

Clipper® Shelving

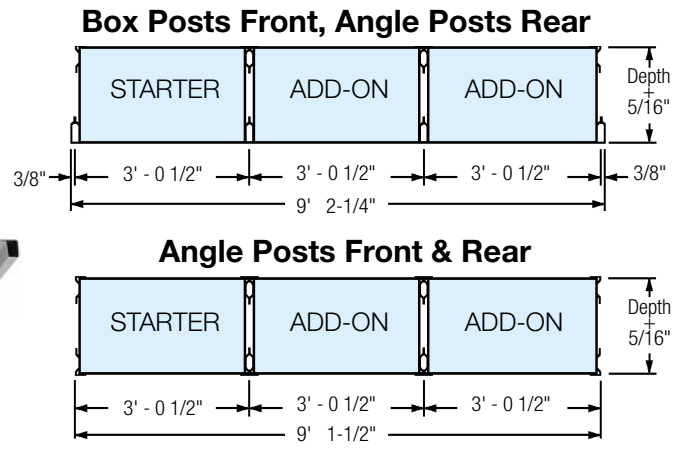
Defined

Clipper Hi-Performance Shelving Systems

At the heart of the Clipper Shelving System is the ingenious Penco Clipper Clip. It is easily installed, holds the shelf firmly in place, can be repositioned at any time, and actually helps make the shelving more rigid.

Clipper® Shelving features Hi-Performance® Box Beam Shelves, which offer an exceptional strength to weight ratio. Clipper Shelving offers a wide variety of sizes and capacities too. This gives you the flexibility to provide top quality storage for a simple back room area up to a sophisticated multi-level or high-rise application.

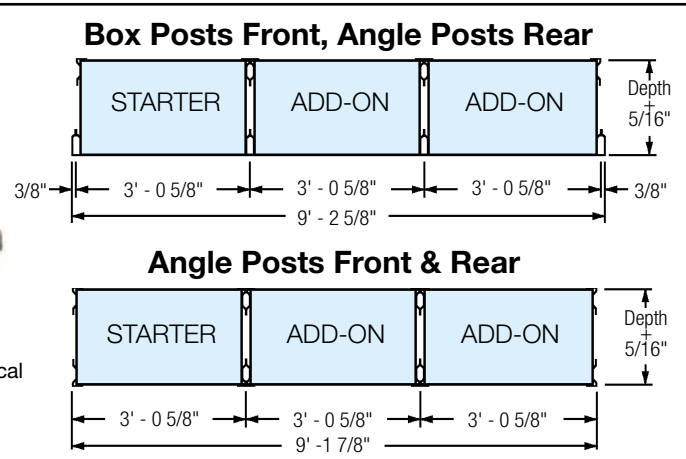
Growth with Penco Hi-Performance® Shelves



Growth with Clipper Conventional Flange Shelves



All dimensions are theoretical subject to manufacturing tolerances.



How To Order Clipper Units

Virtually all shelving storage needs may be satisfied by ordering standard shelving units as illustrated on the following pages. These units are shipped KD with all required components, shelf clips, hardware and assembly instructions.

Choice of Post Arrangements

Penco standard shelving units employ box posts at front and offset angle posts at rear for each section. Other post assembly plans may be employed using offset angle posts at front and rear, when ordered as individual component parts.

Growth Dimension Considerations

To determine the overall dimension of a continuous row of shelving employing box and angle posts, refer to detail drawings below.

To order standard 87" high units:

1. Determine the shelving type desired (open, closed or ledge)
2. Determine shelf width and depth.
3. Order by catalog number as many basic units as required to form a continuous row of shelving.
4. Order by catalog number one ending kit to end each row.
5. Select the appropriate accessories for your application.

Clipper Growth Chart
(With box posts at front, angle posts at rear)

No. of Units In a Row	36" Wide Sections	42" Wide Sections	48" Wide Sections
1	3' 1-3/8"	3' 7-3/8"	4' 1-3/8"
2	6' 2"	7' 2"	8' 2"
3	9' 2-5/8"	10' 8-5/8"	12' 2-5/8"
4	12' 3-1/4"	14' 3-1/4"	16' 3-1/4"
5	15' 3-7/8"	17' 9-7/8"	20' 3-7/8"
6	18' 4-1/2"	21' 4-1/2"	24' 4-1/2"
7	21' 5-1/8"	24' 11-1/8"	28' 5-1/8"
8	24' 5-3/4"	28' 5-3/4"	32' 5-3/4"
9	27' 6-3/8"	32' 0-3/8"	36' 6-3/8"
10	30' 7"	35' 7"	40' 7"
11	33' 7-5/8"	39' 1-5/8"	44' 7-5/8"
12	36' 8-1/4"	42' 8-1/4"	48' 8-1/4"
13	39' 8-7/8"	46' 2-7/8"	52' 8-7/8"
14	42' 9-1/2"	49' 9-1/2"	56' 9-1/2"
15	45' 10-1/8"	53' 4-1/8"	60' 10-1/8"
16	48' 10-3/4"	56' 10-3/4"	64' 10-3/4"
17	51' 11-3/8"	60' 5-3/8"	68' 11-3/8"
18	55' 0"	64' 0"	73' 0"
19	58' 0-5/8"	67' 6-5/8"	77' 0-5/8"
20	61' 1-1/4"	71' 1-1/4"	81' 1-1/4"

Clipper® Shelving

Versatile Shelving & Accessories

Versatile Clipper Shelving can be accessorized for any job.

Back Panel

Completely closes the back of shelving units and provides lateral stability.

Clipper Hi-Performance® Shelf

Available in 19 sizes and 4 classes of load carrying capacity. May be clipped or bolted to posts.

Box Post

Used as a common front post or row end. Allows independent 1" vertical adjustability and access to the full shelf width.

Full Height Dividers

Used to subdivide the shelf opening into smaller units. Punched top and bottom for attachment to shelves.

Heavy Duty Modular Drawers

Provides secure high density storage for small parts. Contact your Penco representative for more information.

Shelf Boxes

Strong steel open topped box for storing small parts. Equipped with built-in stop.

Partial Divider

Divides shelf surface into sections.

Bin Front

To retain small bulk parts on shelf.

Base Strip

Designed to close the space between the bottom shelf and floor to promote good housekeeping.

Label Holder, Accepts 7/8" labels.

Side Panel

Steel sheet used to enclose shelving sides or as a partition between sections placed side by side.

Offset

Angle Post
Roll formed for strength and punched on 1" centers for shelf adjustment. Can be used at front or back of unit.

Sliding Divider

Formed to fit around front and rear flanges of the shelf. May be positioned anywhere along shelf surface.

Back Braces

Attaches to rear posts of open type shelving to ensure lateral stability.

Side Braces

Eliminates front to back sway on open type shelving.



Sway Braces

Open shelving units, 87' high or shorter, must have at least one set of side sway braces per side and one set of back braces. Both side and back braces may be common with adjacent units. For multiple level, deck-over or high-rise shelving structures, the lowest set of braces should be within 6" of the floor. For posts over 87" high up to 123", order two sets of side and rear braces for each unit. Posts taller than 123" may require additional bracing.

For brace location requirements in regions where there is seismic activity, contact a local consultant or the Penco Product Management and Systems Engineering Department.

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Clipper® Shelving

Open Shelving Units

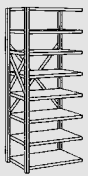
Open Type Shelving

Open type shelving is the basic and most economical shelving design for general purpose use. Backs and sides are open, except that sections are stabilized by sway braces.

For convenient ordering, 36 different open configurations of Basic Units are shown below with their respective End Kits. The completed units below utilize Heavy Duty Hi-Performance® Shelves with box posts at front and offset angle posts at rear. Label holders are not included. Refer to page 4 for ordering instructions.

Many other configurations can be designed from the component parts and accessories on the following pages.

Basic Unit



- 1 Box Post
- 2 Angle Posts
- 1 Set Side Braces
- 1 Set Back Sway Braces
- Shelves
- Hardware

End Kit



- 1 Box Post
- 1 Set Side Braces
- Hardware



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Clipper Open Units

Unit Width	Unit Depth	Unit Height	Capacity Per Shelf**	5 Shelf Basic Cat. No.	6 Shelf Basic Cat. No.	7 Shelf Basic Cat. No.	8 Shelf Basic Cat. No.	End Kit Cat. No.
36" Wide Units	12"	87"	800 lb	1H7015	1H7016	1H7017	1H7018	101287
	18"	87"	850 lb	1H7025	1H7026	1H7027	1H7028	101887
	24"	87"	800 lb	1H7035	1H7036	1H7037	1H7038	102487
42" Wide Units	12"	87"	600 lb	1H7045	1H7046	1H7047	1H7048	101287
	18"	87"	600 lb	1H7055	1H7056	1H7057	1H7058	101887
	24"	87"	600 lb	1H7065	1H7066	1H7067	1H7068	102487
48" Wide Units	12"	87"	500 lb	1H7075	1H7076	1H7077	1H7078	101287
	18"	87"	500 lb	1H7085	1H7086	1H7087	1H7088	101887
	24"	87"	530 lb	1H7095	1H7096	1H7097	1H7098	102487

** For Evenly Distributed Load

Clipper® Shelving

Closed Shelving Units



Front Bases must be ordered separately.

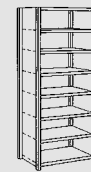
Closed Type Shelving

Closed type shelving units are covered on three sides with steel panels to provide stability, protection and to promote cleanliness of stored items. Optional locking doors may be added for greater security.

The 36 configurations shown below with their respective End Kits employ Heavy Duty Hi-Performance® shelves with box posts at the front and offset angle posts at the rear. Label holders and closed front bases are not included and must be ordered separately.

Refer to page 4 for ordering instructions. Many other configurations can be designed from the component parts and accessories on the following pages.

Basic Unit



- 1 Box Post
- 2 Angle Posts
- 1 Side Panel
- 1 Back Panel
- Shelves
- Hardware

End Kit



- 1 Box Post
- 1 Side Panel
- Hardware

Clipper Closed Units

Unit Width	Unit Depth	Unit Height	Capacity Per Shelf**	5 Shelf Basic Cat. No.	6 Shelf Basic Cat. No.	7 Shelf Basic Cat. No.	8 Shelf Basic Cat. No.	End Kit Cat. No.
36" Wide Units	12"	87"	800 lb	1H8015	1H8016	1H8017	1H8018	1C1287
	18"	87"	850 lb	1H8025	1H8026	1H8027	1H8028	1C1887
	24"	87"	800 lb	1H8035	1H8036	1H8037	1H8038	1C2487
42" Wide Units	12"	87"	600 lb	1H8045	1H8046	1H8047	1H8048	1C1287
	18"	87"	600 lb	1H8055	1H8056	1H8057	1H8058	1C1887
	24"	87"	600 lb	1H8065	1H8066	1H8067	1H8068	1C2487
48" Wide Units	12"	87"	500 lb	1H8075	1H8076	1H8077	1H8078	1C1287
	18"	87"	500 lb	1H8085	1H8086	1H8087	1H8088	1C1887
	24"	87"	530 lb	1H8095	1H8096	1H8097	1H8098	1C2487

** For Evenly Distributed Load



Clipper® Shelving

36" Wide Bin Units

Clipper Shelving Bin Units are closed units with Heavy Duty Hi-Performance shelves, in various quantities, plus dividers and bin fronts as required. Offset angle posts are used at the rear of each unit, and box posts at the front. Order one End Kit to finish a unit or row of units. Front bases are included. Label holders must be ordered separately. This and the following page catalog 36" & 48" wide units, but many other configurations are possible by ordering component parts.

NOTE: Bin widths are nominal. They are measured from the hole centers on the shelves, not the vertical bead of the dividers.

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36" Wide Clipper Bin Units

		9 Openings 8 @ 36" x 9" 1 @ 36" x 12"	13 Openings 12 @ 36" x 6" 1 @ 36" x 12"	21 Openings 21 @ 12" x 12"	21 Openings 21 @ 12" x 12" 7 - 3" Bin Fronts	End Kit
Unit Depth	Unit Height	9 Openings Cat. No.	13 Openings Cat. No.	21 Openings Cat. No.	21 Openings 3" Bin Fronts Cat. No.	End Kit Cat. No.
12"	87"	1H6109	1H6113	1H6121	1H6621	1C1287
18"	87"	1H6209	1H6213	1H6221	1H6521	1C1887
24"	87"	1H6309	1H6313	1H6321	1H6421	1C2487

36" Wide Clipper Bin Units

		29 Openings 16 @ 9" x 9" 4 @ 9" x 12" 9 @ 12" x 12" 8 - 3" Bin Fronts	35 Openings 32 @ 9" x 9" 3 @ 12" x 12"	37 Openings 24 @ 9" x 6" 4 @ 9" x 12" 9 @ 12" x 12"	43 Openings 24 @ 6" x 6" 9 @ 12" x 9" 4 @ 9" x 9" 6 @ 12" x 12"	End Kit
Unit Depth	Unit Height	29 Openings Cat. No.	35 Openings Cat. No.	37 Openings Cat. No.	43 Openings 3" Bin Fronts Cat. No.	End Kit Cat. No.
12"	87"	1H6129	1H6135	1H6137	1H6143	1C1287
18"	87"	1H6229	1H6235	1H6237	1H6243	1C1887
24"	87"	1H6329	1H6335	1H6337	1H6343	1C2487

Clipper® Shelving

48" Wide Bin Units



48" Wide Clipper Bin Units

		9 Openings 8 @ 48" x 9" 1 @ 48" x 12"	13 Openings 12 @ 48" x 6" 1 @ 48" x 12"	28 Openings 28 @ 12" x 12"	28 Openings 28 @ 12" x 12" 7 - 3" Bin Fronts	End Kit
Unit Depth	Unit Height	9 Openings Cat. No.	13 Openings Cat. No.	28 Openings Cat. No.	28 Openings 3" Bin Fronts Cat. No.	End Kit Cat. No.
12"	87"	1H6409	1H6413	1H6428	1H6328	1C1287
18"	87"	1H6509	1H6513	1H6528	1H6228	1C1887
24"	87"	1H6609	1H6613	1H6628	1H6128	1C2487

48" Wide Clipper Bin Units

		42 Openings 16 @ 7-1/2" x 9" 8 @ 9" x 9" 4 @ 7-1/2" x 12" 2 @ 9" x 12" 12 @ 12" x 12" 8 - 3" Bin Fronts	52 Openings 32 @ 7-1/2" x 9" 16 @ 9" x 9" 4 @ 12" x 12"	54 Openings 24 @ 7-1/2" x 6" 12 @ 9" x 6" 4 @ 7-1/2" x 12" 2 @ 9" x 12" 12 @ 12" x 12"	58 Openings 32 @ 6" x 6" 12 @ 12" x 9" 4 @ 7-1/2" x 9" 2 @ 9" x 9" 8 @ 12" x 12"	End Kit
Unit Depth	Unit Height	42 Openings 3" Bin Fronts Cat. No.	52 Openings Cat. No.	54 Openings Cat. No.	58 Openings Cat. No.	End Kit Cat. No.
12"	87"	1H6442	1H6452	1H6454	1H6458	1C1287
18"	87"	1H6542	1H6552	1H6554	1H6558	1C1887
24"	87"	1H6642	1H6652	1H6654	1H6658	1C2487

Clipper® Shelving

Ledge and Counter Units

Ledge Units

Ledge type shelving is recommended where greater depth of the lower compartment is desired, and a convenient working height surface ledge is required. Seven Heavy Duty Hi-Performance® shelves are included plus a heavy gauge ledge top with a reinforcing pan welded to the bottom for extra strength. This provides a total of seven openings.

The units are available in open or closed construction and may be equipped with standard shelving accessories, including locking doors at the top and bottom. Units are 36" wide, 12" deep at the top, and 24" deep at the bottom. Overall height is 87"; the ledge top is 39" high.

The End Kit includes 2 ledge top finishing strips to provide a finished appearance at the sides of the ledge top. Order one End Kit to finish each single unit, or row of units.

Counter Units

Penco steel counters present an extremely clean, classic appearance for over the counter or stock-room use. A smooth, extra heavy gauge reinforced counter top provides an excellent work surface. Three standard Heavy Duty Hi-Performance® Clipper shelves, adjustable on 1" centers, are used below. Units have box posts at all four corners and closed front bases.

The top is designed to butt against adjacent tops when more than one unit is used in a row for a continuous flush surface. One End Kit is required for each single unit, or to end a row of units. Two counter top finishing strips are included with each End Kit, to extend the top beyond the end and provide a finished appearance.

Counter Tops and Fronts may be purchased as separate components. Note that they may be used only when box posts are used at front and rear of unit.



Open Unit with End Kit



Closed Unit with End Kit

Front Bases are included with Closed Ledge Units.

Ledge Units				
Unit Width	Unit Depth	Unit Height	Unit Cat. No.	End Kit Cat. No.
Open Type Units				
36"	12" (Top) 24" (Bottom)	48" (Top) 39" (Bottom)	1H432L	19433E
Closed Type Units				
36"	12" (Top) 24" (Bottom)	48" (Top) 39" (Bottom)	1H434L	19435E



Front and rear views of 2 1H122C Basic Units plus 1 19125E End Kit

Counter Units				
Unit Width	Unit Depth	Unit Height	Unit Cat. No.	End Kit Cat. No.
Complete Units				
36"	24"	39"	1H122C	19125E
42"	24"	39"	1H123C	19125E
48"	24"	39"	1H124C	19125E
Counter Tops Only				
36"	24"	-	13670H	-
42"	24"	-	13680H	-
48"	24"	-	13690H	-
Counter Fronts Only				
36"	-	39"	13870H	-
42"	-	39"	13880H	-
48"	-	39"	13890H	-

Clipper® Shelving

Special Purpose Units

Artwork Shelving

This efficient unit serves the need for storing, organizing and protecting artwork. It is a basic piece of storage equipment wherever artwork is maintained. The unit has 18 openings, each with a 26-3/4" clear vertical opening. The unit includes closed back, sides and base, four Hi-Performance® shelves and 15 dividers. Dividers adjust easily on 1-1/2" centers. Can be accessorized with lockable doors. Order End Kit to finish each unit or row. Shown in Light Putty (723) enamel.



Open Shelf Filing Record Storage

A space-saving efficient unit designed for filing a variety of records in a safe, organized, easily accessible system. Special tabbed dividers insert into the shelf and special back bracket for divider stability. They adjust easily on alternate 1" and 2" centers. The unit features closed sides and base. A special bracket at each shelf level is pierced to accept one tab of the divider. Order End Kit to finish a unit or a row. Shown in Light Putty (723) enamel.



Artwork Shelving						
Unit Width	Unit Depth	Unit Height	No. of Shelves	No. of Dividers	Unit Cat. No.	End Kit Cat. No.
36"	24"	87"	4	15	1H6700	1C2487

Open Shelf Filing Record Storage						
Unit Width	Unit Depth	Unit Height	No. of Shelves	No. of Dividers	Unit Cat. No.	End Kit Cat. No.
36"	12"	87"	8	35	176709	1C1287

X-Ray Shelving

An efficient, practical storage unit with a broad application throughout the healthcare industry for the protective storage of X-ray. The unit features Heavy Duty Hi-Performance shelves, closed back, sides, and base. 25 dividers are furnished in two sizes which adjust easily on 1-1/2" centers. The dividers attach to the shelf with strong plastic buttons. Order End Kit to finish each unit or row. Shown in Light Putty (723) enamel.



Refer to opening sizes in chart below.

X-Ray Shelving						
Unit Width	Unit Depth	Unit Height	No. of Shelves	No. of Dividers	Unit Cat. No.	End Kit Cat. No.
36"	18"	87"	6	25	1H6705	1C1887

Divider Quantities			
Unit Depth	Divider Height	No. of Dividers	Clear Opening Height
18"	16"	15	14-13/16"
18"	18"	10	16-13/16"

Plan Shelving

Designed with the engineer, draftsman or architect in mind, this unit allows plans and drawings to be stored either rolled or flat. This unit provides 64 openings 6" x 36" x 6" for rolled storage and 9 openings 48" x 36" x 4" for flat storage. Unit includes Heavy Duty Hi-Performance shelves, closed back, sides and base. Can be accessorized with lockable doors. Order End Kit to finish each row. Shown in Light Putty (723) enamel.



Plan Shelving						
Unit Width	Unit Depth	Unit Height	No. of Shelves	No. of Dividers	Unit Cat. No.	End Kit Cat. No.
48"	36"	87"	18	56	1H6659	1C3687

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Shelving Components

Box Posts

A high strength roll formed tubular box section usually used at unit fronts; permits full access to shelf width. Designed to be used in common between units, or at row ends. Permits vertical shelf adjustment on 1" centers using clips or nuts & bolts. Internal flange is punched on 3" centers to accept side sway bracing or closed side panels.

Offset Angle Posts

A roll formed high strength post which permits 1" vertical shelf adjustment using clips or nuts & bolts. Can be used at rear of units, or at front and rear. Offset recess adds rigidity and allows for independent shelf clip adjustment. Ends of flanges are punched on 3" centers to accept sway braces or closed panels.

Closed Upright Assemblies

Steel End or Intermediate Panels are used to close the sides of 87" tall shelving units and are securely welded to posts for rigidity.

Small Components

A & B. Clipper Clips - One piece 14 gauge compression clip for box and offset angle posts to hold shelf securely. **A.** For Hi-Performance Shelves; **B.** For Standard Flange Shelves.

C. Post Splice - Used to join Box or Angle posts for high-rise or multi-level shelving applications.

D. Floor Anchor Clip (Foot Plate) Punched for fastening posts to floor. Bolts to post.

E. Floor Protector - To distribute unit load and protect floor. For box and angle posts. Not for use on high-rise or multi-level shelving.

F. Anchors - For securing shelving posts to a concrete floor when Floor Anchor Clips are used. Use the longer anchor #9281 in seismic zones higher than 2A.

G. Heavy Duty Foot Plate - For box, single or double angle posts in high seismic areas.



Small Components

Letter	Unit Description	Cat. No.
A	Clipper Clip (Hi-Performance)	10002Z
B	Clipper Clip (Standard Flange)	100001Z
C	Post Splice	10030H
D	Floor Anchor Clip, 3-1/2" x 2-7/8"	10006Z
-	Shim for "D", 3-1/2" x 2-7/8", 11 Gauge	10011
E	Floor Protector, 1-3/4" x 2-5/8"	10007Z
F	Anchor, 3/8" x 2-1/4"	9280
	Anchor, 3/8" x 3-3/4"	9281
G	Foot Plate, Heavy Duty, 5-1/2" x 2-3/8", 7 Ga.	1ACX322H
-	Shim, Hvy. Duty for "G", 5-1/2" x 2-3/8", 7 Ga.	1ACX330



Box Posts		
Unit Height	14 Gauge Cat. No.	16 Gauge Cat. No.
39"	1B4039C	-
48"	1B4048C	-
75"	1B4075C	-
87"	1B4087C	1B6087C
99"	1B4099C	-
123"	1B4123C	-
147"	1B4147C	-



Offset Angle Posts		
Unit Height	14 Gauge Cat. No.	16 Gauge Cat. No.
39"	1A4039C	-
48"	1A4048C	-
75"	1A4075C	-
87"	1A4087C	1A6087C
99"	1A4099C	-
123"	1A4123C	-
147"	1A4147C	-

14 Gauge Clipper Post Capacities (Pounds)

Unbraced Length (Max. Space Between Shelves)	Box Post Capacity	Single Angle Capacity	Double Angle Capacity (Bolted on 12" Centers)
9"	6740 lb	3760 lb	8270 lb
12"	6450 lb	3490 lb	7670 lb
15"	6070 lb	3130 lb	6880 lb
18"	5630 lb	2700 lb	5940 lb
21"	5090 lb	2180 lb	4790 lb
24"	4480 lb	1680 lb	4460 lb

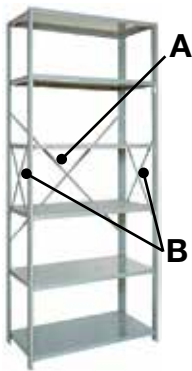
Closed Upright Assemblies

Unit Depth	Unit Height	Cat. No.
Box Post		
		1 Box Post, 1 Angle Post, 1 Side Panel
12"	87"	15412CC
18"	87"	15418CC
24"	87"	15424CC
Offset Angle Post		
		2 Offset Angles, 1 Side Panel
12"	87"	15412AC
18"	87"	15418AC
24"	87"	15424AC
Box Post Intermediate		
		1 Box Post, 2 Offset Posts, 1 Side Panel
12"	87"	15412BC
18"	87"	15418BC
24"	87"	15424BC

Clipper® Shelving

Shelving Components

For Open Construction



Sway Braces (A & B)

Sway braces provide stability for Open Type shelving. They are furnished in sets of two braces to fasten to one back or side of a unit. Hardware included.

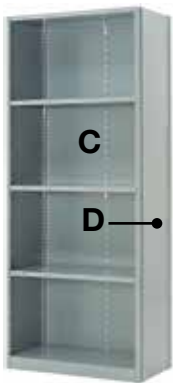
Back sway braces (A.) eliminate lateral sway. They fasten to the flanges of offset angle posts used at the rear of units. Braces also bolt to each other at the center hole to ease installation.

Side sway braces (B.) eliminate front to back sway. They fasten to the flanges of the front and rear posts.



Sway Braces					
Letter Code	Description	Unit Width	Unit Depth	Overall Piece Length	Cat. No.
A	Back Sway Braces	24"	-	45"	12045A
		30"	-	50"	12050A
		36"	-	50-3/4"	12036H
		42"	-	57-1/8"	12042H
		48"	-	65-1/2"	12048H
B	Side Sway Braces	-	9"	11"	12011S
		-	12"	15"	12015S
		-	15"	19"	12019S
		-	18"	26"	12026S
		-	24"	34"	12034S
		-	30"	45"	12045S
		-	32"	46-1/4"	12046S
		-	36"	49"	12049S

For Closed Construction



Back and Side Panels (C & D)

Panels to enclose the backs and sides of Closed Type Shelving provide unit stability while giving greater protection to the shelving contents.

Back panels (C.) bolt to the flanges of offset angle posts at the rear of units. The center of the back is held tight against a shelf with a "back panel clip" furnished with each back. Common backs may be used when units are placed back-to-back, provided that units are securely bolted together.

Backs 36" wide are furnished in one piece through 87" high. Over 87" high, they are split horizontally (2 pieces). 42" & 48" wide backs are furnished in one piece through 51" high; above 51" they are split horizontally (2 pieces). Hardware included.

Side panels (D.) fasten to the flanges in the front and rear posts. Furnished in one piece through 87" high. As an alternate to side panels, you may order Closed Upright Assemblies (shown on the previous page) which combine posts and side panels in one welded unit.



Back and Side Panels									
Letter Code	Description	Shelf Width	Shelf Depth	39" Height	48" Height	51" Height	75" Height	87" Height	99" Height
C	Back Panels	24"	-	-	-	-	-	12340H	-
		30"	-	-	-	-	-	12440H	-
		36"	-	12500H	-	12510H	12530H	12540H	12550H
		42"	-	12600H	-	12610H	12630H	12640H	12650H
		48"	-	12700H	-	12710H	12730H	12740H	12750H
D	Side Panels	-	9"	-	-	-	-	11340H	-
		-	12"	11400H	11409H	11410H	11430H	11440H	11450H
		-	15"	-	-	-	-	11540H	-
		-	18"	11600H	11609H	11610H	11630H	11640H	11650H
		-	24"	11700H	-	11710H	11730H	11740H	11750H
		-	30"	11800H	-	-	-	11840H	11850H
		-	36"	11900H	-	-	11930H	11940H	11950H

Clipper® Shelving

Hi-Performance® Shelves

Clipper Hi-Performance® Shelves maximize load handling capacity through a design which shapes the front and rear flanges into rigid tubular box beams. The box shape provides two vertical surfaces in each box-flange that inherently give it a high strength-to-weight ratio. Additional reinforcing bars or angles are not used with Hi-Performance shelves. Reinforcing options for Class 3 shelves are shown at right.



The shelves are efficiently manufactured from high strength cold rolled steel on a modern automated roll forming mill.

For additional strength, front and rear flanges are welded to the underside of the shelf on 3" centers. Shelf corners are lapped and welded.

Shelves are available in a wide variety of sizes shown below in the capacity chart. All shelves are punched on 1.5" centers to accept shelving accessories such as dividers, label holders and bin fronts.

A. Class 3 Side Shelf Support (pairs)

Used to support Center Support in Class 3 applications.



Class 3 Side Shelf Support	
Unit Depth	Cat. No.
18"	1H830H
24"	1H840H
30"	1H850H
36"	1H860H

B. Class 3 Center Support

Runs left to right beneath the mid-point of the shelf for conversion to Class 3. Supported by side shelf supports.



Class 3 Center Support	
Unit Width	Cat. No.
36"	H13736C
42"	H13742C
48"	H13748C

Clipper Hi-Performance® Shelf Capacities

		Class 0 Medium Duty High Strength Steel		Class 1 Heavy Duty High Strength Steel		Class 2 Extra Heavy Duty High Strength Steel		Class 3 Extra Heavy Duty With Reinforcing*
Unit Width	Unit Depth	Cat. No.	Capacity	Cat. No.	Capacity	Cat. No.	Capacity	Capacity
36"	12"	1H223612C	500 lb	1H203612C	800 lb	1H183612C	1100 lb	-
	15"	1H223615C	500 lb	1H203615C	800 lb	1H183615C	1100 lb	-
	18"	1H223618C	500 lb	1H203618C	850 lb	1H183618C	1200 lb	2000 lb
	24"	1H223624C	500 lb	1H203624C	800 lb	1H183624C	1250 lb	2000 lb
	30"	-	-	1H203630C	500 lb	1H183630C	900 lb	2000 lb
	36"	-	-	1H203636C	500 lb	1H183636C	900 lb	2000 lb
42"	12"	-	-	1H204212C	600 lb	1H184212C	1100 lb	-
	15"	-	-	1H204215C	600 lb	1H184215C	1100 lb	-
	18"	-	-	1H204218C	600 lb	1H184218C	1050 lb	1600 lb
	24"	-	-	1H204224C	600 lb	1H184224C	900 lb	1600 lb
	30"	-	-	1H204230C	625 lb	1H184230C	1000 lb	1600 lb
	32"	-	-	1H204232C	525 lb	1H184232C	950 lb	1600 lb
48"	12"	1H224812C	350 lb	1H204812C	500 lb	1H184812C	750 lb	-
	15"	-	-	1H204815C	500 lb	1H184815C	850 lb	-
	18"	1H224818C	375 lb	1H204818C	500 lb	1H184818C	900 lb	1200 lb
	24"	1H224824C	400 lb	1H204824C	500 lb	1H184824C	900 lb	1200 lb
	30"	-	-	1H204830C	500 lb	1H184830C	750 lb	1200 lb
	36"	-	-	1H204836C	500 lb	1H184836C	750 lb	1200 lb

* Class 3 Capacities are based upon the use of Extra Heavy Duty Shelves with (A) Side Shelf Supports and (B) Center Support for additional capacity. Must use nuts and bolts for shelves, not clips. All shelves are supplied with Clipper Clips. All shelf load capacities are in pounds for evenly distributed loads, and include a safety factor of 1.65.

Clipper® Shelving

Conventional Flange Shelves

Clipper Conventional Flange Shelves are fabricated from 18 gauge cold rolled steel. All sides of the shelf are double flanged for added strength. The corners are lapped and welded for positive reinforcement. Shelves secure to posts with Penco's unique compression Clipper clip, or can be bolted. Shelves are punched for divider placement on alternating 1" and 2" centers. Reinforcing options are shown at right.



All shelves are supplied with Clipper Clips. Nuts and bolts may be substituted upon request. All capacities are for safe static loads distributed uniformly over the entire shelf surface as determined by test. Refer all "Pass Thru" or other unusual conditions to Penco Engineering for their evaluation.

Class 0 - For Normal Loads. No additional reinforcement.

Class 1-B - For Normal Loads requiring impact resistance. A standard Class 0 Shelf with the addition of a 1" x 1/8" reinforcing bar in the front flange.

Class 2-B - For Medium Loads. Same as Class 1-B with the addition of a reinforcing bar in the rear flange.

Class 2-A - For Medium to Heavy Loads. A standard Class 0 shelf with the addition of field installed 1" x 1/8" reinforcing angles in front and rear flanges.

A. Reinforcing Bar

Rollled steel bars insert in the shelf channel for reinforcement. Hardware is included. Not for use with Hi-Performance Shelves.

A - Reinforcing Bar			
Width	Depth	Height	Cat. No.
30"	1/8"	1-3/32"	16660H
36"	1/8"	1-3/32"	16670H
42"	1/8"	1-3/32"	16680H
48"	1/8"	1-3/32"	16690H

B. Reinforcing Angle

1/8" thick rolled steel angles added to the shelf flanges for developing class 2A shelves. Hardware is included. Not for use with Hi-Performance shelves.

B - Reinforcing Angle			
Width	Depth	Height	Cat. No.
36"	1"	1"	16520H
42"	1"	1"	16530H
48"	1"	1"	16690H



Clipper Conventional Flange Shelf Capacities - 18 Gauge

		Class 0		Class 1-B		Class 2-B		Class 2-A	
Unit Width	Unit Depth	Deflection @ Center Ft Edge	Cat. No.	Capacity	Capacity	Capacity	Capacity	Capacity	Capacity
24"	12"	.200"	12810C	990 lb		1270 lb	1580 lb		
	18"	.200"	12830C	1110 lb		1430 lb	1430 lb		
	24"	.200"	12840C	1140 lb		1090 lb	1090 lb		
30"	12"	.250"	12910C	760 lb		980 lb	1230 lb		
	18"	.250"	12930C	820 lb		1060 lb	1320 lb		
	24"	.250"	12940C	920 lb		1030 lb	1030 lb		
36"	9"	.300"	13000C	620 lb	NOTE: Class 1 shelves do not have any more load carrying capabilities over Class 0, but should be used where impact or concentrated loads occur along the front edge.	790 lb	980 lb		
	12"	.300"	13010C	620 lb		810 lb	1010 lb		
	15"	.300"	13020C	620 lb		820 lb	1020 lb		
	18"	.300"	13030C	660 lb		850 lb	1050 lb		
	24"	.300"	13040C	700 lb		920 lb	1090 lb		
	30"	.300"	13050C	790 lb		860 lb	860 lb		
42"	12"	.350"	13110C	520 lb		740 lb	740 lb		
	15"	.350"	13120C	520 lb		690 lb	850 lb		
	18"	.350"	13130C	550 lb		690 lb	860 lb		
	24"	.350"	13140C	580 lb		710 lb	880 lb		
	30"	.350"	13150C	620 lb		740 lb	930 lb		
	36"	.350"	13160C	680 lb		800 lb	800 lb		
48"	12"	.400"	13210C	450 lb		740 lb	740 lb		
	18"	.400"	13230C	470 lb		590 lb	740 lb		
	24"	.400"	13240C	480 lb		600 lb	770 lb		
	30"	.400"	13250C	510 lb		640 lb	790 lb		
	36"	.400"	13260C	550 lb		670 lb	830 lb		
						720 lb	720 lb		



Clipper® Shelving

Shelving Accessories

Finished End Panels



Formed sheet steel panels used to finish the end of a shelving row. Panels attach to posts to cover holes and hardware. Presents an attractive and finished appearance. Must be used with Box Post at front, Angle Posts at rear.

Finished End Panels		
Unit Depth	Unit Height	Cat. No.
12"	87"	18241H
18"	87"	18440H
24"	87"	18540H

Sliding Doors

Flanged on all 4 sides and reinforced. Doors slide on quiet, smooth-running nylon rollers and guides. Designed for use with two 36" wide units side by side. Complete with grooved key cylinder lock and 2 keys. Hardware included. Not for use with Modular Drawers.



Sliding Doors			
Unit Width	Door Frame Height	Unit Height	Pair Cat. No.
72"	36"	39"	1H907236
72"	84"	87"	1H907284

Shelf Boxes



This strong compact open topped box measures 4-5/8" high and is ideal for storing small parts where shelves are spaced on 6" centers. It features a full width drawer pull, built-in drawer stop and recessed label holder. Drawers are slotted on 1" centers to accommodate steel dividers that are ordered separately (see below).

Box guides prevent shelf boxes from sliding behind the front posts. Order 2 Shelf Box Guides for each shelf of boxes. Box Guide Cat. No. 10038H.

Shelf Boxes			
Unit Width	Unit Depth	Boxes Per 36" Shelf	Cat. No.
5-5/8"	11"	6	38030
8-7/16"	11"	4	38035
11-1/4"	11"	3	38040
5-5/8"	17"	6	38180
8-7/16"	17"	4	38185
11-1/4"	17"	3	38190
5-5/8"	23"	6	38255
8-7/16"	23"	4	38260
11-1/4"	23"	3	38265

Shelf Box Dividers

Dividers have built-in label holders and drop into slots in the box sides. Adjustment on 1" centers allow you to compartmentalize each box. Galvanized finish.



Shelf Box Dividers		
Unit Width	Unit Height	Cat. No.
5-5/8"	4-1/2"	38306
8-7/8"	4-1/2"	38307
11-1/4"	4-1/2"	38308

Sliding Reference Shelves



A 12" deep sliding pull-out shelf designed to aid shelving users who need a work surface while working in the shelving area. Fastens beneath any Hi-Performance shelf size shown below, and neatly slides out of the way when not needed.

Sliding Reference Shelves		
For Shelf Size (In.)		Catalog Number
Width	Depth	
36	12	10RS03612H
36	15	10RS03615H
36	18	10RS03618H
42	12	10RS04212H
42	15	10RS04215H
42	18	10RS04218H
42	30	10RS04230H
42	32	10RS04232H
48	12	10RS04812H
48	15	10RS04815H
48	18	10RS04818H



Clipper® Shelving

Shelving Accessories

Front Base Strips



Closes the space between the floor and bottom shelf. Hardware included. The 4" high base is for use with the heavy duty foot plate.

Front Base Strip		
Unit Width	Unit Height	Cat. No.
24"	3"	14500H
30"	3"	14510H
36"	3"	14520H
36"	4"	14525H
42"	3"	14530H
48"	3"	14540H

Swinging Doors



3 Point latching with locking handle and 2 keys. Doors are pre-hung at the factory on a welded frame for easy assembly and good fit. Can be used on standard ledge or counter units up to 87" high. Order doors separately from units. Door can be attached to box posts or angle posts. Base strips

should be ordered to close the opening between the door frame and the floor.

NOTE: Not for use with Modular Drawers.

Swinging Doors			
Unit Width	Door Frame Height	Unit Height	Pair Cat. No.
For Below Ledge or Counter Height			
36"	36"	39"	19600H
For Above Ledge Unit			
36"	48"	48"	19610H
For Standard Shelving Units			
36"	73"	75"	19630H
36"	85"	87"	19640H
48"	36"	39"	19646H
48"	85"	87"	19650H

A. - Bin Front

A formed steel panel partially enclosing the front opening of a shelf to keep bulk items within a bin. 1" & 2" Bin Fronts attach to the front of the shelf with bolts & nuts. 3" high Bin Front attaches to posts with metal clips. Hardware included.

B. - Sliding Divider

Formed to fit around front and rear flanges on the shelf. Position anywhere on surface. No hardware needed. For Hi-Performance Shelves.

C. - Partial Dividers

Partially subdivides shelf to separate stored items. Hardware included.

D. - Full Height Dividers

Used to divide a shelf opening into smaller units. Divider has a beaded front edge for strength and safety. Hardware included. NOTE: For Class 3 shelving applications, contact your representative regarding special notching of dividers.

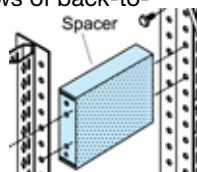
E. - Label Holders

A formed steel strip that accepts 7/8" labels. Fastens to the shelf with plastic buttons (included).



F. - Flue Spacer

A component that can provide a 6" open area between rows of back-to-back shelving to facilitate installation of fire suppression equipment (hardware included).



A. - F. Accessories

Letter Code	Unit Desc.	Unit Width	Unit Depth	Unit Height	Cat. No.
A	Bin Front	36"	-	1"	14210H
		36"	-	2"	14220H
		36"	-	3"	14230C
		42"	-	3"	14330C
		48"	-	3"	14430C
B	Sliding Divider	-	12"	4"	1H4124C
		-	12"	6"	1H4126C
		-	18"	4"	1H4184C
		-	18"	6"	1H4186C
		-	24"	4"	1H4244C
-	24"	6"	1H4246C		
C	Partial Dividers	-	12"	2"	16395H
		-	12"	4"	16410H
		-	18"	2"	16397H
		-	18"	4"	16430H
		-	24"	4"	16440H
D	Full Height Dividers	-	12"	6"	15600H
		-	12"	9"	15620H
		-	12"	12"	15640H
		-	12"	14"	15650H
		-	12"	18"	15670H
		-	15"	6"	15700H
		-	15"	12"	15740H
		-	18"	6"	15800H
		-	18"	9"	15820H
		-	18"	10"	15830H
		-	18"	12"	15840H
		-	18"	16"	15860H
		-	18"	18"	15870H
		-	18"	24"	15890H
		-	24"	6"	15900H
-	24"	9"	15920H		
-	24"	12"	15940H		
-	24"	18"	15970H		
-	24"	24"	15990H		
-	36"	18"	16170H		
E	Label Holders	24"	-	-	13900H
		30"	-	-	13910H
		36"	-	-	13920H
		42"	-	-	13930H
		48"	-	-	13940H
F	Flue Spacer	-	6"	4"	1ACX522H

Clipper® Shelving

QuickShip Shelving



For lead times and warehouse locations, go to:

www.pencoproducts.com/lead-times

www.pencoproducts.com/quickship



Basic Clipper Shelving OPEN QuickShip Units - 87" High



Unit Width	Shelf Depth	5 Shelf Cat. No.	6 Shelf Cat. No.	7 Shelf Cat. No.	8 Shelf Cat. No.
36"	12"	1H7015028	1H7016028	1H7017028	1H7018028
	18"	1H7025028	1H7026028	1H7027028	1H7028028
	24"	1H7035028	1H7036028	1H7037028	1H7038028
48"	24"	1H7095028	1H7096028	1H7097028	1H7098028

Pictured at left: a 5-shelf Open Basic Unit. It requires an Open End Kit for completion (see below).

Basic Clipper Shelving CLOSED QuickShip Units - 87" High



Unit Width	Shelf Depth	5 Shelf Cat. No.	6 Shelf Cat. No.	7 Shelf Cat. No.	8 Shelf Cat. No.
36"	12"	1H8015028	1H8016028	1H8017028	1H8018028
	18"	1H8025028	1H8026028	1H8027028	1H8028028
	24"	1H8035028	1H8036028	1H8037028	1H8038028
48"	24"	1H8095028	1H8096028	1H8097028	1H8098028

Pictured at left: a 5-shelf Closed Basic Unit. It requires a Closed End Kit for completion (see below).

Clipper QuickShip Components

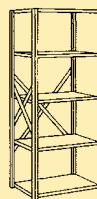
Description	W	D	H	Cat. No.
Box Post	-	-	87"	1B4087028
Offset Angle Post	-	-	87"	1A4087028
Floor Anchor Clip	3-1/2"	2-7/8"	-	10006Z
Concrete Floor Anchor	3/8"	-	2-1/4"	9280
Back Sway Braces	36"	-	-	12036H028
	48"	-	-	12048H028
Side Sway Braces	-	12"	-	12015S028
	-	18"	-	12026S028
	-	24"	-	12034S028
Back Panels	36"	-	87"	12540H028
	48"	-	87"	12740H028
Side Panels	-	12"	87"	11440H028
	-	18"	87"	11640H028
	-	24"	87"	11740H028
Front Base Strips	36"	-	3"	14520H028
	48"	-	3"	14540H028

Clipper Shelving QuickShip End Kits - 87" High

End Kits	Unit Depth	For OPEN Units Cat. No.	For CLOSED Units Cat. No.
Open	12"	101287028	1C1287028
	18"	101887028	1C1887028
	24"	102487028	1C2487028
Closed			

Clipper® QuickShip Adjustable Shelving

- High Quality Industrial Grade
- Open and Closed Configurations
- 87" high units with Box & Angle Posts
- Shelves adjust on 1" vertical centers
- Heavy duty box beam shelves - 4 sizes
- Attractive 028 Gray powder coat finish
- Accessories - Front Bases, Anchors and Floor Anchor Clips

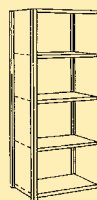


Open Basic Unit

Use an **OPEN Clipper Basic Unit** to start a single unit or a row of shelving. Add additional Clipper Basic Units to add to the row. To end a row or single unit, finish the unit with an **OPEN End Kit**.



Open End Kit



Closed Basic Unit

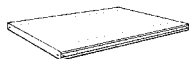
Use a **CLOSED Clipper Basic Unit** to start a single unit or a row of closed shelving. Add additional Closed Clipper Basic Units to add to the row. To end a row or single unit, finish the unit with a **CLOSED End Kit**.



Closed End Kit

Heavy Duty Shelves & Capacities

(Each Shelf comes with 4 Clipper Clips)



Size	Cat. No.	Capacity
36" W x 12" D	1H203612028	800 lbs.*
36" W x 18" D	1H203618028	850 lbs.*
36" W x 24" D	1H203624028	800 lbs.*
48" W x 12" D	1H204812028	500 lbs.*
48" W x 18" D	1H204818028	500 lbs.*
48" W x 24" D	1H204824028	500 lbs.*

* Evenly Distributed Loads for Clipper Hi-Performance Heavy Duty Class 1 Shelves.

Clipper® Shelving

Specifications

General: All shelving shall comply with SMA and ANSI MH 28.1-1982 and in addition shall have the following characteristics:

Posts: All posts shall be punched for clip or nut and bolt construction. Shelves and accessories are to be vertically adjustable on 1" centers. Side sway braces or side panels to be attached to the side flange of the post. Bolts, nuts, and sway braces or panels shall not obstruct the full adjustability of the shelves.

Box Post: Box post to be roll formed and have overall dimensions of 3/4" wide x 2-7/16" deep. Box post to be flush within 1/4" of the face of the shelves when assembled.

Offset Angle: Offset angle post shall be roll formed and have overall dimensions of 1-1/8" wide x 2-1/2" deep. The rear flange shall be punched to accept sway braces or backs, the side flange shall be punched to accept side sway braces or side panels.

Side Panels: Shall be 24 gauge steel. Each side shall be punched with holes for bolting to posts.

Backs: Shall be 24 gauge steel with holes on each side for bolting to angle posts and in the middle for using a back panel clip.

Sway Braces: To be 12 gauge x 3/4" steel punched at each end for bolting to posts and at the center for strength and ease of assembly.

Clipper Shelf Clip: One piece 14 gauge rugged compression type to insert into either box or offset angle posts to form a positive four point connection. Clips shall have two claw-like hooks to seat firmly into post slots and two tabs at bottom to seat into post holes for a tight friction connection. All clips for all posts and shelves to be the same. Design shall offer a pre-clipping feature to simplify erection. Finish: zinc plated. All shelves are to have four independently adjustable clips.

Shelves: Conventional Flange, Class "O": Shall be 18 gauge steel with a 1-3/16" vertical face on all four sides, front and rear faces to have 17/32" return flange 90° with the edges coined upward to prevent snagging. Sides to have a 5/8" return flange 90°. All four shelf corners shall be closed by lapping and spot welding together to provide a firm, rigid shelf. Shelf shall be universally punched for use with all available accessories and for clip or bolted assembly. Shelves are available in 24", 30", 36", 42" and 48" widths and 9", 12", 15", 18", 24", 30" and 36" depths. Shelves can be reinforced by adding 1-3/32" x 11 ga. bars or 1" x 1" x 1/8" angles to front and back flanges.

Shelves: Clipper Hi-Performance® Box Formed: Medium Duty, Heavy Duty and Extra Heavy Duty are manufactured from cold rolled steel in three material thicknesses that provide up to three different shelf capacities per size. Shelves have 1-1/4" face on all four sides. Front and rear faces have four 90° bends providing a 3/4" x 1-1/4" high tubular shape with an 11/16" wide flange seated against the underside of the shelf. The flange is spot welded to the underside of the shelf on 3" centers. Sides have a 5/8" return flange 90°. All four corners are closed by lapping and spot welding together. Medium Duty and Heavy Duty shelf tabs for lapping and welding have formed ribs to maintain the same snug fit in the shelf clip as the extra heavy duty shelf. Overall, the shelf depth and width is 1/4" less than nominal. The shelf is punched for divider adjustment on 1-1/2" centers and for attachment of label holders, bin fronts and base fronts. Hi-Performance shelves are available in 36", 42", & 48" widths and 12", 15", 18", 24", 30" & 36" depths.

Extra Heavy Duty Reinforced (Class 3) Hi-Performance Shelves provide maximum capacity using Extra Heavy Duty shelves that are reinforced using 13 gauge side shelf supports bolted to the Clipper posts and 14

gauge 1-5/32" high hat shaped center supports held in place by a notch and flange in the side shelf support.

Ledge Tops: To be 14 gauge steel. Face of ledge to be 1-1/8" and have a center reinforcing pan. Ledge top to project 1-1/8" beyond the face of the post and to have two 14 gauge angles welded to underside for strength and bolting to post. Must be used with box posts below ledge.

Ledge Tops: To be manufactured from 14 gauge steel and furnished to give ledge top a finished appearance.

Counter Tops: To be 14 gauge steel. Face of counter top to be 1-1/8" and project 1-1/8" beyond face of post with a welded center reinforcing pan. Units to be furnished with box post front and rear for finished appearance. 14 gauge counter top ends can be furnished at the ends of all rows for a finished appearance.

Counter Front: To be 18 gauge steel attached with no exposed fasteners.

Base Strip: Shall be 18 gauge steel attached to face of shelf with bolts and nuts to close space between the bottom of the shelf and the floor.

Label Holder: Shall be 24 gauge steel with necessary holes for attaching to shelves with plastic push-in fasteners.

Shelf Dividers: 6" high through 20" high shall be 24 gauge, 24" high and over shall be 20 gauge. All divider front flanges shall have a 5/16" diameter bead. Top, bottom and rear flanges are 7/8". Dividers less than 24" high shall be attached with plastic push-in fasteners, 24" and higher are bolted.

Partial Dividers: Shall be 18 gauge steel with a 7/8" flange at the bottom. Attached with push-in Plastic Button fasteners.

Sliding Divider: To be 20 gauge steel manufactured to give infinite lateral adjustability. Divider portion shall be sloped 45° at front, 1/2" radius at front corner.

Bin Fronts: To be 18 gauge steel. One and two inch high bin fronts shall be bolted to the face of the shelf. Three inch high bin fronts to be attached to the post by use of 16 gauge zinc plated channel clips.

Shelf Boxes: To be 20 gauge steel with a rigid curled handle at the front of the box, punched with an integral card holder on front and rear. Box shall be 4-5/8" high to fit between shelves on 6" centers and shall be slotted to accept dividers on 1" centers.

Shelf Box Dividers: To be 20 gauge steel. Punched with an integral card holder.

Swinging Doors: Consist of a 16 gauge steel frame and 20 gauge doors, reinforced to prevent warping. Doors are riveted to three 5-knuckle hinges and have a three-point latching device with chrome plated key lock handle. Doors to be preassembled in the frame at factory.

Sliding Doors: Set of doors is 72" wide and cover two 36" wide units. Each door shall be 22 gauge with two or more 18 gauge reinforcing pans, recessed handle and nylon glides and rollers. Each set has 16 gauge channels welded at the top and bottom, and 20 gauge channels on the ends. Doors shall be contained in top, bottom and vertical channels. Right hand door has a provision for a cylinder lock.

Foot Plates: Shall be 13 gauge zinc plated steel and be used to protect floors.

Finish: Finish to be selected from manufacturer's standard colors. Surface to be pretreated with a multiple stage cleaning and metal preparation process. Finish coat of high grade pure polyester powder coat is applied and properly cured to paint manufacturer specifications to achieve optimum performance.

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