

Ventilated Installation Training



Updated March 27, 2015

Shelftech

Lifetime Ventilated

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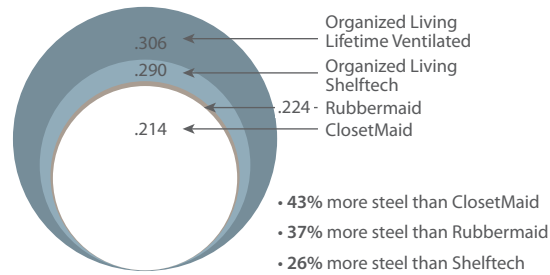
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Features & Benefits

Highest Gauge

Lifetime Ventilated Shelving uses the largest diameter wire rods in the industry.

Comparison of Upper Front Rod on Storage Shelf



These are true scale comparison of uncoated rods.

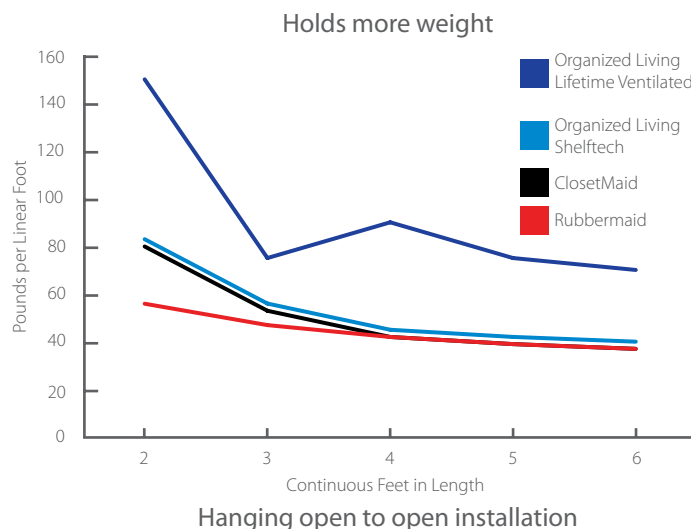
Lifetime Ventilated Shelving	
Front Rods	.306" diameter (1/0 gauge)
Studs	.290" diameter (1/0 gauge)
Back Rod	.243" diameter (3 gauge)
Middle Rods	.243" diameter (3 gauge)
Cross Wires	1" Spacing for standard mesh .105" (10 gauge)
	1" Spacing for 20" standard mesh storage shelf .120 (11 gauge)
	1½" Spacing for tight mesh .091" (11 gauge)

Shelftech Ventilated Shelving	
Front Rods	.290" Hanging, .223" Storage
Studs	.290" diameter (1 gauge)
Back Rod	.243" diameter (3 gauge)
Middle Rods	.158" diameter (6 gauge)
Cross Wires	1" Spacing for standard mesh .091" (12 gauge)
	5/8" Spacing for tight mesh .091" (11 gauge)

**All steel shelving is Grade C 1008 cold drawn steel rod PSI 100,000 tensile strength.*

Higher Weight Capacity

More steel in our shelving and Superior Fastening system to hold more weight. Properly installed Lifetime Ventilated shelving will hold 75 pounds per foot static load capacity.



All Lifetime Shelving Product (regardless to Wall to Wall, Wall to Open or Open to Open)	12"/16"/20"	42"	75lbs per lineal foot
	12"/16"/20"	36"	75lbs per lineal foot
	12"/16"/20"	24"	100lbs per lineal foot
All Shelftech Shelving Product	12"/16"	36" Wall to Wall	60lbs per lineal foot
	12"/16"	36" Wall to Open	50lbs per lineal foot
	12"/16"	36" Open to Open	45lbs per lineal foot

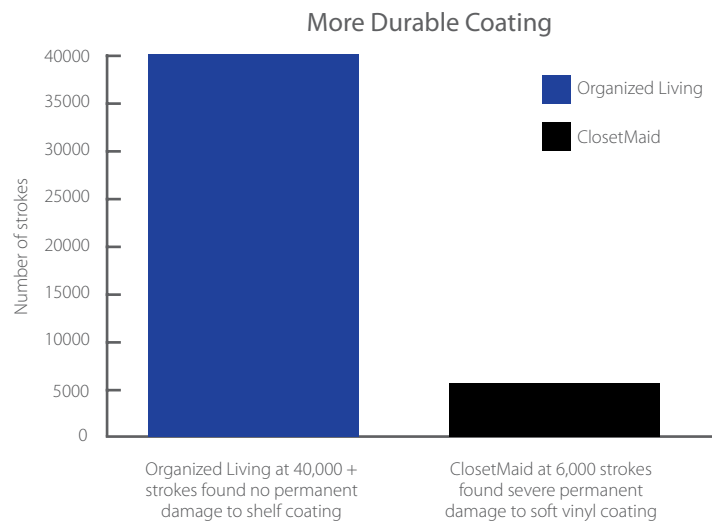
Tough Epoxy Finish on all Shelving

Unlike vinyl coated product our epoxy coating does not:

- Discolor
- Become sticky
- Indent from hanger weight

Our epoxy coating is:

- Specially formulated, electro-statically applied and baked-on
- Non-porous
- Non-absorbent
- Anti-marring, Durable (never needs painting)
- Easy-gliding finish with a 3–5 mils thickness
 - Allows for up to 5 times easier movement for hangers to glide freely.

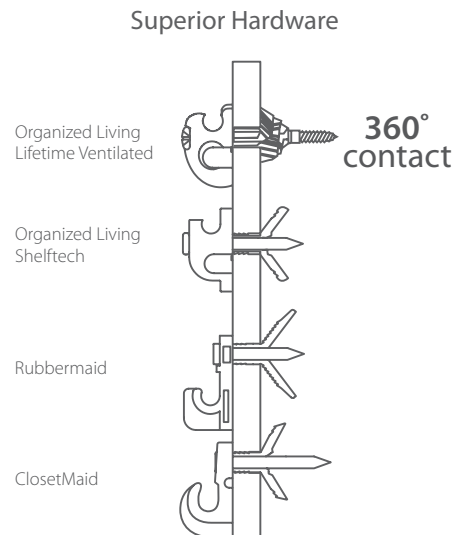
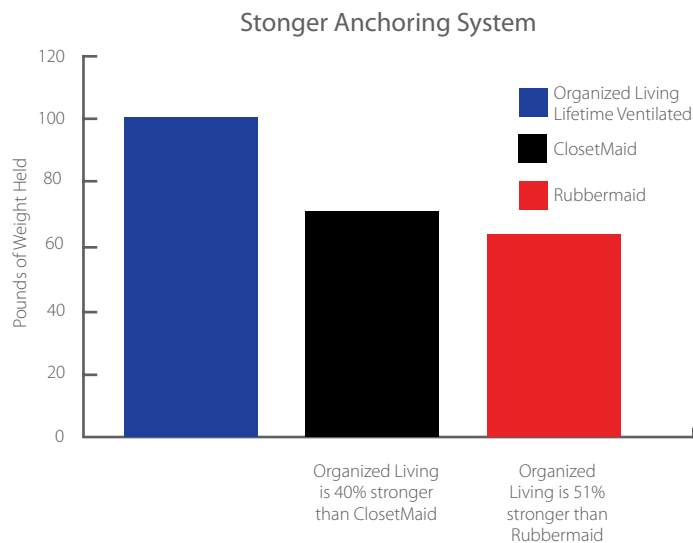


Brighter White

- Organized Living Shelving has a superior white finish
- Whiter and heavier than our competition
- Matches our full family of products.

Superior Hardware

- Versa-clip Back Clips set Organized Living apart from the competition.
- Support Braces and Support Poles offer superior strength
- Maintains superior weight load capacities even on open-ended installations.



Simplicity

- We offer a Back Clip that works in any substrate.
 - Drywall, concrete, plaster
- Support Poles that are adjustable
- Patented Open Slide shelf
- Back Clips do not interfere with cross wires
 - Placement of Back Clips is not critical (does not have to be in between the wires)
- The Versa Clip serves as both a Back Clip and a Down Back Clip.

Benefits of Ventilated Wire

- Easier to cut than wood and more forgiving.
- Quick Simple installations.
- Maintenance free – no dusting, painting, or cleaning.
- Allows airflow throughout the closet and allows you to see what is stored up high.

Shelftech

Lifetime Ventilated

Organized Living® • Limited Lifetime Warranty

Organized Living warrants to the original consumer purchaser of properly installed Organized Living wire shelving, wall and door racks, and other wire storage devices, that its products will remain free of any defects in materials and workmanship for as long as the original purchaser owns the products. This warranty applies only to properly installed Organized Living products used for indoor domestic/consumer purposes.

In the case of installation of Organized Living products for industrial, commercial, or business purposes, or use for such purposes, these same products are warranted to be free of defects in materials and workmanship for a period of two (2) years from the date of purchase. In case of any claim hereunder

by a non-domestic use customer, such claim must be received by Organized Living prior to a date ending on the second year after original purchase. In case of any claim hereunder, Organized Living agrees, at its sole discretion, to provide replacement product (FOB at the Organized Living plant in Bloomington, IN) or a refund of the original purchase price. All claims should be addressed to Organized Living, 3100 E. Kemper Road, Cincinnati, Ohio 45241. Attn: Warranty Damages.

THIS WARRANTY EXCLUDES PRODUCT DAMAGE DUE TO IMPROPER INSTALLATION OR PRODUCT ABUSE OR MISUSE, WHETHER INFLECTED BY AN INSTALLING CONTRACTOR, SERVICE COMPANY OR OTHERS. ORGANIZED LIVING WILL

NOT BE RESPONSIBLE FOR LABOR, INSTALLMENT OR FREIGHT CHARGES AND/OR ANY DAMAGE INCURRED IN INSTALLATION, REPAIR OR REPLACEMENT, NOR FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES. NO IMPLIED WARRANTY SHALL EXCEED IN LENGTH THE SPECIFIC WARRANTY GIVEN HEREUNDER.

Some states, provinces and nations do not allow the exclusion or limitation of implied warranties, or of incidental or consequential damages so the above limitations or exclusions may not apply in every case. This warranty gives the owner specific legal rights, and the owner may also have other rights which may vary from state to state, province to province, and nation to nation.

Maintenance and Cleaning: Organized Living Lifetime Ventilated Shelving is coated with a durable epoxy powder coating that requires no regular maintenance. If required, the shelving may be cleaned with a dry dusting rag or if a stronger cleaning is required, the shelving may be cleaned with any non-abrasive household cleaner and water.

Dealer Support: 1-800-669-3225
Order Fax: 1-513-277-3702

Shelftech

Lifetime Ventilated

Hanging Shelves

Shelf with Hanging Rod

- Most common type of hanging shelf.
- Dual duty shelf perfect for hanging and storage. (Closets, laundries, etc...)
- The shelf cross wires are 1" apart and studs are every 12".
- It comes in two depths, 12" and 16".
- Shelves come in 12' Lengths.



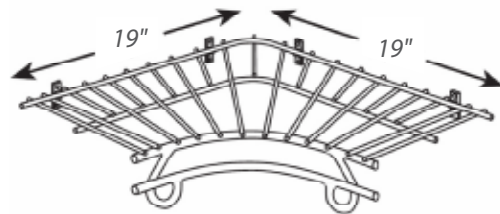
Open Slide® Hanging Shelf

- Allows uninterrupted movement along the entire shelf.
- Dual Shelf, like the Shelf with Hanging rod, but with continuous Hanger movement.
- The shelf cross wires are 1" apart and support hooks are every 6" for strength.
- Comes in 12" depth.
- Shelves come in 12' Lengths.



Corner Rounder Shelves

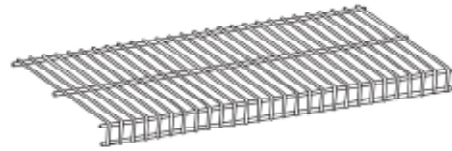
- Extends hanging space around corners inside of closets
- Allow 19" for placement in corner
- Uses Joiner Clip and Waste Saver Joiner
- It comes in 12" Shelf and Rod and 12" and 16" Open Slide Shelves.



Storage Shelves

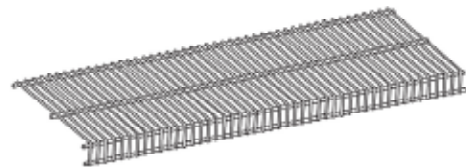
Storage

- An economical shelf used in pantries, linens, laundries, wherever hanging space is not needed.
- May be inverted to create a Shoe Shelf.
- The shelf cross wires are 1 in apart and continue down the front lip of the shelf.
- It comes in three different depths, 12", 16", and 20".
- Shelves come in 12' Lengths.



Tight-Mesh Storage Shelf

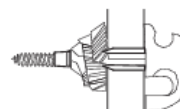
- Tight-Mesh design keeps small items upright.
- May be inverted to create a Shoe Shelf.
- A versatile shelf used in pantries, linens and laundries.
- The shelf crosswires are 1/2" apart and continue down the front lip of the shelf.
- It comes in three different depths, 12", 16" and 20".
- Shelves come in 12' lengths.



Installation Hardware

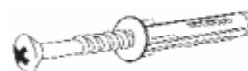
Versa-Clip® with Tri-Loc® II Anchor

- Strongest hardware available.
- Place on Ventilated shelf every 11" on the back wall.
 - Shelf snaps into the Versa-Clip* with 20lbs of pressure.
 - Front of Versa-Clip does not interfere with crosswires.
- Patented Tri-Loc anchor system.
 - Provides full 360 degree contact with drywall.
- Used as Down Back Clip.
 - Placed above the shelf at open ends and above all support braces.
 - Installed in addition to regular usage to capture the back rod and keep the shelf from popping out.



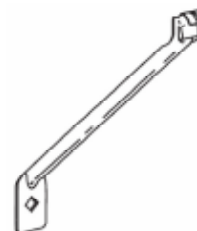
Tri-Loc® II Anchor

- Anchoring system that attaches Support Braces and Side Wall Brackets to the wall.
- Patented Tri-Loc anchor system.
 - Provides full 360 degree contact with drywall.



Support Brace

- Required every 42" and at the open ends of shelving.
- Comes in sizes for 9", 12", 16" and 20" shelves.
- All hanging shelves use 12" Support Brace.



Side Wall and Angled Side Wall Brackets

- Used in place of Support Brace when the shelf meets a wall.
 - Holds the front two rods of the ventilated shelf.
- Side Wall Brackets come with anchors loaded with anchors loaded or with no anchors.
- Angled Side Wall Brackets are designed to accommodate shelves that need to be cut at an angle.
 - Angled Side Wall Brackets only come without anchors loaded.



Anchors Loaded

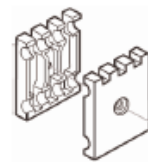


Angled Sidewall Bracket

Installation Hardware – continued

Joiner Clamp

- Used to connect to long continuous runs of shelving.
- Supports 12" and 16" Hanging Shelf and 12" Storage/Linen Shelving.
- Grasps the front wires of any two ventilated shelves.



Strap Back Clip

- Used to secure ventilated shelving to studs in heavy duty applications (optional) such as in pantries and garages.
- Uses a #8 x 1 1/2" Phillips PN: 1430-6688-30 sold separately.



Vertical Support Pole and Clips

- Replaces the Support Braces and Side Wall Brackets.
 - Most commonly used to create a tower of shelving.
- Support Pole uses either plastic Adjustable Pole Clip or metal Snap-In Pole Clips.
- Vertical Support Pole is made of steel and is available in 70" and 84 3/4" lengths.
- Rubber Caps are available for the top and bottom of the Vertical Support Pole.



Metal Corner Bracket

- Bracket used to create a "butt" corner.
- Holds the front of one shelf level with the connecting shelf without interfering with hanger movement.



Lifetime Shoe Rack Support

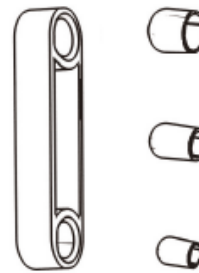
- Used with 12" storage or Tight Mesh shelving.
- Supports shelf at angle
- 2 mounting options.
 - Attached on the middle wire shelf to support the shelf off the wall.
 - Attached to the front of the shelf to support the shelf off the floor.



Installation Hardware – continued

End Caps & Double End Caps

- Covers and finishes rods that have been cut.
 - Prevents articles of clothing from snagging on the ends of the shelf and other issues.
- Presses on the end of each cut rod. Can also be permanently attached to shelf with super glue.
- Large, medium and small sizes available as well as Double End Caps for every application.



Open Slide® Joiner Clip

- Connects the Hanging Rods of two ventilated shelves together to allow for continuous hanging.
- Comes with two bolts and two nuts that tighten the Clip to the Hanging Rod.
- Need two Joiner Clips per Corner Rounder Shelf.



Waste Saver

- Used to connect any two Shelf Rods together other than the Hanging Rod.
- Keeps shelf crosswires 1" apart.
- Fits snugly over wires to allow a seamless transition along the shelf.



Side Wall Support

- Used when you have an Angled Shelf to capture the cross-wires.
- Attaches to the side wall with Tri-Loc Anchor.



Hanging Shelves

Shelftech Shelf with Hanging Rod

- Most common type of hanging shelf.
- Dual duty shelf perfect for hanging and storage. (Closets, laundries, etc...)
- The shelf cross wires are 1" apart and studs are every 12".
- It comes in 12" depths.
- Shelves come in 12' Lengths.



Shelftech Open Slide

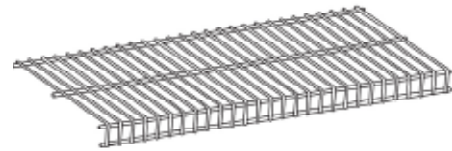
- Shelftech version of Open Slide.
- Studs every 12" provide open slide hanging.
- The shelf cross wires are 1" apart and studs are every 12".
- It comes in 12" depths.
- Shelves come in 12' Lengths.



Storage Shelves

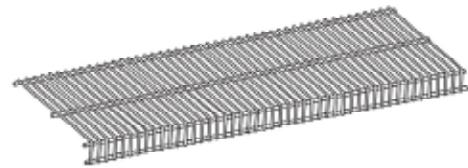
Shelftech Storage

- An economical shelf used in pantries, linens, laundries, wherever hanging space is not needed.
- May be inverted to create a Shoe Shelf.
- The shelf cross wires are 1 in apart and continue down the front lip of the shelf.
- It comes in three different depths, 12" and 16".
- Shelves come in 12' Lengths.



Shelftech Tight-Mesh Storage Shelf

- Tight-Mesh design keeps small items upright.
- A versatile shelf used in pantries, linens and laundries.
- The shelf crosswires are $\frac{5}{8}$ " apart and continue down the front lip of the shelf.
- It comes in three different depths, 9", 12" and 16".
- Shelves come in 12' lengths.

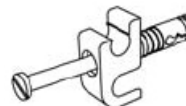


Installation Hardware

Shelftech has its' own pin driven hardware but can use all Lifetime Hardware

Shelftech Pin Driven Back Clip

- Mounts to the back wall every 11".
 - Shelf snaps into the Back Clip with 20lbs of pressure.
 - Front of Back Clip does not interfere with crosswires.
- Pin Driven Hardware mounts securely to the wall.
 - Opens into the drywall for extra strength.
 - Inserted into 1/4" hole.



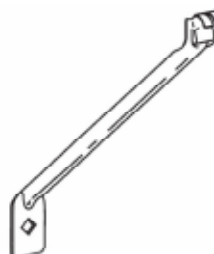
Shelftech Pin Driven Anchor

- Anchoring system that attaches Support Braces to the wall.
- Pin Driven Hardware mounts securely to the wall.
 - Pins into the drywall for extra strength.
 - Inserted into 1/4" hole.



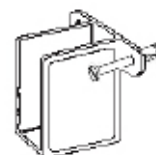
Support Brace

- Required every 36" and at the open ends of shelving.
- Comes in sizes for 9", 12", 16" and 20" shelves.
- All hanging shelves use 12" Support Brace.



Shelftech Pin Driven Side Wall Brackets

- Used in place of Support Brace when the shelf meets a wall.
 - Holds the front two rods of the ventilated shelf.
- Side Wall Brackets come with anchors built in



Universal Shoe Rack Support

- Used with 12" Storage or Tight-Mesh Shelves.
- Supports shelf at an angle.
- Hooks on the back of the shelf and supports the middle of the shelf against the wall.



Installation Hardware—continued

Shelftech Support Pole and Clips

- Replaces the Support Braces and Side Wall Brackets.
 - Most commonly used to create a tower of shelving.
- Pole Clips are installed with self tapping screws
 - Type A: for linen and hanging shelving, mounts through the shelf capturing the front rods.
 - Type B: for Tight-mesh Shelving applications, mounts from the front of the shelf
- Vertical Support Pole is made of steel 84 $\frac{3}{4}$ " long.
- Rubber Caps are available for the top and bottom of the Vertical Support Pole.



Type A



Type B



End Caps & Double End Caps

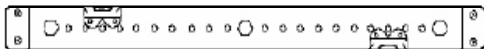
- Covers and finishes rods that have been cut.
 - Prevents articles of clothing from snagging on the ends of the shelf and other issues.
- Presses on the end of each cut rod. Can also be permanently attached to shelf with super glue.
- Large, medium and small sizes available as well as Double End Caps for every application.



Templates

- Available in two different types: Punch-Type (mark wall for drilling later) and Drill Type (has bushing built in for drilling the hole).
 - Punch Type Templates have points on the back of the template that when pressed into the wall mark the wall with small divets where holes should be drilled. Allows for any corrections that need to be made before drilling the actual holes.
 - Drill type templates have a bushing that guides a 1/4" drill bit where holes should be drilled. Process allows for little leeway if holes end up being in the wrong place.
- Templates are available in 24" and 36" Back Clip Templates and for 9", 12"-16" and 20" Shelves.
- The Combination Template is only available as a Drill-Type Template. The Combination Template is used for putting Back Clips and Sidewall Brackets in Shelf Stacks.

Back Clip Template



Side Wall Bracket Template



Back Clip & Side Wall Bracket Template



Template Instructions

Side Wall Bracket

Drill Through

Drill-type Side Wall Bracket Templates: Available for 9", 12"-16": and 20" Deep Shelves



1. Align notch of Side Wall Bracket Template with marked shelf line, level, and drill through the template's bushings using a 1/4" drill.
2. When using combination 12"-16" Side Wall Bracket Template extend sliding extension for 16" deep Linen or Tight Mesh Shelving. Hanging Shelving uses 12" deep position.

Punch

Punch Type Side Wall Bracket Templates: Available for 9", 12"-16": and 20" Deep Shelves



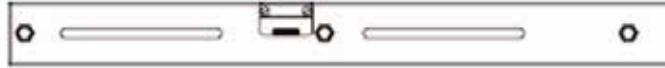
1. Align notch of Side Wall Bracket Template width marked shelf line, level, and press firmly to the wall.
2. When using combination 12"-16" Side Wall Bracket Template extend sliding extension for 12"-16" deep Linen or Tight Mesh Shelving. Hanging Shelving uses 12" deep position. Drill 1/4" hole at all indent marks.

Template Instructions – continued

Back Clip

Drill Through

24" and 36" Drill-type Side Back Clip Templates



1. Measure and mark the required shelf height.
2. Drill a 1/4" hole approximately 1 1/2" inside of the shelf starting point. Insert the post on the template into this first hole, level, and drill the next holes. Repeat this process across the shelf wall. At the end of the shelf wall, it may be necessary to align the slots of the template of the previously drilled holes (not using the post), and drill the last hole approximately 1 1/2" inside of the shelf ending point.
3. If Side Wall Bracket is required, mark the shelf height at the notch before removing Back Clip Template. This mark will be used to align Side Wall Bracket Template.

Punch

24" and 36": Drill-type Side Back Clip Templates:



1. Measure and mark the required shelf height.
2. Align notch on template with this mark, level, and press firmly or tap against the wall to leave small indentation marks. Place the point of the punch in the last indentation, level and repeat the process. At the end of the shelf wall, it may be necessary to align the holes on the template over the previously punched indentations, level and then mark the last indentation, level and then mark the last indentation through the hole with a pencil or awl.
3. If Side Wall Bracket is required, mark the shelf height at the notch before removing Back Clip Template. This mark will be used to align Side Wall Bracket Template.
4. Drill a 1/4" hole at all hole locations.

Template Instructions – continued

Combination Template

Drill Type

Back Clip and Side Wall Bracket Template ("Ironing Board")

CAUTION: Do not rely on the floor to be level. Use the level on the template to ensure level shelves.

1. Determine the required shelf heights. The shelf heights of template can be adjusted by raising or lowering the top section. See information below.
2. Place edge of template where shelf will begin. The foot of template should rest on the floor as you level it. Drill through the second bushing from the edge as well as the next matching color for each required shelf height. Colors are coordinated for moving left to right, and right to left. Move the template across the wall by aligning the template, then drill. (You may also approximate the required 11" between Back Clips and drill the next two sets of holes.)
3. For Side Wall Brackets, place the template against the return wall, and drill the blue and green pair of bushings at the required shelf heights.
4. For 16" 16" deep Linen or Tight Mesh Shelving, extend the foldable arms before drilling for Side Wall brackets. Hanging Shelving uses 12" deep position deep shelving.

Shelf Stack Heights

Shelf heights with legs in extended position:

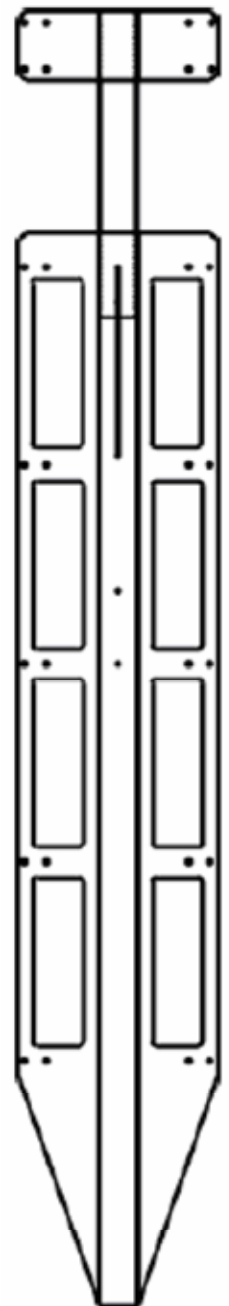
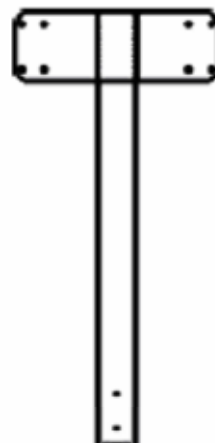
84", 81", 68", 55", 42" and 29"

Shelf heights with legs in lower position:

71", 68", 55", 42", 29" and 16"

33" Extension Arm

- Used with the Combination Template to accommodate taller ceilings.



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Tools

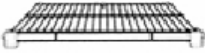
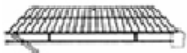
Required Tools:

- Templates
- 9.6 v or greater cordless drill with an extra charged battery
- #2 Phillips Screwdriver
- 1/4" drill bit
- Tape Measure
- Pliers
- T-bevel
- Mallet
- 5 gallon bucket for bulk hardware
- 12" and 24" levels
- Bolt cutters
- Pencils
- Tool belt
- Razor knife

Highly Recommended:

- Pneumatic cutting head
- Cutting table
- Replacement Jaws
- Balancer
- Air Compressor
 - Professional Compressor. 25 gallon, 3 1/2" HP, Vertical, 2-stage, Oil free Pump, 175 psi max or similar compressor

Selecting Proper Hardware

Wall-to-wall with side walls supporting shelves 	Requires A, B Shelves longer than 3'6" require H or I, J	Open-end-to-wall with a side wall anchoring one shelf end and a Support Brace or Support Pole on the other. 	Requires A, B, H or I 	Open-end-to-open-end with Support Braces or Support Poles anchoring both ends. 	Requires A, H or I 
Shoe Rack – upside down with added Shoe Rack Supports, the 12" shelf converts to a shoe rack. 	Requires A, E				

A	Versa-clip with Tri-Loc II Anchor	Attaches Shelving to wall every 11".	
	Shelftech Pin Driven Back clip		
B	Side Wall Bracket with Tri-Loc II Anchor	Support front of Shelf from side wall(s)	
	Shelftech Pin Driven Side Wall Brackets		
C	End Caps – Small, Medium, Large, Double	Covers cut rods for a finished look	
D	Tri-Loc II Anchor	Attaches Support Braces to wall	
	Pin Driven Anchor		
E	Shoe Rack Support	Covers Shelving to shoe rack (not for use with Shelftech)	
F	Adjustable Pole Clips	Attaches multiple shelves to Support Pole (J) at any height	
	Shelftech Adjustable Pole & Clips		
G	Metal Corner Bracket	Joins Shelving to Shelving Corners	
H	12" Support Braces	Supports at open ends or every 42" (36" for Shelftech) For all 12" Shelving and 16" Hanging Shelves	Requires D 
I	16" Support Braces	For 16" Storage Shelving	Requires D 
J	84" Support Braces	May be used in place of Support Braces	Requires F 
	Shelftech Support Pole		

*Patent 6,086,035

Shelftech

Lifetime Ventilated

Hardware to Wire Shelving Ratios for Ordering

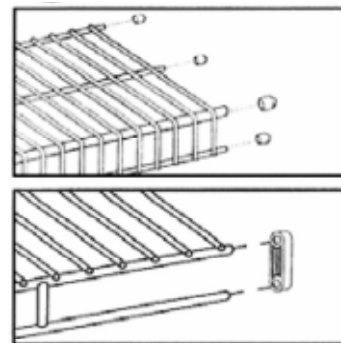
Description	Type of Shelving	Ratio
Back Clip	All	# of ft. x 1.25
Side Wall Bracket	All	# of ft. x 0.45
Small End Cap	All	# of ft. x 1.5
Medium End Cap	All	# of ft. x 2
Large End Cap	Shelf and Rod	# of ft. x 2
Support Brace	All	# of ft. x 0.20
Versa-clip as Downback Clip	Shelf and Rod	# of ft. x 0.20

Installation

End Caps

To cover rods for a finished look.

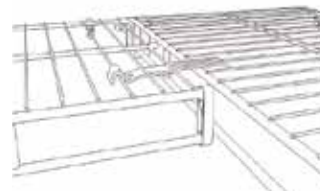
- Place over cut rods on either end of shelving for a finished look.
- Double end caps provide additional support and prevent hanger from sliding off the shelf.



Metal Corner Bracket

Creates corners without Corner Rounders Treatment.

1. Run one shelf fully into corner, secure with a Side Wall Bracket.
2. At corner, butt the end of a second shelf against the first.
3. Secure second shelf with Support Brace.



Shoe Rack Supports

There are 2 ways that you can install the Universal Shoe Bracket

The first way is to install an inverted shelf to back wall (see instruction for Versa-Clip), tilt the shelf all the way up and slide the Shoe Bracket over the back rod as pictured in 1 then tilt the shelf down onto the Shoe Brackets

The second way is to clip the Shoe Bracket onto the inverted shelf while it is off of the wall as pictured in 2a. Then take the shelf and install it to the back wall (see instruction for Versa-Clip)

NOTE: May be used with all 12" or 16" depth shelving.



Support Pole

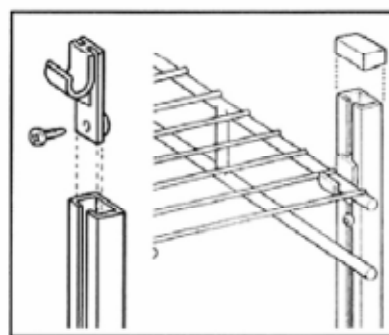
Support Poles provide greater strength than Support Braces when installing multiple shelves.

Adjustable Support Pole Clips allow you to attach shelves at almost any height.

Adjustable Support Pole Clips come in two different types:

1. The screw in type that uses a serrated head to grip the pole. The serrated head stays on the pole even when not attached.
2. Clip-in type. While the clip-in type is stronger, it cannot stay on the pole without weight forcing it down.

The recommended spacing is every 3'6". If desired, an 84" Support Pole can be cut to length about $\frac{3}{4}$ " above the highest shelf. Place caps over each end to protect the floor and provide a finished look.



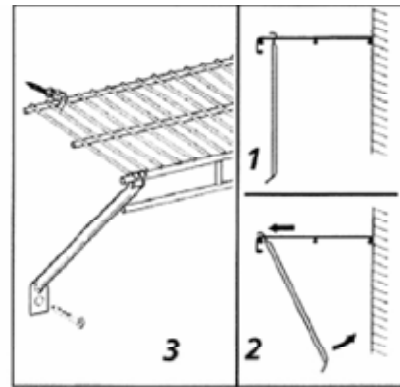
To support shelving at open end or as a center support when Support braces are not used.

Installation – continued

Support Braces

1. Attach shelf to wall. (see instructions for Versa-Clip)
2. While holding shelf level, insert Support Brace in shelf as shown and rotate back to wall. (figure 1 thru 2)
3. Mark wall through Support Brace and drill $\frac{1}{4}$ " hole at marked position.
4. Holding Support Brace to wall, insert Tri-Loc II Anchor or ShelfTech Pin Driven Anchor through Support Brace (figure 3) leaving it approximately $\frac{1}{8}$ " from the wall. Draw tight with power screwdriver until the anchor is flush with the wall for Tri-Loc II Anchor.

NOTE: If installing Tri-Loc II into a stud or solid wall be sure to drill at least 2 $\frac{1}{2}$ " deep and fully insert Tri-Loc II Anchor into the wall.



To support front of shelf at open end or when shelf span is greater than 42" (36" for Shelftech Shelving). For extra-heavy loads, place Support Braces every two feet.

Design Fundamentals

Determining the Type of Installation

This is important because of different types of hardware and installation.

Wall-to-Wall

- In this installation, there are two side walls to attach the shelf.
- This is the easiest installation! Requires Versa-Clips, Side Wall Brackets at each end against the side wall and center support if the shelf is more than 42" long.
- Important: This type of installation requires that you cut the shelving 1" shorter than the measured width.

Open-to-Wall

- In this installation, there is only one side wall available to attach the shelf.
- This installation requires Versa-Clips and a Side Wall Bracket on one end where the shelf will meet the wall and either a Support Brace or Support Pole on the open end.
- The shelf should be measured exactly to the desired length.
- An extra Versa-Clip needs to be installed as a down Back Clip above the shelf at the open end if using a Support Brace.

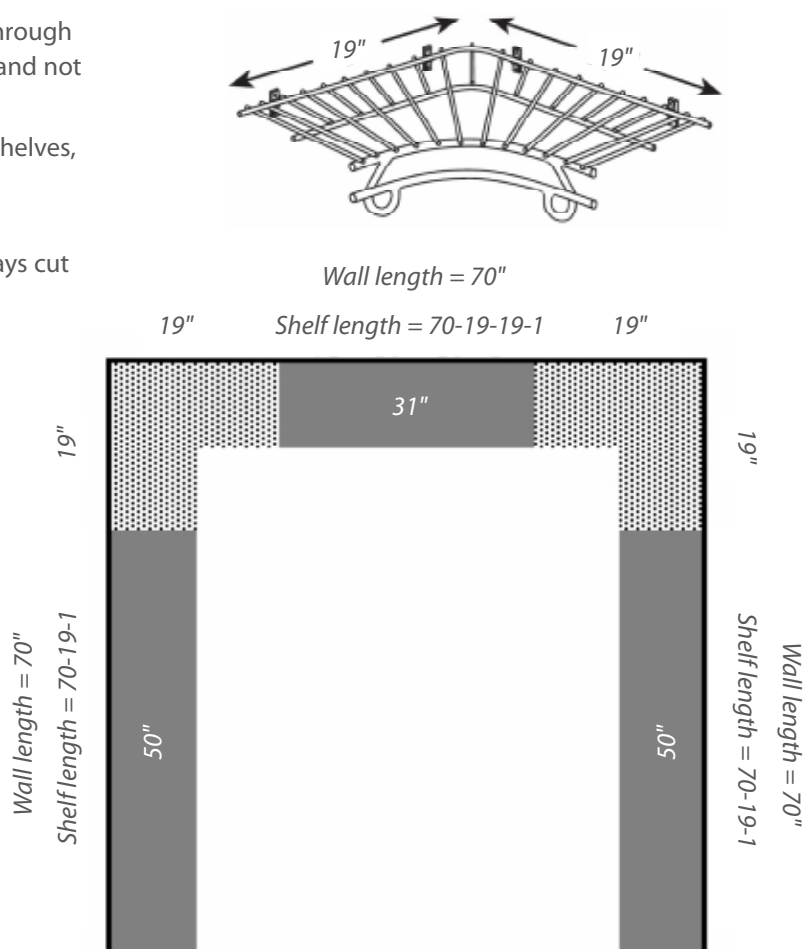
Open-to-Open

- In this installation, the shelf is not attached to either side wall.
- This installation requires Versa-Clips and a Support Brace or Support Pole on both ends.
- The shelf should be measured exactly to the desired length.
- Extra Versa-Clip needs to be installed as a down Back Clip above the shelf at both ends if using Support Braces.

Corner Treatment

Corner Rounder

- This design will allow hanging space to continue through the 90-degree corner, keeping clothing accessible and not pushed into "out-of-reach" corners.
- The Corner Rounder shelf is available for hanging shelves, Shelf with Hanging Rod and Open Slide, and uses conventional hardware.
- The shelf connecting to the Corner Rounder is always cut 1" shorter, similar to a wall-to-wall installation.

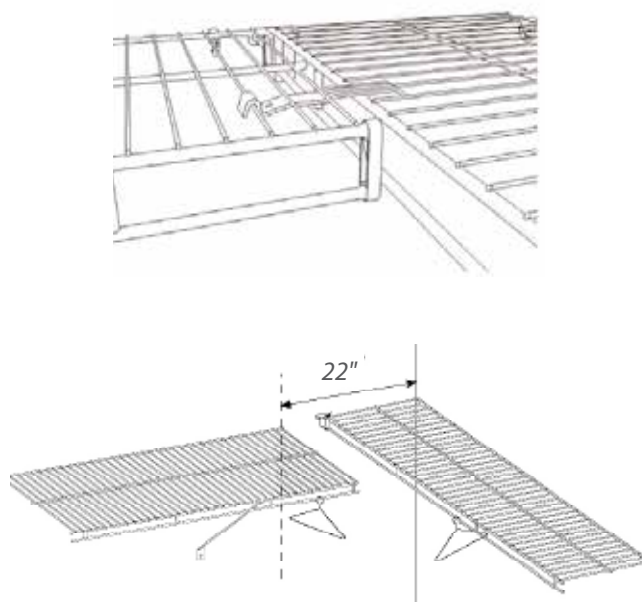


Square

- This design allows the shelves to be butted together in a 90-degree corner.
- Butting shelves in a corner is generally done with storage shelves, such as a large linen closet or the top shelf in a walk-in.
- One shelf uses a Side Wall Bracket. The open-ended shelf uses a metal corner bracket and a support brace. Place the support brace 10–12" from the shelf end so the support brace does not interfere with hanger movement on the other shelf.

Open

- This design is used when one hanging shelf meets another hanging shelf in a corner. It is the most economical and allows for the complete use of the corner for hanging.
- Typically one shelf stops 22–30" from the corner and the other shelf is installed to the wall.



Clothing Measurements and Spacing

The best-designed storage space considers the customer's available space and an inventory of the items to be stored. Ask the consumer to organize his or her items into three groups; long hang, short hang, and items to be placed on shelves or in drawers. This inventory will assist in determining how much space should be allocated to each type of storage. Below you will find a chart of general space guidelines.

Men's Clothing	Thickness	Length	Women's Clothing	Thickness	Length
Jacket	2"	45"	Jacket	2"	36"
Long Coat	2.5"	60"	Long Coat	2.25"	60"
Short Coat	2-4"	42"	Short Coat	2"	42"
Bathrobe	1.5"	54"	Bathrobe	1.5"	51"
Suit	2-4"	39"	Suit	2-4"	36"
Slacks over hanger	1.5"	39"	Slacks over hanger	2-4"	36"
Slacks hung over cuff	1"	54"	Slack hung from cuff	1.5"	51"
Shirt	1.25"	39"	Skirt	1.75"	36"
Ties	6"	30"	Dress	2"	60"
Folded Clothes	14"	12"	Blouse	1.25"	36"
Shoes (pair)	9"	12-16"	Folded clothes	12"	10-12"
			Shoes (pair)	7"	12"

- The width and length measurements found in the chart are approximates and should be adjusted to fit the size of the individual.
- Plan ahead for future additions by adding 10-15% to the storage space required.

Layouts

Single Hang

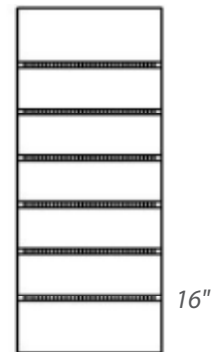
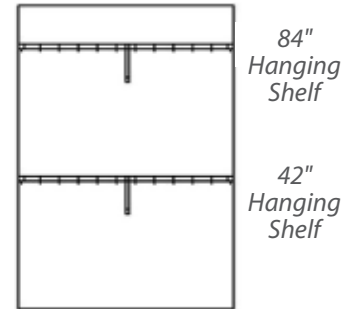
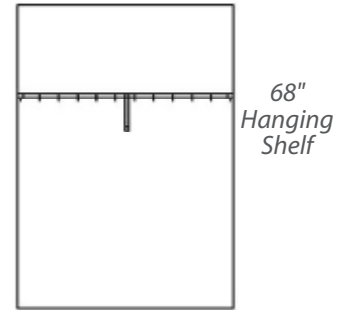
One hanging shelf, typically Shelf & Rod or Open Slide, is hung at 68" from the floor. Generally, an upper Storage/Linen or Tight-Mesh shelf is added at 81" from the floor. Consider a Shoe Shelf (inverted shelf) placed at either 6" or 11" from the floor and at every 8" for multiple Shoe Shelves.

Double Hang

This design doubles the vertical space with two hanging shelves, either Shelf and Rod or Open Slide are hung at 42" and 84" from the floor.

Tower/Stacking

Five or six storage shelves stacked 13" apart (due to support braces) starting at either 29" (five shelves) or 16" (6 shelves) from the floor. Towers can be created in between single or double hang sections of a design for storage of folded clothing.



Layouts – continued

Reach-in

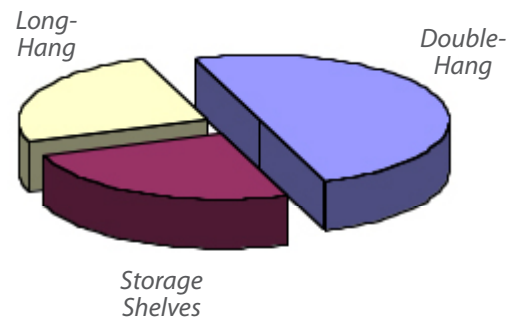
A 50/25/25 rule is a good start.

50% of the closet for Double-hang

25% of the closet for Long-hang

25% of the closet for a Storage Shelves

Using this rule for a typical 8' reach-in closet you would allow 4' for double-hang, 2' for Single-hang and 2' for storage shelves.



Walk-in

A walk-in uses similar rules (50/25/25) as the reach-in, but consider that the “HIS” side may not need 25% single-hang, and the “HER” side may require more.

Child Reach-in

A child's reach-in for toddlers may use triple-hang by mounting shelving at 28", 56" and 84" from the floor. Adjustable installation may be best in this situation (see freedomRail) because it can be changed to normal mounting locations as the child grows.

The tower space should be designed for games, toys and books.

Pre-Teen Reach-in

A pre-teen's closet is similar to a normal reach-in, but the hanging can be installed closer together. If you position the shelving at 32" and 64" then you can put a storage shelf at 84" from the floor which provides double-hang and added storage.

Design Considerations

Doors

The type of door needs to be indicated: Folding doors, Sliding/Bypass Doors, Swinging Doors and Pocket Doors. For Sliding/Bypass Doors, leave the center of the closet somewhat cumbersome to access. Do not put a tower in the center. Instead, consider long hang in the center. Also consider the location of Pocket Doors and do not install on that location.

Return Walls

Reach-in closets often have return walls on either side of the door. These walls may offer an opportunity to hang a tower of shelves if the closet is more than 30" deep.

Above Doors

A closet with a tall inside and a normal size door poses other problems. Once you reach a point in the height of the shelving that it is at or above the doors, a normal depth shelf may not be the best choice. If the closet is 22" deep, once you are above the door height (80"), a 16" deep shelf will only leave 6" of space to access the shelf. Use 9" or 12" deep shelving instead.

Other Obstacles

Any obstruction on a wall that may interfere with the design needs to be listed as well as the location of the obstruction on the wall which includes the following information: the distance between the sides of the walls and the obstruction, the distance between the ceiling and floor of the obstruction and the measurements of the obstruction itself. Obstructions include, but not limited to, the following: windows, light switches, central vac hookups, electrical outlets, heating/cooling vents, access panels, access doors, pocket doors and recessed vanity mirrors that are on the other side of the wall to name a few.

Questions to Ask Before Designing...

Before starting closet designs, the following questions will help you to customize the design to the homebuyer's needs.

Master or Bedroom Closets

How much long hang will the customer need?

- Storage for dresses, robes, pants hung by the cuff.
- Women – 25% estimate between 18" and 36".
- Men – 0–25% but if needed at all, it will be for pants/robes.
- Child – usually none, but teenage girls may need a minimal amount for dresses.

How much shelving will the customer need?

- Shoes, sweaters, handbags, hats, games, toys, linens.
- Women – usually need 1–2 sections.
- Men – at least one section.
- Child – may need as much shelving as hanging.

How much double hang will the customer need?

- After determining long hang and shelving needs, the remainder of the space should be used as double hang.

Linen

What do you store in your linen closet? Do you need to maximize the depth of the closet shelving?

- Is the closet deep enough to install shelving on the side walls?
- Does the customer need deep shelving for beach towels, blankets, etc., if so suggest 16" or 20" deep shelving.
- Suggesting the use of tight mesh shelving makes the space more versatile; smaller items can be stored on the shelving without falling through the cross-wires.

Pantry

Do you need adjustable storage?

- If adjustable storage is desired in the pantry, the customer should be introduced to freedomRail.

Do you buy in bulk?

- Yes – the first shelf should start at 29" to provide sufficient storage below.
- No – the first shelf can be located at 16" to provide 6 storage shelves.

Do you buy items in large packages (cereal boxes, etc)?

- Yes – leave a large space between two shelves or omit one shelf in the stack.
- No – space shelves evenly.

Questions to Ask Before Designing... – continued

Do you store small items (spices, etc) in your pantry?

- Yes – suggest use of tight-mesh shelving to prevent small items from falling between the crosswires.
- No – Linen/Storage shelving will be sufficient.

Do you need to maximize the depth of the shelf (foil, plastic wrap, etc)?

- Yes – suggest 16" or 20" deep shelving.

NOTE: The top shelf in a pantry may need to be 9" or 12" deep to allow clearance with the door header. It is recommended to provide a minimum of "-10" of clearance between the shelf and the door header.

Take-offs

The key to a successful installation is to start with the proper measurements that take into account any obstruction in the closet. Obstructions may include safes, windows, heating ducts, attic access doors, alarm or electrical boxes and light switches. It is also important to note what type of door will be used and the orientation of the door.

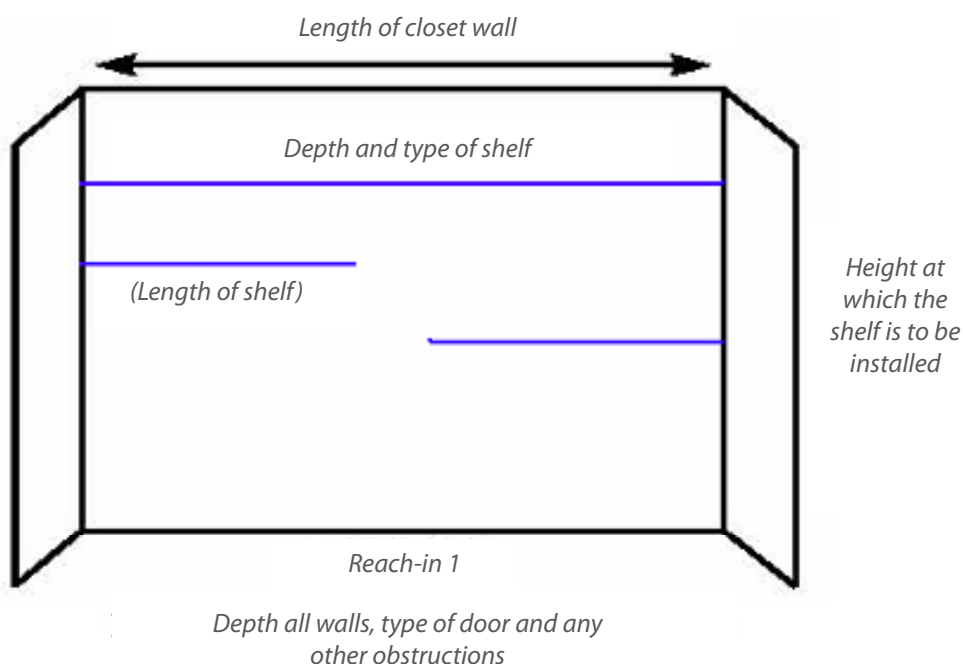
Always consider what is on the other side of the wall!

All measurements should be exact. If the installation is going to call for an inch to be subtracted from the shelf, it should be the cut-man who subtracts the inch. All measurements should be included on a take-off sheet.

The following should be noted on the take-off sheet for each closet:

- All walls must be included in the take off.
- Wall lengths and Heights in inches
- Location of any obstructions (as noted on page 31)
- Type of door (as noted on page 31)

Measurements should be recorded on the take off sheet using the following method:



Take-offs – continued

Abbreviations for Shelving:

SR = Shelf & Rod

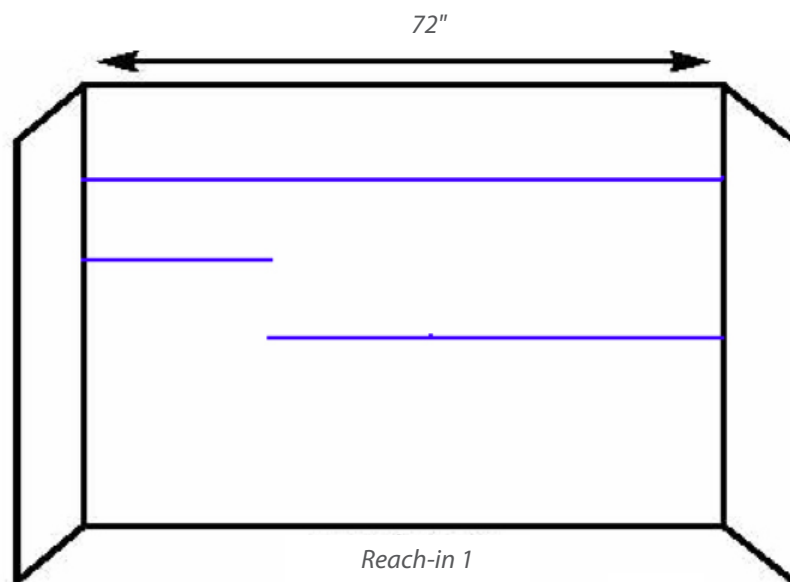
LN = Linen

OS = Open Slide

TM = Tight mesh

It is important to make sure that the wall length is exact and marked at the top of the take off. The length of any shelf that is not to extend wall to wall should be noted under the shelf. The height at which the shelves are to be installed should be indicated next to each shelf.

Example Take Off:



Reach-in Closet and Pantry/Linen/Laundry Take-off Sheet

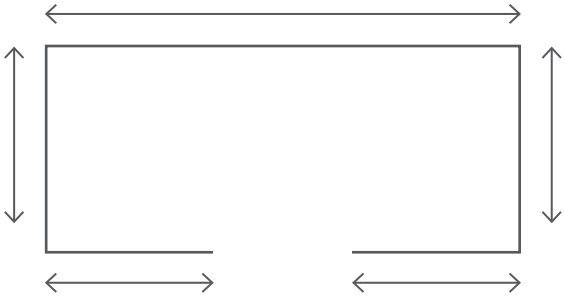
Builder Name/Locations:
Model Name/Number:
Contact Name/Phone #:

Plan Name/Number:
Base Price of Home:
Date:

*Please label any obstructions on the walls that may interfere with the design.

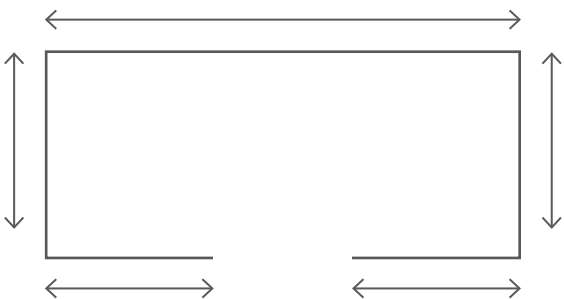
Ceiling Height _____ Type of Door _____

Circle one of each
Door Swing (if regular swinging door): Left/Right, In/Out



Room Name: _____

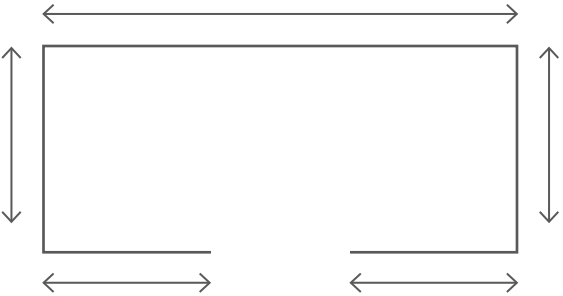
Circle one of each
Door Swing (if regular swinging door): Left/Right, In/Out



Room Name: _____

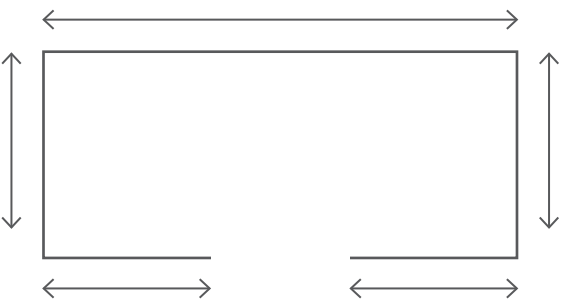
Ceiling Height _____ Type of Door _____

Circle one of each
Door Swing (if regular swinging door): Left/Right, In/Out



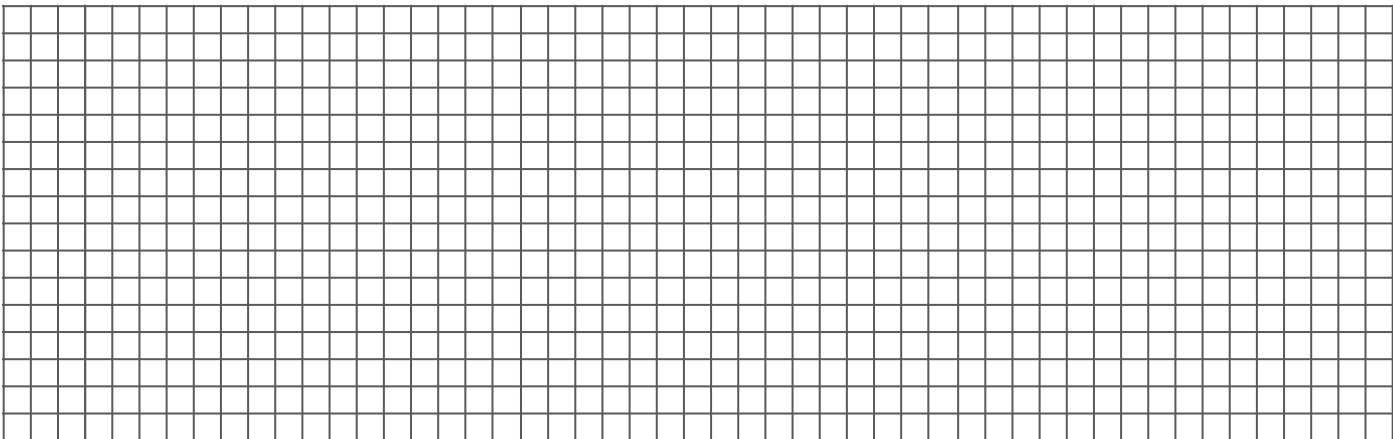
Room Name: _____

Circle one of each
Door Swing (if regular swinging door): Left/Right, In/Out



Room Name: _____

Use the grid below to add additional areas or for areas that have angled walls or sloped ceilings.



Master Closet or Garage Take-off Sheet

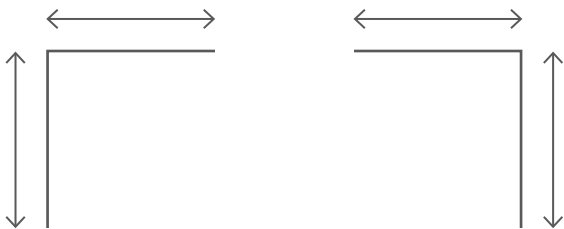
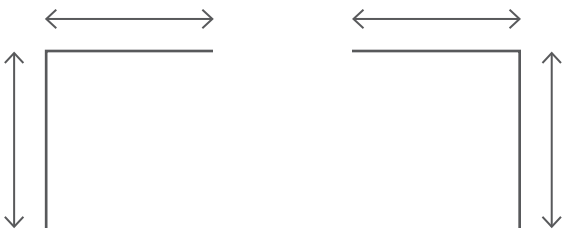
Builder Name/Locations:
Model Name/Number:
Contact Name/Phone #:

Plan Name/Number:
Base Price of Home:
Date:

*Please label any obstructions on the walls that may interfere with the design.

Ceiling Height _____ Type of Door _____
Circle one of each
Door Swing (if regular swinging door): Left/Right, In/Out

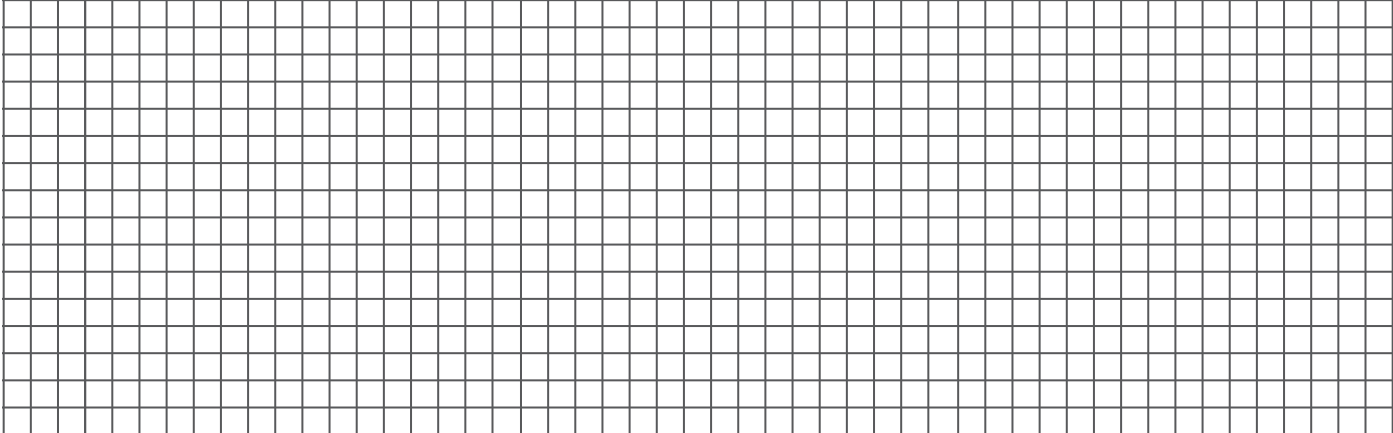
Ceiling Height _____ Type of Door _____
Circle one of each
Door Swing (if regular swinging door): Left/Right, In/Out



Room Name: _____

Room Name: _____

Use the grid below to add additional areas or for areas that have angled walls or sloped ceilings.

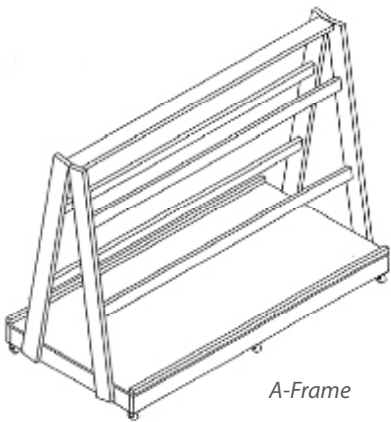
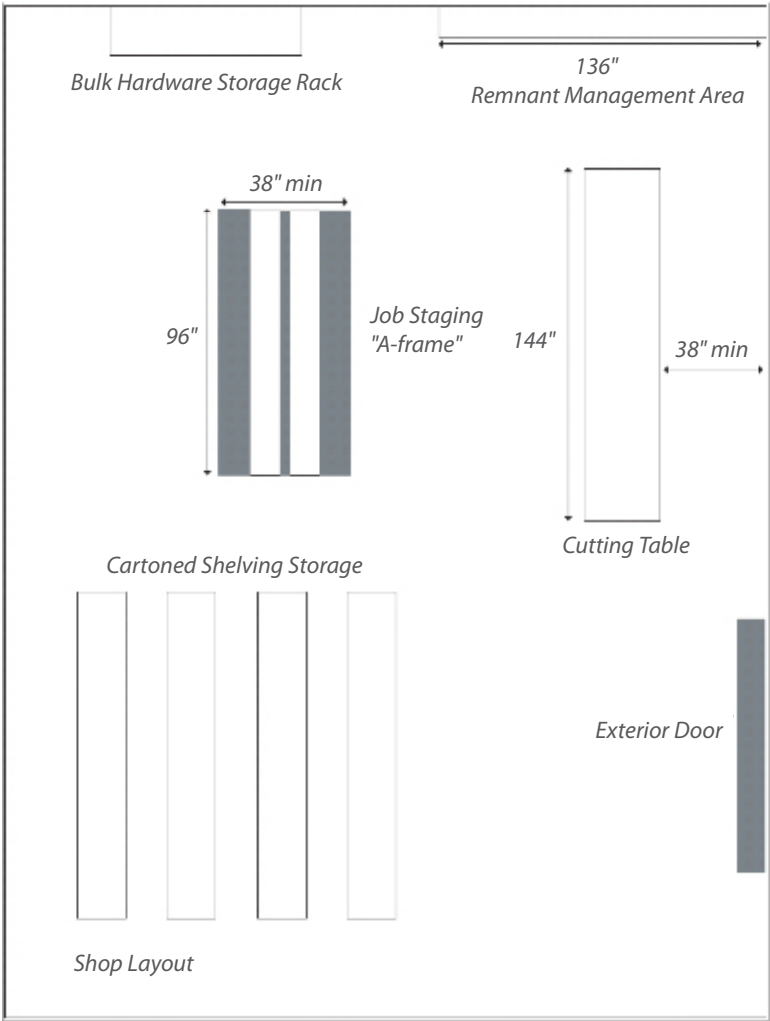


Warehousing & Installation Preparation

- There should be an efficient flow of materials from storage to cutting to bundling and staging.
- Remnant management will minimize waste, maximize your inventory and your cut time, and maximize your profits.
- Bundling jobs by the closet and marking them, increases your efficiency and productivity.

Shop Set-up

The ideal shop will be a minimal of 1000 to 1500 sq ft. The following is a sample shop layout that would allow for an efficient flow of materials through the shop. The cutting area should be at least 15'x20' to 20'x20' in order to allow for easy movement of materials.



Remnant Management

The remnant management area should be positioned as close to the cutting table as the new inventory. A section of wall 10'–16' long should be divided into sections for different types and lengths of shelving, and the walls should be marked in 6" increments from the floor to 12'. This will allow your cutter to easily identify desired lengths of shelving without having to use a measuring tape.

Cutting Guidelines

The following Cutting Guidelines should be posted by the cutting table and above the remnant management area.

Before every cut, always check the remnant pile for a shelf within 6" of the needed length. If all shelves in this area will leave more than 6", use a new 12' shelf.

Shelf and Rod/Open Slide

- Never make a cut that will leave less than 3' (36").
- Never make a cut within 2" of a hook on Open Slide, in order to follow this rule you may need to make 2 cuts.

Linen/Tight-Mesh

- Never make a cut that will leave less than a 2' (24") piece of shelving.

If a shelf is to be installed wall to wall, 1" should be deducted from the measurement, otherwise cuts be exact. A 1/2" deduction is acceptable in order to achieve a proper cut. A proper cut is made in the middle of two deck wires. This allows for proper end capping and possible shelf joining.

When possible, cut more than one house at a time.

Other Tips for Minimizing Waste

- Field measure the job, be careful that your take-offs are neat and complete.
- Cut and prepare the shelving closet by closet in your shop, not at the job-site.
- Follow the remnant management program.
- Bundle each job and/or closet separately and mark the locations on the bundle.
 - Each closet should be wrapped independently and the closet location and house location should be indicated. The number of shelves in each closet should also be indicated.

TIP: Some companies assign a color to each room in a home (ex: Master Closet is always purple) and use a colored shipping tag to indicate the home location.

- All closet bundles for a house should be staged together.
- Double check orders before they leave to ensure that no closets or shelves were omitted.

Truck Set-up

To reduce trips back to the shop for materials, the following should always be in stock on the truck:

- Safety stock of shelving and hardware.
- Bolt cutters.
- Wall patch and sandpaper.
- Templates.