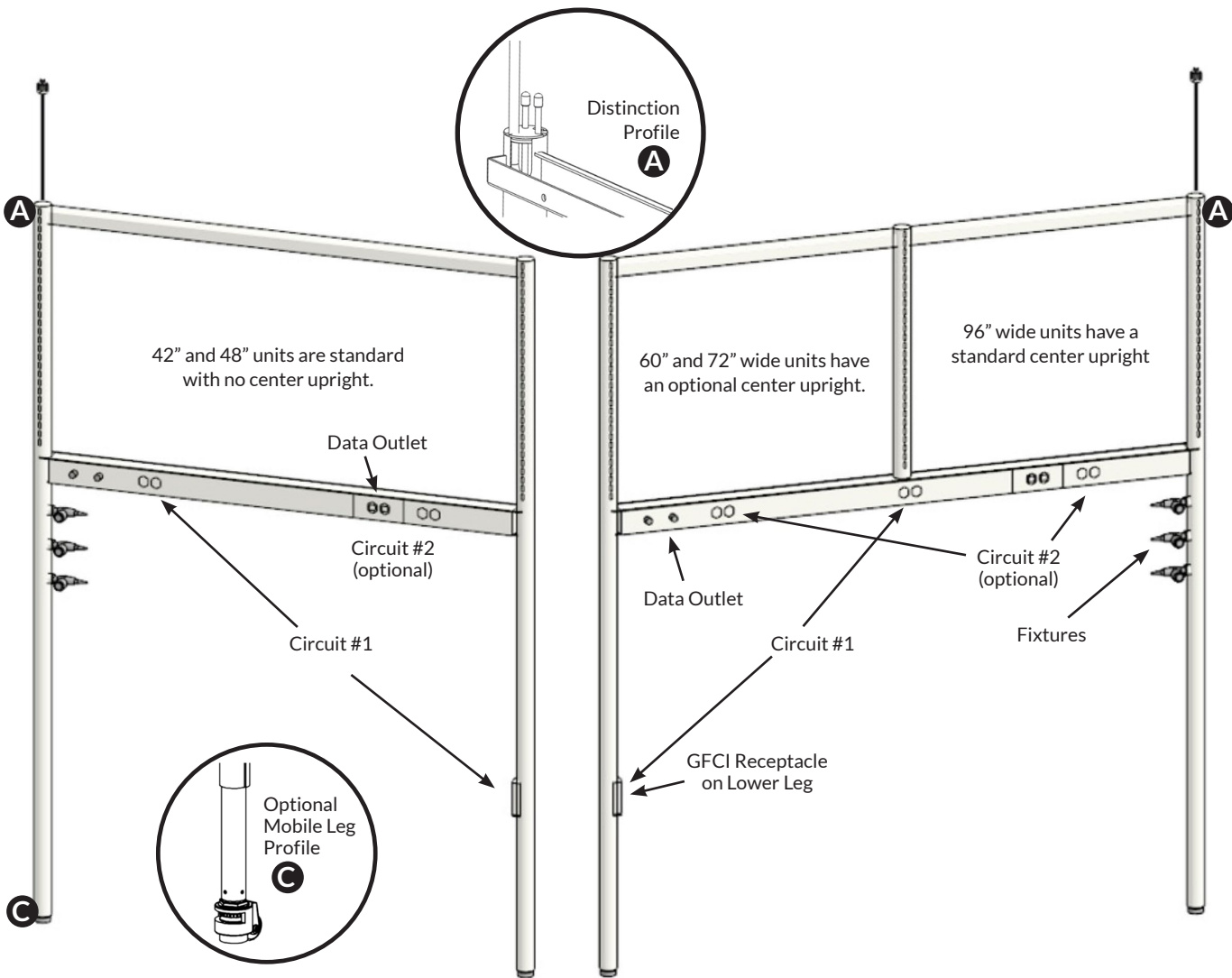
Standard: 1 Circuit - single cord and 3-prong (NEMA L5-20R)

Optional: 2 Circuit - single cord and 4-prong (NEMA L14-20R)

Color

All duplexes are black in color.

WIDTH	(DUPLEX) ELECTRICAL	(DOUBLE) TELECOMMUNICATIONS
42"	2	1
48"	2	1
60"	3	1
72"	3	1
96"	3	1



Dimensions are nominal. Illustrations and specifications are based on the latest product information available at the time of publication.



Bench Components

Left | Right Shared Frame Assemblies

Shared frame assemblies become freestanding structures when combined with two-post bench frames. Shared frames are available in powder coated steel.

Frames are factory installed with electrical wiring and outlets. CAT6 cables are available.

Frames can have none, one, two or three service lines per side with chrome plated brass stems. The top fixture stem has a copper tubing line. The middle and bottom fixture stem have polyethylene tubing.

Unions, reducers, disconnects and service fixtures are available.

Raceways for shared frames have 20 amp hospital grade duplexes in the horizontal raceway, with the master GFCI in the side upright under the work surface.

Single frames are equipped with a 3-prong, 16 amp twist-lock power cord on each side:

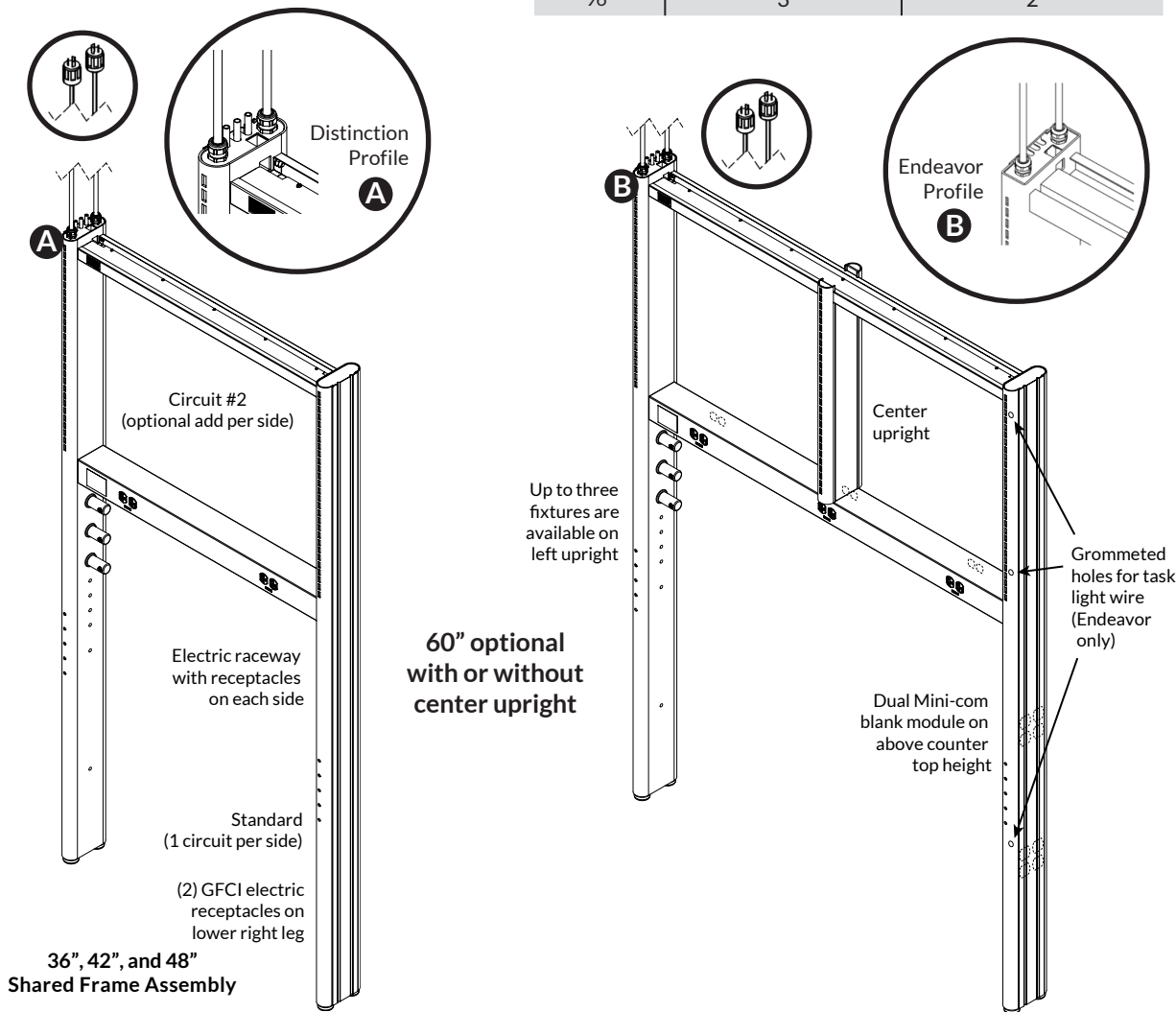
Standard: 2 Circuit - single cord and 3-prong (NEMA L5-20R)

Optional: 4 Circuit - single cord and 4-prong (NEMA L14-20R)

Color

All duplexes are black in color.

WIDTH	(RACEWAY PER SIDE) ELECTRICAL	(DOUBLE) TELECOMMUNICATIONS
36" (Endeavor Only)	2	2
42"	2	2
48"	2	2
60"	3	2
72"	3	2
96"	3	2



Dimensions are nominal. Illustrations and specifications are based on the latest product information available at the time of publication.



Bench Components

Shared Frame Pass-Through

Removing the raceway enlarges the work area by creating a larger opening that fosters improved collaboration and interaction. To maintain functionality and accessibility, power is relocated to the side upright above the counter-top, ensuring easy access without obstructing the workspace.

The shared frame assemblies transform into freestanding structures when paired with two-post bench frames, offering flexibility and adaptability. Constructed from durable powder-coated steel, these frames are pre-wired at the factory with electrical wiring and outlets, streamlining setup. For networking needs, CAT6 cables are available, and service lines can be customized with none, one, two, or three lines per side, featuring chrome-plated brass stems.

The top fixture stem includes a copper tubing line, while the middle and bottom fixture stems feature polyethylene tubing to accommodate various needs. Additionally, unions, reducers, disconnects, and service fixtures can be incorporated for enhanced versatility.

Single frames are equipped with a 3-prong, 16 amp twist-lock power cord on each side:

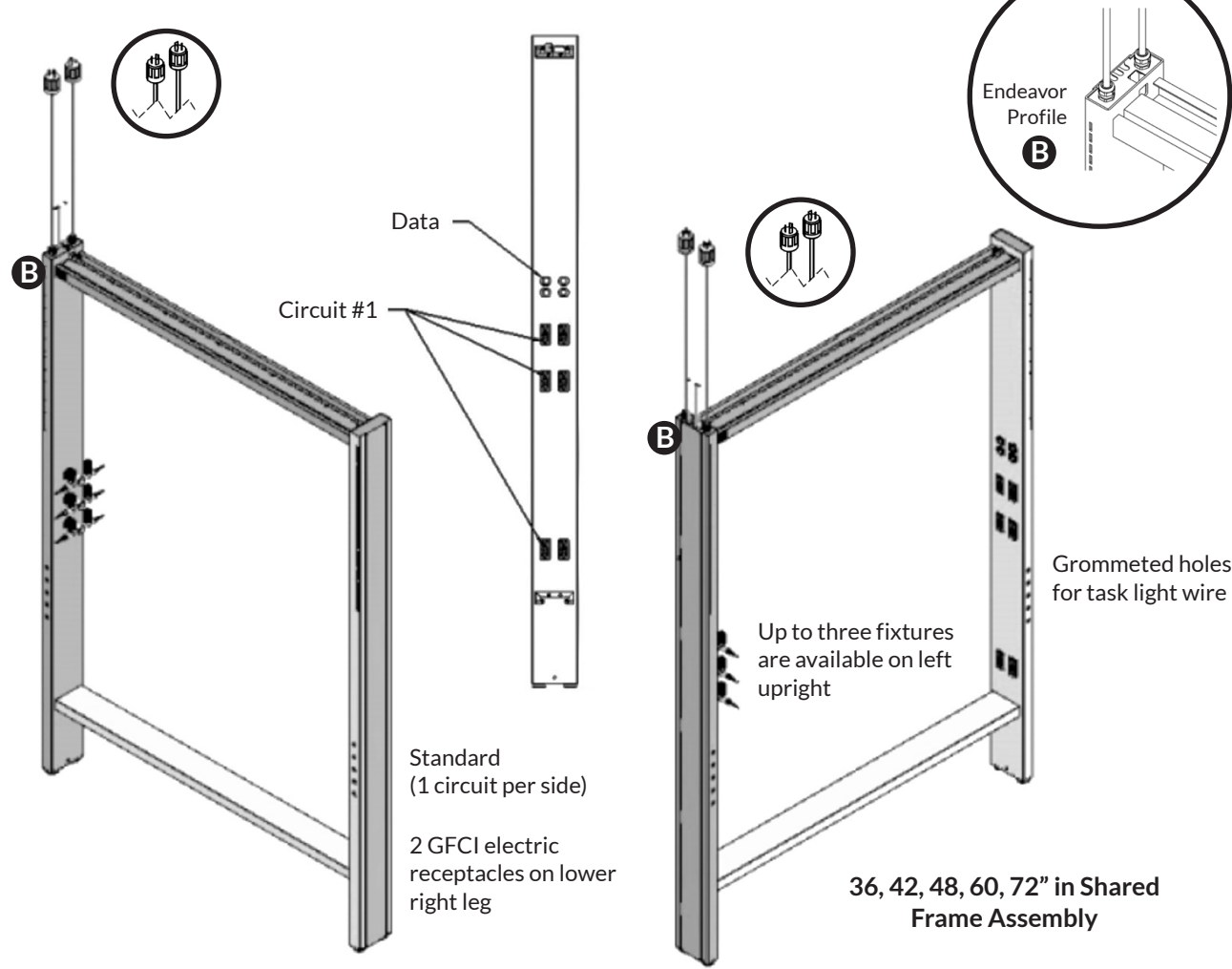
Standard: 2 Circuit - single cord and 3-prong (NEMA L5-20R)

Optional: 4th Circuit option unavailable on pass-through

Color

All duplexes are black in color.

WIDTH	UPRIGHT ELECTRICAL	(DOUBLE) TELECOMMUNICATIONS
36"	4	2
42"	4	2
48"	4	2
60"	4	2
72"	4	2



Dimensions are nominal. Illustrations and specifications are based on the latest product information available at the time of publication.

Step 1

How to Select Which Adaptable System is Right for You

PRODUCT LINE		
FEATURE/PURPOSE	ENDEAVOR	DISTINCTION
9, 12, 15 Shelf Depth		•
12, 15, 18 Shelf Depths	•	
Exceed SEFA Category 4 > 2400lbs	•	•
Classic Round Tube Design		•
Modern Square Tube Design	•	
Integrated LED lighting	•	•
Self contained piping services	•	•
Highly Customizable	•	
Mobile Single-Sided	•	•
Pass-Through	•	
ADA Options	•	•

Step 2

Choose Frame Style

One-Side Directional - 1L	One-Side Directional - 1R	Two-Sided Directional - 2S
Fixture(s) located on left upright	Fixture(s) located on right upright	Fixture(s) located on one upright and can be rotated to desired hand orientation
One-Sided Left Handed Mobile - LM	One-Sided Right Handed Mobile - RM	Two-Sided Pass-Through - 2P (Endeavor Only)
Fixture(s) located on left upright	Fixture(s) located on right upright	Fixture(s) located on one upright and can be rotated to desired hand orientation



Step 3

Dimensions: Two-digit width, height and depth of frame

Width x Height x Depth

Step 4

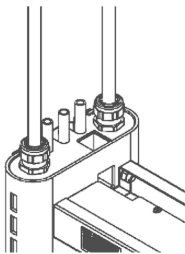
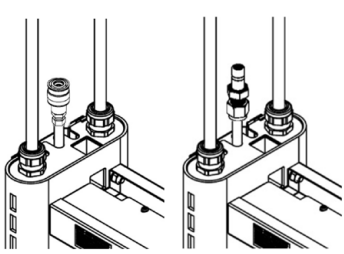
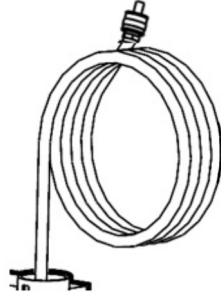
Center Upright

N - No	Y - Yes
Not a feature for widths less than 60" wide	Optional on 60" and 72" wide and standard for 96"

Step 5

Piping

Internal service hoses are required to connect fixtures through the frame to exterior services. These are factory installed and pressure tested when a fixture is selected. End termination options:

T - Top of Frame	Q - Quick Disconnect	H - Homerun
Hose end with cap (copper x1/PVC hose x2)	Hose connections (attach at top of frame)	One piece homerun white reinforced PVC piping extending 4' above frame (includes keyed quick connect 3/8" NPT M/F Pair)
		



Step 6

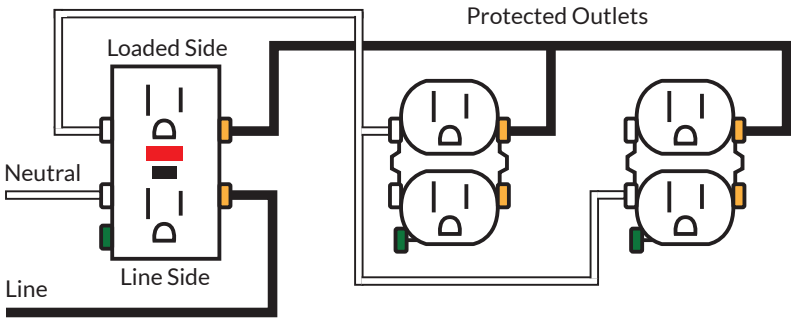
Raceway

ES – Duplex Receptacle *	GS – GFCI Receptacle *
--------------------------	------------------------

GFCI circuit protection will trip when abnormal current flow occurs (i.e. power leaking into equipment housing or moisture present in the connection).

ES: Frames come with a 20Amp GFCI circuit installed on each side. The duplex outlets in the raceway are controlled by the GFCI outlet in the leg on the corresponding side. (Series circuit)

GS: Some applications require GFCI reset outlets at the point of use. Selecting this option will replace the standard duplex outlets in the raceway with GFCI reset outlets and updates the wiring to parallel configuration. (Each outlet wired and trips separately).



*Qty 2 receptacles for widths 36-48 / Qty 3 receptacles for widths 60-96

**Pass-Through: Qty 4 receptacles within upright

Step 7

Circuits

NOTE: See Appendix A for detailed circuit diagrams.

1C – Single Circuit	2C – Double Circuit	4C – Four Circuit
Standard for 1L/1R	Standard for 2S (Shared frame)	Optional for 2S (Shared Frame only)
		*Automatically upgrades to all GFCI

Circuits are a single path for electricity (current) to flow to the load. The continuous load rating for a 120V, 20Amp circuit is:

$20\text{Amp} \times 120\text{V} \times 80\% = 1,920 \text{ watts (single circuit load rating) @ 16 Amps}$

Standard: Frames come with a single circuit installed on each side with a NEMA L5-20P plug (single power wire).

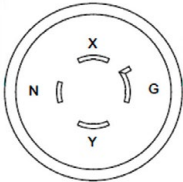
Some applications require a greater load exceeding the single circuit load rating.

Upgrade: Selecting this option will reconfigure the wiring into two circuits per side, upgrading the plug to a NEMA 14-20P (two power wire). Outlets will be on alternating circuits (i.e. circuit one controls outlets 1,3 | circuit two controls outlets 2,4)

NOTE: See Appendix A for detailed circuit diagrams.



NEMA L5-20P



NEMA L14-20P



Step 8

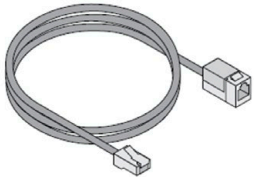
Data

	ONLY	1-WIRED	2-WIRED	3-WIRED	4-WIRED
	DB BLANK PORTS*	D1 1 PORT/ 1 BLANK	D2 2 PORTS	D3 3 PORTS/ 1 BLANK	D4 4 PORTS
1L/1R - LH/RH Single	•	•	•		
2S - Shared	•	•	•	•	•

*Qty 2 blanks for L/R Single and 4 blanks for Shared

Data receptacles are included in either the support frame posts (Endeavor) or horizontal raceway (Distinction). Two blank ports for single and four for the shared frame. Wired options are outlined in the chart.

Pre-assembled Cat6A Cable is shipped loose for field installation.

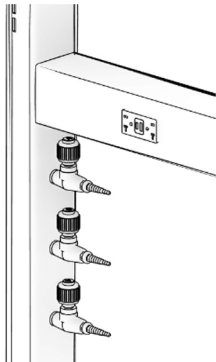


Step 9

Service Fixture

Frames will accept up to three fixtures, pre-piped for easy connection to overhead services.

F0	F1	F2	F3
None	One Service	Two Services	Three Services
	Standard in bottom position	Utilizes bottom & middle hole positions	Services assigned bottom to top

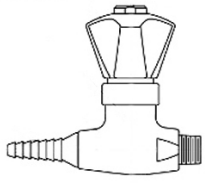
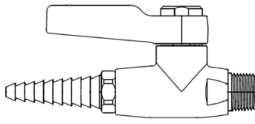
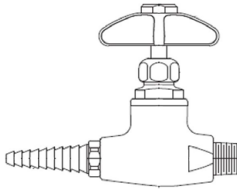
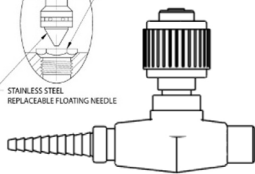
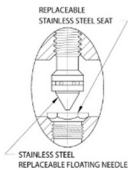


Step 10

Valve Type

Multiple handle options are available.

N - None	K - Knob (Std)	S - Star Handle	L - Lever	C - ColorTech
No Fixtures	Needle point valve cocks allowing metered control of gas pressures	Star handle needle valve and handle assembly	Ball valves provide simple on/ off control. ADA Compliant	Colored needle valve and handle assemble

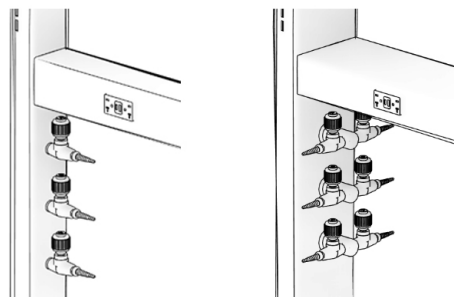


Step 11

Valve Options

Single sided frames have one valve per turret while Shared frames come with two fixtures (double sided) per turret.

N - n/a	S - Single	D - Dual
Not applicable with zero fixtures	Standard for 1L/1R Single frames	Standard for 2S (Shared frame)



Step 12

Valve Color

If valves are added to the frame, two valve finish options are available.

N - n/a	C - (Standard)	W
Not applicable with zero fixtures	Polished Chrome/Clear coat	ColorTech (multiple color options)

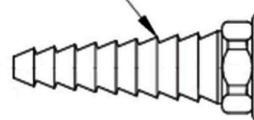
*Color selection will be in the MOD notes.

Step 13

Outlet Option

N - n/a	S - (Standard)
Not applicable with zero fixtures	90-degree Serrated Hose End

REMOVABLE TEN
SERRATION HOSE END



Step 14

Configuration Code

This code will be assigned by the quote configurator.

Step 15

Select a Color

Tier 1	Tier 2 * (Additional charges will apply)		
BK - Black	—	—	PL - Platinum
G1 - Dove Grey	BL - Blue	HG - Hunter Green	PA - Purple
G3 - Gray Slate	BS - Blue State	IN - Indigo	SY - Safety Yellow*
PW - Petal White	BD - Brown Burgandy	KK - Khaki	SA - Sand
	CH - Chameleon	—	SS - Sandstone
	DK - Dark Khaki	PM - Piedmont Green	SW - Shell White

NOTE: Paint selection not required at quote stage

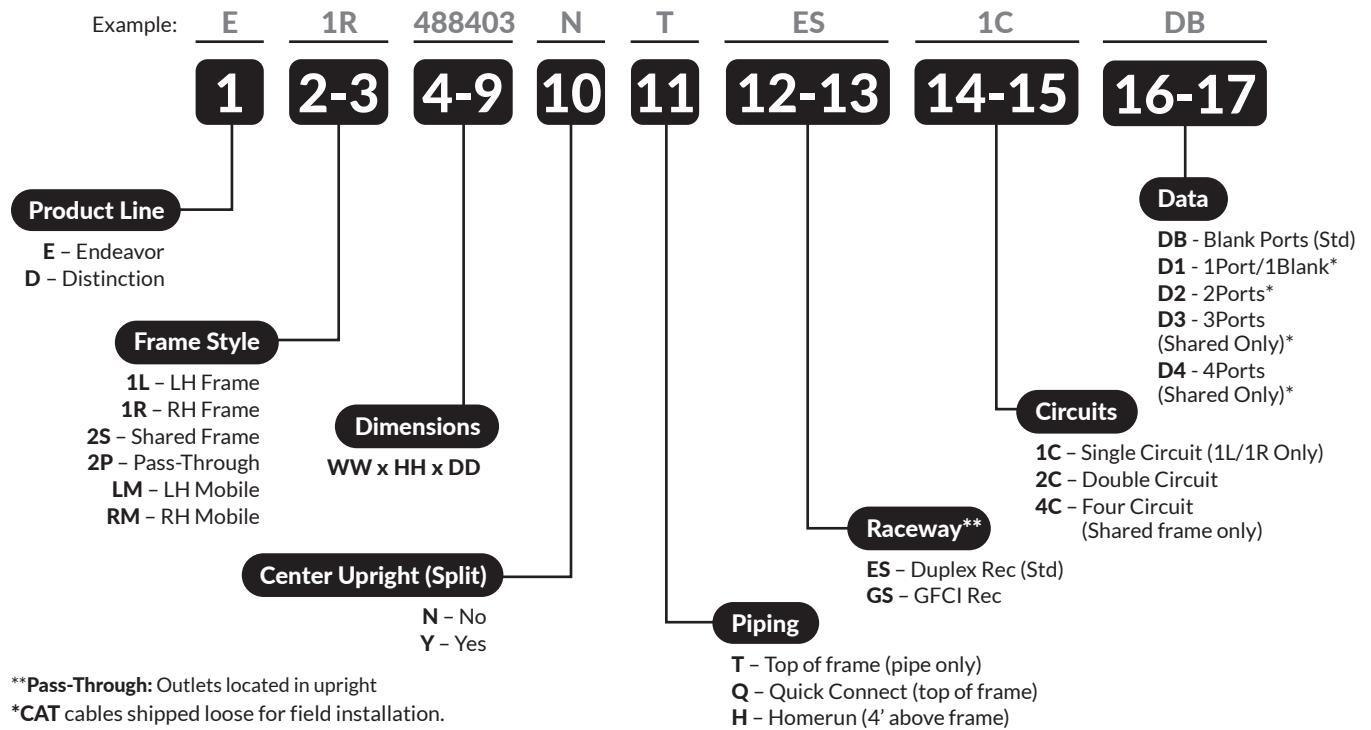
NOTE: Accent color options available on laser cut retainer only

* Safety Blue and Red also available

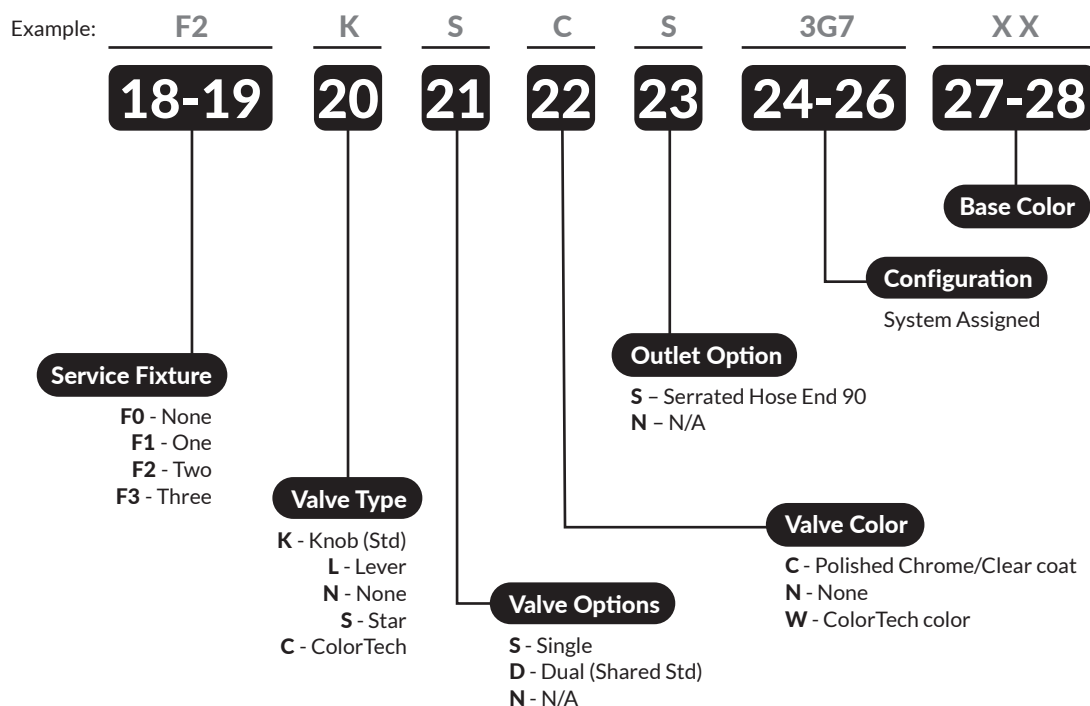


How to order your Adaptable Systems in a few simple steps

Base



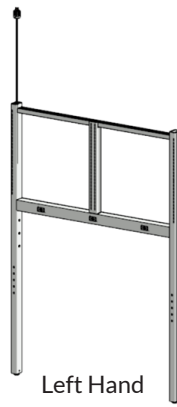
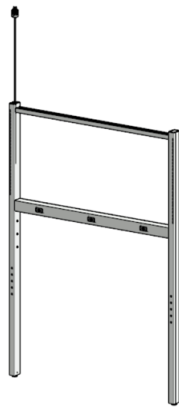
Options



Ordering Guide

Single

SERIES	FRAME STYLE	WIDTH	HEIGHT	DEPTH	CENTER UPRIGHT	PIPING	RACEWAY	CIRCUITS	DATA	FIXTURES
Endeavor	1L - Single Left Hand	36 42 48 60 72 96	84	03	No	I - Top of frame (pipe only) Q - Quick Connect (top of frame) H - Homerun (4' above frame)	ES - Duplex Rec (Std) GS - GFCI Rec	1C -Single Circuit 2C -Double Circuit	DB - Blank Data Ports D1 -1 Port D2 - 2 Ports	F0 -None F1 - One F2 - Two F3 -Three
	1R - Single Right Hand									
	LM - Left Hand Mobile				Yes					
	RM - Right Hand Mobile									



Left Hand



Right Hand

Shared

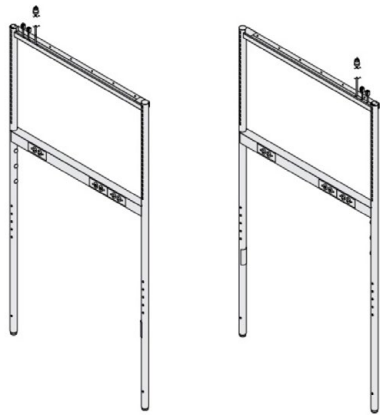
SERIES	FRAME STYLE	WIDTH	HEIGHT	DEPTH	CENTER UPRIGHT	PIPING	RACEWAY	CIRCUITS	DATA	FIXTURES
Endeavor	2S Shared	36	84	06	No	I - Top of frame (pipe only) Q - Quick Connect (top of frame) H - Homerun (4' above frame)	ES - Duplex Rec (Std) GS - GFCI Rec	2C - Double Circuit 4C - Four Circuit	DB - Blank Data Ports D1 - 1 Ports D2 - 2 Ports D3 - 3 Ports D4 - 4 Ports	F0 - None F1 - One F2 - Two F3 - Three
	2P Pass-Through	42 48 60 72 96			Yes					



Ordering Guide

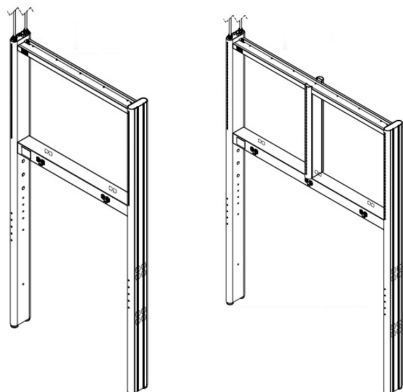
Single

SERIES	FRAME STYLE	WIDTH	HEIGHT	DEPTH	CENTER UPRIGHT	PIPING	RACEWAY	CIRCUITS	DATA	FIXTURES					
Distinction	1L - Single Left Hand	42 48 60 72 96	84	02	No	I - Top of frame (pipe only) Q - Quick Connect (top of frame) H - Homerun (4' above frame)	ES - Duplex Rec (Std) GS - GFCI Rec	1C -Single Circuit 2C -Double Circuit	DB - Blank Data Ports D1 -1 Port D2 - 2 Ports	F0 -None F1 - One F2 - Two F3 - Three					
	1R - Single Right Hand														
	LM - Left Hand Mobile				Yes										
	RM - Right Hand Mobile														



Shared

SERIES	FRAME STYLE	WIDTH	HEIGHT	DEPTH	CENTER UPRIGHT	PIPING	RACEWAY	CIRCUITS	DATA	FIXTURES
Distinction	2S Shared	42 48 60 72 96	84	06	No	I - Top of frame (pipe only) Q - Quick Connect (top of frame) H - Homerun (4' above frame)	ES - Duplex Rec (Std) GS - GFCI Rec	2C - Double Circuit 4C - Four Circuit	DB - Blank Data Ports D1 - 1 Ports D2 - 2 Ports D3 - 3 Ports D4 - 4 Ports	F0 - None F1 - One F2 - Two F3 - Three
					Yes					



Bench Frames

Height adjustments are 31", 33", 35" and 37" (Excludes 1" top)

*For top information, reference Page 27

Two-Post Bench Frames



- Depth: 30"
- Adjustable height bench frame for application with rear frame assemblies

WIDTH	ENDEAVOR	DISTINCTION	ENDEAVOR - MOBILE	DISTINCTION - MOBILE
36"	EBF23630	—	EBM23630	—
42"	EBF24230	DBF24230	EBM24230	DBM24230
48"	EBF24830	DBF24830	EBM24830	DBM24830
60"	EBF26030	DBF26030	EBM26030	DBM26030
72"	EBF27230	DBF27230	EBM27230	DBM27230
96"	EBF29630	DBF29630	EBM29630	DBM29630

Two-Post Bench Frames



- Depth: 24"
- Adjustable height bench frame for application with rear frame assemblies
- ADA compliant

WIDTH	ENDEAVOR	DISTINCTION
36"	EBF23624	—
42"	EBF24224	DBF24224
48"	EBF24824	DBF24824
60"	EBF26024	DBF26024
72"	EBF27224	DBF27224
96"	EBF29624	DBF29624

Four-Post Bench Frames



- Depth: 30"
- Adjustable height table frame stand-alone applications
- Bench frames are field assembled to leg kit

WIDTH	ENDEAVOR	DISTINCTION
36"	EBF43630	—
42"	EBF44230	DBF44230
48"	EBF44830	DBF44830
60"	EBF46030	DBF46030
72"	EBF47230	DBF47230
96"	EBF49630	DBF49630

Four-Post Bench Frames



- Depth: 24"
- Adjustable height table frame stand-alone applications
- Bench frames are field assembled to leg kit
- ADA compliant

WIDTH	ENDEAVOR	DISTINCTION
36"	EBF43624	—
42"	EBF44224	DBF44224
48"	EBF44824	DBF44824
60"	EBF46024	DBF46024
72"	EBF47224	DBF47224
96"	EBF49624	DBF49624

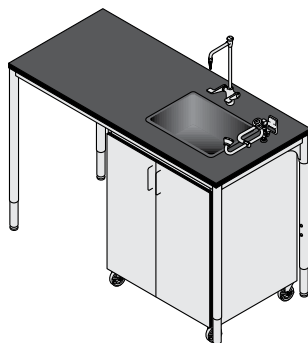
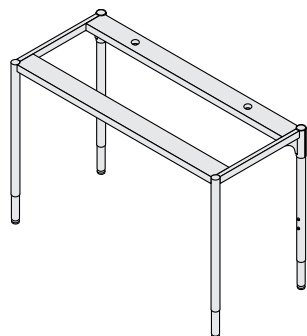


Bench Frames

Height adjustments are 31", 33", 35" and 37" (Excludes 1" top)

*Adjustable height table frame for supporting a Fume Hood

Four-Post Sink Bench Frames



- Depth: 30"
- Adjustable height table frame for application with sink in work surface
- Two fixture cutouts in back horizontal rail
- Bench frames are field assembled to leg kit

WIDTH	ENDEAVOR	DISTINCTION
42"	EBF44230S	DBF44230S
48"	EBF44830S	DBF44830S
60"	EBF46030S	DBF46030S
72"	EBF47230S	DBF47230S
96"	EBF49630S	DBF49630S

Four-Post Fume Hood Bench Frames*



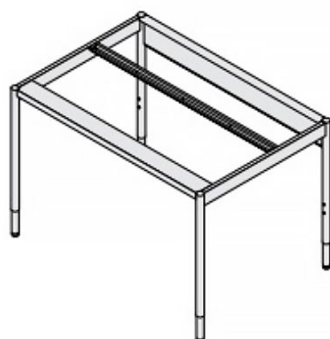
- Depth: 29"
- Depth for hoods: 32"

WIDTH	ENDEAVOR	DISTINCTION
36"	EBF43629FH	DBF43629FH
48"	EBF44829FH	DBF44829FH
60"	EBF46029FH	DBF46029FH
72"	EBF47229FH	DBF47229FH



- Depth: 35"
- Depth for hoods: 36" & 37"

WIDTH	ENDEAVOR	DISTINCTION
36"	EBF43635FH	DBF43635FH
48"	EBF44835FH	DBF44835FH
60"	EBF46035FH	DBF46035FH
72"	EBF47235FH	DBF47235FH



- Depth: 41"
- Depth for hoods: 43"

WIDTH	ENDEAVOR	DISTINCTION
48"	EBF44841FH	DBF44841FH
60"	EBF46041FH	DBF46041FH
72"	EBF47241FH	DBF47241FH

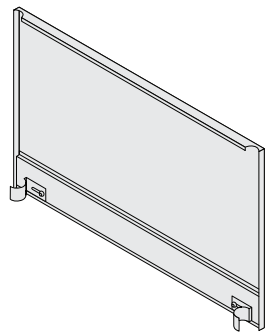
*NOTE: For top options, see Page 49 in the Hamilton Laboratory Solutions Fume Hood Catalog



Modesty Panels

- Powdercoated painted steel.
- Hardware included

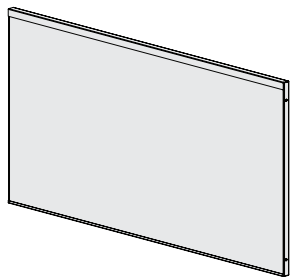
Modesty Panel for Single (L/R) Frame Assembly



- Height: 19" (483mm)
- Mounts to tubular rear frame assembly below counter top

WIDTH	ENDEAVOR	DISTINCTION
36"	EMP3619	DMP3619
48"	EMP4219	DMP4219
48"	EMP4819	DMP4819
60"	EMP6019	DMP6019
72"	EMP7219	DMP7219
96"	EMP9619	DMP9619

Modesty Panel for Shared Frame Assembly



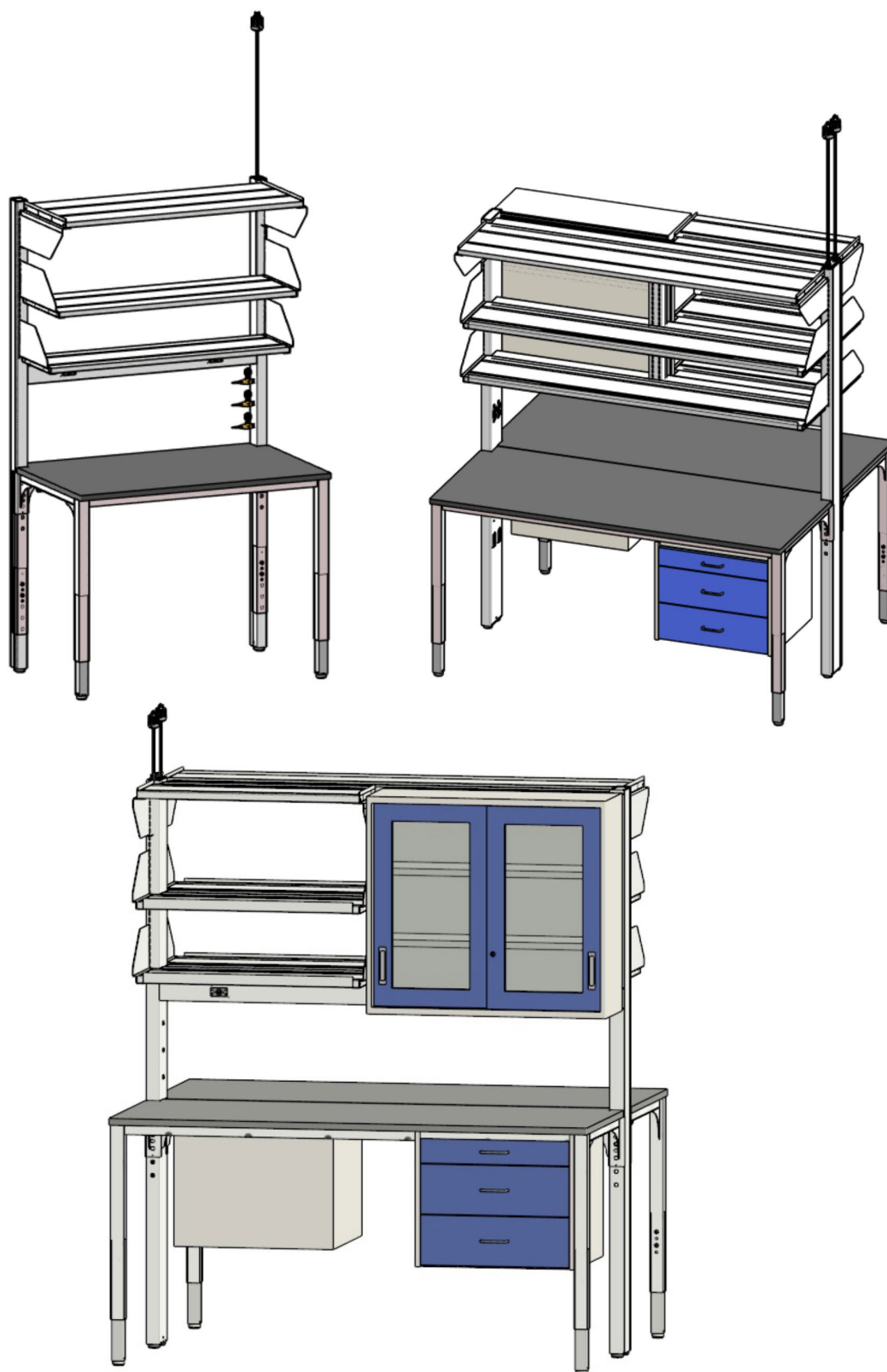
- Height: 19" (483mm)
- Mounts to shared rear frame assembly below counter top (side mounts to vertical frame)

WIDTH	ENDEAVOR	DISTINCTION
36"	EMP3619S	DMP3619S
42"	EMP4219S	DMP4219S
48"	EMP4819S	DMP4819S
60"	EMP6019S	DMP6019S
72"	EMP7219S	DMP7219S
96"	EMP9619S	DMP9619S

Dimensions are nominal. Illustrations and specifications are based on the latest product information available at the time of publication.



Storage Options



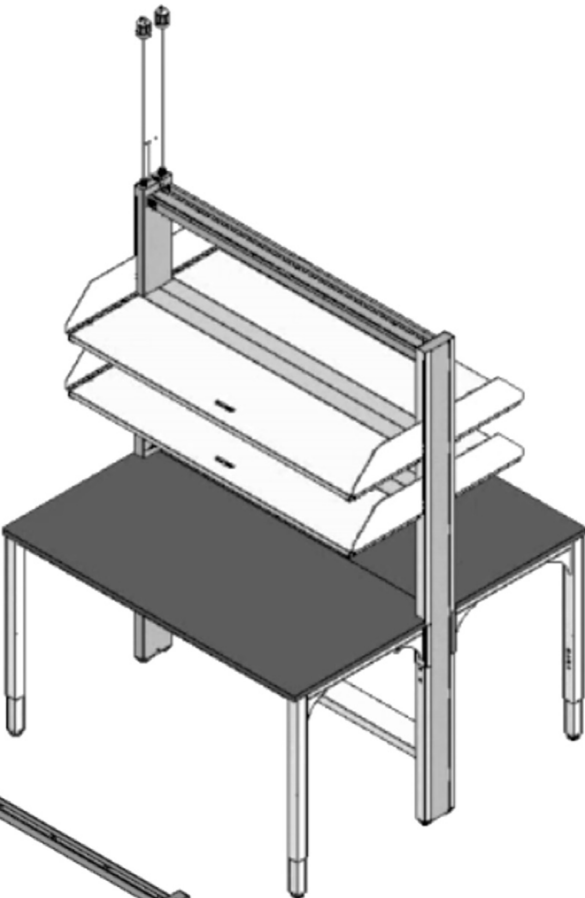
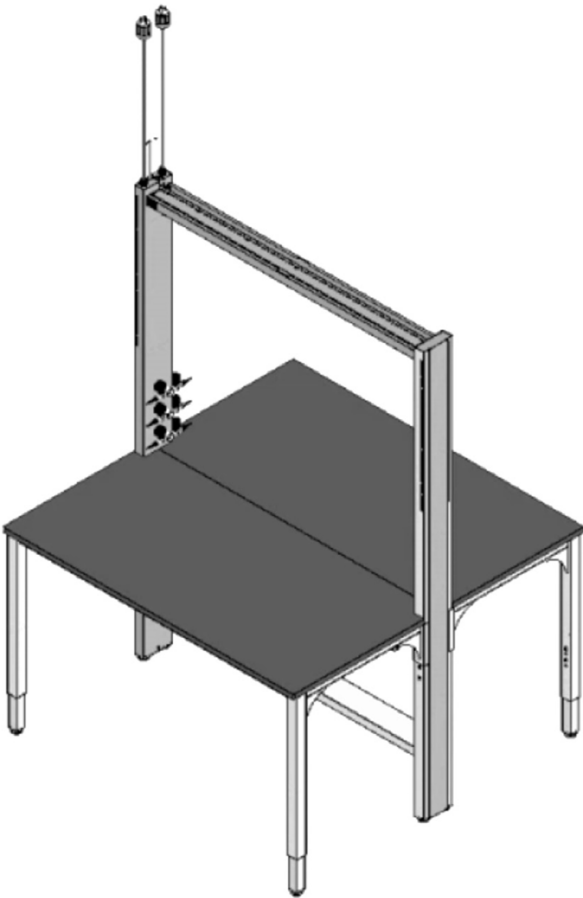
Dimensions are nominal. Illustrations and specifications are based on the latest product information available at the time of publication.



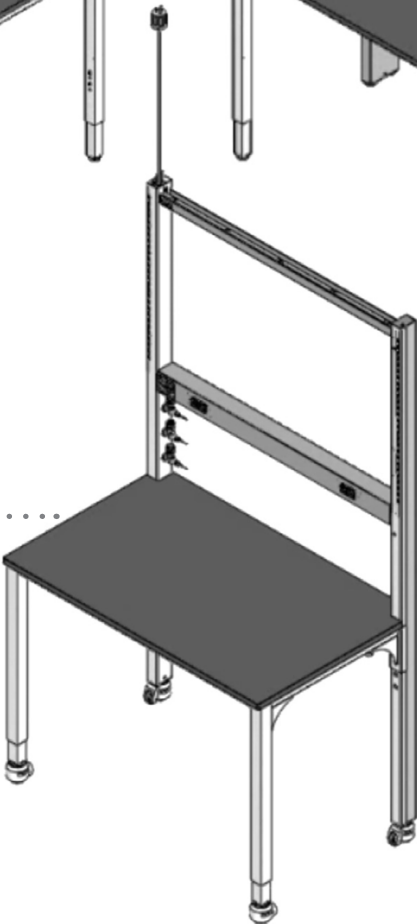
Bench Components

Wall Mount Units and Suspended Units

Pass Thru-ISO View/Fixture Pass Thru-ISO View/Fixture
View-Table/No Shelves View-Table/Shelves



Mobile-ISO View/Fixture
View-Table/No Shelves



Dimensions are nominal. Illustrations and specifications are based on the latest product information available at the time of publication.



Bench Components

Wall Mount Units and Suspended Units

Common features:

- Field installable with Single or Shared Frame Distinction
- Maximum (2) wall or suspended cabinets per frame – load not to exceed 150 lbs. per cabinet

Wall Mount Units Suspended Units

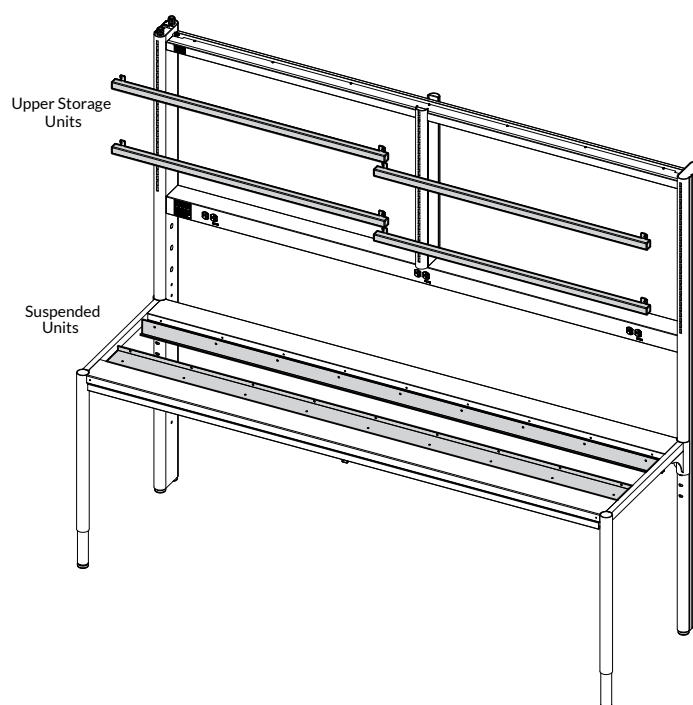
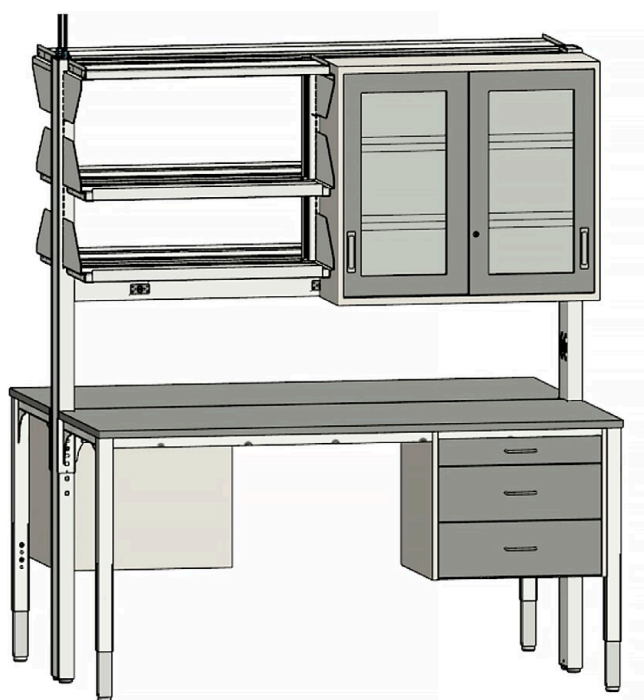
- Wall rails mount into shelf slots in vertical uprights
- Wall mount units require (1) product per wall cabinet

WIDTH	ENDEAVOR	DISTINCTION
30"	EFR30S	DFR30S
36"	EFR36	—
36"	EFR36S	DFR36S
42"	EFR42	DFR42
48"	EFR48	DFR48
48"	EFR48S	DFR48S
60"	EFR60	DFR60
72"	EFR72	DFR72

- Suspended rails are bolted to table frame (fasteners included)
- Suspended units require (1) product per (2) suspended units

WIDTH	ENDEAVOR	DISTINCTION
36"	ESR36	—
42"	ESR42	DSR42
48"	ESR48	DSR48
60"	ESR60	DSR60
72"	ESR72	DSR72
96"	ESR96	DSR96

Example Suspended and Wall Mount Setup



- For casework options, please reference the Hamilton Laboratory Solutions Casework Catalog.

Dimensions are nominal. Illustrations and specifications are based on the latest product information available at the time of publication.

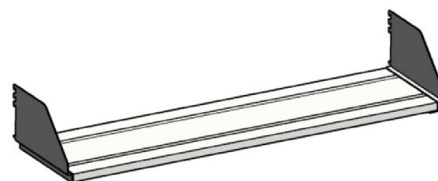


Shelf Packages

Flat Shelf Packages

Includes: Brackets (Left & Right, shelf)

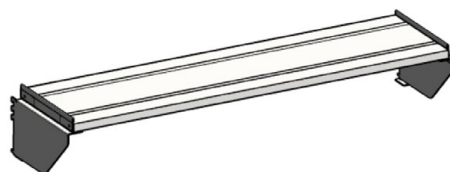
WIDTH	12" DEEP		15" DEEP		18" DEEP
	ENDEAVOR	DISTINCTION	ENDEAVOR	DISTINCTION	ENDEAVOR
30"	ESH3012S	DSH3012S	ESH3015S	DSH3015S	ESH3018S
36"	ESH3612	DSH3612	ESH3615	DSH3615	ESH3618
36"	ESH3612S	DSH3612S	ESH3615S	DSH3615S	ESH3618S
42"	ESH4212	DSH4212	ESH4215	DSH4215	ESH4218
48"	ESH4812	DSH4812	ESH4815	DSH4815	ESH4818
48"	ESH4812S	DSH4812S	ESH4815S	DSH4815S	ESH4818S
60"	ESH6012	DSH6012	ESH6015	DSH6015	ESH6018
72"	ESH7212	DSH7212	ESH7215	DSH7215	ESH7218



Top (inverted) Shelf Packages

Includes: Inverted brackets (Left & Right, shelf)

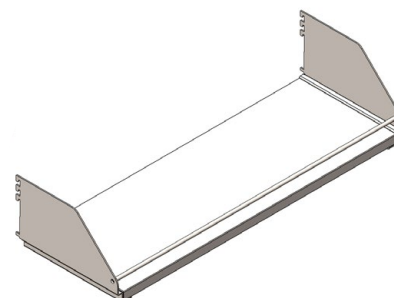
WIDTH	12" DEEP		15" DEEP		18" DEEP
	ENDEAVOR	DISTINCTION	ENDEAVOR	DISTINCTION	ENDEAVOR
30"	ESH3012TIS	DSH3012TIS	ESH3015TIS	DSH3015TIS	ESH3018TIS
36"	ESH3612TI	DSH3612TI	ESH3615TI	DSH3615TI	ESH3618TI
36"	ESH3612TIS	DSH3612TIS	ESH3615TIS	DSH3615TIS	ESH3618TIS
42"	ESH4212TI	DSH4212TI	ESH4215TI	DSH4215TI	ESH4218TI
48"	ESH4812TI	DSH4812TI	ESH4815TI	DSH4815TI	ESH4818TI
48"	ESH4812TIS	DSH4812TIS	ESH4815TIS	DSH4815TIS	ESH4818TIS
60"	ESH6012TI	DSH6012TI	ESH6015TI	DSH6015TI	ESH6018TI
72"	ESH7212TI	DSH7212TI	ESH7215TI	DSH7215TI	ESH7218TI



Shelf pkg w/Stainless Steel Retaining Rod

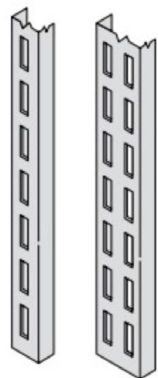
Includes: Pre-drilled brackets (Left & Right, shelf, and stainless rod)

WIDTH	12" DEEP		15" DEEP		18" DEEP
	ENDEAVOR	DISTINCTION	ENDEAVOR	DISTINCTION	ENDEAVOR
30"	ESH3012RRS	DSH3012RRS	ESH3015RRS	DSH3015RRS	ESH3018RRS
36"	ESH3612RR	DSH3612RR	ESH3615RR	DSH3615RR	ESH3618RR
36"	ESH3612RRS	DSH3612RRS	ESH3615RRS	DSH3615RRS	ESH3618RRS
42"	ESH4212RR	DSH4212RR	ESH4215RR	DSH4215RR	ESH4218RR
48"	ESH4812RR	DSH4812RR	ESH4815RR	DSH4815RR	ESH4818RR
48"	ESH4812RRS	DSH4812RRS	ESH4815RRS	DSH4815RRS	ESH4818RRS
60"	ESH6012RR	DSH6012RR	ESH6015RR	DSH6015RR	ESH6018RR
72"	ESH7212RR	DSH7212RR	ESH7215RR	DSH7215RR	ESH7218RR

**NOTE:** No center support

Shelf Packages

Wall Standard



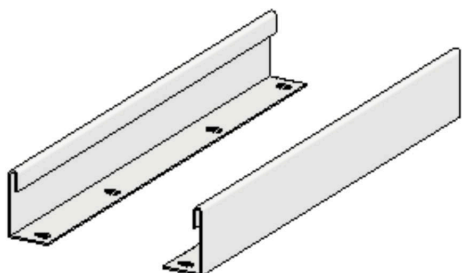
Endeavor

HEIGHT	SINGLE SLOTTED	DOUBLE SLOTTED
	ENDEAVOR	ENDEAVOR
36"	MWS0136S	MWS0136D

Mounts directly to interior wall when wall-mounted shelves are required.

- Wall reinforcement is required
- Powdercoated steel
- Two wall standards are required for each shelf assembly
- Hardware included for bracket

Top Shelf (Side Retainers)

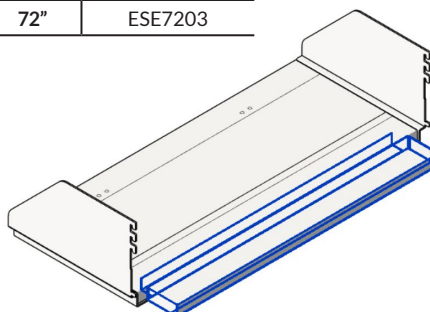
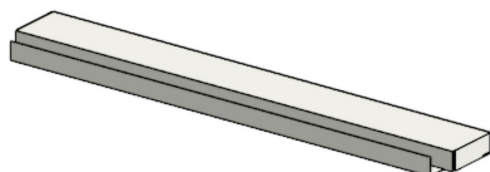


DEPTH (29.125")	ENDEAVOR OR DISTINCTION
12	ESL1202PR
15	ESL1502PR
18	ESL1802PR

Shelf Extenders (Endeavor Only)

- Add to back of shelves to fill the space between uprights and rear wall
- Extended table frame uprights
- Screw to underside of existing shelf
- Does not increase the shelf load rate
- Adds 3-1/4" (83 mm) to depth of shelf

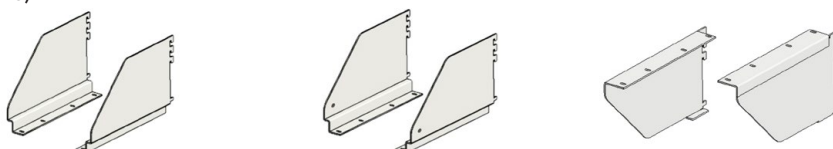
WIDTH	ENDEAVOR
30"	ESE3003S
36"	ESE3603
36"	ESE3603S
42"	ESE4203
48"	ESE4803
48"	ESE4803S
60"	ESE6003
72"	ESE7203



Upper Storage — Shelf Brackets & Lips

Shelf Brackets (Pair – LH/RH)

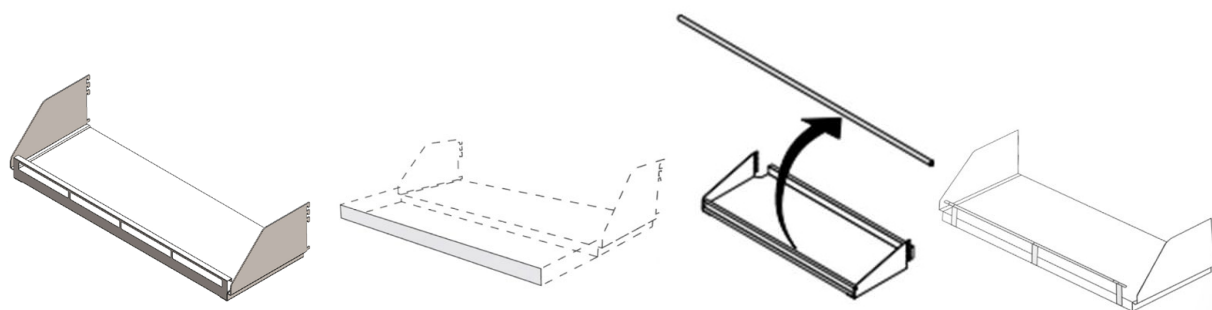
(Shelves provided by others)



DEPTH	NO HOLES		HOLES (For Retaining Rod)		TOP INVERTED	
	ENDEAVOR	DISTINCTION	ENDEAVOR	DISTINCTION	ENDEAVOR	DISTINCTION
12"	EBK12	DBK1201	EBK12H	DBK1201H	EBK12TI	—
15"	EBK15	DBK1501	EBK15H	DBK1501H	EBK15TI	DBK1501T
18"	EBK18	—	EBK18H	—	EBK18TI	—

Shelf Lips/Retainers

NOTE: Install hardware included



WIDTH	LASER CUTOUT		FRONT OR REAR RETAINER		SS ROD		SS ROD W/P CLIPS
	ENDEAVOR	DISTINCTION	ENDEAVOR	DISTINCTION	ENDEAVOR	DISTINCTION	ENDEAVOR OR DISTINCTION OR MAX
30"	ESL3003	DSL3003	ESL30FRS	DSL30FRS	ERR30SS	DRR30SSS	ESL3003RC
36"	ESL3603	DSL3603	ESL36FR	—	ERR36SS	—	ESL3603RC
36"	—	—	ESL36FRS	DSL36FRS	ERR36SSS	DRR36SSS	—
42"	ESL4203	DSL4203	ESL42FR	DSL42FR	ERR42SS	DRR42SS	ESL4203RC
48"	ESL4803	DSL4803	ESL48FR	DSL48FR	ERR48SS	DRR48SS	ESL4803RC
48"	—	—	ESL48FRS	DSL48FRS	ERR48SSS	DRR48SSS	—
60"	ESL6003	DSL6003	ESL60FR	DSL60FR	ERR60SS	DRR60SS	ESL6003RC
72"	ESL7203	DSL7203	ESL72FR	DSL72FR	ERR72SS	DRR72SS	ESL7203RC

***NOTE:** Rods require brackets with holes.

****Mid width optional aftermarket turret not included.**

NOTE: Center turret support not offered

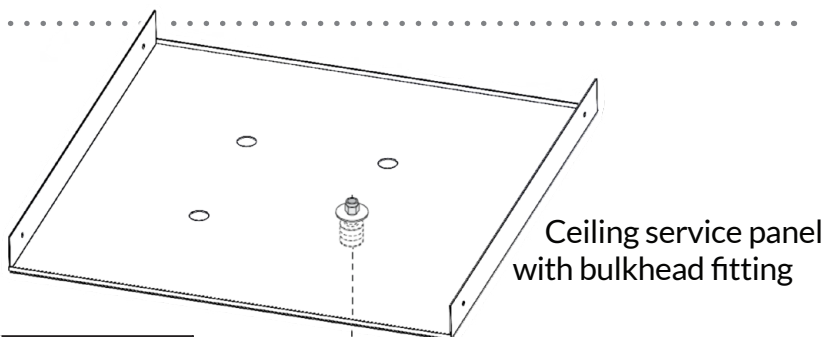
Dimensions are nominal. Illustrations and specifications are based on the latest product information available at the time of publication.



Service Fixtures

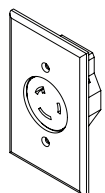
Ceiling Service Panels

- Use when services from ceiling area are desired
- 24' x 24' panel replaces standard size ceiling panel
- Color per order
- Order service fixtures separately
- Integrated 2" mounting lip on opposite sides with 3/8" holes.



	UP TO 1 TABLE	UP TO 2 TABLES	UP TO 4 TABLES
Both			
	CSP0124R3S3	CSP0224R3S6R3	
Single Frame			
		CSP0224R1S6R2	CSP0424R2S12R4
Shared Frame			
		CSP0224R1S6R4	CSP0424R2S12R8

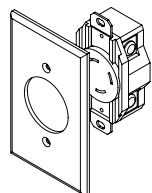
NOTE: Part Number to each row with the item



- Three prong outlet
- Twist lock 125V outlet assembly
- To be used with tubular rear frame assemblies
- Single circuit

PRODUCT NO.

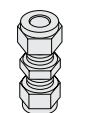
CSP3PL520



- Four prong outlet
- Twist lock NEMA L14-20 outlet assembly
- To be used with shared rear frame assemblies
- Dual circuit

PRODUCT NO.

CSP4PL1420



Union

Male Quick-Connect

Coiled or straight service line

Male Quick-Connect

Female Quick-Connect

Reducer Fitting

Shared rear frame

Tubular rear frame

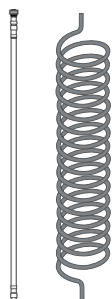
Connected to top of tube

Dimensions are nominal. Illustrations and specifications are based on the latest product information available at the time of publication.



Service Fixtures

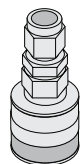
Service Line Assembly



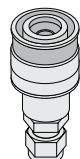
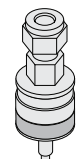
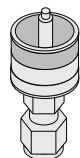
- Milky white 3/8" O.D. nylon tubing
- For use with tubular and shared rear frames
- Brass or stainless steel fitting can be connected to this tubing
- For use with single and shared frames

PRODUCT NO.	LENGTH
SLA84COIL	84" (working length)
SLA60POLY	60"

Quick Disconnect Assemblies



- 3/8" fitting
- Includes nipple and coupler – each have a color-keyed band
- Nickel plated brass

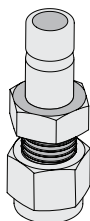


For Tubular Rear Frame and Shared Rear Frame

BAND COLOR	CEILING PANEL	TUBE ENDS
Black – He	PQDHe	PQDHeTE
Orange – Air	PQDAIR	PQDAIRTE
Yellow – Vac	PQDVAC	PQDVACTE
Blue – Gas	PQDGAS	PQDGASTE
Brown – N ²	PQDN2	PQDN2TE
White – Burning Gas UL Listed	PQDBGS	PQDBGSTE

NOTE: The blue band can be used with multiple gases.
Consult manufacturer for user defined gases.

Reducer Fitting – 3/8" to 1/4"



- Connecting quick disconnect to service line

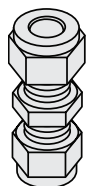
PRODUCT NO.	MATERIAL
PRD3814	Nickel Plated Brass
PRD3814SS	316 Stainless Steel

Dimensions are nominal. Illustrations and specifications are based on the latest product information available at the time of publication.



Service Fixtures

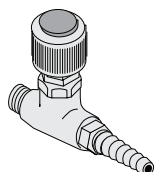
Tube-to-Tube Union Connectors



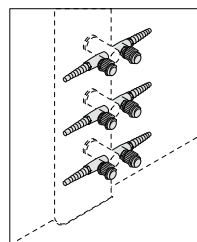
- For connecting the internal tubing add (3/8" OD) after tubing to straight or coiled lines

SIZE	BRASS	STAINLESS STEEL
(3/8" to 1/4")	PTU3814	PTU3814SS
(3/8" to 3/8")	PTU3838	PTU3838SS

Service Fixture

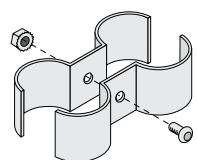


- Chrome plated brass
- Service fixture connects to fitting in tubular upright
- Includes a color-keyed index button on handle
- For natural gas applications on the shared rear frame, it is recommended that the tubing, elbow and top fixture stem location be stainless steel. Contact manufacturer for assistance.



BAND COLOR	KNOB	LEVER	STAR
White – Burning Gas	SVKBGS	SVLBGS	SVSBGAS
Brown – N ²	SVKN2	SVLN2	SVSNIT
Orange – Air	SVKAIR	SVLAIR	SVSAIR
Yellow – Vac	SVKVAC	SVLVAC	SVSVAC
Blue – Gas	SVKGAS	SVLGAS	SVSGAS
Black – He	SVKHE	SVLHE	SVSHE
Violet – Ar	SVKAR	SVLAR	SVSARG

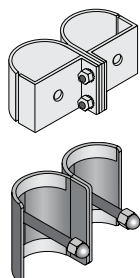
Back-To-Back Mounting Kit



- Use to secure two tubular rear frame assemblies back-to-back – two kits are required for each frame assembly
- Powdercoated steel
- The 5/16" diameter hardware for connecting top of tubular frames is user supplied
- Hardware included with instructions

ENDEAVOR	DISTINCTION
EMKSFB2B	DMKSFB2B

Side-To-Side Mounting Kit



- Use to secure two tubular rear frame assemblies side-to-side – one kit is required for each pair of frames
- Powdercoated steel
- Hardware included

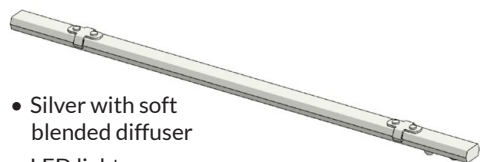
	ENDEAVOR	DISTINCTION
Front post-side to side bracket	EMKSFS2S	DMKSFS2S
Back post-side to side bracket	EMKSFB2S	DMKSFB2S

Dimensions are nominal. Illustrations and specifications are based on the latest product information available at the time of publication.



Task Lights & Electrical

Task Lights



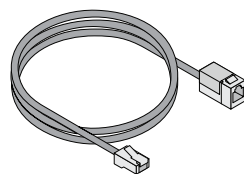
- Silver with soft blended diffuser
- LED light
- Universal magnet or screw mount
- Low-profile install inside shelf channel
- Integral dimmer on-off switch

- 48 fc at 36" from worktop in complete darkness
- Wire management kits with each fixture
- 10-year warranty
- Listed to UL153 & UL8750
- CRI 94 | 5000k color temp
- Small external power driver included

WIDTH	PRODUCT NO.
30"	TLT30
36"	TLT36
42"	TLT42
48"	TLT48
60"	TLT60
72"	TLT72

**Optional - 12" daisy chain to connect up to 4 in a series - Part # TLTDC12

Cable Assemblies for Data/Phone



- Use to connect telephone and data outlets
- CAT6 cables to attach to Hubbell faceplates in rear frames
- Cables are equipped with one male plug end (ceiling service panel) and one female plug end (rear leg outlet)
- Cables extend from the outlets in the upright, up and across the top horizontal support and four-feet above the top of the frame
- Order separately for field installation
- Standard blank data ports com pre-installed in the upright.
 - Rear frames: qty of up to 2
 - Shared frames: qty of up to 4

CAT6 Cables for data or phone

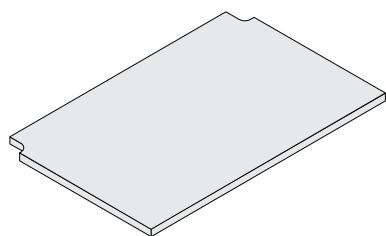
PRODUCT NO.	LENGTH
CAT648	36-48" (1219mm)
CAT672	60-72" (1827mm)
CAT696	96" (2437mm)

Dimensions are nominal. Illustrations and specifications are based on the latest product information available at the time of publication.



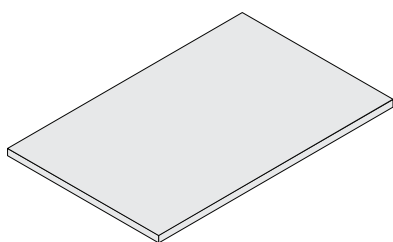
Work Surfaces

Epoxy Resin Work Surfaces



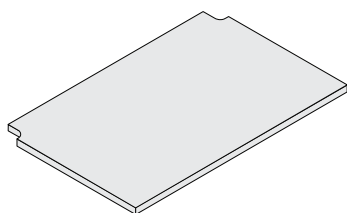
- Black Epoxy Resin with rear cutouts for bench frames with full-height rear frame assemblies
- 30" (763mm) depth

WIDTH	PRODUCT NO.	
	ENDEAVOR	DISTINCTION
36"	ETE3630RFC	—
42"	ETE4230RFC	DTE4230RFC
48"	ETE4830RFC	DTE4830RFC
60"	ETE6030RFC	DTE6030RFC
72"	ETE7230RFC	DTE7230RFC
96"	ETE9630RFC	DTE9630RFC



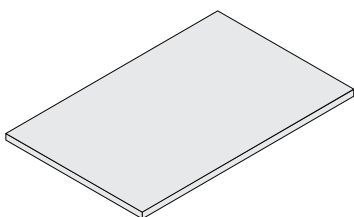
- Black Epoxy Resin for four- post bench frames
- 30" (763mm) depth

WIDTH	PRODUCT NO.	
	ENDEAVOR	DISTINCTION
36"	ETE3630	—
42"	ETE4230	DTE4230
48"	ETE4830	DTE4830
60"	ETE6030	DTE6030
72"	ETE7230	DTE7230
96"	ETE9630	DTE9630



- Black Epoxy Resin with rear cutouts for bench frames with full-height rear frame assemblies
- 24" (609mm) depth - ADA Compliant

WIDTH	PRODUCT NO.	
	ENDEAVOR	DISTINCTION
36"	ETE3624RFC	—
42"	ETE4224RFC	DTE4224RFC
48"	ETE4824RFC	DTE4824RFC
60"	ETE6024RFC	DTE6024RFC
72"	ETE7224RFC	DTE7224RFC
96"	ETE9624RFC	DTE9624RFC



- Black Epoxy Resin for four-post bench frames
- 24" (609mm) depth - ADA Compliant

WIDTH	PRODUCT NO.	
	ENDEAVOR	DISTINCTION
36"	ETE3624	—
42"	ETE4224	DTE4224
48"	ETE4824	DTE4824
60"	ETE6024	DTE6024
72"	ETE7224	DTE7224
96"	ETE9624	DTE9624

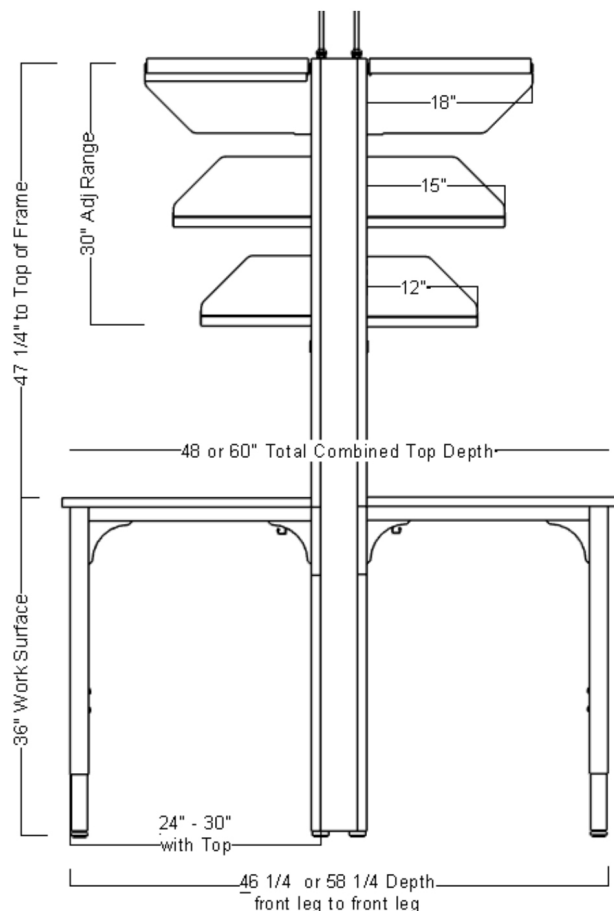
NOTE: Reference page 49 of the Hamilton Laboratory Solutions Fume Hood catalog for fume hood tops

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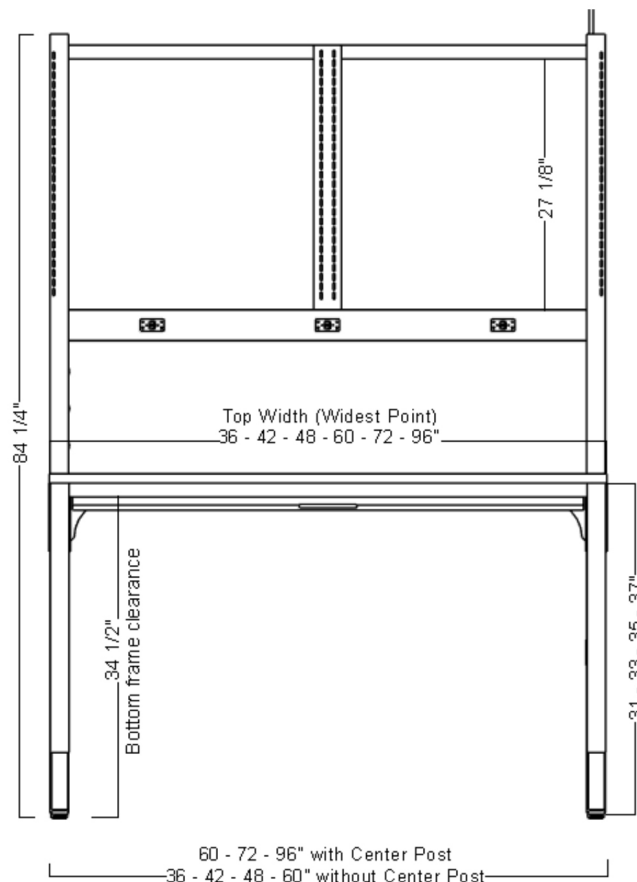


Dimensions

Endeavor & Distinction Shared Frame



Side Elevation



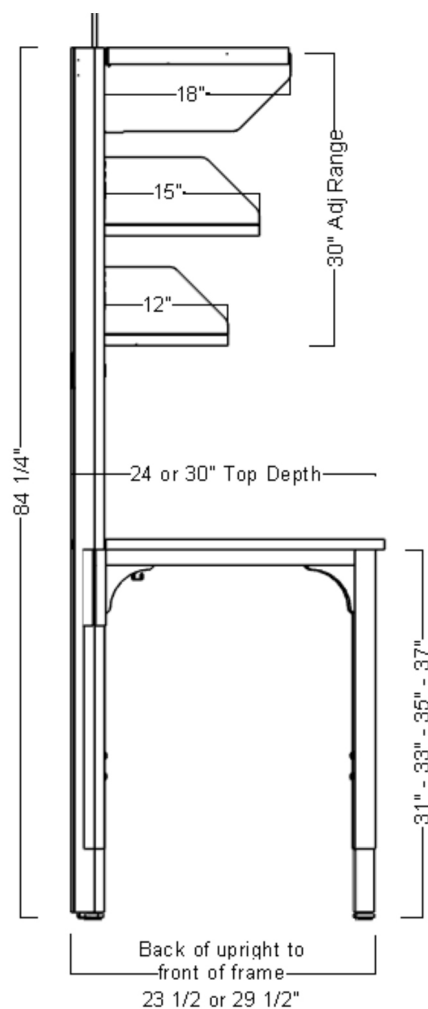
**Front Elevation
(with center post)**
(shown with no Shelves)

Dimensions are nominal. Illustrations and specifications are based on the latest product information available at the time of publication.

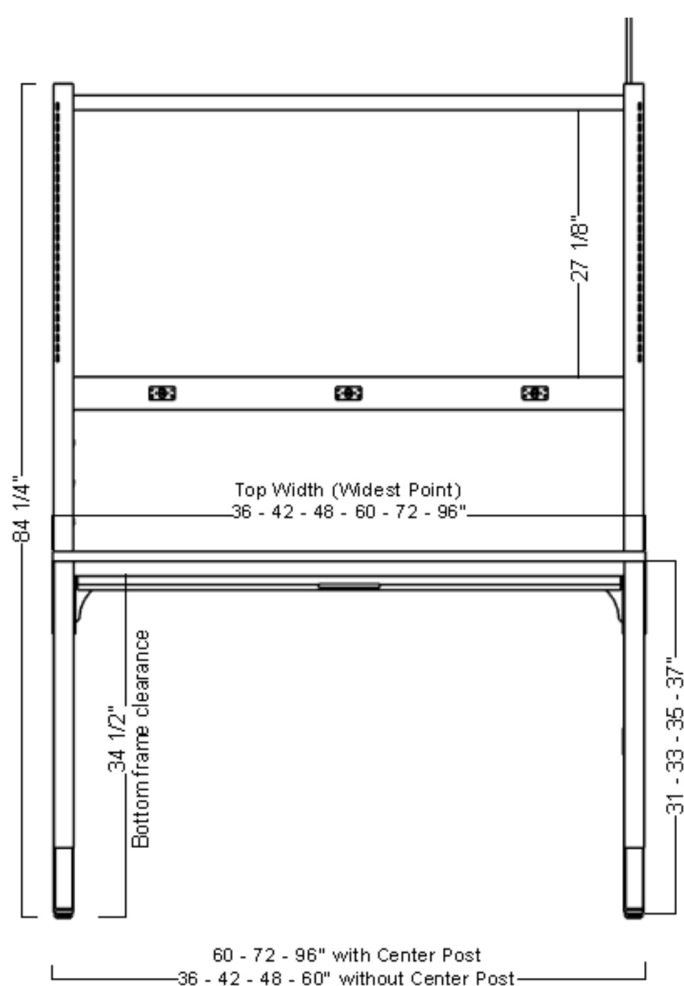


Dimensions

Endeavor & Distinction Left and Right Hand Frame



Side Elevation



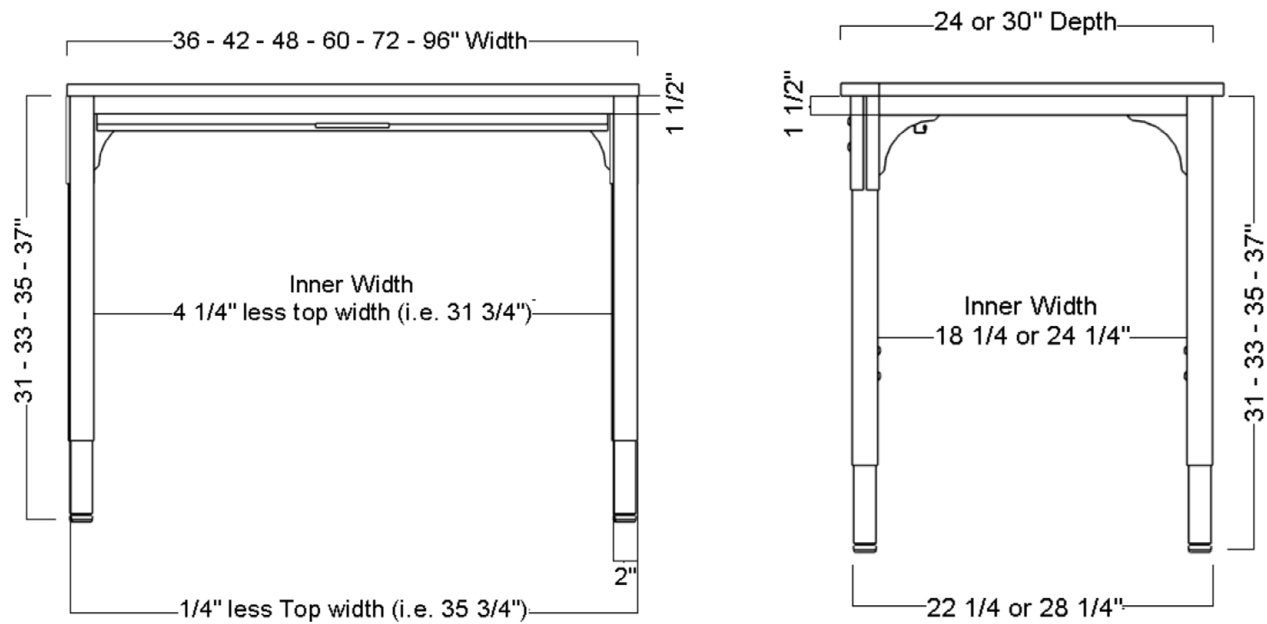
**Front Elevation
(no center post)**
(shown with no Shelves)

Dimensions are nominal. Illustrations and specifications are based on the latest product information available at the time of publication.



Dimensions

Endeavor & Distinction 4-Leg Table Frame

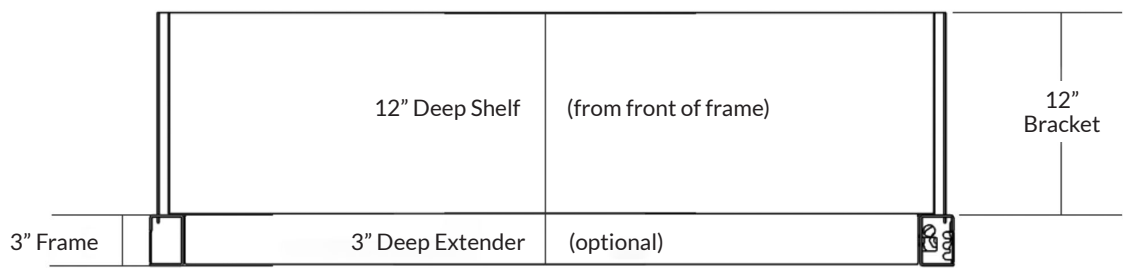


Front Elevation

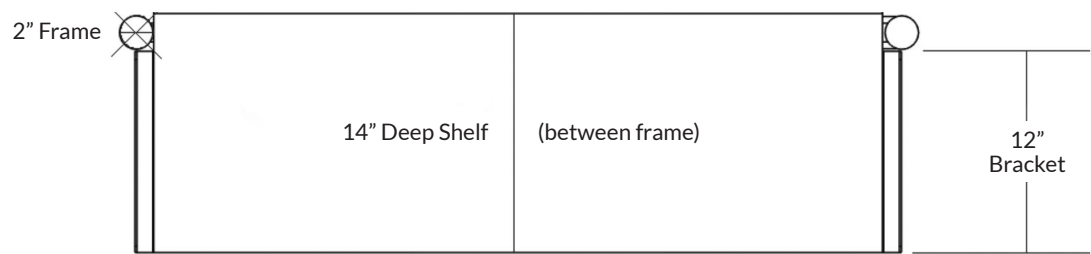
Side Elevation

(shown with no Shelves)

Endeavor Single Frame Shelf (Top View)



Distinction Single Frame Shelf (Top View)

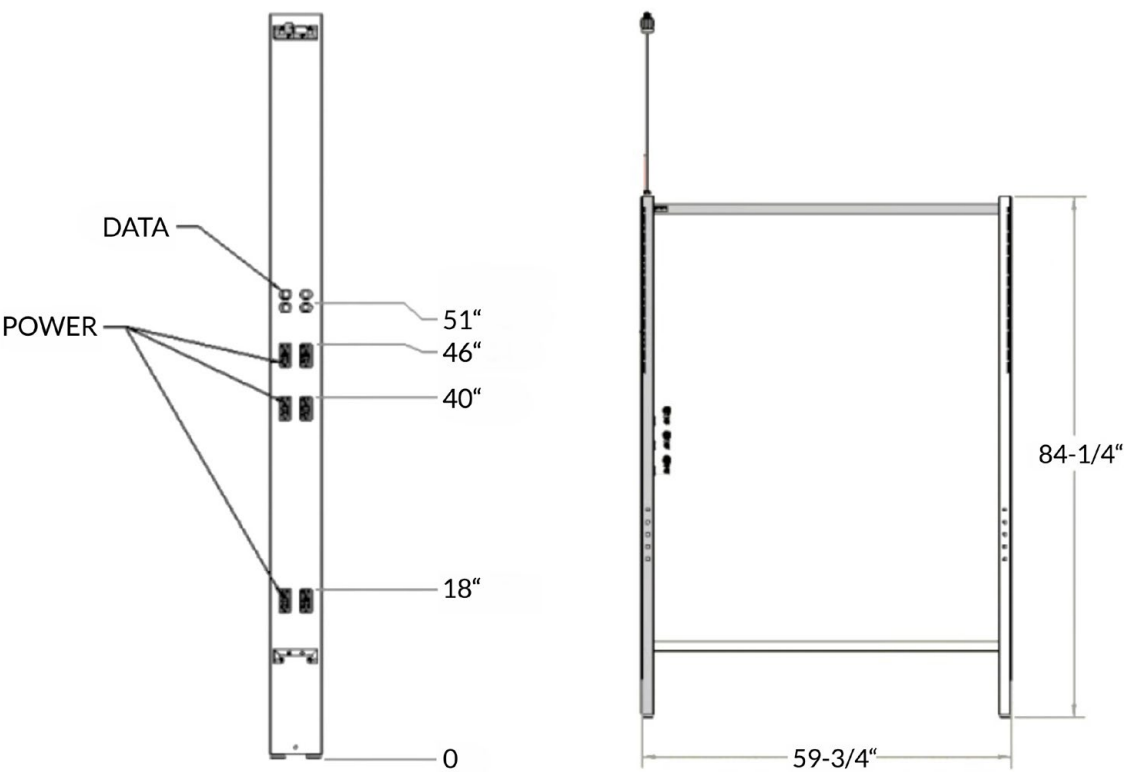


Dimensions are nominal. Illustrations and specifications are based on the latest product information available at the time of publication.

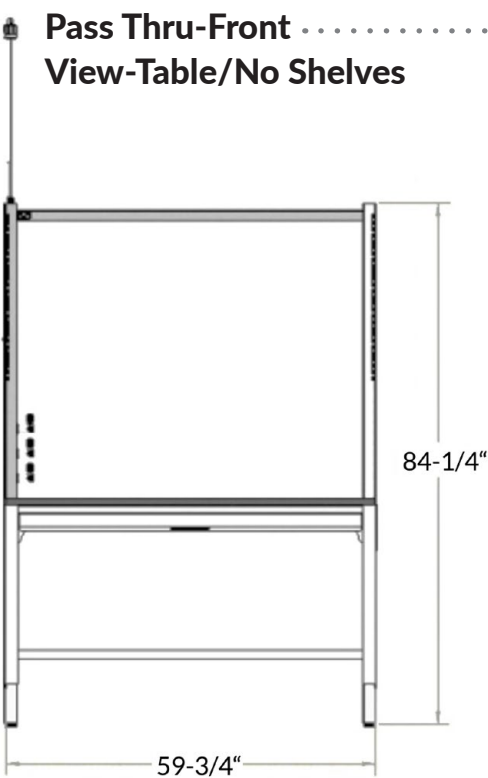


Dimensions

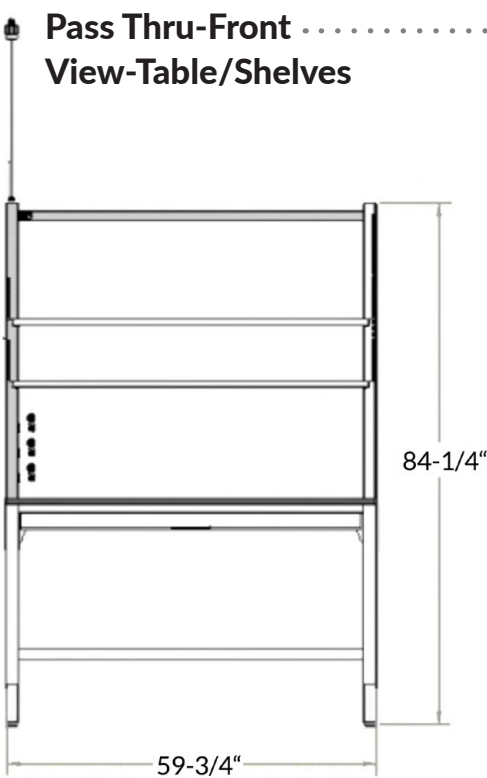
Pass Thru-Front View-No Table/No Shelves



Pass Thru-Front View-Table/No Shelves



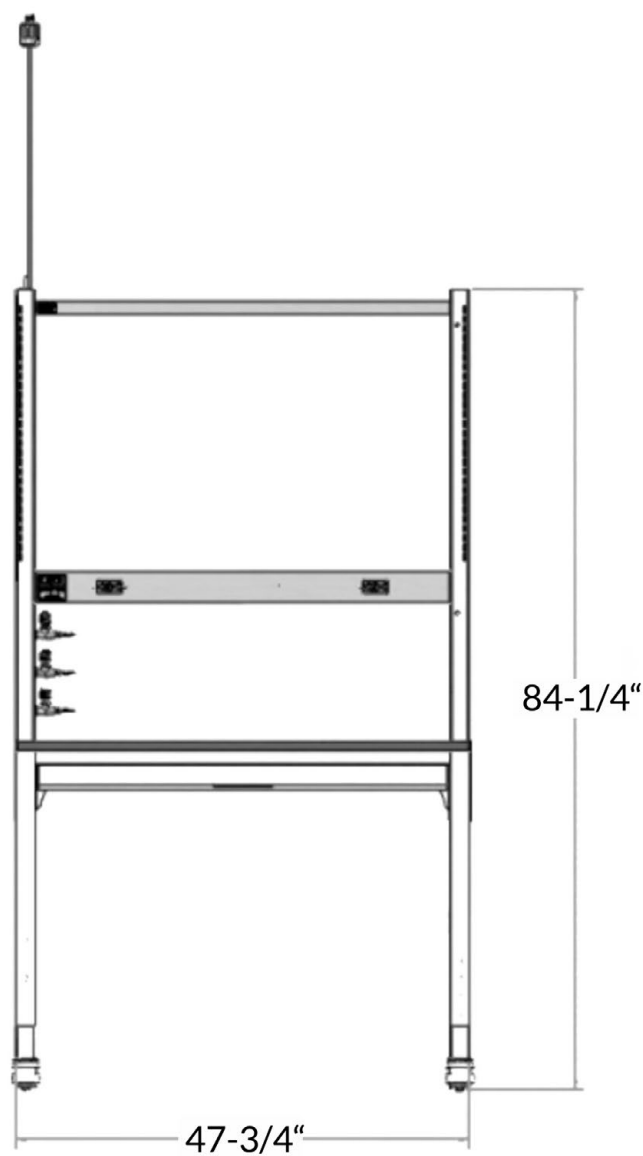
Pass Thru-Front View-Table/Shelves



Dimensions

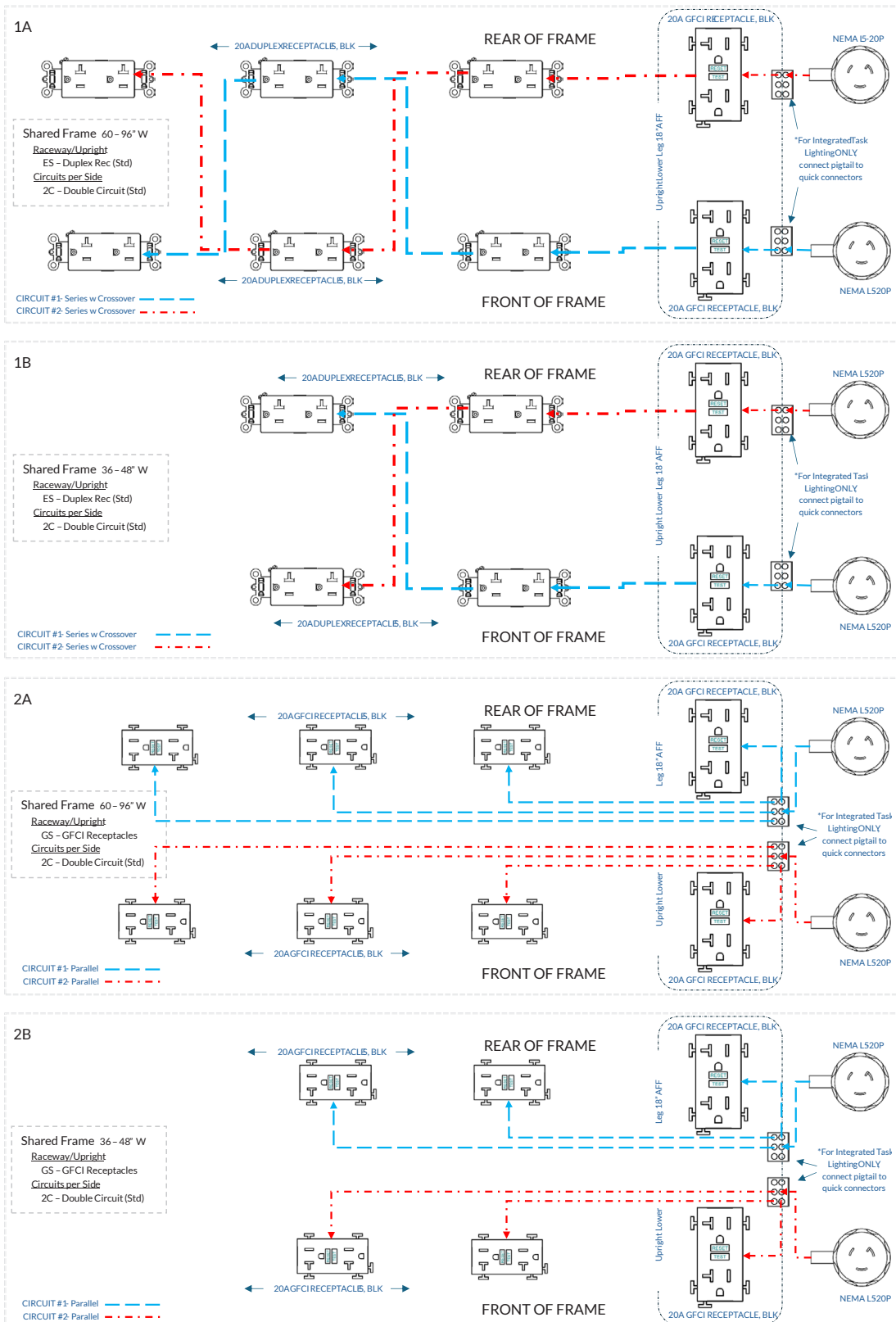
Mobile-Front
View-Table/No Shelves

Mobile-Side
View-Table/No Shelves



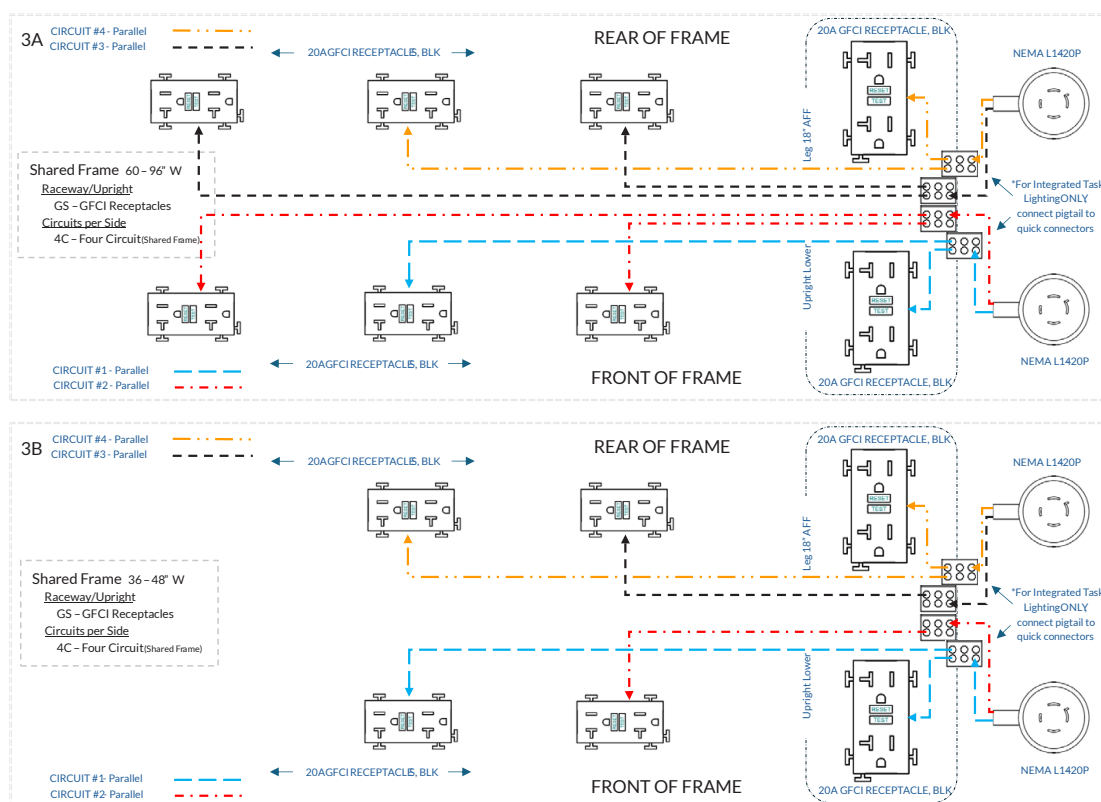
Electrical

Shared Frame — Appendix A



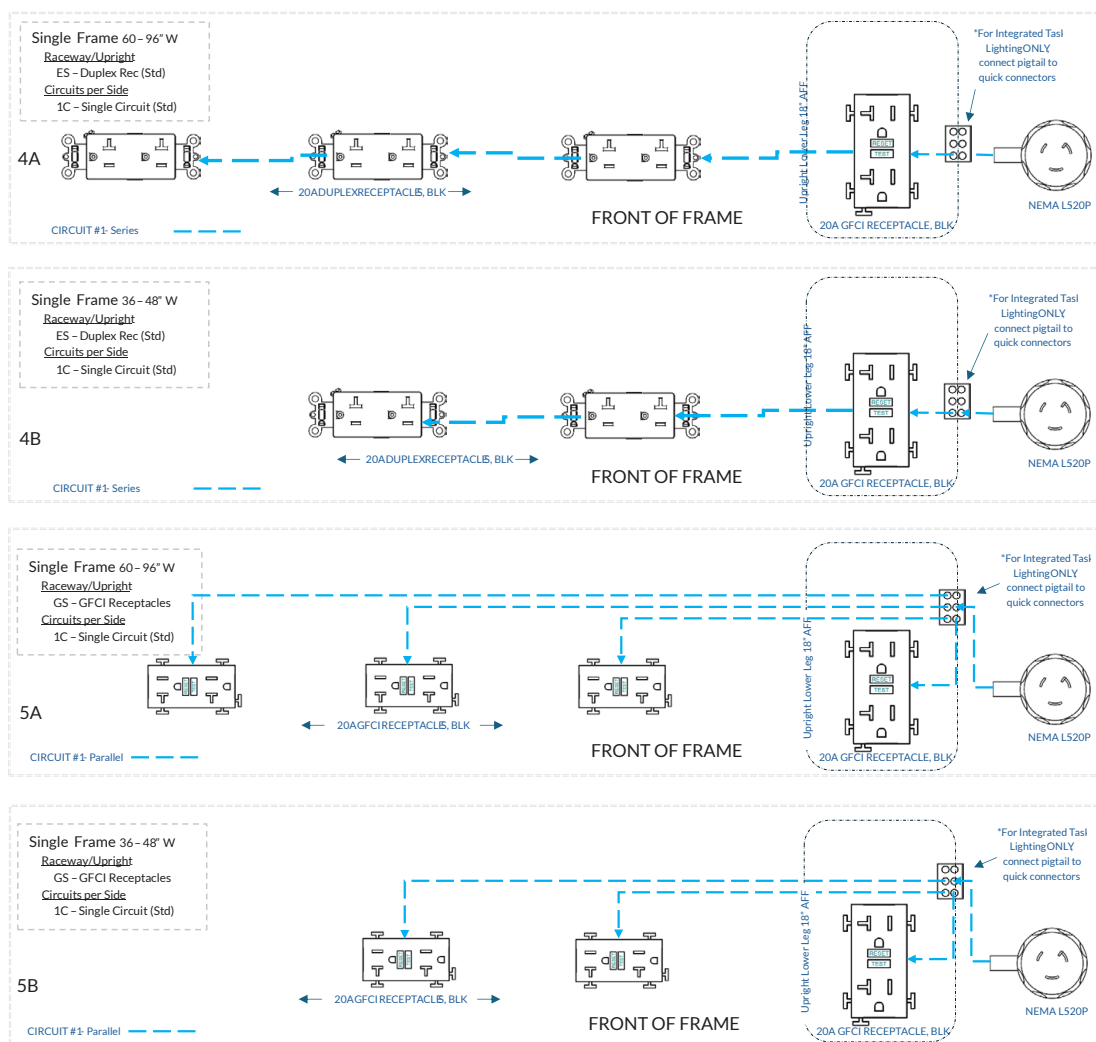
Electrical

Shared Frame — Appendix A



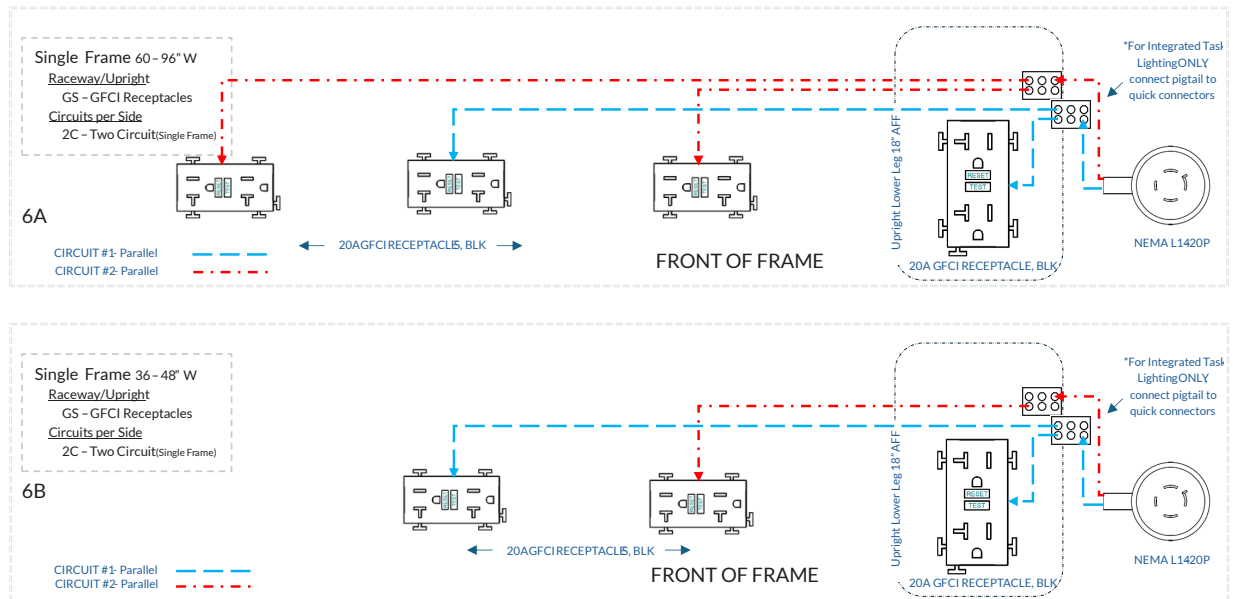
Electrical

Single Frame — Appendix A

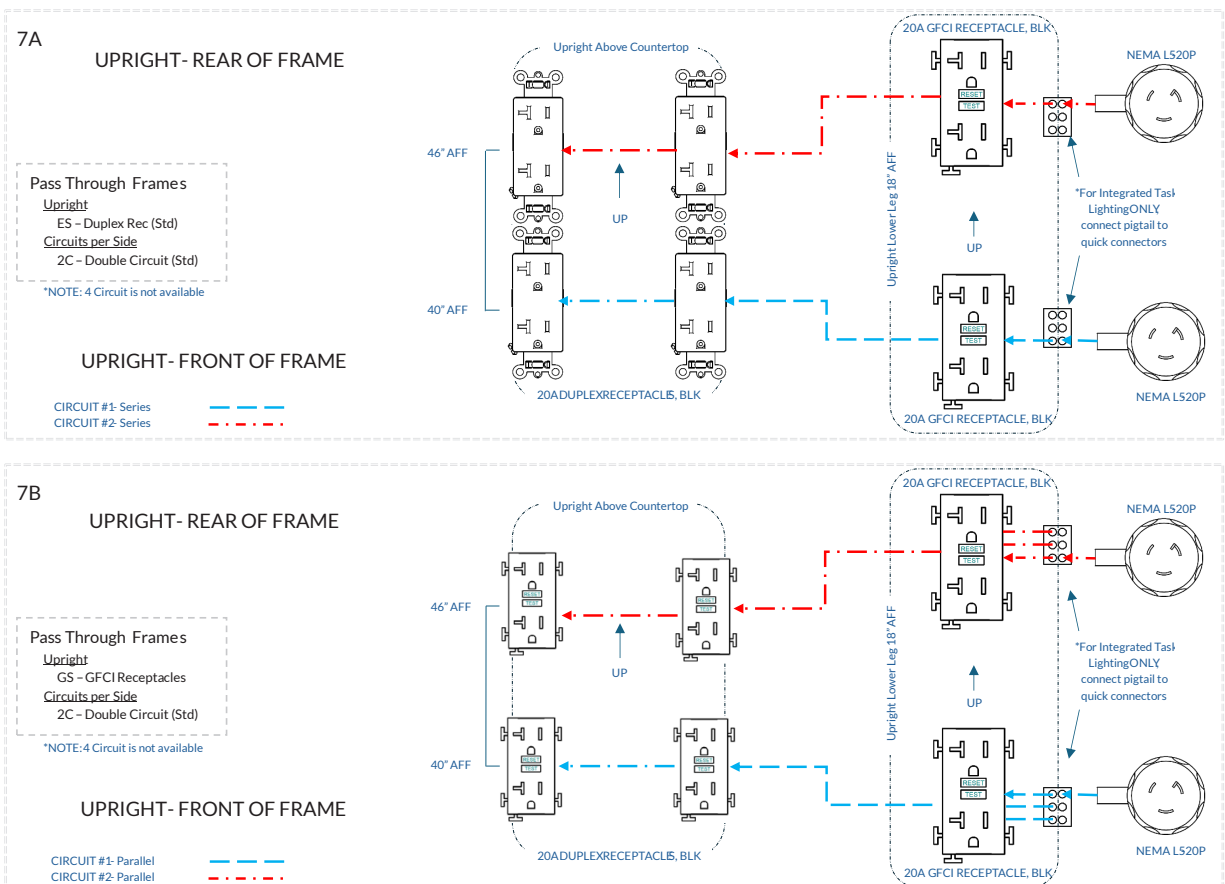


Electrical

Single Frame — Appendix A



Pass-Through Frames — Appendix A



Scientific Equipment and Furniture Association (SEFA)

Laboratory Furniture/Casework, Shelving & Tables/Recommended Practices

SEFA Profile

The Scientific Equipment and Furniture Association (SEFA) is a voluntary international trade association representing members of the laboratory furniture, casework, fume hood and related equipment industry. The association was founded to promote this rapidly expanding industry and to improve the quality, safety and timely completion of laboratory facilities in accordance with customer requirements. All Hamilton steel laboratory furniture and equipment is tested and in full compliance with the SEFA 8 & SEFA 10 Metal 2020 standards.

6.1 Purpose

Many of the components used in adaptable casework shall be tested in conformance to the appropriate section within SEFA 8 & 10. Shelves, drawers, doors, tables, coatings and component hardware are all specified for laboratory grade performance within that standard. Performance criteria specific to Adaptable Furniture relate to strength and stability. The purpose of this standard is to identify the minimal acceptable physical strength of adaptable furniture.

6.2 Description of Test Unit

Four configurations have been identified to represent the majority of laboratory grade adaptable furniture. Although designs vary from manufacturer to manufacturer, the basic configuration can be represented by one of four configurations. For test purposes, all systems shall have a worksurface and two rows of shelving mounted in the location and to the size shown on the figures below.

Figure 1. Single sided, cantilevered worksurface

Figure 2. Double sided, cantilevered worksurface

Figure 3. Single sided, simply supported worksurface

Figure 4. Double sided, simply supported worksurface

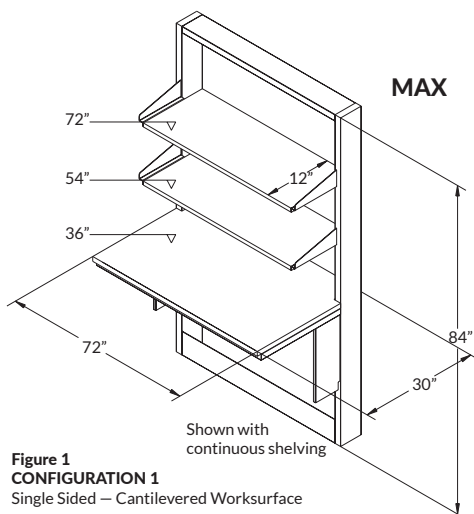


Figure 1
CONFIGURATION 1
Single Sided – Cantilevered Worksurface

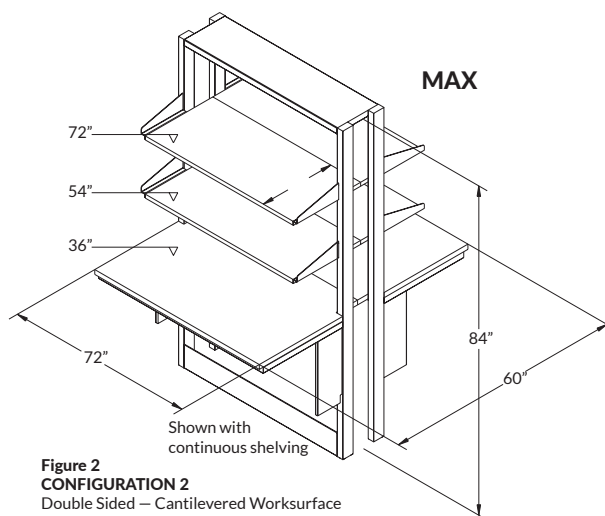


Figure 2
CONFIGURATION 2
Double Sided – Cantilevered Worksurface

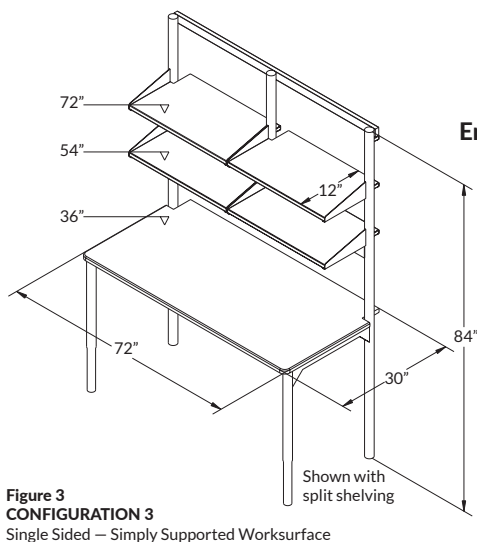


Figure 3
CONFIGURATION 3
Single Sided – Simply Supported Worksurface

Endeavor & Distinction

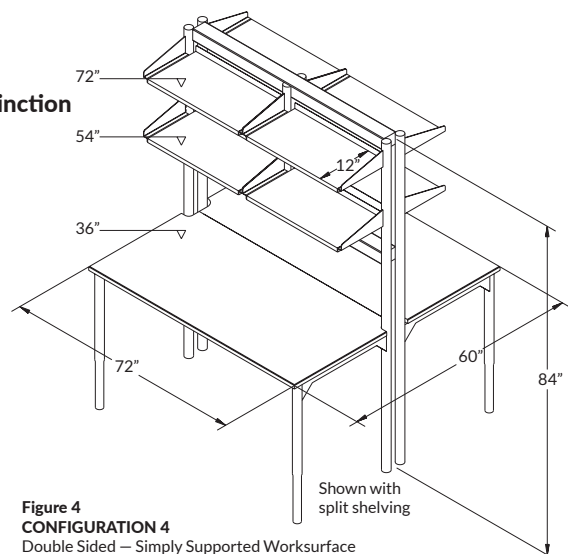


Figure 4
CONFIGURATION 4
Double Sided – Simply Supported Worksurface



Scientific Equipment and Furniture Association (SEFA)

6.3 Live Load

6.3.1 Shelf Live Load - Shelf Deflection Performance Evaluation

1. Purpose of Test

This method evaluates the deflection performance of laboratory shelf assemblies (shelf, bracket, and reinforcement components) under uniform loading. The intent is to isolate shelf behavior from full adaptable-system testing, ensuring repeatable, measurable, and comparable results across manufacturers.

2. Test Setup

- Test Article: Shelf assembly consisting of worksurface, brackets, and reinforcement (hat channel or equivalent).
- Spans: 72" test length | Depth: 12", standard test
- Configuration: As designed by the manufacturer; record bracket length, gauge, and gauge.
- Instrumentation: Vertical measurement at shelf centerline (X-axis)- no more than 1" from front edge

3. Test Procedure

STEP	LOAD	DWELL TIME	MEASUREMENT
1.	10 pounds at each end	N/A	Zero measuring instrument
2.	100% of prescribed load	10 min.	Record deflection

Target Uniform Load: 60 lb/ft² (per SEFA-10 baseline) or up to 200 lb total per shelf, whichever is greater. Loading Material: Standard sandbags or equivalent uniformly distributed weight.

4. Acceptance Criteria

- Absolute Maximum Deflection: ≤ 0.25 in. for 12" deep shelf
- Residual Set (after unload): ≤ 0.03 in.
- Failure Mode: Structural distortion (noticeable sag) or instability constitutes failure regardless of deflection reading.

5. Shelf Classification

CLASSIFICATION	LOAD CAPACITY	DEFLECTION LIMIT
Light Duty (CAT 2)	20 lb/ft ² (maximum 100 lbs)	≤ L / 240
Standard Duty (CAT 3)	40 lb/ft ² (Maximum 200 lbs)	≤ L / 240
Heavy Duty (CAT 4)	60 lb/ft ² (maximum 250)	≤ L / 240

6. Full Unit Classification

- The worksurface and shelving are classified at the lowest passing Category level.
- Example: Worksurface passes CAT3 + Shelving CAT1 = Full Unit is classified as CAT1.

6.3.2 Worksurface

There are four categories of laboratory grade worksurface loads to adaptable furniture. The manufacturer shall specify which category is to be tested and the testing agency shall report the category on the test certificate. All worksurface loads shall be uniformly distributed over the entire worksurface by using fifty pound solid steel bars as specified in SEFA-8. Worksurface material shall be specified by the manufacturer, installed per manufacturer's specification and reported by the testing agency on the test certificate.

- Category 1 = 200 pounds
- Category 2 = 600 pounds
- Category 3 = 1000 pounds
- Category 4 = 1200 pounds

6.4.2 Acceptance Criteria

Allowable maximum deflection

$$X = 0.125 \text{ inches}$$

$$Y \text{ avg } (Y^1 + Y^2)/2 = 0.125 \text{ inches}$$

$$Z = 0.125 \text{ inches}$$

6.4.3 Test Procedure Continued

With shelves fully loaded add the worksurface live load using fifty pound steel bars to the specified load category for worksurfaces.

Record deflection at X, Y1, Y2 and Z.

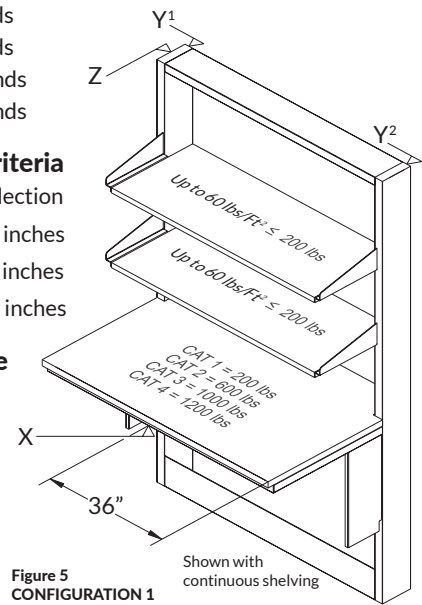


Figure 5
CONFIGURATION 1
Single Sided - Cantilevered

6.4.4 Acceptance Criteria

Allowable maximum deflection

$$X = 0.250 \text{ inches}$$

$$Y \text{ avg } (Y^1 + Y^2)/2 = 0.125 \text{ inches}$$

$$Z = 0.125 \text{ inches}$$

6.5 Stability Test Config. 1 (Single Sided, Cantilevered) - Anchored Units

Refer to Fig. 6.

6.5.1 Test Procedure Anchored Units

At the upper most point of the assembly apply a force at Fz equal to two percent of the systems fully loaded maximum.

Record deflection at X and Z.

6.5.2 Acceptance Criteria

Allowable maximum deflection

$$X = 0.060 \text{ inches}$$

$$Z = 0.500 \text{ inches}$$

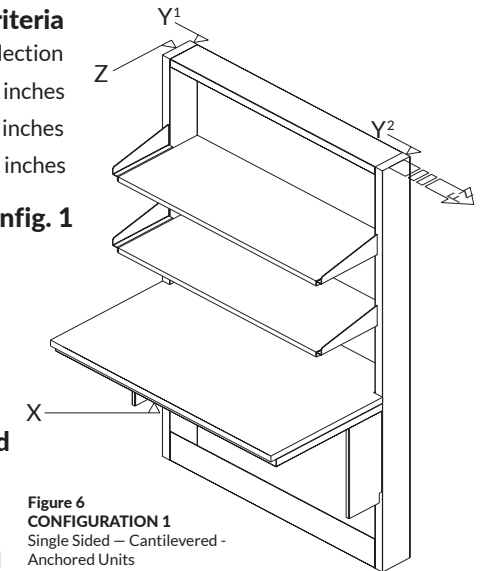


Figure 6
CONFIGURATION 1
Single Sided - Cantilevered - Anchored Units

6.6 Resistance to Overturning Config. 2 (Single Sided, Cantilevered) - Free Standing Units

6.6.1 Test Procedure Free Standing Units

Block the unit at front or rear bottom edge to prevent lateral movement. Tilt the unit 10 degrees from horizontal in the direction most likely to overturn.



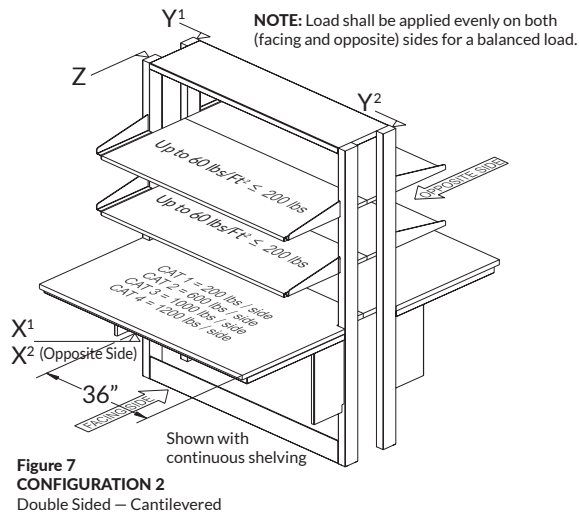
Scientific Equipment and Furniture Association (SEFA)

6.6.2 Acceptance Criteria

A pass is when the unit does not initiate overturn when tilted 10 degrees from horizontal in the direction most likely to cause overturn and when no parts become disengaged from unit.

6.7 Strength Test Configuration 2 (Double Sided, Cantilevered)

Refer to Fig. 7



6.7.1 Test Procedure

Measure the worksurface to find the center point (approximately at 36") and mark it for reference. Establish a zero vertical deflection point. From this point will be determined X coordinate movement.

Establish an X coordinate on the opposite side equal to the location on facing side. Establish a zero deflection point at the upper most height and on each end of the assembly. From this point will be determined Y and Z coordinate movement.

Load the shelves with ten-pound sand or shot bags until each shelf is loaded with up to 60 lbs per sq ft not to exceed 200 pounds. Load shall be applied evenly on both (facing side and opposite) sides for a balanced load.

Record deflection at X1, X2, Y1, Y2 and Z.

6.7.2 Acceptance Criteria

Allowable maximum deflection

$$X^1, X^2 = 0.125 \text{ inches}$$

$$Y \text{ avg } (Y^1 + Y^2)/2 = 0.125 \text{ inches}$$

$$Z = 0.125 \text{ inches}$$

6.7.3 Test Procedure Continued

With shelves fully loaded add the worksurface live load using fifty pound steel bars to the specified load category for worksurfaces. Load shall be applied evenly on both (facing side and opposite) sides for a balanced load.

Record deflection at X1, X2, Y1, Y2 and Z.

6.7.4 Acceptance Criteria

Allowable maximum deflection

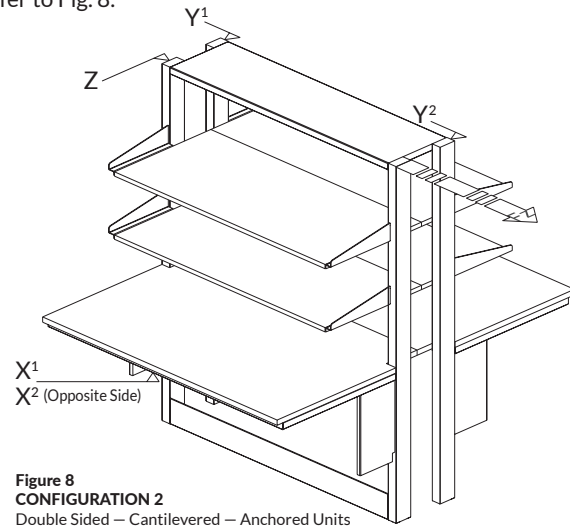
$$X^1, X^2 = 0.250 \text{ inches}$$

$$Y \text{ avg } (Y^1 + Y^2)/2 = 0.125 \text{ inches}$$

$$Z = 0.125 \text{ inches}$$

6.8 Stability Test Config. 2 (Double Sided, Cantilevered) -Anchored Units

Refer to Fig. 8.



6.8.1 Test Procedure Anchored Units

At the upper most point of the assembly apply a force at Fz equal to two percent of the systems fully loaded maximum.

Record deflection at X1, X2, and Z.

6.5.2 Acceptance Criteria

Allowable maximum deflection

$$X^1, X^2 = 0.063 \text{ inches}$$

$$Z = 0.500 \text{ inches}$$

6.9 Resistance to Overturning Configuration 2 (Double Sided, Cantilevered) - Free Standing Units

6.9.1 Test Procedure Free Standing Units

Block the unit at front or rear bottom edge to prevent lateral movement. Tilt the unit 10 degrees from horizontal in the direction most likely to overturn.

6.9.2 Acceptance Criteria

A pass is when the unit does not initiate overturn when tilted 10 degrees from horizontal in the direction most likely to cause overturn and when no parts become disengaged from unit.



Scientific Equipment and Furniture Association (SEFA)

6.10 Strength Test Configuration 3 (Single Sided, Supported)

Refer to Fig. 9

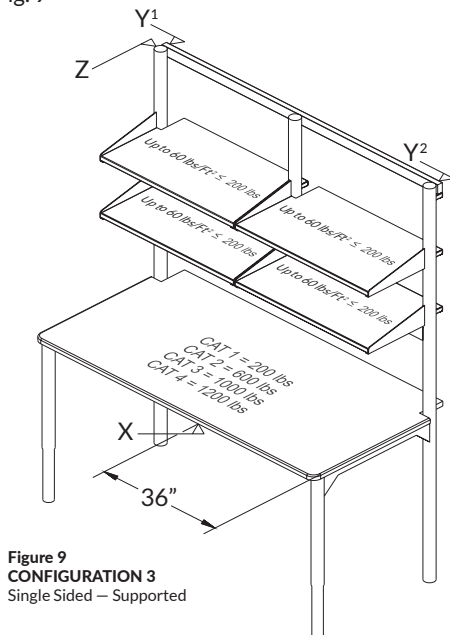


Figure 9
CONFIGURATION 3
Single Sided — Supported

6.10.1 Test Procedure

Measure the worksurface to find the center point (approximately at 36") and mark it for reference. Establish a zero vertical deflection point. From this point will be determined X coordinate movement.

Establish a zero deflection point at the upper most height and on each end of the assembly. From this point will be determined Y and Z coordinate movement.

Load the shelves with ten-pound sand or shot bags until each shelf is loaded with up to 60 lbs per sq ft not to exceed 200 pounds.

Record deflection at X, Y¹, Y² and Z.

6.10.2 Acceptance Criteria

Allowable maximum deflection

$$X = 0.125 \text{ inches}$$

$$Y \text{ avg } (Y^1 + Y^2)/2 = 0.125 \text{ inches}$$

$$Z = 0.125 \text{ inches}$$

6.10.3 Test Procedure Continued

With shelves fully loaded add the worksurface live load using fifty pound steel bars to the specified load category for worksurfaces.

Record deflection at X, Y¹, Y² and Z.

6.10.4 Acceptance Criteria

Allowable maximum deflection

$$X = 0.250 \text{ inches}$$

$$Y \text{ avg } (Y^1 + Y^2)/2 = 0.125 \text{ inches}$$

$$Z = 0.125 \text{ inches}$$

6.11 Stability Test Configuration. 3 (Single Sided, Supported) - Anchored Units

Refer to Fig. 10.

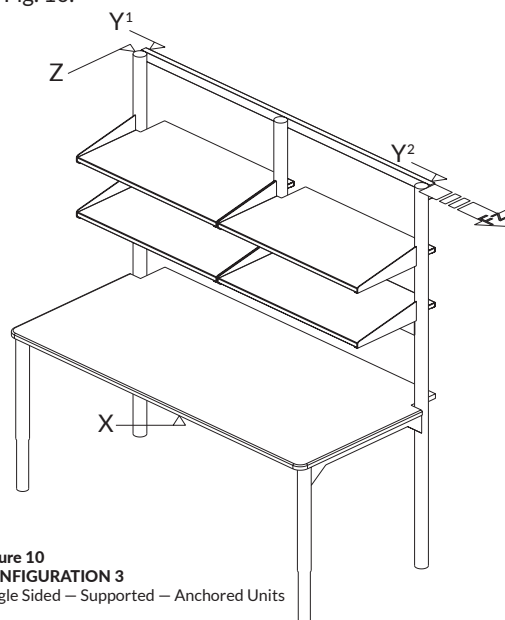


Figure 10
CONFIGURATION 3
Single Sided — Supported — Anchored Units

6.11.1 Test Procedure Anchored Units

At the upper most point of the assembly apply a force at Fz equal to two percent of the systems fully loaded maximum.

Record deflection at X and Z.

6.11.2 Acceptance Criteria

Allowable maximum deflection

$$X = 0.063 \text{ inches}$$

$$Z = 0.500 \text{ inches}$$

6.12 Resistance to Overturning Configuration 3 (Single Sided, Supported) - Free Standing Units

6.12.1 Test Procedure Free Standing Units

Block the unit at front or rear bottom edge to prevent lateral movement. Tilt the unit 10 degrees from horizontal in the direction most likely to overturn.

6.12.2 Acceptance Criteria

A pass is when the unit does not initiate overturn when tilted 10 degrees from horizontal in the direction most likely to cause overturn and when no parts become disengaged from unit.



Scientific Equipment and Furniture Association (SEFA)

6.13 Strength Test Configuration 4 (Double Sided, Supported)

Refer to Fig. 11

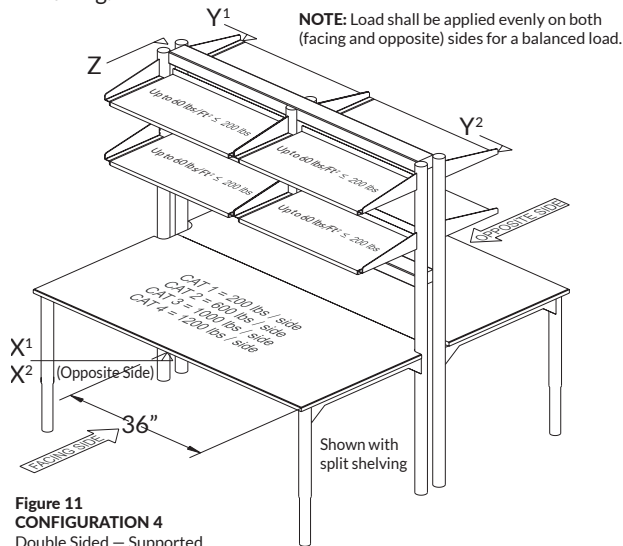


Figure 11
CONFIGURATION 4
Double Sided – Supported

6.13.1 Test Procedure

Measure the worksurface to find the center point (approximately at 36") and mark it for reference. Establish a zero vertical deflection point. From this point will be determined X coordinate movement. Establish an X coordinate on the opposite side equal to the location on facing side.

Establish a zero deflection point at the upper most height and on each end of the assembly. From this point will be determined Y and Z coordinate movement.

Load the shelves with ten-pound sand or shot bags until each shelf is loaded with up to 60 lbs per sq ft not to exceed 200 pounds. Load shall be applied evenly on both (facing side and opposite) sides for a balanced load.

Record deflection at X^1 , X^2 , Y^1 , Y^2 and Z.

6.13.2 Acceptance Criteria

Allowable maximum deflection

$$X^1, X^2 = 0.125 \text{ inches}$$

$$Y \text{ avg } (Y^1 + Y^2)/2 = 0.125 \text{ inches}$$

$$Z = 0.125 \text{ inches}$$

6.13.3 Test Procedure Continued

With shelves fully loaded add the worksurface live load using fifty pound steel bars to the specified load category for worksurfaces. Load shall be applied evenly on both (facing side and opposite) sides for a balanced load.

Record deflection at X^1 , X^2 , Y^1 , Y^2 and Z.

6.13.4 Acceptance Criteria

Allowable maximum deflection

$$X^1, X^2 = 0.250 \text{ inches}$$

$$Y \text{ avg } (Y^1 + Y^2)/2 = 0.125 \text{ inches}$$

$$Z = 0.125 \text{ inches}$$

6.14 Stability Test Configuration. 4 (Double Sided, Supported) - Anchored Units

Refer to Fig. 12.

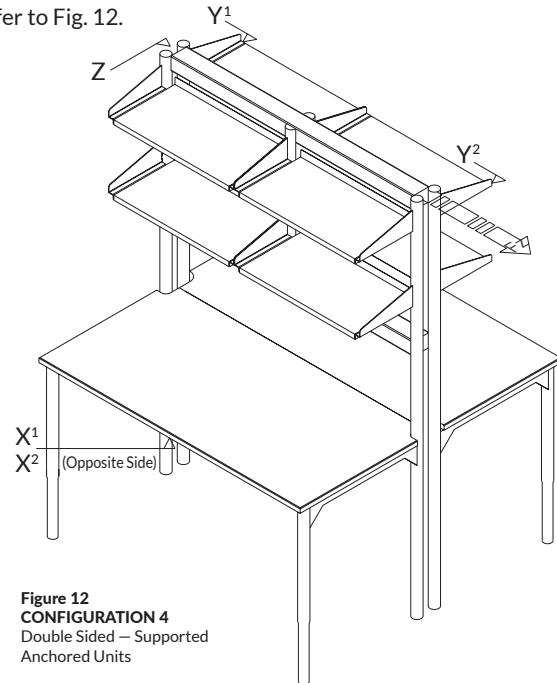


Figure 12
CONFIGURATION 4
Double Sided – Supported
Anchored Units

6.14.1 Test Procedure Anchored Units

At the upper most point of the assembly apply a force at F_z equal to two percent of the systems fully loaded maximum.

Record deflection at X^1 , X^2 , and Z.

6.14.2 Acceptance Criteria

Allowable maximum deflection

$$X^1, X^2 = 0.063 \text{ inches}$$

$$Z = 0.500 \text{ inches}$$

6.15 Resistance to Overturning Configuration 4 (Double Sided, Supported) - Free Standing Units

6.15.1 Test Procedure Free Standing Units

Block the unit at front or rear bottom edge to prevent lateral movement. Tilt the unit 10 degrees from horizontal in the direction most likely to overturn.

6.15.2 Acceptance Criteria

A pass is when the unit does not initiate overturn when tilted 10 degrees from horizontal in the direction most likely to cause overturn and when no parts become disengaged from unit.

7.0 Product Testing

7.1 Forms

Configuration 1

Single Sided – Cantilevered

Configuration 2

Double Sided – Cantilevered

Configuration 3

Single Sided – Simply Supported

Configuration 4

Double Sided – Simply Supported

Adapted from NSF/ANSI 49-2010



Scientific Equipment and Furniture Association (SEFA)

CLASS FUNCTIONALITY RATING CHART

POINTS DEFINITION

CLEANABILITY

- 1 = System creates multiple gaps and hard to reach surfaces
- 2 = Multiple gaps — surfaces reachable
- 3 = Sealed worksurfaces and toespaces — reachable worksurfaces with minor gaps
- 4 = Sealed worksurfaces and toespaces — all surfaces reachable and sealed

STORAGE VOLUME

- 1 = Prohibits storage units — allows for shelves only
- 2 = Restricted by suspended unit sizing for fit within system components
- 3 = Restricted by base unit sizing to fit under suspended surfaces
- 4 = Utilizes full volume of bench space available

STABILITY – OVERTURN

- 0 = Fail
- 1 = Pass

POINTS DEFINITION

STRENGTH – OVERALL

Single Sided (Worksurface & Shelves)

- 0 = Less than 600 pounds
- 1 = 600 pounds
- 2 = 1000 pounds
- 3 = 1400 pounds
- 4 = Over 1400 pounds

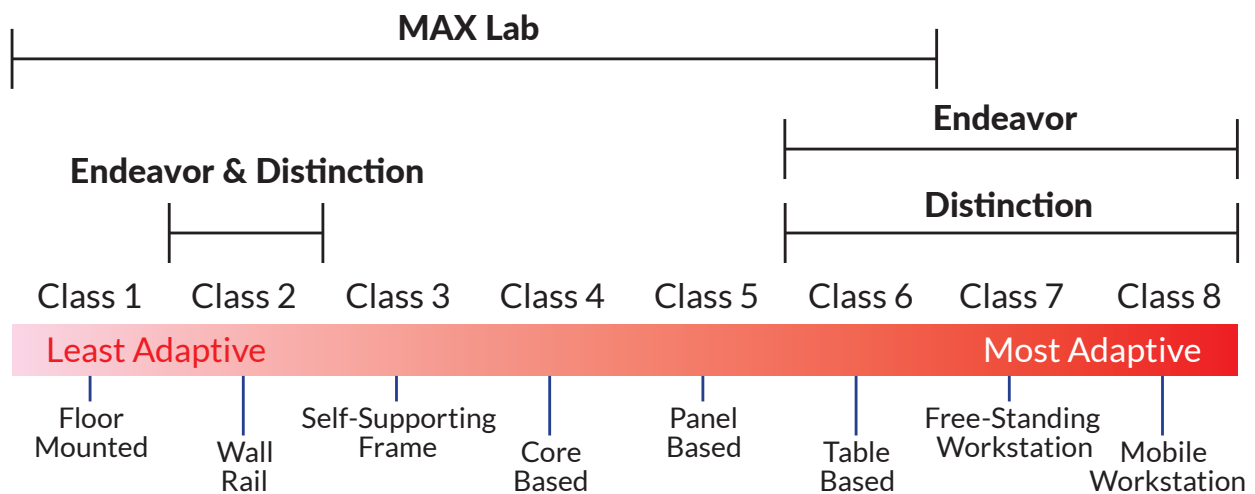
STRENGTH – OVERALL

Double Sided (Worksurface & Shelves)

- 0 = Less than 1200 pounds
- 1 = 1200 pounds
- 2 = 2000 pounds
- 3 = 2800 pounds
- 4 = Over 2800 pounds

STRENGTH – WORKSURFACE

- 1 = 200 pounds
- 2 = 600 pounds
- 3 = 1000 pounds
- 4 = Over 1000 pounds



FUNCTIONALITY RATING CHART

ACTION	CLASS 1	CLASS 2	CLASS 3	CLASS 4	CLASS 5	CLASS 6	CLASS 7	CLASS 8
Cleanability	3-4	1-3	1-3	1-3	1-3	1-3	2-3	1-3
Storage Volume	4-4	1-3	1-3	1-3	1-3	1-3	1-3	1-3
Strength – Overall	4-4	2-3	2-4	2-4	2-4	2-3	2-3	2-4
Strength – Work Surface	1-4	1-4	1-4	1-4	1-4	1-4	1-4	1-4
Stability – Tipping	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1
Functionality Range	12-17	5-14	5-15	6-15	5-15	5-14	6-14	5-15



Scientific Equipment and Furniture Association (SEFA)

8.0 Cabinet Surface Finish Tests

8.1 Chemical Spot Test

8.1.1 Purpose of Test

The purpose of the chemical spot test is to evaluate the resistance a finish has to chemical spills.

Note: Many organic solvents are suspected carcinogens, toxic and/or flammable. Great care should be exercised to protect personnel and the environment from exposure to harmful levels of these materials.

8.1.2 Test Procedure

Obtain one sample panel measuring 14" x 24" (355.6mm x 609.6mm). The received sample to be tested for chemical resistance as described herein.

Place panel on a flat surface, clean with soap and water and blot dry. Condition the panel for 48-hours at 73+ 3F (23+ 2C) and 50+ 5% relative humidity. Test the panel for chemical resistance using forty-nine different chemical reagents by one of the following methods:

Method A –

Test volatile chemicals by placing a cotton ball saturated with reagent in the mouth of a one-ounce (29.574cc) bottle and inverting the bottle on the surface of the panel.

Method B –

Test volatile chemicals by placing five drops of the reagent on the surface of the panel and covering with a 24mm watch glass, convex side down.

For both of the above methods, leave the reagents on the panel for a period of one hour. Wash off the panel with water, clean with detergent and naphtha, and rinse with deionized water. Dry with a towel and evaluate after 24-hours at 73±3°F (23±2°C) and 50 ±5% relative humidity using the following rating system:

Level 0 – No detectable change.

Level 1 – Slight change in color or gloss.

Level 2 – Slight surface etching or severe staining.

Level 3 – Pitting, cratering, swelling, or erosion of coating, Obvious and significant deterioration.

TEST NO:	CHEMICAL REAGENT	TEST METHOD
1.	Acetate, Amyl	A
2.	Acetate, Ethyl	A
3.	Acetic Acid, 98%	B
4.	Acetone	A
5.	Acid Dichromate, 5%	B
6.	Alcohol, Butyl	A
7.	Alcohol, Ethyl	A
8.	Alcohol, Methyl	A
9.	Ammonium Hydroxide, 28%	B
10.	Benzene	A
11.	Carbon Tetrachloride	A
12.	Chloroform	A

TEST NO:	CHEMICAL REAGENT	TEST METHOD
13.	Chromic Acid, 60%	B
14.	Cresol	A
15.	Dichlor Acetic Acid	A
16.	Dimethylformamide	A
17.	Dioxane	A
18.	Ethyl Ether	A
19.	Formaldehyde, 37%	A
20.	Formic Acid, 90%	B
21.	Furfural	A
22.	Gasoline	A
23.	Hydrochloric Acid, 37%	B
24.	Hydrochloric Acid, 48%	B
25.	Hydrogen Peroxide, 3%	B
26.	Iodine, Tincture of	B
27.	Methyl Ethyl Ketone	A
28.	Methylene Chloride	A
29.	Mono Chlorobenzene	A
30.	Naphthalene	A
31.	Nitric Acid, 20%	B
32.	Nitric Acid, 30%	B
33.	Nitric Acid, 70%	B
34.	Phenol, 90%	A
35.	Phosphoric Acid, 85%	B
36.	Silver Nitrate, Saturated	B
37.	Sodium Hydroxide, 10%	B
38.	Sodium Hydroxide, 20%	B
39.	Sodium Hydroxide, 40%	B
40.	Sodium Hydroxide, Flake	B
41.	Sodium Hydroxide, Saturated	B
42.	Sulfuric Acid, 33%	B
43.	Sulfuric Acid, 77%	B
44.	Sulfuric Acid, 96%	B
45.	Sulfuric Acid, 77% and Nitric Acid, 70%, equal parts	B
46.	Toluene	A
47.	Trichloroethylene	A
48.	Xylene	A
49.	Zinc Chloride, Saturated	B

8.1.3 Acceptance Level

Results will vary from manufacturer to manufacturer.

Laboratory grade finishes should result in no more than four Level 3 conditions. Suitability for a given application is dependent upon the chemicals used in a given laboratory.

8.2 Hot Water Test

8.2.1 Purpose of Test

The purpose of this test is to insure the coating is resistant to hot water.



Scientific Equipment and Furniture Association (SEFA)

8.2.2 Test Procedure

Hot water, 190°F to 205°F (88°C to 96°C), shall be allowed to trickle (with a steady stream and at a rate of not less than 6 ounces (177.44cc) per minute on the surface, which shall be set at an angle of 45-degrees, for a period of five minutes.

8.2.3 Acceptance Level

After cooling and wiping dry, the finish shall show no visible effect from the hot water.

8.3 Impact Test

8.3.1 Purpose of Test

The purpose of this test is to evaluate the ductility of the coating.

8.3.2 Test Procedure

A one-pound ball approximately 2" (50.8mm) in diameter shall be dropped from a distance of 12" (304.8mm) onto a flat horizontal surface, coated to manufacturer's standard manufacturing method.

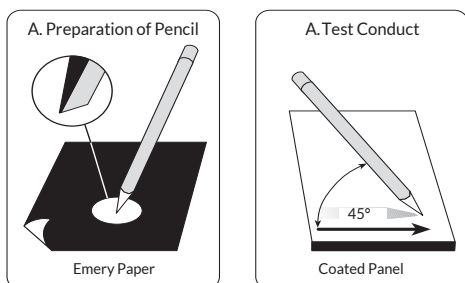


Figure 11

Figure 11 Cabinet Body Surface Hardness Test

8.3.3 Acceptance Level

There shall be no visible evidence to the naked eye of cracks or checks in the finish due to impact.

8.4 Paint Adhesion on Steel Test

8.4.1 Purpose of Test

The paint adhesion test is used to determine the bond of the coating to steel. This does not apply to non-steel products.

8.4.2 Test Procedure

This test is based on ASTM D2197-86 "Standard Method of Test for Adhesion of Organic Coating". Two sets of eleven parallel lines 1/16" (1.587mm) apart shall be cut with a razor blade to intersect at right angles thus forming a grid of 100 squares. The cuts shall be made just deep enough to go through the coating, but not into the substrate. They shall then be brushed lightly with a soft brush for one minute. Examine under 100-foot candles of illumination.

8.4.3 Acceptance Level

Ninety or more of the squares shall show finish intact.

8.5 Paint Hardness on Steel Test

8.5.1 Purpose of Test

The paint hardness test is used to determine the resistance of the coatings to scratches.

8.5.2 Test Procedure

Pencils, regardless of their brand, are valued in this way: 8-H is the hardest, and next 11 order of diminishing hardness are 7-H, 6-H, 5-H, 4-H, 3-H, 2-H, H, F, HB, B (soft), 2-B, 3-B, 4-B, 5-B (which are softest).

The pencils shall be sharpened on emery paper to a wide sharp edge (See Figure 11). Pencils of increasing hardness shall be pushed across the paint film in a chisel-like manner until one is found that will cut or scratch the film. The pencil used before that one, that is the hardest pencil that will not rupture the film, is then used to express or designate the hardness.

8.5.3 Acceptance Level

The paint shall have a hardness of 4-H minimum.

9.0 Wall, Counter-Mounted, and Tall Cabinets

9.1 Description of Test

Unit evaluation shall be conducted on a wall mounted cabinet with nominal dimensions as follows: 48" (1219.2mm) wide, 30" (762mm) high, and 12" (304.8mm) deep. The wall cabinet shall be manufactured to manufacturer's standard construction and practices. The wall cabinet shall have two swinging doors, designed in such a way that when the doors are open, access to the cabinet is unobstructed (See Figure 12). Door loading procedures are outlined under Section 5.0 (Doors). The wall cabinet will be provided with the manufacturer's standard number of shelves. Shelves shall be evaluated per Section 7.0 (Shelves). The unit and shelves shall be mounted in a manner recommended by the manufacturer. A visual examination shall be conducted to verify that the configuration and installation comply with these conditions. Discontinue evaluation if unit is not in compliance or if malfunction is noted.

9.2 Load Test

9.2.1 Purpose of Test

The wall mounted load test will demonstrate the strength of the back of the wall cabinet as well as the joinery of the cabinet and function of doors when the unit is subjected to loads normally expected for laboratory furniture.

9.2.2 Test Procedure

Using sand or shot bags weighing 10 pounds (4.54kg) each, load cabinet bottom, each shelf, and top uniformly with 40 pounds (18.14kg) per square foot to a maximum of 200 pounds (90.72kg) each. Maximum load to any cabinet shall not exceed 600 pounds (272.16kg), - a maximum of 200 pounds (90.72kg) loaded to each bottom, a minimum of one shelf loaded per Section 7.0, and the top - regardless of the number of shelves.

9.2.3 Acceptance Level

With weights in place, operate doors through full travel to verify normal operation of doors. Remove weights and operate doors to verify normal operation. Verify that there is no significant permanent deflection of cabinet top, cabinet back, cabinet bottom or shelves. After weights are removed, the cabinet shall show no permanent damage to the cabinet, cabinet bottom, or shelves.



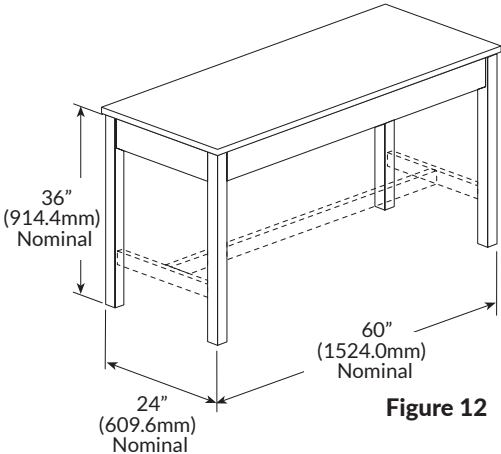


Figure 12 Cabinet Body Surface Hardness Test

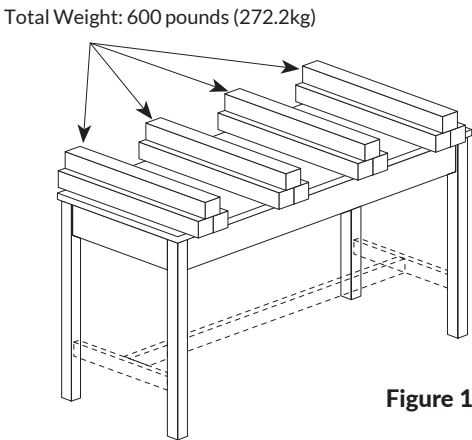


Figure 13 Table Static Load Test Configuration

10.0 Tables

10.1 Description of Test Unit

The table for evaluation shall be a standing height, four-legged, freestanding table. The table shall be nominally 60" (1,524mm) long, 24" (609.6mm) deep, and 36" (914.4mm) high. (See Figure 14). Leg and apron size and construction shall be to manufacturer's specification. A top of 1" (25.4mm) thick 37-50 pcf medium density fiberboard shall be positioned on the table in a manner recommended by the manufacturer. The top dimensions will be such that it will overhang the cabinet perimeter by 1". Its weight shall be included in the test as live load. Tables can be represented by a very large range of styles and designs. Products inclusive in this section of testing are: Free-Standing Tables, Desks, Aprons mounted between two fixed areas such as a wall or casework, Mobile Tables (Free-Standing Tables on wheels or casters), Mobile Under-Counter Units, Mobile Workstations, Adjustable Tables, Modular Tables, C-Frame Tables, L-Frame Tables, J-Frame Tables, and Tables for systems furniture. These table systems can all be classified as one of three types of tables; Fixed, Free-Standing, and Mobile.

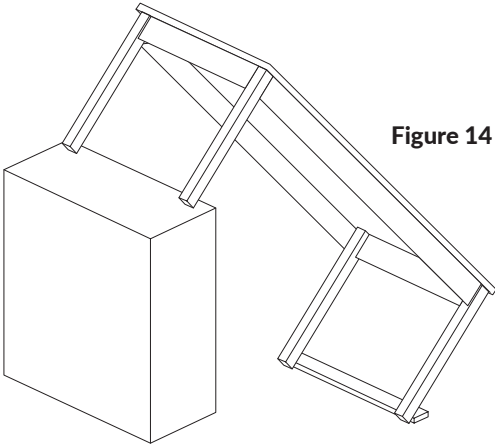


Figure 14 Table Static Load Test Configuration

10.2 Table Static Load Test

10.2.1 Purpose of Test

This test will challenge the table components to loads that are normal for use in a laboratory.

10.2.2 Test Procedure

Load the table top by using solid steel bars (Per Section 3.1), each weighing 50 pounds (22.68kg), stacked evenly and spaced per Section 14. Load the table to the manufacturer's recommended live load*. These evenly distributed loads should be no less than 300 pounds (136.08kg) for mobile, 600 pounds (272.16kg) for free-standing, and 2000 pounds (907.20kg) for fixed. Include the weight of the working surface as live load. (See Figure 13)

**Table load will vary considerably. Factors impacting live load capability include the size of the table, material, amount of drawers and book compartments, glide or caster load rating. Contact manufacturer for live load.*

10.3.2 Test Procedure

Test Method

Racking Angle: 45° degrees

Time Under Test: 30 minutes

Number of Samples Tested: One (1)

10.3.3 Acceptance Criteria

MODEL NUMBER	DESCRIPTION OF SAMPLE
950S3660	Table

There shall be no structural damage to end panels, legs, or bases. The operation of the table shall be normal.

Results:

PASS. The sample meets the acceptance criteria. Refer to the photograph below.



Scientific Equipment and Furniture Association (SEFA)

1.0 Scope

SEFA 10 is intended to provide designers, architects, purchasers, end users, and manufacturers workable tools for evaluating various types of adaptable laboratory furniture systems. This Recommended Practice provides descriptions of various adaptable laboratory furniture systems and evaluates important features of each system. Adaptability, strength, and functionality are rated for each adaptable system described, along with how each system integrates with laboratory services and utilities.

2.0 Purpose

The purpose of this document is to describe the distinguishing characteristics of adaptable laboratory furniture systems. Each class designation identifies the key attributes for purposes of evaluating the suitability for the intended use. These classes apply to products specifically designed and manufactured for installation and use in a laboratory. All materials shall be laboratory grade and of appropriate quality and type for the purpose intended. Construction shall conform to the best practices of the scientific/laboratory furniture industry. Product finish shall be resistant to chemical spills and splashes common to a typical laboratory operation. Structural strength shall be adequate to support heavy laboratory apparatus, storage containers and heavy instruments. Products should interface with the appropriate lab services (plumbing, electrical, communication).

3.0 Definitions

3.1 Adaptable Laboratory Furniture Systems Defined

Adaptable Laboratory Furniture systems are defined as modular furniture assemblies consisting of individual components including support structures, cabinets and storage units, worksurfaces, shelving, and accessories. This Recommended Practice includes classifications for different types of these systems based on a rating scale beginning with the least adaptable laboratory furniture system to the most adaptable system.

3.2 Characteristics of Adaptable Laboratory Furniture Systems

Adaptable Laboratory Furniture Systems are designed from modular components to create laboratory furniture assemblies that accommodate reconfiguration and/or relocation. These systems consist of pre-engineered components that are reusable. Adaptable Laboratory Furniture systems typically allow for some degree of component adjustability that may include shelving, cabinetry, worksurfaces, and utilities. Some systems require attachment to the building structure, and some are freestanding or mobile.

3.3 Vibration

Floor mounted and adaptable laboratory furniture systems have differing attributes regarding vibration isolation based on several factors. These include the vibration stability of the building structure, how the furniture is attached to the structure, how the system transfers vibration from one component to another, and how independent units are able to isolate vibration. The laboratory designer needs to take all factors into account to properly address the vibration isolation needs of the equipment being used in the laboratory. Manufacturers of different systems can recommend approaches to vibration isolation based on the individual requirements of the lab.

3.6 Codes and Standards (Related to)

SEFA 3 – Recommended Practices for Work Tops

SEFA 4 – Glossary of Terms

SEFA 8 – Recommended Practices for Casework

UL 61010A-1 – Electrical Equipment for Laboratory Use

UL 962 – Household and Commercial Furnishings

4.0 Classifying Adaptable Furniture Systems

The adaptable systems described in this Recommended Practice have been classified based on a rating scale beginning with the least adaptable laboratory furniture system to the most adaptable system. An adaptability chart (see Appendix A) was created to define the common tasks associated with laboratory furniture adaptability, and assigns each system a numerical scoring range based on how that particular task can be accommodated by the particular adaptable system. The total point range for a particular system determines its position in the classification, from lowest (least adaptable) to highest.

4.1 Description of Classes

Class 1 – FIXED FLOOR MOUNTED AND WALL SUPPORTED

Floor mounted casework utilizes traditional base cabinet construction which is supported and attached to the floors and walls of the building. The cabinetry can be either built-in or modular. Worksurfaces are mounted to the top of the base cabinets in continuous lengths.

Class 2 – WALL RAIL SUPPORTED

Wall rail casework systems use a wall mounted fixed horizontal and/or vertical support rail from which the cabinetry is hung. The rail can be positioned to support under counter base units, above counter wall cases, shelving, or other ancillary items. The worksurface is typically mounted to the under counter base units, although independently supported worksurfaces can be utilized. Some systems allow for hanging the casework and worksurface at varying heights.

Class 3 – SELF SUPPORTING FRAME

Self Supporting Frame casework systems utilize a floor supported cantilevered support frame (C-Frame). Some systems are fully cantilevered; some utilize a front leg for added strength and stability. The frame can be worksurface height or also include above counter framing. Base cabinets, upper cabinets, worksurfaces, shelving, service utility distribution, and ancillary items can be suspended from the frame structure. Typically, the frame utilizes a support leg structure connected by horizontally run support members. The frame can be constructed to provide a chase for horizontally run services beneath the worksurface and behind the base cabinets. Typically, the worksurfaces are supported independently of the cabinets, allowing for cabinet relocation horizontally within the structure. Some systems are designed with height adjustable support legs. Self supporting frame systems can also be used in conjunction with mobile or floor mounted casework.



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Class 4 – CORE BASED

Core based casework systems utilize a floor mounted support module (core) from which table frames, upper cabinets, shelving, service utility distribution, and ancillary items are suspended. The core module is typically anchored to the floor and/or adjacent walls or structural members, to provide a self-supporting structure for all system components. Core modules can be worksurface height or also include an above counter structure. The core modules provide a chase for horizontally and vertically run services. The core modules can be provided with enclosure panels or be open. Base cabinets can be floor mounted or mobile in front of the support module, or suspended from table frames supported by the core module. Typically, individual core modules are provided in varying lengths and are combined to create full length assemblies. Table frames with work surfaces and shelving are suspended from the core modules. Typically the Core module incorporates adjustment slots for vertical height adjustability of worksurfaces, shelving and ancillary items.

Class 5 – PANEL BASED

Panel based systems are similar to Core based systems except they utilize a narrow support module, typically 6" or less. This narrow panel design limits the available space for service utility distribution. These panel assemblies are sometimes used as wall partitions, and can include features such as glass inserts, doors, and other features associated with internal wall partitions. These systems can require attachment to overhead structures in addition to floor and/or wall anchoring.

Class 6 – TABLE BASED

Table based systems use independent floor mounted self-supporting tables as the key component. They are used in conjunction with separate wall mounted or structural upper storage systems. The tables can be adjustable in height, and can be designed to support suspended base cabinets, and/or floor mounted or mobile base units. For this class, these tables do not have above worksurface structures integrated into the table. Utilities, sinks, and other fixed elements are typically separate from the tables, allowing the tables to be easily relocated.

Class 7 – FREE STANDING WORKSTATION

Free Standing Workstations are table based systems utilizing floor mounted tables as the key component. The workstation can be worksurface height or incorporate above counter structure. The workstations can incorporate either adjustable height or fixed height worksurfaces. Base cabinets can be mobile, floor mounted, or suspended. Upper cabinets, worksurfaces, shelving, service utility distribution, and ancillary items can be suspended from the frame structure. Free Standing Workstations with above counter structures can be preplumbed and prewired, and used in conjunction with ceiling mounted service utility distribution systems. Typically, Free Standing Workstations incorporate adjustment slots for vertical height adjustability of worksurfaces, shelving and ancillary items. Free Standing Workstations are not anchored to the building, allowing for simple relocation.

Class 8 – MOBILE WORKSTATION

Mobile Workstations are similar to Free Standing Workstations, but are typically mounted on casters to accommodate simple relocation. The workstation can be worksurface height or incorporate above counter structure. The workstation can incorporate either adjustable height or fixed height worksurfaces. Base cabinets can be mobile, floor mounted, or suspended. Upper cabinets, worksurfaces, shelving, service utility distribution, and ancillary items can be suspended from the frame structure. Mobile Workstations with above counter structures can be preplumbed and prewired, and used in conjunction with ceiling mounted service utility distribution systems. Typically, Mobile Workstations incorporate adjustment slots for vertical height adjustability of worksurfaces, shelving and ancillary items.





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