

# Introduction to the Heavy Duty System

## **Heavy Duty modular-designed cabinets will meet any equipment requirement**

The Heavy Duty modular electronic cabinet system is designed to support your electronic equipment in a variety of difficult environments. From simple high weight bearing capacity (3,000 pounds) through the most strenuous shock and vibration environments (NEBS Seismic, Mil-Spec 810, Mil-Spec 901) through EMI/RFI shielding environments (FCC Part 15, Tempest, Mil-Std 285), Heavy Duty cabinets allow you to place your systems wherever they might go. We believe that the Heavy Duty Enclosure System is the finest electronic cabinet line on the market today.

To further support you, the widest selection of accessories is available to further enhance the function and economy of the Heavy Duty System of Electronic Cabinets. The Heavy Duty accessories include such items as; Cabinet Trucks, Equipment Shelves, Equipment/Storage Drawers, Work/Writing Shelf Frames with Laminated Plastic Insert Panels, Turrets, Lift Bolts, Sliding Chassis Shelves, Laminated Plastic Work/Writing Shelves, "Pull-Out" Shelves, Hinged Drawer Shelves, Chassis Guides and Supports, and Door and Panel Options such as grills, louvers and perforated openings.

For more information on these products, please see the following pages. A description of the various [Heavy Duty Frames](#) begins on [page A2](#). An index of Heavy Duty Accessories is on [page A26](#). [Shielded Enclosures and Accessories](#) begin on [page A110](#). [Seismic Hardening Kits](#) are on [page A25](#).

If you have any questions, please call (800) 204-7225.



*Heavy Duty Cabinet Assembly with Acrylic Window Door and Recessed Base (rear view)*



*Vertical Rack Frame with Recessed Base*



# Heavy Duty Modular Electronic Cabinets



*Vertical Rack Frame and 30° Sloped Front Console*

Heavy Duty Frames and Consoles		
Frame Type	Dimensions	Features and Options
Vertical Racks	Widths: 19" and 24" call factory for 30" W Depths: 17", 24", 29, 36"	<ul style="list-style-type: none"> <li>▶ 14-gauge multi-formed channel frame sides for heavier load capacities</li> <li>▶ Adjustable and removable 7-gauge Vertical Mounting Rails</li> <li>▶ Recessed ledge for mounting doors and side panels removable from the outside</li> <li>▶ Double ledge transverse members reduce sway or twist giving maximum stability</li> </ul>
Angular Frames for Vertical Racks	Depths: 17", 24", 29, 36"	<ul style="list-style-type: none"> <li>▶ Constructed of 14-gauge multi-formed cold rolled steel</li> <li>▶ Can be utilized with 30°, 45° and 60° units</li> <li>▶ Welded frame design with 16-gauge top and rear panel</li> <li>▶ The sharp nose design minimizes space at the juncture of adjoining frames</li> </ul>
15° and 30° Sloped Front Consoles	Widths: 19" and 24" call factory for 30" W Depths: 24", 29"	<ul style="list-style-type: none"> <li>▶ Frames use strong 14-gauge steel with all-welded construction</li> <li>▶ Front panel slopes 15° or 30° from the vertical</li> <li>▶ Vertical Mounting Rails in sloped openings are removable, but not adjustable</li> <li>▶ Available in 3 slope panel heights</li> </ul>
Angular Sloped Front Frames	Depths: 24", 29"	<ul style="list-style-type: none"> <li>▶ Constructed of 14-gauge multi-formed cold rolled steel channel frame</li> <li>▶ Can be utilized with 30°, 45° and 60° modular cabinet designs</li> <li>▶ Rear panels are removable from the outside for easy access</li> <li>▶ Exclusive sharp nose design minimizes space at the juncture of adjoining frames</li> </ul>

# Heavy Duty Quality Features

## Quality Features Guarantee the Finest Electronic Cabinets Available

### Sway-Proof Corners

The double ledge, double plane corner construction used in the Equipto Enclosure System provides maximum stability with modular design. This unique feature assures increased load carrying capacity, reduction of torsion to a minimum, and virtual elimination of side sway and deflection of the frame from front to back.



### Rugged Mounting Angles

Because the safety and reliability of equipment mounted in the panel openings of an electronic enclosure depends largely on how securely it can be mounted, Equipto engineers specified heavy 1 1/2" x 1 1/2" x 3/16" thick vertical mounting rails for Equipto enclosures.



### Trigger Action Latches

As an optional feature in the Equipto Enclosure System, latches make it possible to remove side and rear panels instantly from outside of the frame. The trigger and bolt are finished in black to harmonize with other hardware. The heavy bolt is designed so that in the open position, it forms a rugged handle to lift the latch panel easily from its recess.



### Mar-Proof Panel Screws

Equipto engineers have combined a 10B sheet metal screw with a nylon washer making it practically impossible to scratch or mar the finish of panels or equipment when screws are removed and then reinstalled. The use of Speed Nuts® permits low-torque, positive vibration-proof fastening of your instrumentation.



### Moveable Angle Support Channels

The horizontal side frame members which support the panel mounting angles can be removed and reinstalled, or completely removed to suit your specific requirements. With this feature, side members need no longer interfere with cabling between cabinets, impede air flow, or create unnecessary problems when equipment must be installed through the side of the cabinet.



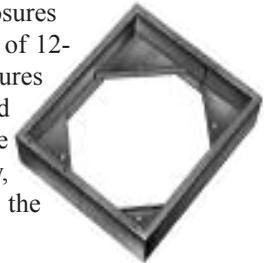
### Modern Hardware

The black-finished, extruded aluminum hardware was designed by Equipto engineers to harmonize well with the electronic equipment and instrumentation installed in all Equipto cabinets. Door hinges, door handles with a two point latch system, drawer pulls and the black nylon washers for Equipto Mar-Proof panel-mounting screws were all conceived to compliment each other, creating a new style trend in electronic cabinet hardware design.



### Heavier Pontoon Bases

Pontoon bases for Equipto enclosures are of channel design, constructed of 12-gauge, cold rolled steel. This insures stability under severe handling and mounting conditions. Since the bases can be removed if necessary, they need not be purchased with the frames if not required.



### Sag-Proof Doors

Because of the double ledge construction of all Equipto Enclosure frames, all doors are mounted flush with the frame surface and recessed within the protective perimeter of the frame itself. All flush doors are mounted with heavy duty separable, extruded aluminum hinges having a 1/4" stainless steel pin and a nylon anti-friction bearing. This minimizes damage in shipment and allows mounting of equipment directly on doors where required. Doors are easily removable.

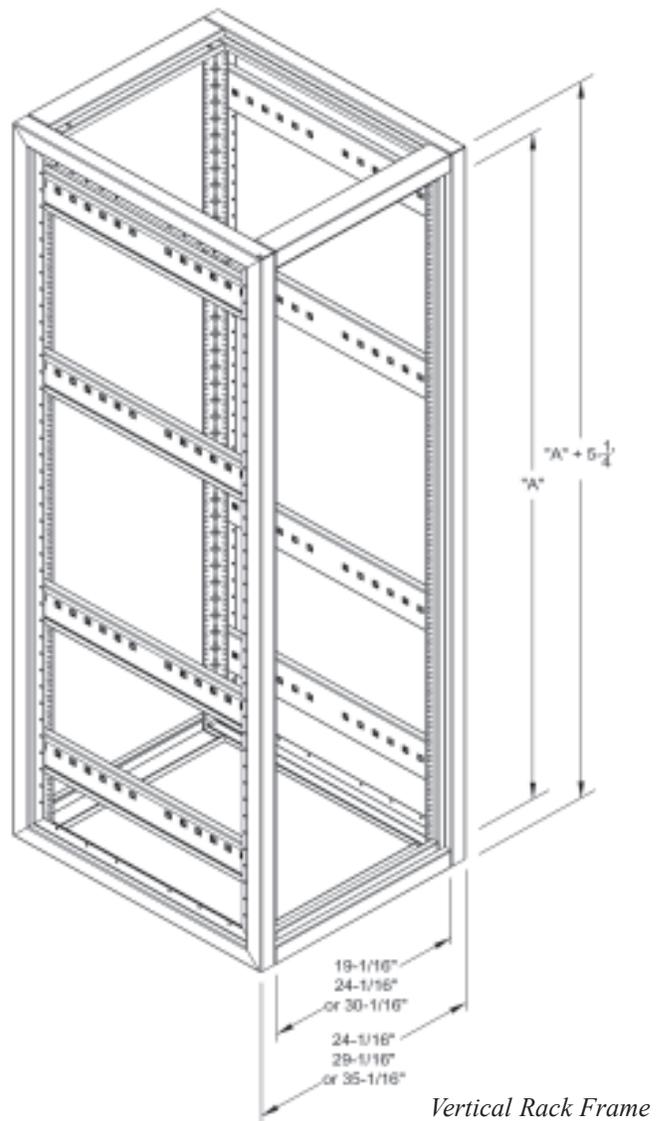




# Vertical Rack Frames

The Heavy Duty line of Vertical Rack Frames is modular-designed sheet metal cabinetry to house electronic equipment and instrumentation, to meet virtually any equipment requirement you may have. At Equipto Electronics, we have value-engineered these frames, designing them to solve your most complex requirements, giving you optimal performance, quality, reliability, standardization and interchangeability. The modular functional design will allow Vertical Rack cabinet frames to be joined side by side, one above the other, and front to back or back to back.

The strong frame structure of the Vertical Rack frames is made of 3/16" thick vertical mounting rails and rugged angle support channels. The design of the frame permits the use of doors in either the front or rear opening without any changes. The four adjustable 1 1/2" x 1 1/2" x 3/16" punched vertical mounting rails with each frame are removable. Frames may also be purchased with tapped vertical mounting rails or without vertical mounting rails. The Equipto Vertical Racks are available in three standard panel widths, four standard depths, and panel heights from 21 to 84 inches per the EIA 310 standard. They are shipped completely assembled with panels and doors installed to your specifications. Please see the table on the following page for more details on specific sizes.



## Product Features

- ▶ 14-gauge multi-formed channel frame sides for heavier load capacities
- ▶ Four zinc plated adjustable and removable punched vertical mounting rails 3/16" thick with universal EIA 310 hole spacing furnished with each frame
- ▶ Recessed ledge for mounting doors and side panels
- ▶ Welded double ledge and double plane corner construction
- ▶ Double ledge transverse members reduce any sway or twist giving maximum stability
- ▶ Variety of base options available

Seismic Kits shown on Page A25

## FRAME OPTIONS

By inserting the following Add-On after the first 3 digits of the frame part number you can order multiple frame accessories with just a one digit part number change. See chart below for choices.  
i.e. - 170H-070-030 Frame VR 19 x 70 x 29 w/tapped vertical mtg rails

Add-On	Frame accessories included when Add-On is included in frame P/N
A	with punched vertical mtg rails and lift blocks
B	with punched vertical mtg rails and prep'd for seismic
C	with punched vertical mtg rails, lift blocks and prep'd for seismic
D	without vertical mtg rails
E	without vertical mtg rails and w/ lift blocks
F	without vertical mtg rails and prep'd for seismic
G	without vertical mtg rails, with lift blocks and prep'd for seismic
H	with tapped vertical mtg rails
J	with tapped vertical mtg rails and lift blocks
K	with tapped vertical mtg rails and prep'd for seismic
L	with tapped vertical mtg rails, lift blocks and prep'd for seismic

# Vertical Rack Frames

VERTICAL RACK FRAMES - 19" Wide Panel Space									
Size of Front and Rear Panel Openings HEIGHT "A"	Part No. of Frame	Side Panels		Hinged Side Panels		Full Length Doors		Front or Rear Full Length Panels	
		External Latch	Internal Screw	Left Hinged	Right Hinged	Left Hinged	Right Hinged	External Latch	External Screw
<b>17" Overall Depth</b> Top / Btm Panel Screw Fastened 371-010-      Top Panel Latching 373-010-									
21 1/8"	170-021-010	314-921-	324-921-	431-921-	434-921-	091-121-	092-121-	381-121-	391-121-
28 1/8"	170-028-010	314-928-	324-928-	431-928-	434-928-	091-128-	092-128-	381-128-	391-128-
35 1/8"	170-035-010	314-935-	324-935-	431-935-	434-935-	091-135-	092-135-	381-135-	391-135-
42 1/8"	170-042-010	314-942-	324-942-	431-942-	434-942-	091-142-	092-142-	381-142-	391-142-
49 1/8"	170-049-010	314-949-	324-949-	431-949-	434-949-	091-149-	092-149-	381-149-	391-149-
<b>24" Overall Depth</b> Top / Btm Panel Screw Fastened 371-020-      Top Panel Latching 373-020-									
21 1/8"	170-021-020	315-921-	325-921-	432-921-	435-921-	091-121-	092-121-	381-121-	391-121-
28 1/8"	170-028-020	315-928-	325-928-	432-928-	435-928-	091-128-	092-128-	381-128-	391-128-
35 1/8"	170-035-020	315-935-	325-935-	432-935-	435-935-	091-135-	092-135-	381-135-	391-135-
42 1/8"	170-042-020	315-942-	325-942-	432-942-	435-942-	091-142-	092-142-	381-142-	391-142-
49 1/8"	170-049-020	315-949-	325-949-	432-949-	435-949-	091-149-	092-149-	381-149-	391-149-
56 1/8"	170-056-020	315-956-	325-956-	432-956-	435-956-	091-156-	092-156-	381-156-	391-156-
63 1/8"	170-063-020	315-963-	325-963-	432-963-	435-963-	091-163-	092-163-	381-163-	391-163-
70 1/8"	170-070-020	315-970-	325-970-	432-970-	435-970-	091-170-	092-170-	381-170-	391-170-
77 1/8"	170-077-020	315-977-	325-977-	432-977-	435-977-	091-177-	092-177-	381-177-	391-177-
84 1/8"	170-084-020	315-984-	325-984-	432-984-	435-984-	091-184-	092-184-	381-184-	391-184-
<b>29" Overall Depth</b> Top / Btm Panel Screw Fastened 371-030-      Top Panel Latching 373-030-									
21 1/8"	170-021-030	316-921-	326-921-	433-921-	436-921-	091-121-	092-121-	381-121-	391-121-
28 1/8"	170-028-030	316-928-	326-928-	433-928-	436-928-	091-128-	092-128-	381-128-	391-128-
35 1/8"	170-035-030	316-935-	326-935-	433-935-	436-935-	091-135-	092-135-	381-135-	391-135-
42 1/8"	170-042-030	316-942-	326-942-	433-942-	436-942-	091-142-	092-142-	381-142-	391-142-
49 1/8"	170-049-030	316-949-	326-949-	433-949-	436-949-	091-149-	092-149-	381-149-	391-149-
56 1/8"	170-056-030	316-956-	326-956-	433-956-	436-956-	091-156-	092-156-	381-156-	391-156-
63 1/8"	170-063-030	316-963-	326-963-	433-963-	436-963-	091-163-	092-163-	381-163-	391-163-
70 1/8"	170-070-030	316-970-	326-970-	433-970-	436-970-	091-170-	092-170-	381-170-	391-170-
77 1/8"	170-077-030	316-977-	326-977-	433-977-	436-977-	091-177-	092-177-	381-177-	391-177-
84 1/8"	170-084-030	316-984-	326-984-	433-984-	436-984-	091-184-	092-184-	381-184-	391-184-
<b>36" Overall Depth</b> Top / Btm Panel Screw Fastened 371-036-      Top Panel Latching 373-036-									
21 1/8"	170-021-036	334-921-	335-921-	441-921-	444-921-	091-121-	092-121-	381-121-	391-121-
28 1/8"	170-028-036	334-928-	335-928-	441-928-	444-928-	091-128-	092-128-	381-128-	391-128-
35 1/8"	170-035-036	334-935-	335-935-	441-935-	444-935-	091-135-	092-135-	381-135-	391-135-
42 1/8"	170-042-036	334-942-	335-942-	441-942-	444-942-	091-142-	092-142-	381-142-	391-142-
49 1/8"	170-049-036	334-949-	335-949-	441-949-	444-949-	091-149-	092-149-	381-149-	391-149-
56 1/8"	170-056-036	334-956-	335-956-	441-956-	444-956-	091-156-	092-156-	381-156-	391-156-
63 1/8"	170-063-036	334-963-	335-963-	441-963-	444-963-	091-163-	092-163-	381-163-	391-163-
70 1/8"	170-070-036	334-970-	335-970-	441-970-	444-970-	091-170-	092-170-	381-170-	391-170-
77 1/8"	170-077-036	334-977-	335-977-	441-977-	444-977-	091-177-	092-177-	381-177-	391-177-
84 1/8"	170-084-036	334-984-	335-984-	441-984-	444-984-	091-184-	092-184-	381-184-	391-184-

\*\* If front or rear panel will be mounted to Tapped vertical mounting rails, then add 'T' to the front of the front/rear panel part number in order to receive the correct mounting hardware. i.e. T381-170-010

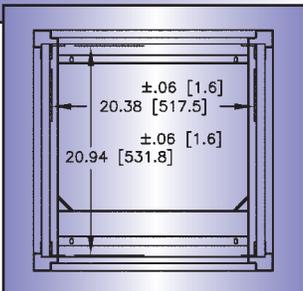
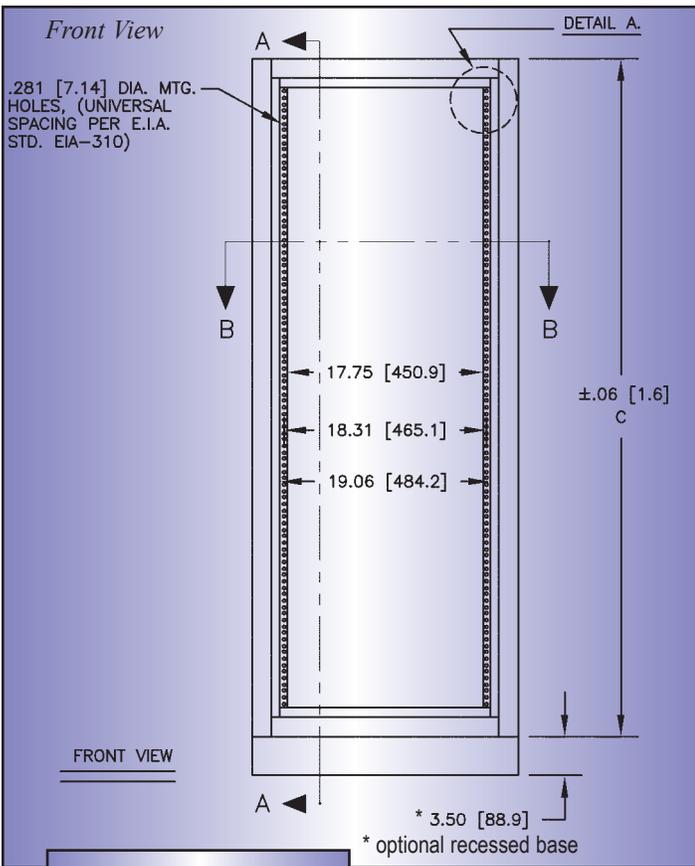
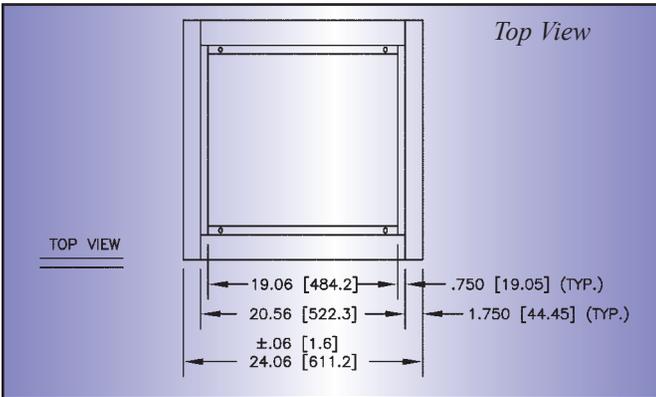
See  
Frame  
Options  
Shown  
On  
Page  
A4

PANEL AND DOOR SUFFIX - Add this style number to the partial part number of doors and panels shown above												
	Plain	Louvered					Grilled				Perforated	Bronze Tinted Acrylic Window Doors
		Top Panel	Top	Bottom	Top & Bottom	Fully	Top Panel	Top	Bottom	Top & Bottom	Top & Bottom	
No Filter	-010	-014	-011	-012	-013	-014	-019	-016	-017	-018	-015	-040
Filtered							-039	-036	-037	-038		



# Vertical Rack Frames

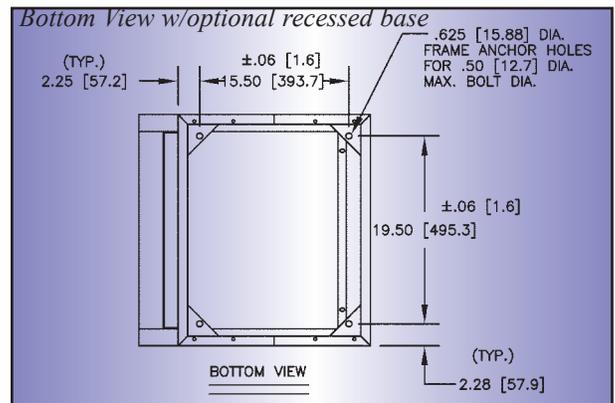
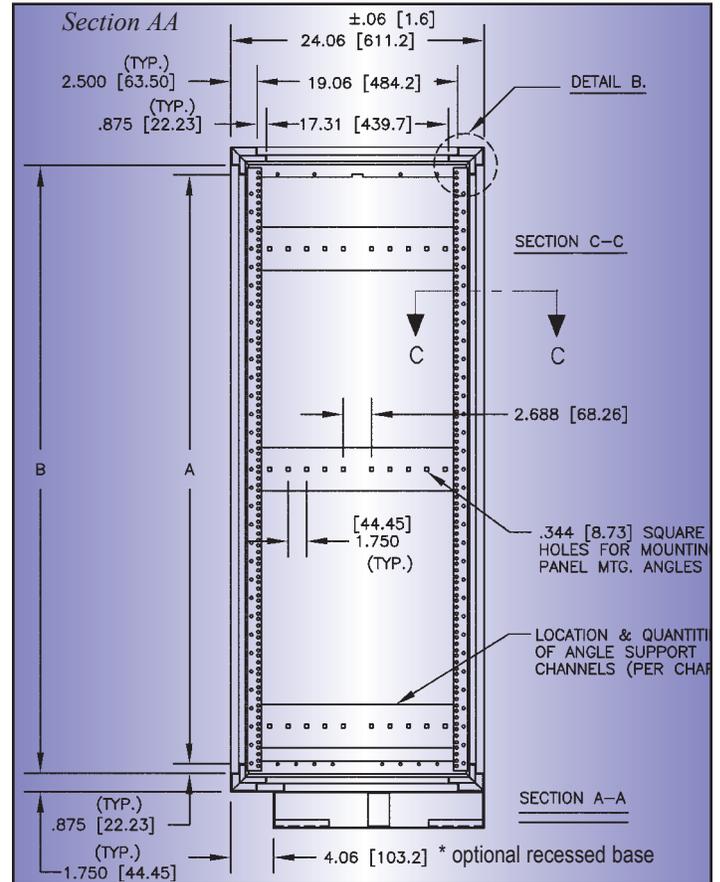
For 19" Panel Width, 24 1/16" Deep



Section BB

**\*\*Note:**

Drawings show optional recessed base for reference.

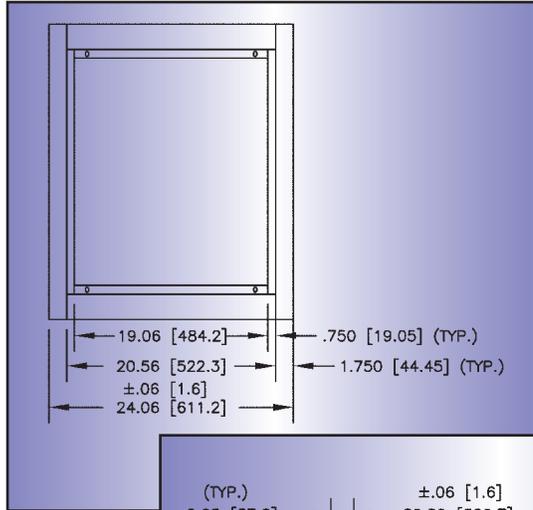


Part No.	A	B	C
170-021-020	21.12 (536.6)	22.88 (581.0)	26.38 (669.9)
170-028-020	28.12 (714.4)	29.88 (758.8)	33.38 (847.7)
170-035-020	35.12 (892.2)	36.88 (936.6)	40.38 (1025.5)
170-042-020	42.12 (1070.0)	43.88 (1114.4)	47.38 (1203.3)
170-049-020	49.12 (1247.8)	50.88 (1292.2)	54.38 (1381.1)
170-056-020	56.12 (1425.6)	57.88 (1470.0)	61.38 (1558.9)
170-063-020	63.12 (1603.4)	64.88 (1647.8)	68.38 (1736.7)
170-070-020	70.12 (1781.2)	71.88 (1825.6)	75.38 (1914.5)
170-077-020	77.12 (1959.0)	78.88 (2003.4)	82.38 (2092.3)
170-084-020	84.12 (2136.8)	85.88 (2181.2)	89.38 (2270.1)

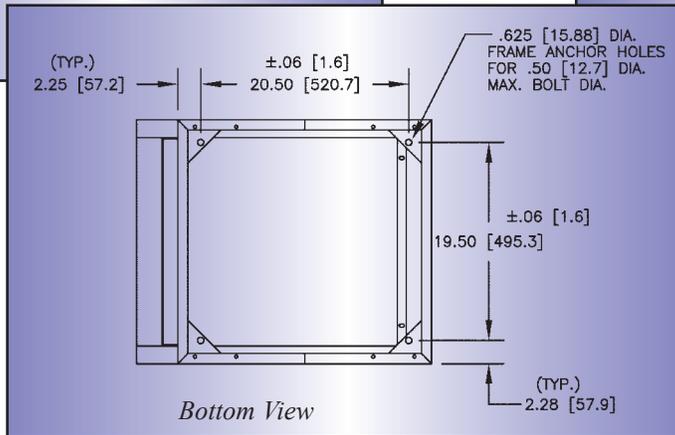
# Vertical Rack Frames

Heavy Duty

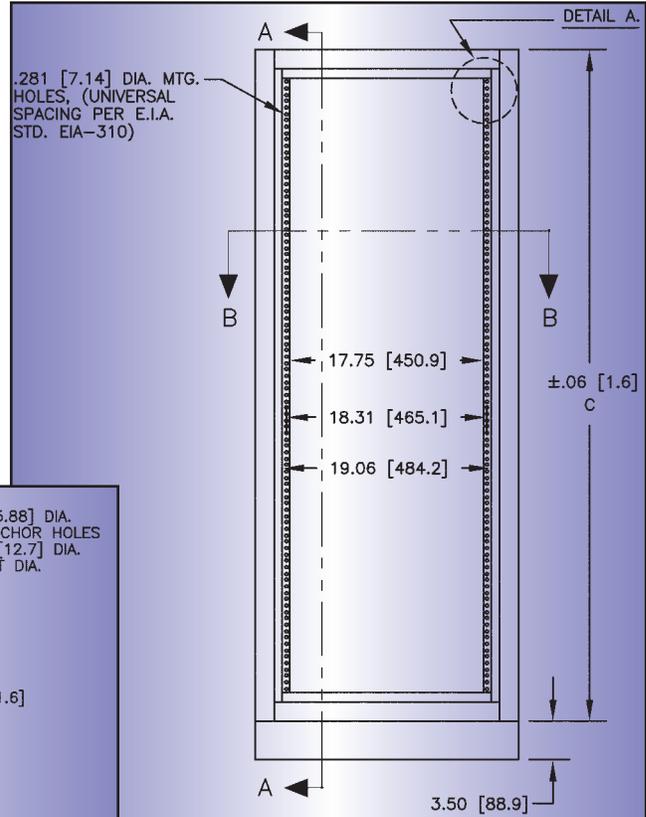
For 19" Panel Width, 29 1/16" Deep



Top View

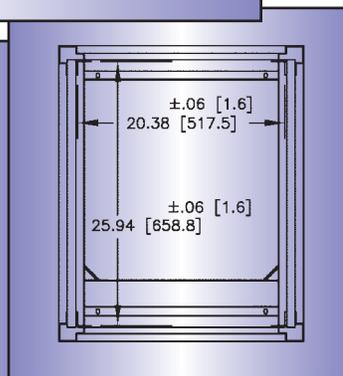


Bottom View

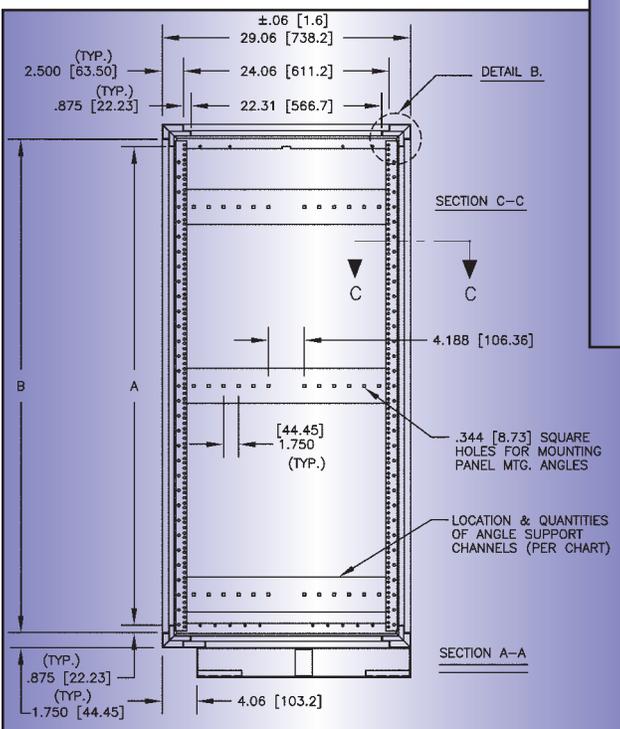


Front View

Section BB



Drawings show optional recessed base for reference.



Section AA

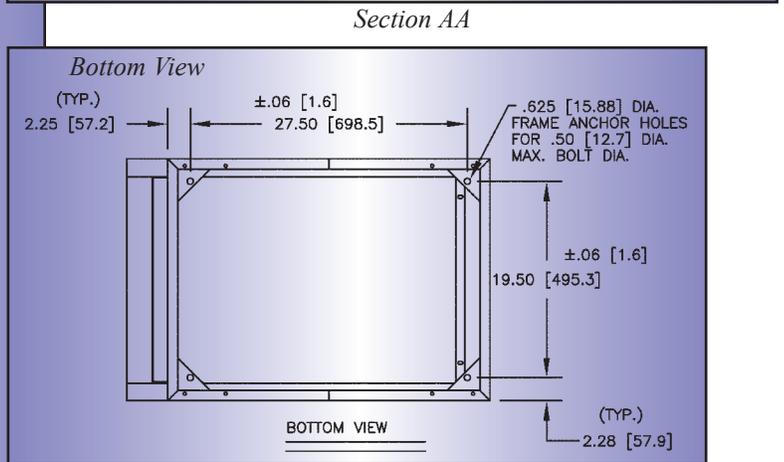
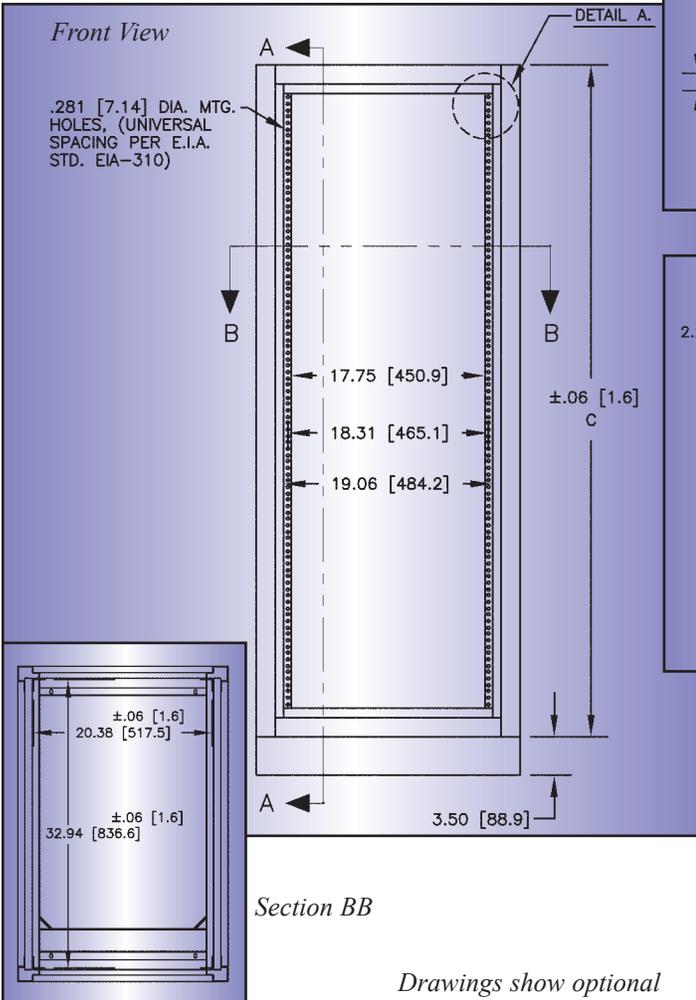
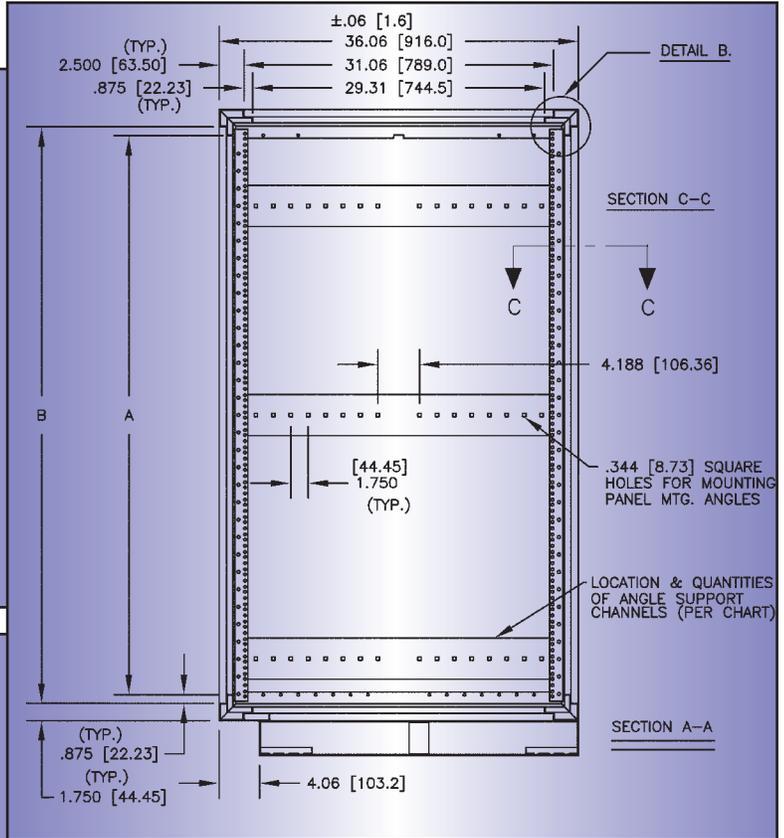
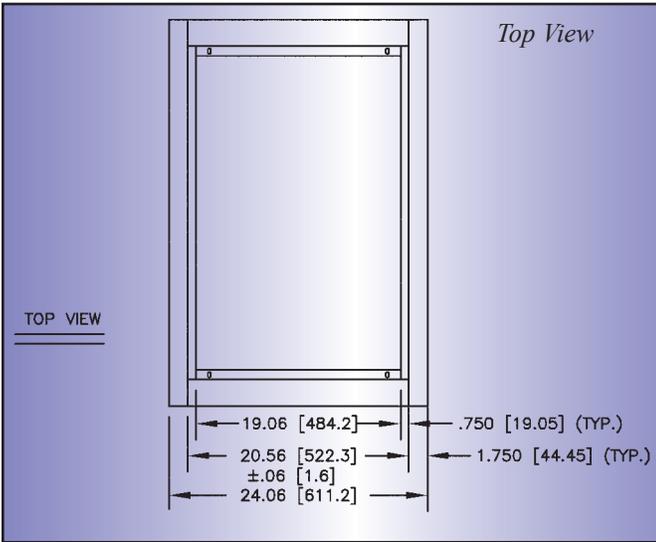
Part No.	A	B	C
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170-028-030	28.12 (714.4)	29.88 (758.8)	33.38 (847.7)
170-035-030	35.12 (892.2)	36.88 (936.6)	40.38 (1025.5)
170-042-030	42.12 (1070.0)	43.88 (1114.4)	47.38 (1203.3)
170-049-030	49.12 (1247.8)	50.88 (1292.2)	54.38 (1381.1)
170-056-030	56.12 (1425.6)	57.88 (1470.0)	61.38 (1558.9)
170-063-030	63.12 (1603.4)	64.88 (1647.8)	68.38 (1736.7)
170-070-030	70.12 (1781.2)	71.88 (1825.6)	75.38 (1914.5)
170-077-030	77.12 (1959.0)	78.88 (2003.4)	82.38 (2092.3)
170-084-030	84.12 (2136.8)	85.88 (2181.2)	89.38 (2270.1)

Visit our web site at [www.equiptoelec.com](http://www.equiptoelec.com) for the latest technical data or a price quote



# Vertical Rack Frames

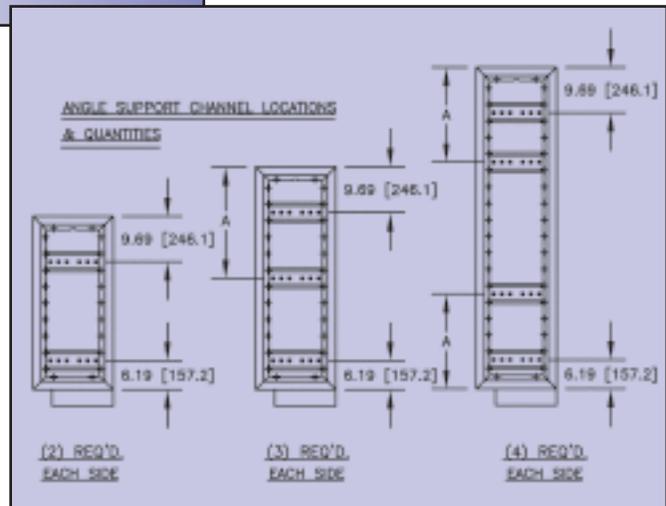
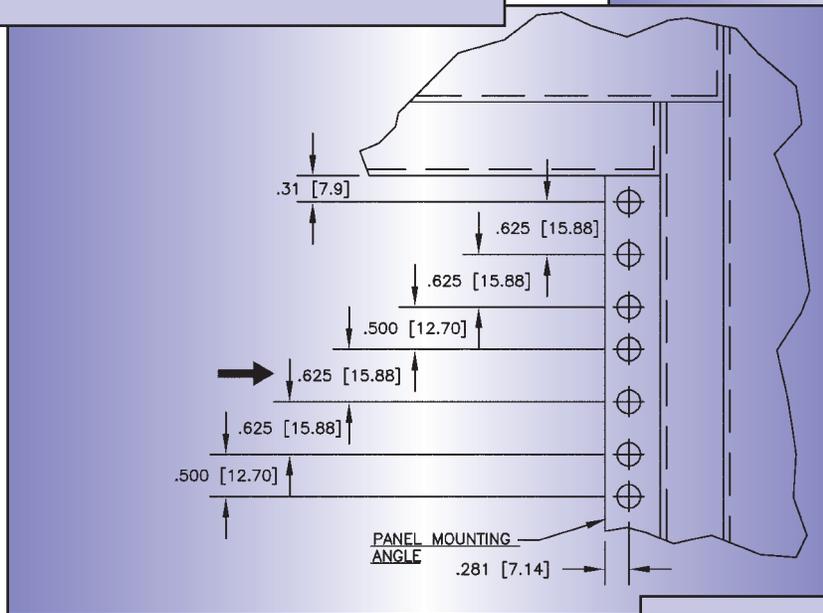
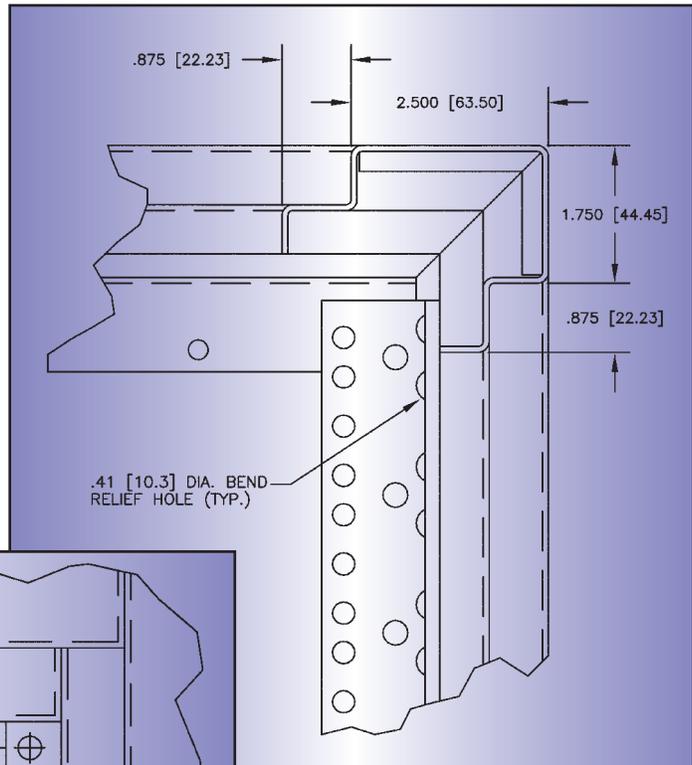
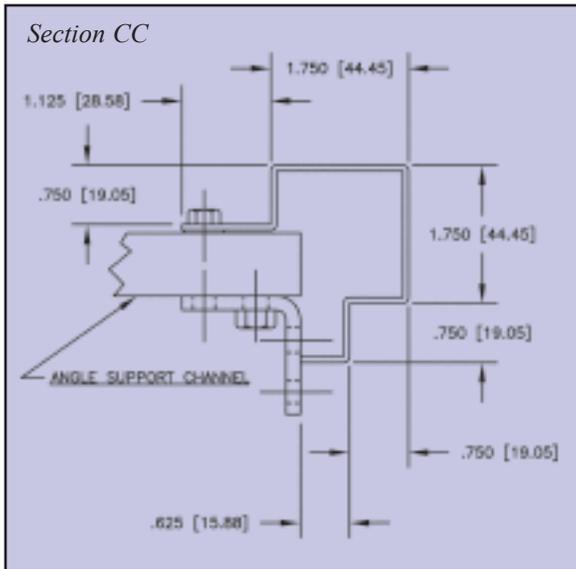
For 19" Panel Width, 36 1/16" Deep



Drawings show optional recessed base for reference.

Part No.	A	B	C
170-021-036	21.12 (536.6)	22.88 (581.0)	26.38 (669.9)
170-028-036	28.12 (714.4)	29.88 (758.8)	33.38 (847.7)
170-035-036	35.12 (892.2)	36.88 (936.6)	40.38 (1025.5)
170-042-036	42.12 (1070.0)	43.88 (1114.4)	47.38 (1203.3)
170-049-036	49.12 (1247.8)	50.88 (1292.2)	54.38 (1381.1)
170-056-036	56.12 (1425.6)	57.88 (1470.0)	61.38 (1558.9)
170-063-036	63.12 (1603.4)	64.88 (1647.8)	68.38 (1736.7)
170-070-036	70.12 (1781.2)	71.88 (1825.6)	75.38 (1914.5)
170-077-036	77.12 (1959.0)	78.88 (2003.4)	82.38 (2092.3)
170-084-036	84.12 (2136.8)	85.88 (2181.2)	89.38 (2270.1)

# Vertical Rack Frame Details



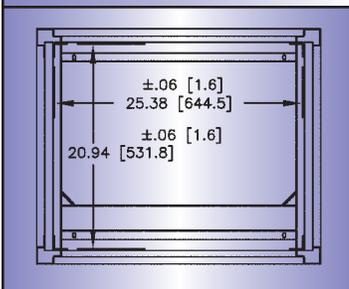
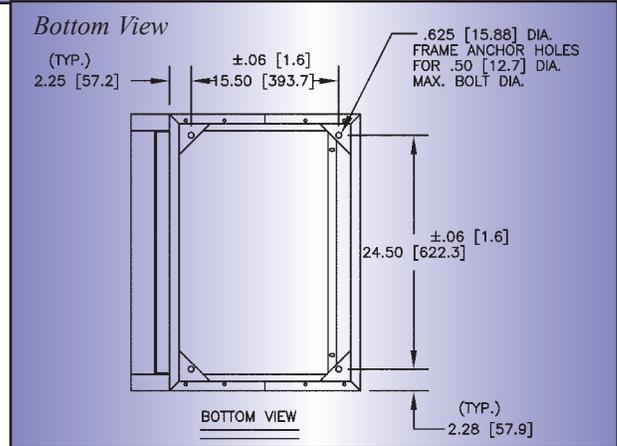
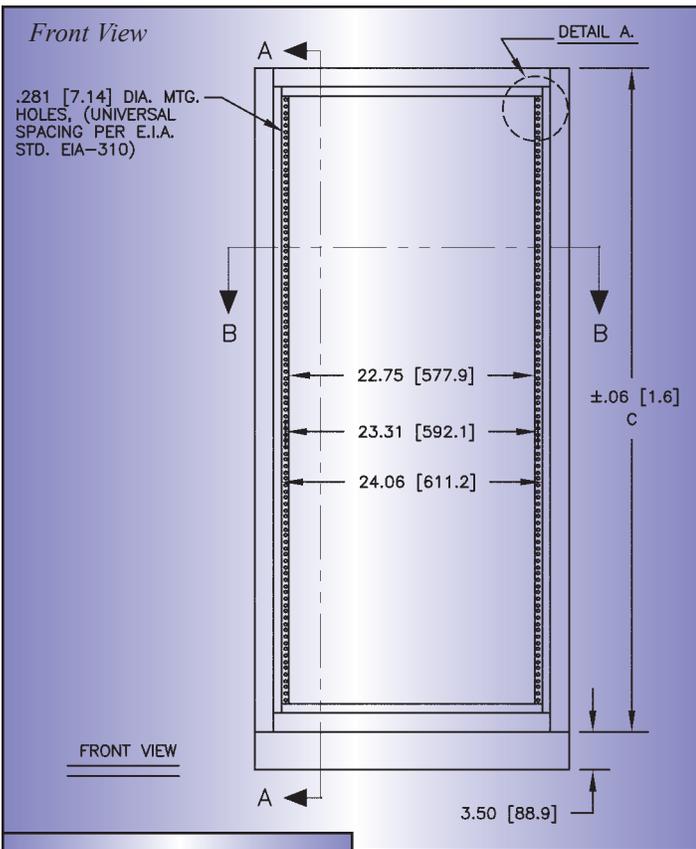
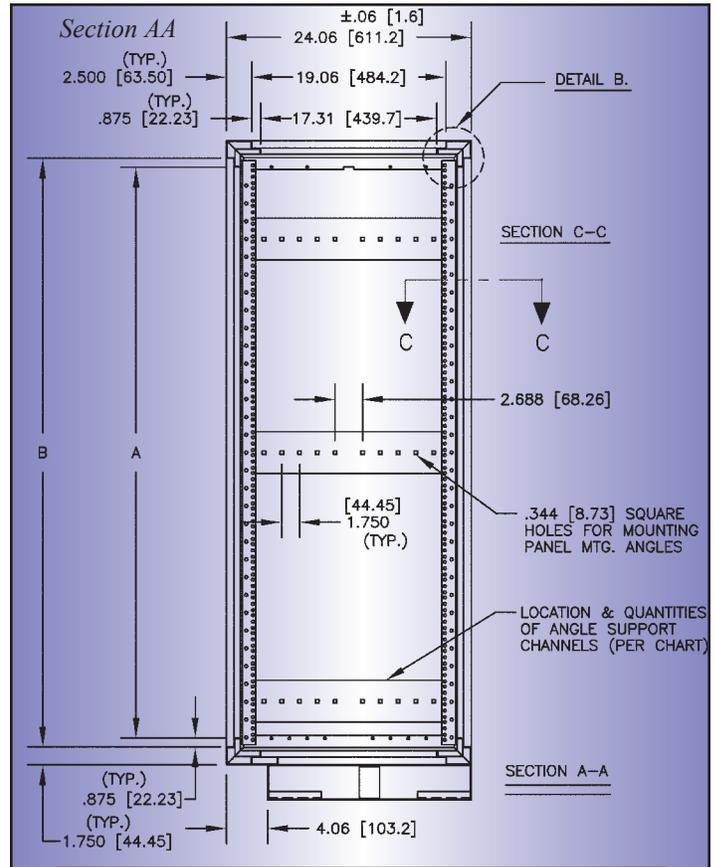
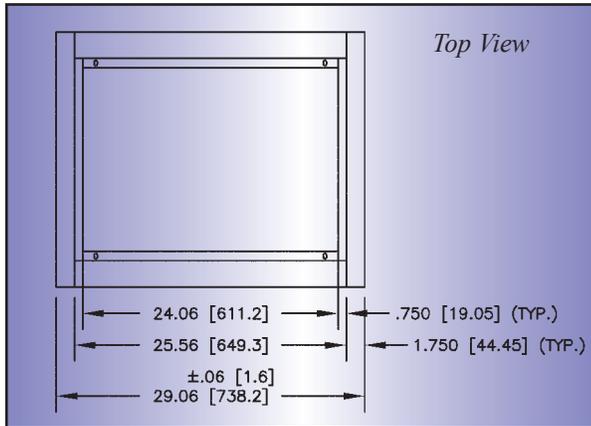
Part No.	Panel Space	A ± .06	No. of Support Channel Per Side
170-021-__	21.12 (536.6)	N/A	2
170-028-__	28.12 (714.4)	N/A	2
170-035-__	35.12 (892.2)	N/A	2
170-042-__	42.12 (1070.0)	23.69 (601.7)	3
170-049-__	49.12 (1247.8)	27.19 (690.6)	3
170-056-__	56.12 (1425.6)	30.69 (779.5)	3
170-063-__	63.12 (1603.4)	20.19 (512.8)	4
170-070-__	70.12 (1781.2)	23.69 (601.7)	4
170-077-__	77.12 (1959.0)	27.19 (690.6)	4
170-084-__	84.12 (2136.8)	30.69 (779.5)	4

Angle Support Channel locations and quantities



# Vertical Rack Frames

**For 24" Panel Width, 24 1/16" Deep**



Section BB

Drawings show optional recessed base for reference.

Part No.	A	B	C
170-021-050	21.12 (536.6)	22.88 (581.0)	26.38 (669.9)
170-028-050	28.12 (714.4)	29.88 (758.8)	33.38 (847.7)
170-035-050	35.12 (892.2)	36.88 (936.6)	40.38 (1025.5)
170-042-050	42.12 (1070.0)	43.88 (1114.4)	47.38 (1203.3)
170-049-050	49.12 (1247.8)	50.88 (1292.2)	54.38 (1381.1)
170-056-050	56.12 (1425.6)	57.88 (1470.0)	61.38 (1558.9)
170-063-050	63.12 (1603.4)	64.88 (1647.8)	68.38 (1736.7)
170-070-050	70.12 (1781.2)	71.88 (1825.6)	75.38 (1914.5)
170-077-050	77.12 (1959.0)	78.88 (2003.4)	82.38 (2092.3)
170-084-050	84.12 (2136.8)	85.88 (2181.2)	89.38 (2270.1)

# Vertical Rack Frames

\*\* If front or rear panel will be mounted to Tapped vertical mounting rails, then add 'T' to the front of the front/rear panel part number in order to receive the correct mounting hardware. i.e. T381-170-010

VERTICAL RACK FRAMES - For 24" Wide Panels									
Size of Front and Rear Panel Openings HEIGHT "A"	Part No. of Frame	Side Panels		Hinged Side Panels		Full Length Doors		Front or Rear Full Length Panels	
		External Latch	Internal Screw	Left Hinged	Right Hinged	Left Hinged	Right Hinged	External Latch	External Screw
<b>17" Overall Depth</b>		Top / Btm Panel Screw Fastened 371-040-				Top Panel Latching 373-040-			
21 1/8"	170-021-040	314-921-	324-921-	431-921-	434-921-	091-221-	092-221-	381-221-	391-221-
28 1/8"	170-028-040	314-928-	324-928-	431-928-	434-928-	091-228-	092-228-	381-228-	391-228-
35 1/8"	170-035-040	314-935-	324-935-	431-935-	434-935-	091-235-	092-235-	381-235-	391-235-
42 1/8"	170-042-040	314-942-	324-942-	431-942-	434-942-	091-242-	092-242-	381-242-	391-242-
49 1/8"	170-049-040	314-949-	324-949-	431-949-	434-949-	091-249-	092-249-	381-249-	391-249-
<b>24" Overall Depth</b>		Top / Btm Panel Screw Fastened 371-050-				Top Panel Latching 373-050-			
21 1/8"	170-021-050	315-921-	325-921-	432-921-	435-921-	091-221-	092-221-	381-221-	391-221-
28 1/8"	170-028-050	315-928-	325-928-	432-928-	435-928-	091-228-	092-228-	381-228-	391-228-
35 1/8"	170-035-050	315-935-	325-935-	432-935-	435-935-	091-235-	092-235-	381-235-	391-235-
42 1/8"	170-042-050	315-942-	325-942-	432-942-	435-942-	091-242-	092-242-	381-242-	391-242-
49 1/8"	170-049-050	315-949-	325-949-	432-949-	435-949-	091-249-	092-249-	381-249-	391-249-
56 1/8"	170-056-050	315-956-	325-956-	432-956-	435-956-	091-256-	092-256-	381-256-	391-256-
63 1/8"	170-063-050	315-963-	325-963-	432-963-	435-963-	091-263-	092-263-	381-263-	391-263-
70 1/8"	170-070-050	315-970-	325-970-	432-970-	435-970-	091-270-	092-270-	381-270-	391-270-
77 1/8"	170-077-050	315-977-	325-977-	432-977-	435-977-	091-277-	092-277-	381-277-	391-277-
84 1/8"	170-084-050	315-984-	325-984-	432-984-	435-984-	091-284-	092-284-	381-284-	391-284-
<b>29" Overall Depth</b>		Top / Btm Panel Screw Fastened 371-060-				Top Panel Latching 373-060-			
21 1/8"	170-021-060	316-921-	326-921-	433-921-	436-921-	091-221-	092-221-	381-221-	391-221-
28 1/8"	170-028-060	316-928-	326-928-	433-928-	436-928-	091-228-	092-228-	381-228-	391-228-
35 1/8"	170-035-060	316-935-	326-935-	433-935-	436-935-	091-235-	092-235-	381-235-	391-235-
42 1/8"	170-042-060	316-942-	326-942-	433-942-	436-942-	091-242-	092-242-	381-242-	391-242-
49 1/8"	170-049-060	316-949-	326-949-	433-949-	436-949-	091-249-	092-249-	381-249-	391-249-
56 1/8"	170-056-060	316-956-	326-956-	433-956-	436-956-	091-256-	092-256-	381-256-	391-256-
63 1/8"	170-063-060	316-963-	326-963-	433-963-	436-963-	091-263-	092-263-	381-263-	391-263-
70 1/8"	170-070-060	316-970-	326-970-	433-970-	436-970-	091-270-	092-270-	381-270-	391-270-
77 1/8"	170-077-060	316-977-	326-977-	433-977-	436-977-	091-277-	092-277-	381-277-	391-277-
84 1/8"	170-084-060	316-984-	326-984-	433-984-	436-984-	091-284-	092-284-	381-284-	391-284-
<b>36" Overall Depth</b>		Top / Btm Panel Screw Fastened 371-066-				Top Panel Latching 373-066-			
21 1/8"	170-021-066	334-921-	335-921-	441-921-	444-921-	091-221-	092-221-	381-221-	391-221-
28 1/8"	170-028-066	334-928-	335-928-	441-928-	444-928-	091-228-	092-228-	381-228-	391-228-
35 1/8"	170-035-066	334-935-	335-935-	441-935-	444-935-	091-235-	092-235-	381-235-	391-235-
42 1/8"	170-042-066	334-942-	335-942-	441-942-	444-942-	091-242-	092-242-	381-242-	391-242-
49 1/8"	170-049-066	334-949-	335-949-	441-949-	444-949-	091-249-	092-249-	381-249-	391-249-
56 1/8"	170-056-066	334-956-	335-956-	441-956-	444-956-	091-256-	092-256-	381-256-	391-256-
63 1/8"	170-063-066	334-963-	335-963-	441-963-	444-963-	091-263-	092-263-	381-263-	391-263-
70 1/8"	170-070-066	334-970-	335-970-	441-970-	444-970-	091-270-	092-270-	381-270-	391-270-
77 1/8"	170-077-066	334-977-	335-977-	441-977-	444-977-	091-277-	092-277-	381-277-	391-277-
84 1/8"	170-084-066	334-984-	335-984-	441-984-	444-984-	091-284-	092-284-	381-284-	391-284-

See  
Frame  
Options  
Shown  
On  
Page  
A6

PANEL AND DOOR SUFFIX - Add this style number to the partial part number of doors and panels											
Style	Plain	Louvered					Grilled				Bronze Tinted Acrylic Window Doors
		Top Panel	Top	Bottom	Top & Bottom	Fully	Top Panel	Top	Bottom	Top & Bottom	
No Filter	-010	-014	-011*	-012	-013*	-014*	-019	-016*	-017	-018*	-040
Filtered							-039**	-036*	-037**	-038* **	

See Page A92 for style details.

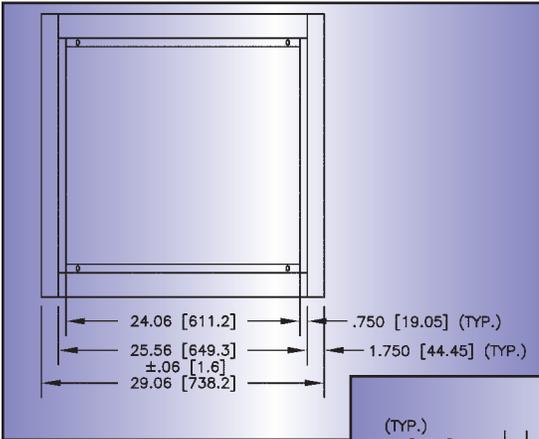
+ Not available on slope frame side panels.

\*\* Available only on Latch or Hinge type panels.

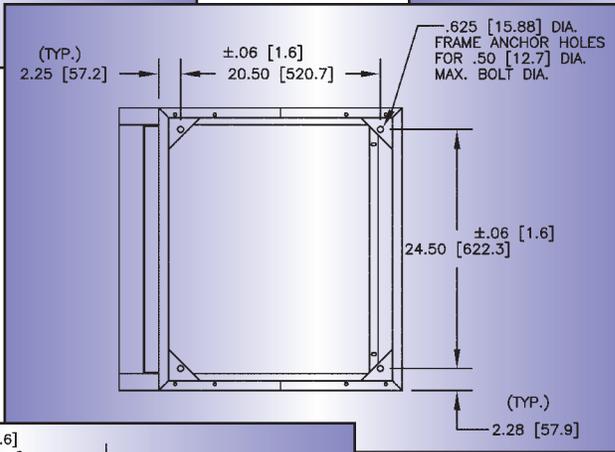


# Vertical Rack Frames

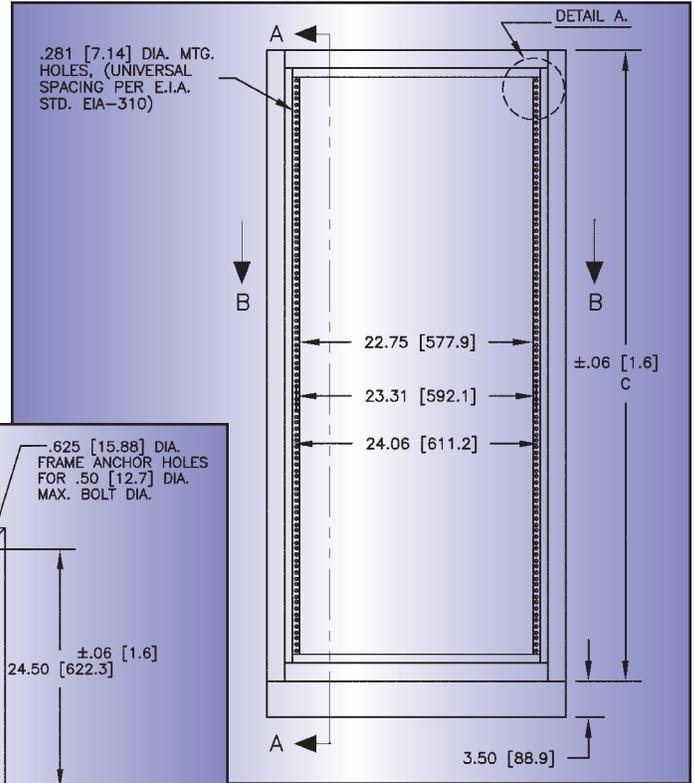
For 24" Panel Width, 29 1/16" Deep



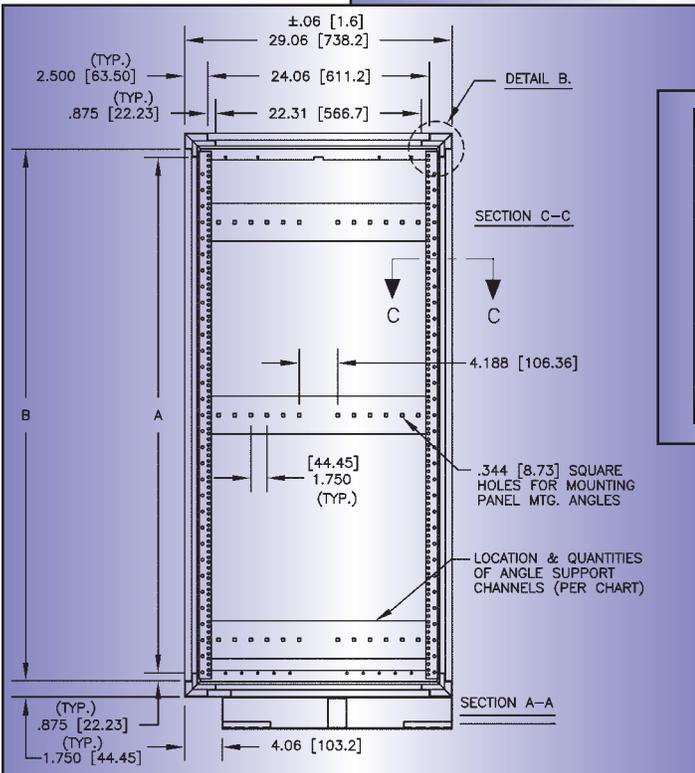
Top View



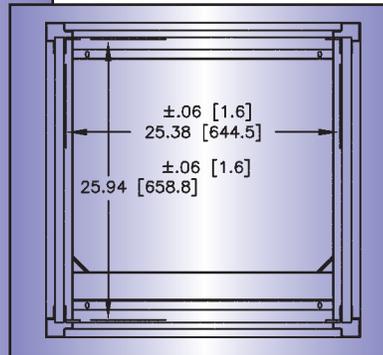
Bottom View



Front View



Section AA



Section BB

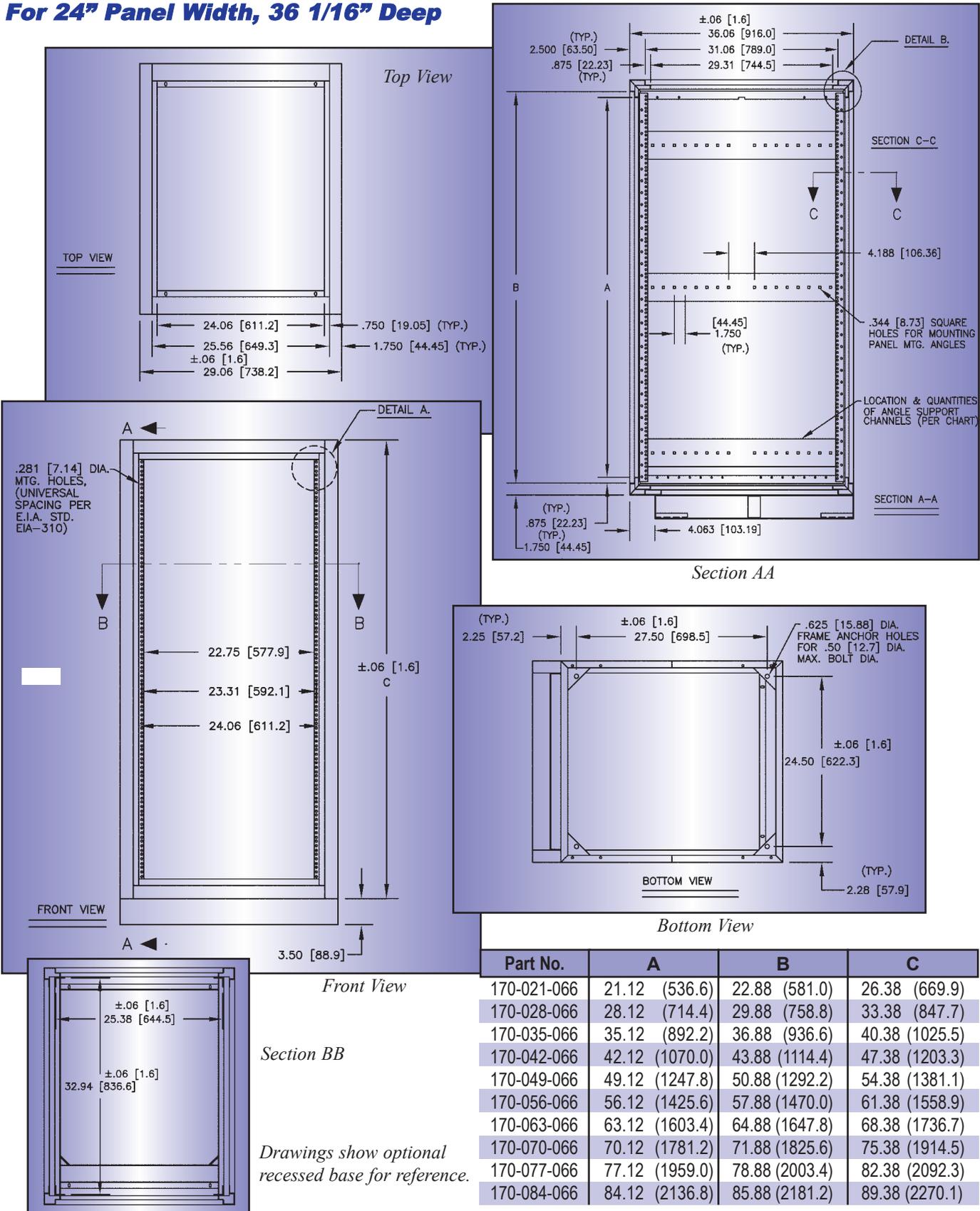
Drawings show optional recessed base for reference.

Part No.	A	B	C
170-021-060	21.12 (536.6)	22.88 (581.0)	26.38 (669.9)
170-028-060	28.12 (714.4)	29.88 (758.8)	33.38 (847.7)
170-035-060	35.12 (892.2)	36.88 (936.6)	40.38 (1025.5)
170-042-060	42.12 (1070.0)	43.88 (1114.4)	47.38 (1203.3)
170-049-060	49.12 (1247.8)	50.88 (1292.2)	54.38 (1381.1)
170-056-060	56.12 (1425.6)	57.88 (1470.0)	61.38 (1558.9)
170-063-060	63.12 (1603.4)	64.88 (1647.8)	68.38 (1736.7)
170-070-060	70.12 (1781.2)	71.88 (1825.6)	75.38 (1914.5)
170-077-060	77.12 (1959.0)	78.88 (2003.4)	82.38 (2092.3)
170-084-060	84.12 (2136.8)	85.88 (2181.2)	89.38 (2270.1)

# Vertical Rack Frames

Heavy Duty

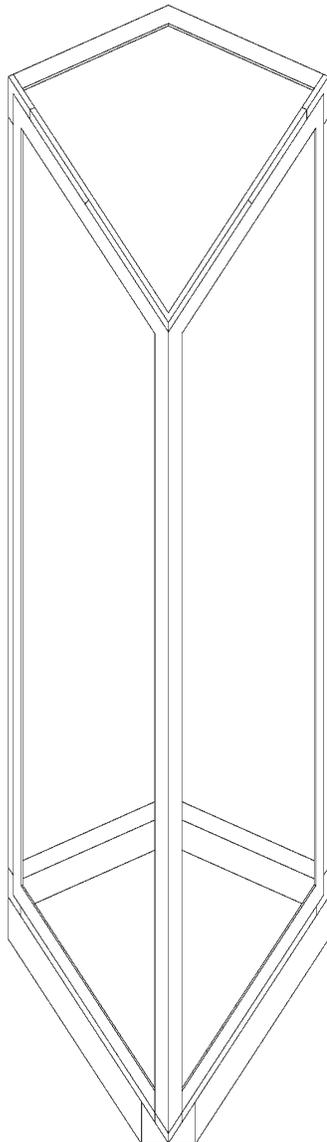
For 24" Panel Width, 36 1/16" Deep





# Angular Frames for Vertical Racks

The Vertical Angular Frames are designed to be used with the Heavy Duty Vertical Rack Frames. If your needs require an assembly of a vertical console with an angular shape design, you can be assured of receiving the highest level of operational efficiency with the angular frame. Design features insure there is no space lost at the frame juncture which ensures a cleaner appearance as well as a better fitting writing top and work surface. All welded design is fabricated with 16-gauge top and rear panel and bolted side by side to the adjoining vertical rack frames. The rear panels are removable from the outside. Vertical mounting rails are not supplied with angular frames. A Recessed Base is supplied with each Vertical Angular Frame. They also come complete with top and rear panel and all hardware for assembly of adjoining frames.



*Angular Frame for Vertical Rack*

## Product Features

- ▶ Constructed of 14-gauge multi-formed cold rolled steel
- ▶ The sharp nose design minimizes space at the juncture of adjoining frames
- ▶ Available as 30°, 45° and 60° units.
- ▶ All welded frame includes 16-gauge top and rear panel
- ▶ Bottom of frame is completely enclosed

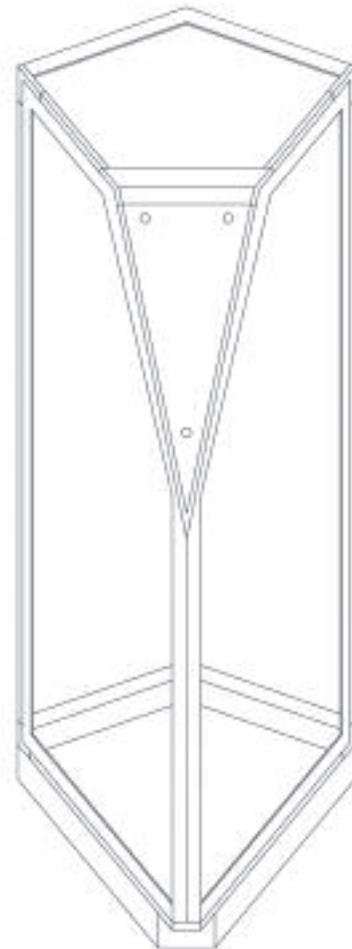
ANGULAR VERTICAL RACK FRAMES				
If You Use Vertical Rack	Vert. Angular Frames Fit That Frame			
	19" Wide	24" Wide	30°	45°
170-021-010	170-021-040	170-021-310	170-021-410	170-021-610
170-028-010	170-028-040	170-028-310	170-028-410	170-028-610
170-035-010	170-035-040	170-035-310	170-035-410	170-035-610
170-042-010	170-042-040	170-042-310	170-042-410	170-042-610
170-049-010	170-049-040	170-049-310	170-049-410	170-049-610
170-021-020	170-021-050	170-021-320	170-021-420	170-021-620
170-028-020	170-028-050	170-028-320	170-028-420	170-028-620
170-035-020	170-035-050	170-035-320	170-035-420	170-035-620
170-042-020	170-042-050	170-042-320	170-042-420	170-042-620
170-049-020	170-049-050	170-049-320	170-049-420	170-049-620
170-056-020	170-056-050	170-056-320	170-056-420	170-056-620
170-063-020	170-063-050	170-063-320	170-063-420	170-063-620
170-070-020	170-070-050	170-070-320	170-070-420	170-070-620
170-077-020	170-077-050	170-077-320	170-077-420	170-077-620
170-084-020	170-084-050	170-084-320	170-084-420	170-084-620
170-021-030	170-021-060	170-021-330	170-021-430	170-021-630
170-028-030	170-028-060	170-028-330	170-028-430	170-028-630
170-035-030	170-035-060	170-035-330	170-035-430	170-035-630
170-042-030	170-042-060	170-042-330	170-042-430	170-042-630
170-049-030	170-049-060	170-049-330	170-049-430	170-049-630
170-056-030	170-056-060	170-056-330	170-056-430	170-056-630
170-063-030	170-063-060	170-063-330	170-063-430	170-063-630
170-070-030	170-070-060	170-070-330	170-070-430	170-070-630
170-077-030	170-077-060	170-077-330	170-077-430	170-077-630
170-084-030	170-084-060	170-084-330	170-084-430	170-084-630
170-021-036	170-021-066	170-021-336	170-021-436	170-021-636
170-028-036	170-028-066	170-028-336	170-028-436	170-028-636
170-035-036	170-035-066	170-035-336	170-035-436	170-035-636
170-042-036	170-042-066	170-042-336	170-042-436	170-042-636
170-049-036	170-049-066	170-049-336	170-049-436	170-049-636
170-056-036	170-056-066	170-056-336	170-056-436	170-056-636
170-063-036	170-063-066	170-063-336	170-063-436	170-063-636
170-070-036	170-070-066	170-070-336	170-070-436	170-070-636
170-077-036	170-077-066	170-077-336	170-077-436	170-077-636
170-084-036	170-084-066	170-084-336	170-084-436	170-084-636

# Angular Sloped Front Frames

Angular Sloped Front frames are specifically designed for a semi-circular or angular installation and will line up perfectly when bolted side-by-side to adjoining Sloped Front Consoles. They are sloped 15° or 30° for compatibility with Sloped Front Consoles. The Recessed Base is designed to conform to the toe space of the console assembly. Vertical mounting rails are not supplied with angular frames. All Sloped Front Angular Frames come complete with top panel for sloped front, rear panel, including all of the hardware to assemble to adjoining frames.

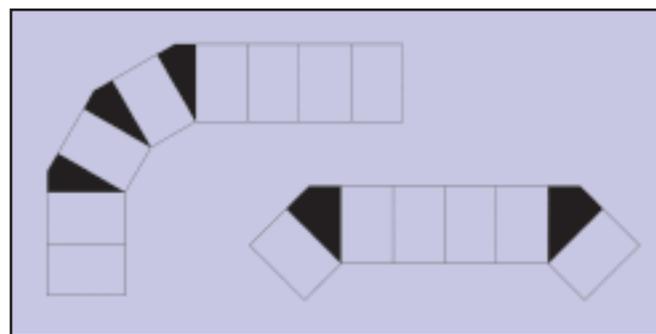
## Product Features

- ▶ Constructed of 14-gauge multi-formed cold rolled steel
- ▶ All welded frame construction
- ▶ Can be utilized with 30°, 45° and 60° modular cabinets
- ▶ Rear panels are removable from outside for easy access
- ▶ Enclosed bottom frame keeps the console clean
- ▶ Exclusive sharp nose design minimizes space at the juncture of adjoining frames



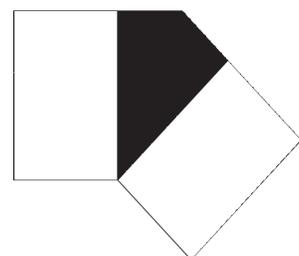
Angular Sloped Front Frame

ANGULAR SLOPED FRONT FRAMES			
If You Use Sloped Front Console Frame	These Sloped Front Angular Frames Will Fit That Frame		
	30°	45°	60°
For 15° Sloped Front Consoles			
183-121-021	183-121-321	183-121-421	183-121-621
183-121-031	183-121-331	183-121-431	183-121-631
183-128-021	183-128-321	183-128-421	183-128-621
183-128-031	183-128-331	183-128-431	183-128-631
183-135-021	183-135-321	183-135-421	183-135-621
183-135-031	183-135-331	183-135-431	183-135-631
183-121-051	183-121-321	183-121-421	183-121-621
183-121-061	183-121-331	183-121-431	183-121-631
183-128-051	183-128-321	183-128-421	183-128-621
183-128-061	183-128-331	183-128-431	183-128-631
183-135-051	183-135-321	183-135-421	183-135-621
183-135-061	183-135-331	183-135-431	183-135-631
For 30° Sloped Front Consoles			
181-314-021	181-314-321	181-314-421	181-314-621
181-314-031	181-314-331	181-314-431	181-314-631
181-317-021	181-317-321	181-317-421	181-317-621
181-317-031	181-317-331	181-317-431	181-317-631
181-321-021	181-321-321	181-321-421	181-321-621
181-321-031	181-321-331	181-321-431	181-321-631
181-314-051	181-314-321	181-314-421	181-314-621
181-314-061	181-314-331	181-314-431	181-314-631
181-317-051	181-317-321	181-317-421	181-317-621
181-317-061	181-317-331	181-317-431	181-317-631
181-321-051	181-321-321	181-321-421	181-321-621
181-321-061	181-321-331	181-321-431	181-321-631



Typical Vertical Rack and Sloped Front Console using 3-30° angular frames on top and 2-45° shown on bottom

Exclusive design ensures no loss of space at the juncture, giving a neater appearance and better fitting writing top and work surfaces.

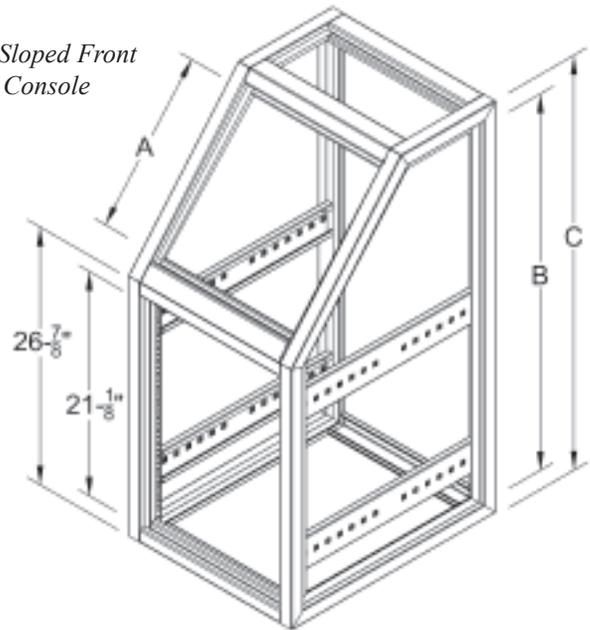




# 15° and 30° Sloped Front Consoles

The Sloped Front Console frame slopes 15° and 30° vertically and is the most widely used frame type, where electronic equipment is operated from a sitting position. They are available in 19", 24" and 30" panel widths and two depths to include 24" and 29". The vertical panel space on the sloped front is available in five heights including 14", 17 1/2", 21", 28" and 35". They may be joined side-by-side with Vertical Rack Frames or with other sloped frame styles. All of the Sloped Front Console Frames are furnished with four adjustable and removable 1 1/2"x 1 1/2"x 3/16" Vertical Mounting Rails. The Sloped Front Consoles are shipped completely assembled with panels and doors installed to your specifications.

30° Sloped Front Console

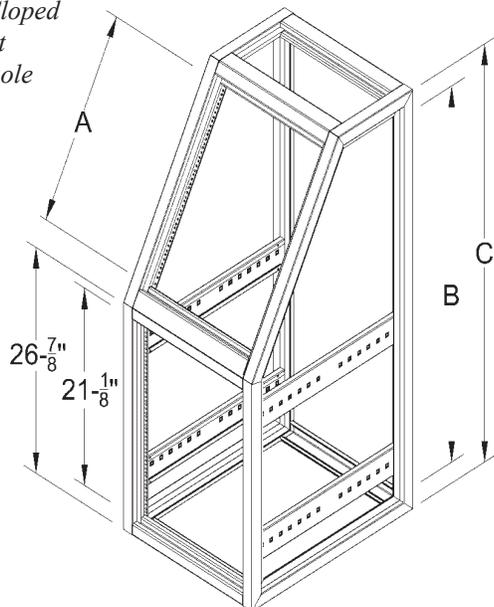


## Product Features

- ▶ Strong 14 gauge multi-formed channel frame sides for heavier load carrying capacity
- ▶ Heavy 12-gauge pontoon base bolted to frame ensures stable floor mounting
- ▶ All welded double ledge double plane corner construction for the greatest strength
- ▶ Recessed ledge for mounting doors and side panels where side panels are removable from the outside
- ▶ Six, Zinc plated ASTM B-633 Type 2 vertically adjustable or completely removable vertical mounting rail support channels

(1) Bases sold separately (2) Hinged sloped side panels are hinged at rear only  
 (3) Space does not permit use of latches in some sizes of top panels

15° Sloped Front Console



	19" Panels	24" Panels	A	B	C
	Frame No.	Frame No.			
15 Degree Slope	183-121-021	183-121-051	21-1/8"	45-5/8"	51-27/32"
	183-128-021	183-128-051	28-1/8"	52-5/8"	58-39/64"
	183-135-021	183-135-051	35-1/8"	59-5/8"	65-3/8"
	183-121-031	183-121-061	21-1/8"	45-5/8"	51-27/32"
	183-128-031	183-128-061	28-1/8"	52-5/8"	58-39/64"
	183-135-031	183-135-061	35-1/8"	59-5/8"	65-3/8"
30 Degree Slope	181-314-021	181-314-051	14-1/8"	36-15/16"	43-5/32"
	181-317-021	181-317-051	17-5/8"	40-3/8"	46-3/16"
	181-321-021	181-321-051	21-1/8"	42-1/8"	49-7/32"
	181-314-031	181-314-061	14-1/8"	36-15/16"	43-5/32"
	181-317-031	181-317-061	17-5/8"	40-3/8"	46-3/16"
	181-321-031	181-321-061	21-1/8"	42-1/8"	49-7/32"

## FRAME OPTIONS

By inserting the following Add-On after the first 3 digits of the frame part number you can order multiple frame accessories with just a one digit part number change. See chart below for choices.  
 i.e. - 170H-070-030 Frame VR 19 x 70 x 29 w/tapped vertical mtg rails

Add-On	Frame accessories included when Add-On is included in frame P/N
A	with punched vertical mtg rails and lift blocks
B	with punched vertical mtg rails and prep'd for seismic
C	with punched vertical mtg rails, lift blocks and prep'd for seismic
D	without vertical mtg rails
E	without vertical mtg rails and w/ lift blocks
F	without vertical mtg rails and prep'd for seismic
G	without vertical mtg rails, with lift blocks and prep'd for seismic
H	with tapped vertical mtg rails
J	with tapped vertical mtg rails and lift blocks
K	with tapped vertical mtg rails and prep'd for seismic
L	with tapped vertical mtg rails, lift blocks and prep'd for seismic

# 15° Sloped Front Consoles

15° SLOPED FRONT CONSOLES - See Frame Options on Page A16													
For 19" Wide Panels													
Hght. of Sloped Opening Height "A"	Part No. of Frame (1)	Side Panels LH		Side Panels RH		Hinged Side Panels (2)		Full Length Rear Door		Rear Full Length Panel		Top Panel	
		External Latch	Internal Screw	External Latch	Internal Screw	LH	RH	Left Hinged	Right Hinged	External Latch	External Screw	External Latch	Internal Screw
<b>24" Overall Depth</b>													
21 1/8"	183-121-021	313-407-	323-407-	319-407-	329-407-	453-407-	459-407-	091-145-	092-145-	381-145-	391-145-	465-022-	466-022-
28 1/8"	183-128-021	313-506-	323-506-	319-506-	329-506-	453-506-	459-506-	091-152-	092-152-	381-152-	391-152-	465-032-	466-032-
35 1/8"	183-135-021	313-605-	323-605-	319-605-	329-605-	453-605-	459-605-	091-159-	092-159-	381-159-	391-159-	465-042-	466-042-
		Lower Front Panel		Latching: 381-121-		Screw Fastened: 391-121-		Consult factory if putting below a writing shelf					
		Lower Front Door		Right Hinged: 092-121-		Left Hinged: 091-121-		Consult factory if putting below a writing shelf					
		Bottom Panel		Screw Fastened: 371-020-									

15° SLOPED FRONT CONSOLES - See Frame Options on Page A16													
For 24" Wide Panels													
Hght. of Sloped Opening Height "A"	Part No. of Frame (1)	Side Panels LH		Side Panels RH		Hinged Side Panels (2)		Full Length Rear Door		Rear Full Length Panel		Top Panel	
		External Latch	Internal Screw	External Latch	Internal Screw	LH	RH	Left Hinged	Right Hinged	External Latch	External Screw	External Latch	Internal Screw
<b>29" Overall Depth</b>													
21 1/8"	183-121-031	313-414-	323-414-	319-414-	329-414-	453-414-	459-414-	091-145-	092-145-	381-145-	391-145-	465-023-	466-023-
28 1/8"	183-128-031	313-513-	323-513-	319-513-	329-513-	453-513-	459-513-	091-152-	092-152-	381-152-	391-152-	465-033-	466-033-
35 1/8"	183-135-031	313-612-	323-612-	319-612-	329-612-	453-612-	459-612-	091-159-	092-159-	381-159-	391-159-	465-043-	466-043-
		Lower Front Panel		Latching: 381-121-		Screw Fastened: 391-121-		Consult factory if putting below a writing shelf					
		Lower Front Door		Right Hinged: 092-121-		Left Hinged: 091-121-		Consult factory if putting below a writing shelf					
		Bottom Panel		Screw Fastened: 371-030-									

15° SLOPED FRONT CONSOLES - See Frame Options on Page A16													
For 24" Wide Panels													
Hght. of Sloped Opening Height "A"	Part No. of Frame (1)	Side Panels LH		Side Panels RH		Hinged Side Panels (2)		Full Length Rear Door		Rear Full Length Panel		Top Panel	
		External Latch	Internal Screw	External Latch	Internal Screw	LH	RH	Left Hinged	Right Hinged	External Latch	External Screw	External Latch	Internal Screw
<b>24" Overall Depth</b>													
21 1/8"	183-121-051	313-407-	323-407-	319-407-	329-407-	453-407-	459-407-	091-245-	092-245-	381-245-	391-245-	465-025-	466-025-
28 1/8"	183-128-051	313-506-	323-506-	319-506-	329-506-	453-506-	459-506-	091-252-	092-252-	381-252-	391-252-	465-035-	466-035-
35 1/8"	183-135-051	313-605-	323-605-	319-605-	329-605-	453-605-	459-605-	091-259-	092-259-	381-259-	391-259-	465-045-	466-045-
		Lower Front Panel		Latching: 381-221-		Screw Fastened: 391-221-		Consult factory if putting below a writing shelf					
		Lower Front Door		Right Hinged: 092-221-		Left Hinged: 091-221-		Consult factory if putting below a writing shelf					
		Bottom Panel		Screw Fastened: 371-050-									

15° SLOPED FRONT CONSOLES - See Frame Options on Page A16													
For 24" Wide Panels													
Hght. of Sloped Opening Height "A"	Part No. of Frame (1)	Side Panels LH		Side Panels RH		Hinged Side Panels (2)		Full Length Rear Door		Rear Full Length Panel		Top Panel	
		External Latch	Internal Screw	External Latch	Internal Screw	LH	RH	Left Hinged	Right Hinged	External Latch	External Screw	External Latch	Internal Screw
<b>29" Overall Depth</b>													
21 1/8"	183-121-061	313-414-	323-414-	319-414-	329-414-	453-414-	459-414-	091-245-	092-245-	381-245-	391-245-	465-026-	466-026-
28 1/8"	183-128-061	313-513-	323-513-	319-513-	329-513-	453-513-	459-513-	091-252-	092-252-	381-252-	391-252-	465-036-	466-036-
35 1/8"	183-135-061	313-612-	323-612-	319-612-	329-612-	453-612-	459-612-	091-259-	092-259-	381-259-	391-259-	465-046-	466-046-
		Lower Front Panel		Latching: 381-221-		Screw Fastened: 391-221-		Consult factory if putting below a writing shelf					
		Lower Front Door		Right Hinged: 092-221-		Left Hinged: 091-221-		Consult factory if putting below a writing shelf					
		Bottom Panel		Screw Fastened: 371-060-									

(1) Bases sold separately (2) Hinged sloped side panels are hinged at rear only (3) Space does not permit use of latches in some sizes of top panels

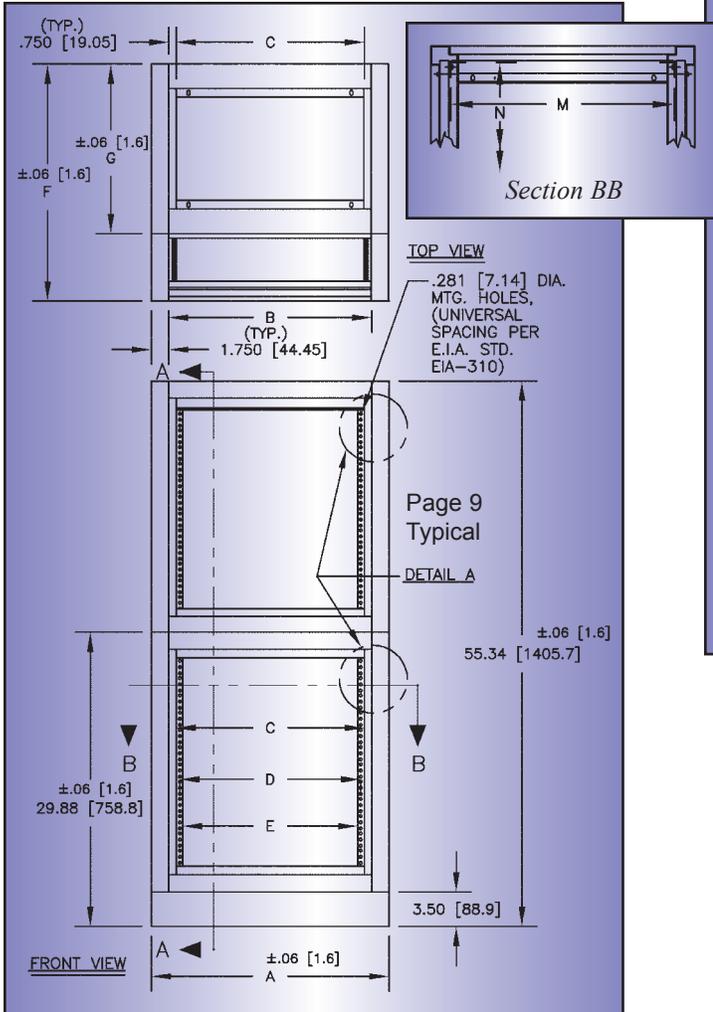
If front or rear panel will be mounted to *Tapped* vertical mounting rails, then add 'T' to the front of the front/rear panel part number in order to receive the correct mounting hardware. i.e. T381-170-010

Visit our web site at [www.equiptoelec.com](http://www.equiptoelec.com) for the latest technical data or a price quote

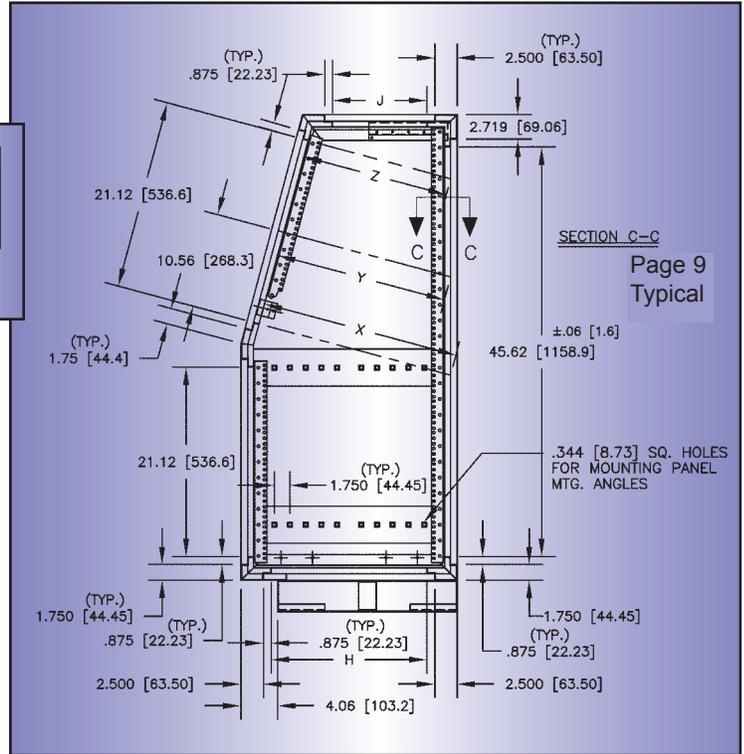


# 15° Sloped Front Consoles

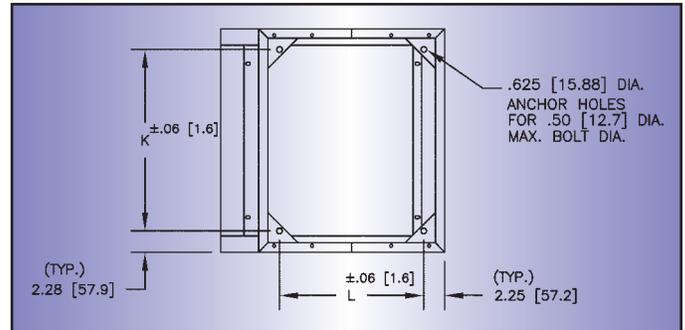
**19" & 24" Wide, 21" High Panel Space on Slope, 24 1/16" & 29 1/16" Deep**



Top and Front Views - shown w/optional recessed base



Section AA - shown with optional recessed base



Bottom View - shown w/optional recessed base

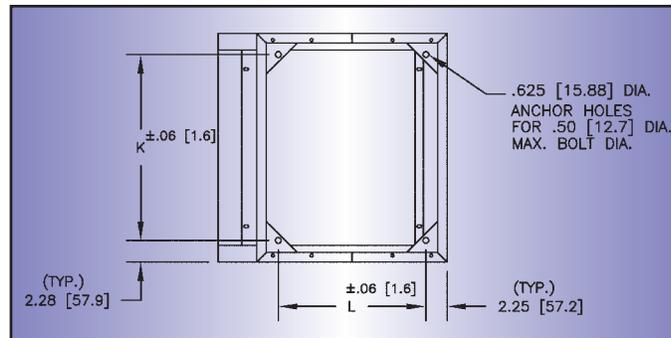
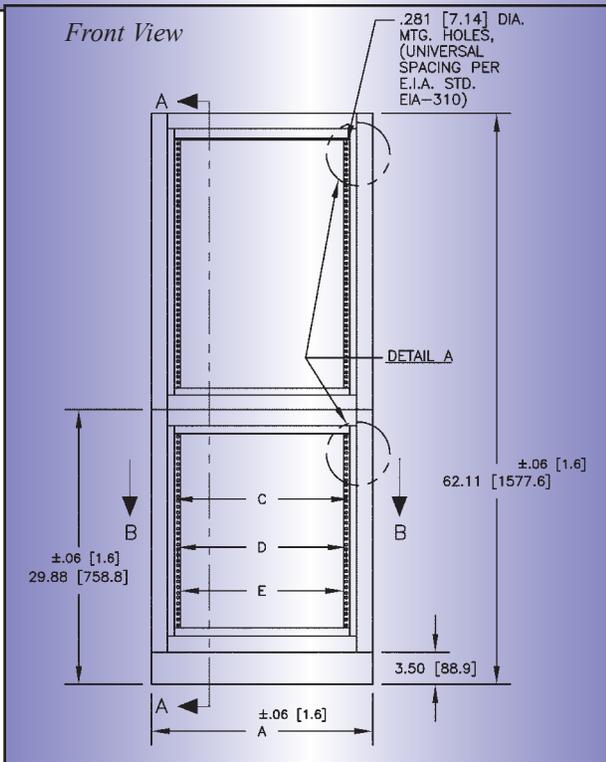
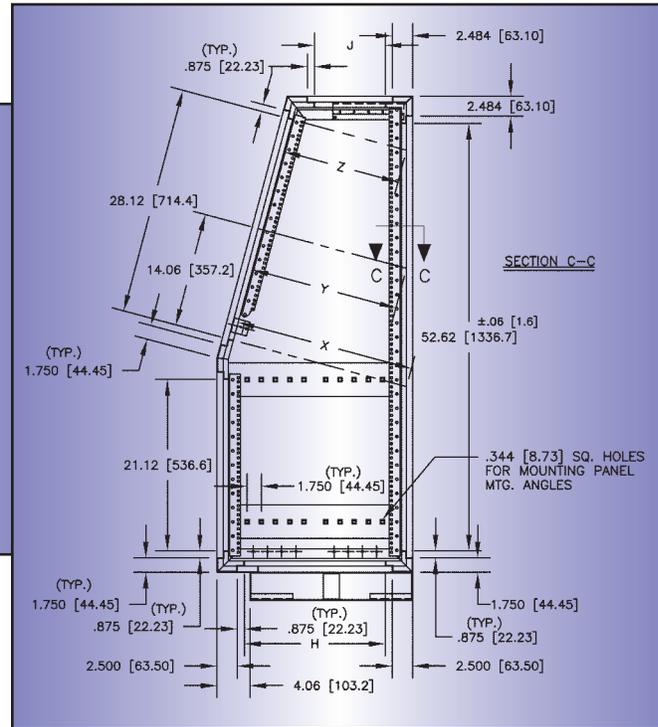
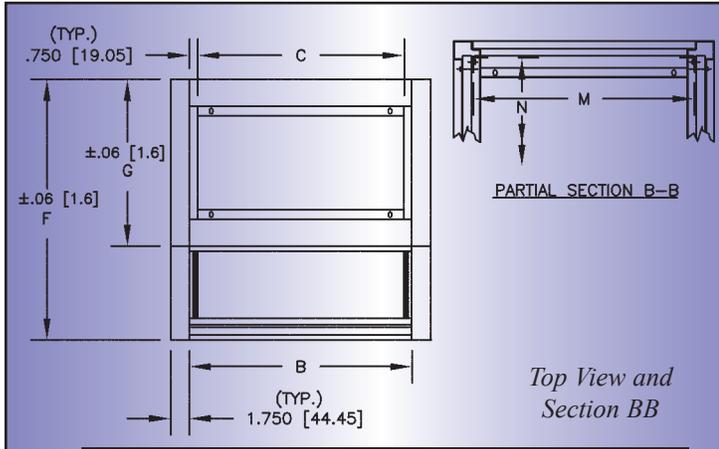
Part No.	A	B	C	D	E	F	G	H
183-121-021	24.06 (611.2)	20.56 (522.3)	19.06 (484.2)	18.31 (465.1)	17.75 (450.9)	24.06 (611.2)	17.23 (437.8)	17.31 (439.7)
183-121-031	24.06 (611.2)	20.56 (522.3)	19.06 (484.2)	18.31 (465.1)	17.75 (450.9)	29.06 (738.2)	22.23 (564.8)	22.31 (566.7)
183-121-051	29.06 (738.2)	25.56 (649.3)	24.06 (611.2)	23.31 (592.1)	22.75 (577.9)	24.06 (611.2)	17.23 (437.8)	17.31 (439.7)
183-121-061	29.06 (738.2)	25.56 (649.3)	24.06 (611.2)	23.31 (592.1)	22.75 (577.9)	29.06 (738.2)	22.23 (564.8)	22.31 (566.7)

Part No.	J	K	L	M	N	X	Y	Z
183-121-021	10.48 (266.3)	19.50 (495.3)	15.50 (393.7)	20.38 (517.5)	20.94 (531.8)	22.12 (562.0)	19.25 (489.0)	16.50 (419.1)
183-121-031	15.48 (393.3)	19.50 (495.3)	20.50 (520.7)	20.38 (517.5)	25.94 (658.8)	27.38 (695.3)	24.50 (622.3)	21.75 (552.5)
183-121-051	10.48 (266.3)	24.50 (622.3)	15.50 (393.7)	25.38 (644.5)	20.94 (531.8)	22.12 (562.0)	19.25 (489.0)	16.50 (419.1)
183-121-061	15.48 (393.3)	24.50 (622.3)	20.50 (520.7)	25.38 (644.5)	25.94 (658.8)	27.38 (695.3)	24.50 (622.3)	21.75 (552.5)

# 15° Sloped Front Consoles

Heavy Duty

**19" & 24" Wide, 28" High Panel Space on Slope, 24 1/16" & 29 1/16" Deep**



**Note:** Frames on this page shown with optional recessed base.

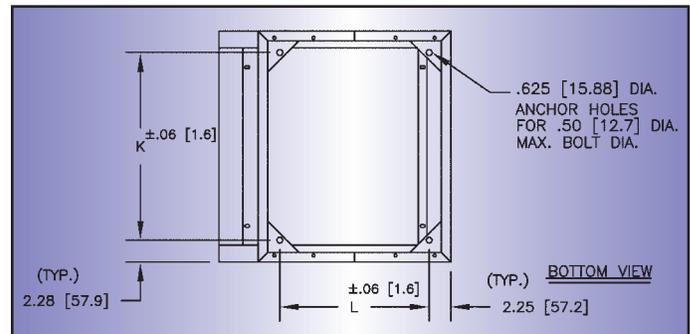
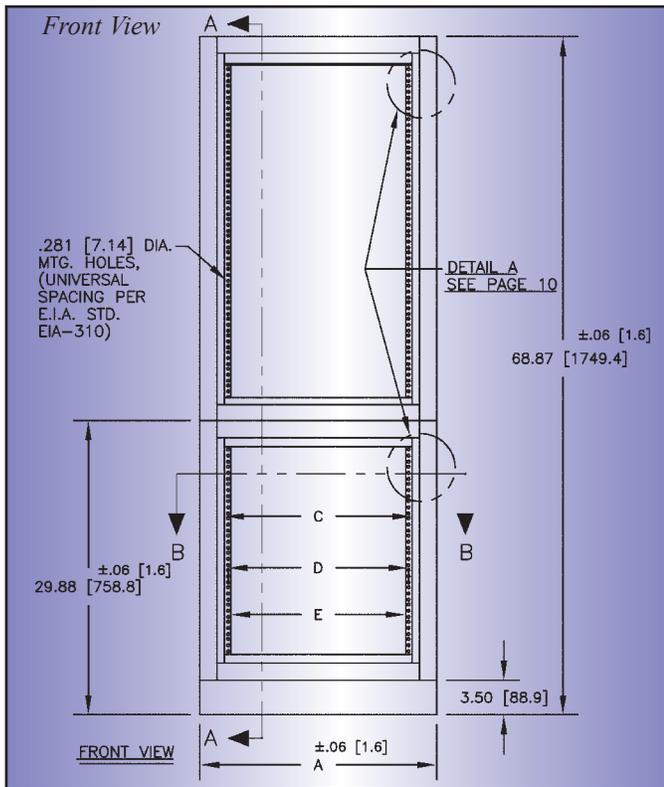
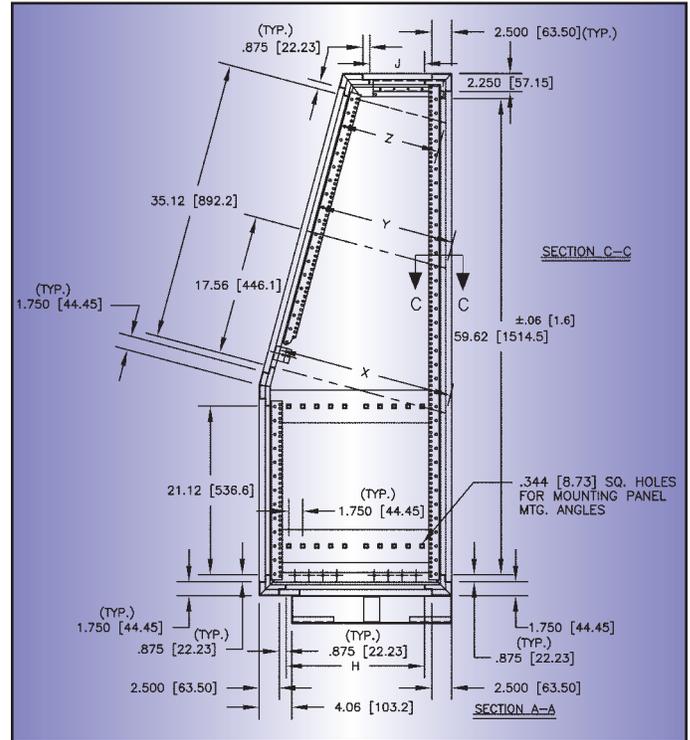
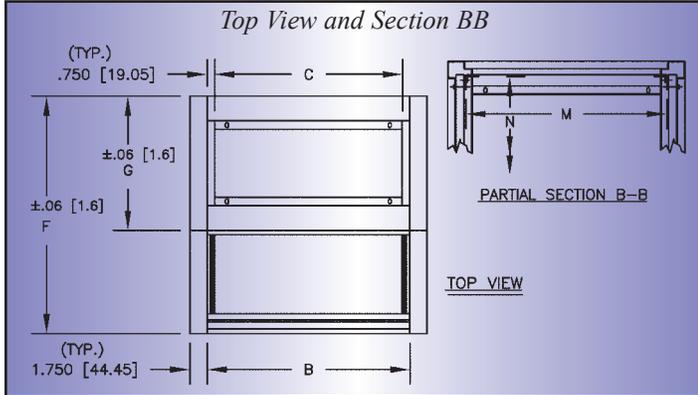
Part No.	A	B	C	D	E	F	G	H
183-128-021	24.06 (611.2)	20.56 (522.3)	19.06 (484.2)	18.31 (465.1)	17.75 (450.9)	24.06 (611.2)	15.42 (391.7)	17.31 (439.7)
183-128-031	24.06 (611.2)	20.56 (522.3)	19.06 (484.2)	18.31 (465.1)	17.75 (450.9)	29.06 (738.2)	20.42 (518.7)	22.31 (566.7)
183-128-051	29.06 (738.2)	25.56 (649.3)	24.06 (611.2)	23.31 (592.1)	22.75 (577.9)	24.06 (611.2)	15.42 (391.7)	17.31 (439.7)
183-128-061	29.06 (738.2)	25.56 (649.3)	24.06 (611.2)	23.31 (592.1)	22.75 (577.9)	29.06 (738.2)	20.42 (518.7)	22.31 (566.7)

Part No.	J	K	L	M	N	X	Y	Z
183-128-021	8.67 (220.3)	19.50 (495.3)	15.50 (393.7)	20.38 (517.5)	20.94 (531.8)	22.03 (559.6)	18.27 (463.9)	14.50 (368.3)
183-128-031	13.67 (347.3)	19.50 (495.3)	20.50 (520.7)	20.38 (517.5)	25.94 (658.8)	27.22 (691.4)	23.46 (596.1)	19.69 (500.1)
183-128-051	8.67 (220.3)	24.50 (622.3)	15.50 (393.7)	25.38 (644.5)	20.94 (531.8)	22.03 (559.6)	18.27 (463.9)	14.50 (368.3)
183-128-061	13.67 (347.3)	24.50 (622.3)	20.50 (520.7)	25.38 (644.5)	25.94 (658.8)	27.22 (691.4)	23.46 (596.1)	19.69 (500.1)



# 15° Sloped Front Consoles

**19" & 24" Wide, 35" High Panel Space on Slope, 24 1/16" & 29 1/16" Deep**



**Note:** Frames on this page shown with optional recessed base.

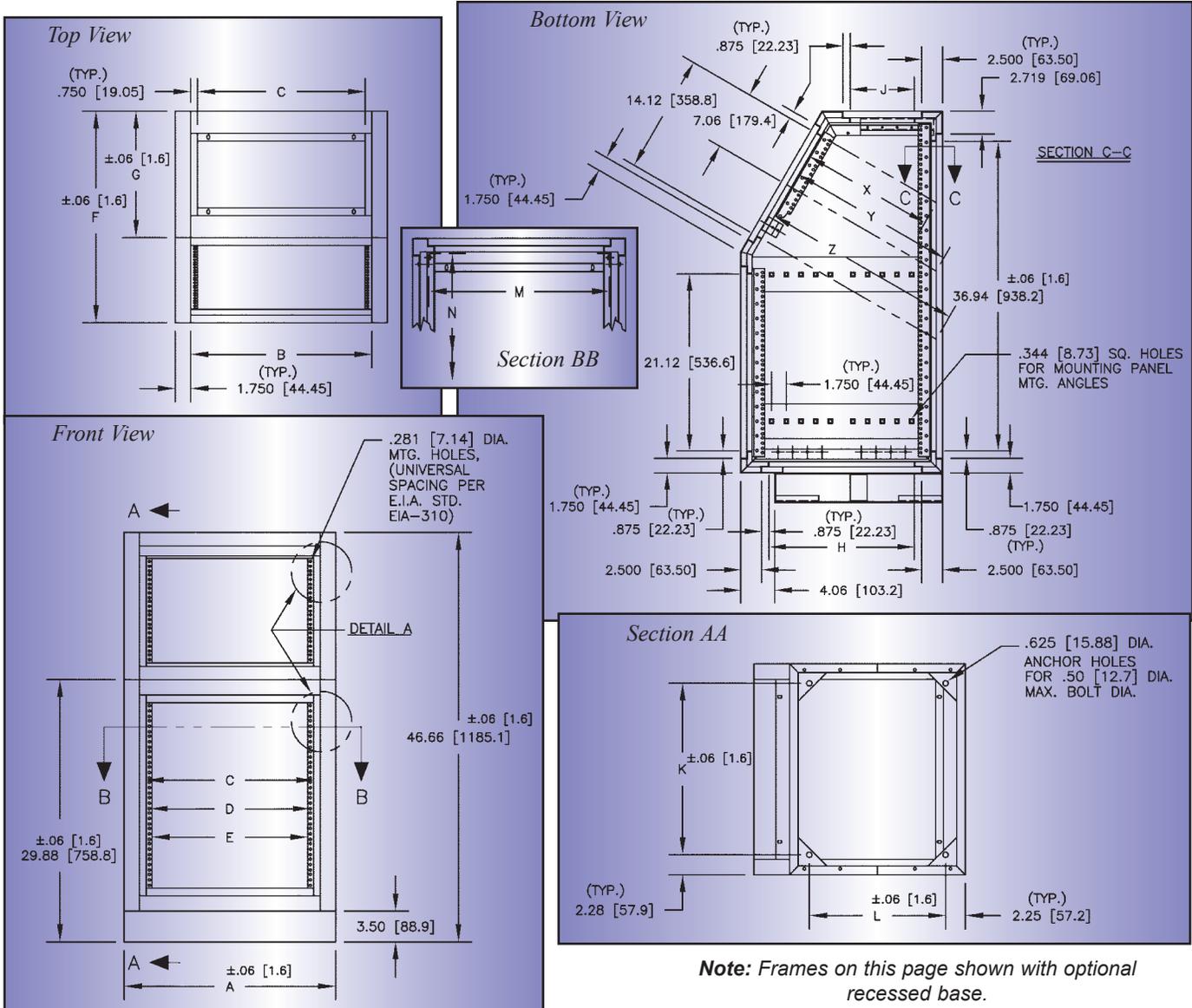
Part No.	A	B	C	D	E	F	G	H
183-135-021	24.06 (611.2)	20.56 (522.3)	19.06 (484.2)	18.31 (465.1)	17.75 (450.9)	24.06 (611.2)	13.61 (345.7)	17.31 (439.7)
183-135-031	24.06 (611.2)	20.56 (522.3)	19.06 (484.2)	18.31 (465.1)	17.75 (450.9)	29.06 (738.2)	18.61 (472.7)	22.31 (566.7)
183-135-051	29.06 (738.2)	25.56 (649.3)	24.06 (611.2)	23.31 (592.1)	22.75 (577.9)	24.06 (611.2)	13.61 (345.7)	17.31 (439.7)
183-135-061	29.06 (738.2)	25.56 (649.3)	24.06 (611.2)	23.31 (592.1)	22.75 (577.9)	29.06 (738.2)	18.61 (472.7)	22.31 (566.7)

Part No.	J	K	L	M	N	X	Y	Z
183-135-021	6.86 (174.2)	19.50 (495.3)	15.50 (393.7)	20.38 (517.5)	20.94 (531.8)	22.12 (562.0)	17.41 (442.1)	12.71 (323.1)
183-135-031	11.86 (301.2)	19.50 (495.3)	20.50 (520.7)	20.38 (517.5)	25.94 (658.8)	27.38 (695.3)	22.66 (575.5)	17.97 (456.4)
183-135-051	6.86 (174.2)	24.50 (622.3)	15.50 (393.7)	25.38 (644.5)	20.94 (531.8)	22.12 (562.0)	17.41 (442.1)	12.71 (323.1)
183-135-061	11.86 (301.2)	24.50 (622.3)	20.50 (520.7)	25.38 (644.5)	25.94 (658.8)	27.38 (695.3)	22.66 (575.5)	17.97 (456.4)

# 30° Sloped Front Consoles

Heavy Duty

**19" & 24" Wide, 14" High Panel Space on Slope, 24 1/16" & 29 1/16" Deep**



Part No.	A	B	C	D	E	F	G	H
181-314-021	24.06 (611.2)	20.56 (522.3)	19.06 (484.2)	18.31 (465.1)	17.75 (450.9)	24.06 (611.2)	14.38 (365.1)	17.31 (439.7)
181-314-031	24.06 (611.2)	20.56 (522.3)	19.06 (484.2)	18.31 (465.1)	17.75 (450.9)	29.06 (738.2)	19.38 (492.1)	22.31 (566.7)
181-314-051	29.06 (738.2)	25.56 (649.3)	24.06 (611.2)	23.31 (592.1)	22.75 (577.9)	24.06 (611.2)	14.38 (365.1)	17.31 (439.7)
181-314-061	29.06 (738.2)	25.56 (649.3)	24.06 (611.2)	23.31 (592.1)	22.75 (577.9)	29.06 (738.2)	19.38 (492.1)	22.31 (566.7)

Part No.	J	K	L	M	N	X	Y	Z
181-314-021	7.62 (193.7)	19.50 (495.3)	15.50 (393.7)	20.38 (517.5)	20.94 (531.8)	15.88 (403.2)	20.00 (508.0)	23.94 (608.0)
181-314-031	12.62 (320.7)	19.50 (495.3)	20.50 (520.7)	20.38 (517.5)	25.94 (658.8)	21.50 (546.1)	25.75 (654.1)	29.69 (754.1)
181-314-051	7.62 (193.7)	24.50 (622.3)	15.50 (393.7)	25.38 (644.5)	20.94 (531.8)	15.88 (403.2)	20.00 (508.0)	23.94 (608.0)
181-314-061	12.62 (320.7)	24.50 (622.3)	20.50 (520.7)	25.38 (644.5)	25.94 (658.8)	21.50 (546.1)	25.75 (654.1)	29.69 (754.1)



# 30° Sloped Front Consoles

30° SLOPED FRONT CONSOLES													
For 19" Wide Panels													
Hght. of Sloped Opening Height "A"	Part No. of Frame (1)	Side Panels LH		Side Panels RH		Hinged Side Panels (2)		Full Length Rear Door		Rear Full Length Panel		Top Panel	
		External Latch	Internal Screw	External Latch	Internal Screw	LH	RH	Left Hinged	Right Hinged	External Latch	External Screw	External Latch	Internal Screw
<b>24" Overall Depth</b>													
14 1/8"	181-314-021	311-284-	321-284-	317-284-	327-284-	451-284-	457-284-	091-136-	092-136-	381-136-	391-136-	461-062-	462-062-
17 5/8"	181-317-021	311-341-	321-341-	317-341-	327-341-	451-341-	457-341-	091-140-	092-140-	381-140-	391-140-	(3)	462-072-
21 1/8"	181-321-021	311-370-	321-370-	317-370-	327-370-	451-370-	457-370-	091-142-	092-142-	381-142-	391-142-	(3)	462-082-
Lower Front Panel		Latching: 381-121-		Screw Fastened: 391-121-									
Lower Front Door		Right Hinged: 092-121-		Left Hinged: 091-121-		Consult factory if putting below a writing shelf							
Bottom Panel		Screw Fastened: 371-020-		Consult factory if putting below a writing shelf									

30° SLOPED FRONT CONSOLES													
For 24" Wide Panels													
Hght. of Sloped Opening Height "A"	Part No. of Frame (1)	Side Panels LH		Side Panels RH		Hinged Side Panels (2)		Full Length Rear Door		Rear Full Length Panel		Top Panel	
		External Latch	Internal Screw	External Latch	Internal Screw	LH	RH	Left Hinged	Right Hinged	External Latch	External Screw	External Latch	Internal Screw
<b>29" Overall Depth</b>													
14 1/8"	181-314-031	311-291-	321-291-	317-291-	327-291-	451-291-	457-291-	091-136-	092-136-	381-136-	391-136-	461-063-	462-063-
17 5/8"	181-317-031	311-348-	321-348-	317-348-	327-348-	451-348-	457-348-	091-140-	092-140-	381-140-	391-140-	461-073-	462-073-
21 1/8"	181-321-031	311-377-	321-377-	317-377-	327-377-	451-377-	457-377-	091-142-	092-142-	381-142-	391-142-	461-083-	462-083-
Lower Front Panel		Latching: 381-121-		Screw Fastened: 391-121-									
Lower Front Door		Right Hinged: 092-121-		Left Hinged: 091-121-		Consult factory if putting below a writing shelf							
Bottom Panel		Screw Fastened: 371-030-		Consult factory if putting below a writing shelf									

30° SLOPED FRONT CONSOLES													
For 24" Wide Panels													
Hght. of Sloped Opening Height "A"	Part No. of Frame (1)	Side Panels LH		Side Panels RH		Hinged Side Panels (2)		Full Length Rear Door		Rear Full Length Panel		Top Panel	
		External Latch	Internal Screw	External Latch	Internal Screw	LH	RH	Left Hinged	Right Hinged	External Latch	External Screw	External Latch	Internal Screw
<b>24" Overall Depth</b>													
14 1/8"	181-314-051	311-284-	321-284-	317-284-	327-284-	451-284-	457-284-	091-236-	092-236-	381-236-	391-236-	461-065-	462-065-
17 5/8"	181-317-051	311-341-	321-341-	317-341-	327-341-	451-341-	457-341-	091-240-	092-240-	381-240-	391-240-	(3)	462-075-
21 1/8"	181-321-051	311-370-	321-370-	317-370-	327-370-	451-370-	457-370-	091-242-	092-242-	381-242-	391-242-	(3)	462-085-
Lower Front Panel		Latching: 381-221-		Screw Fastened: 391-221-									
Lower Front Door		Right Hinged: 092-221-		Left Hinged: 091-221-		Consult factory if putting below a writing shelf							
Bottom Panel		Screw Fastened: 371-050-		Consult factory if putting below a writing shelf									
<b>29" Overall Depth</b>													
14 1/8"	181-314-061	311-291-	321-291-	317-291-	327-291-	451-291-	457-291-	091-236-	092-236-	381-236-	391-236-	461-066-	462-066-
17 5/8"	181-317-061	311-348-	321-348-	317-348-	327-348-	451-348-	457-348-	091-240-	092-240-	381-240-	391-240-	461-076-	462-076-
21 1/8"	181-321-061	311-377-	321-377-	317-377-	327-377-	451-377-	457-377-	091-242-	092-242-	381-242-	391-242-	461-086-	462-086-
Lower Front Panel		Latching: 381-221-		Screw Fastened: 391-221-									
Lower Front Door		Right Hinged: 092-221-		Left Hinged: 091-221-		Consult factory if putting below a writing shelf							
Bottom Panel		Screw Fastened: 371-060-		Consult factory if putting below a writing shelf									

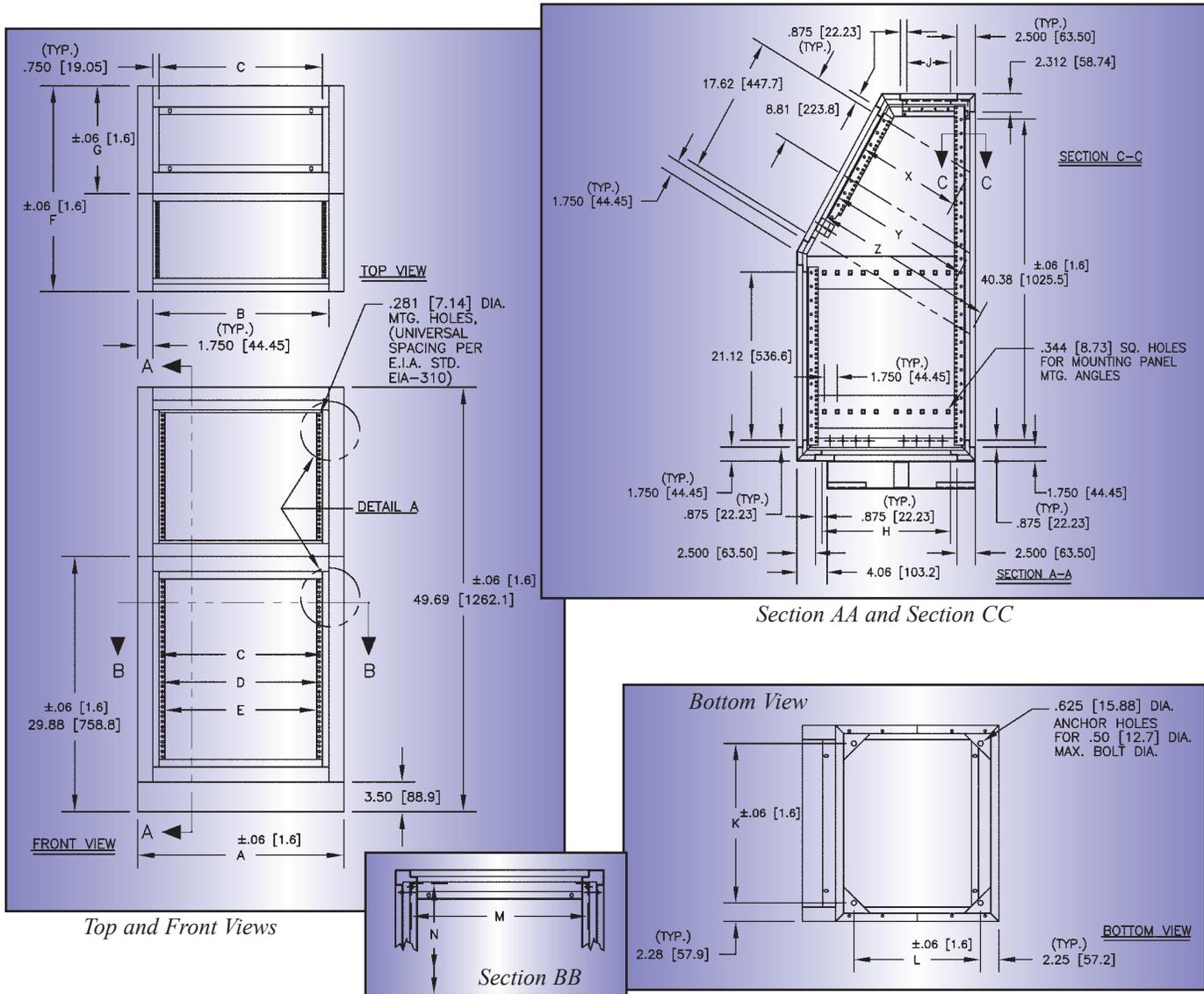
(1) Bases sold separately (2) Hinged sloped side panels are hinged at rear only (3) Space does not permit use of latches in some sizes of top panels

If front or rear panel will be mounted to *Tapped* vertical mounting rails, then add 'T' to the front of the front/rear panel part number in order to receive the correct mounting hardware. i.e. T381-170-010

# 30° Sloped Front Consoles

Heavy Duty

**19" & 24" Wide, 17 1/2" High Panel Space on Slope, 24 1/16" & 29 1/16" Deep**



Top and Front Views

**Note:** Frames on this page shown with optional recessed base

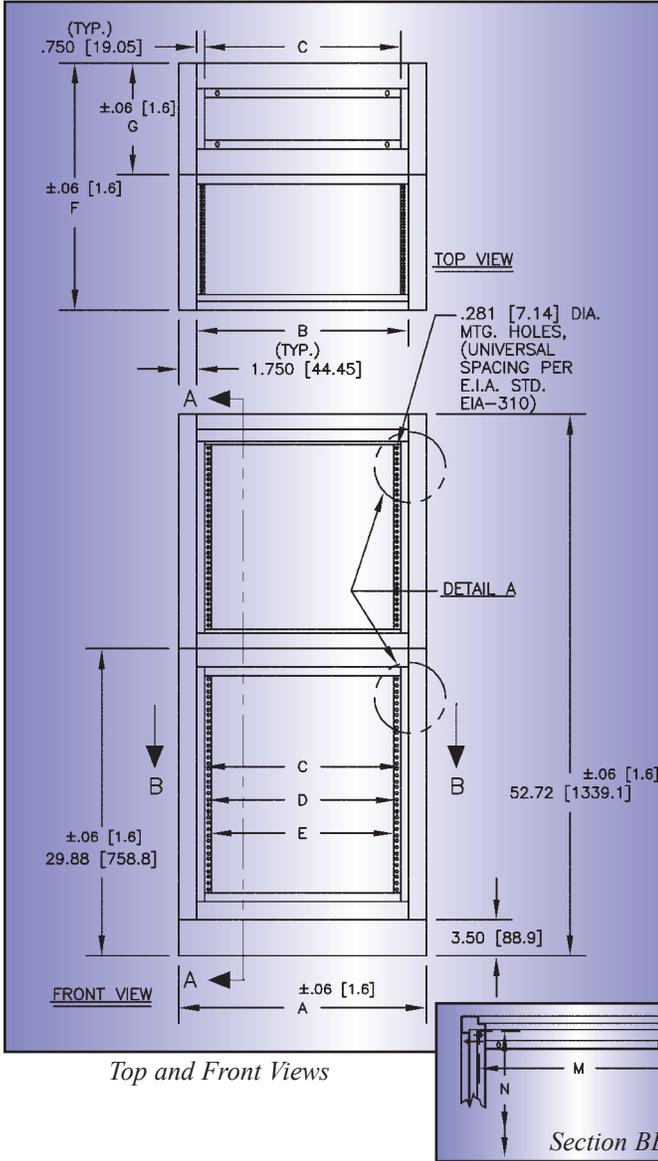
Part No.	A	B	C	D	E	F	G	H
181-317-021	24.06 (611.2)	20.56 (522.3)	19.06 (484.2)	18.31 (465.1)	17.75 (450.9)	24.06 (611.2)	12.62 (320.7)	17.31 (439.7)
181-317-031	24.06 (611.2)	20.56 (522.3)	19.06 (484.2)	18.31 (465.1)	17.75 (450.9)	29.06 (738.2)	17.62 (447.7)	22.31 (566.7)
181-317-051	29.06 (738.2)	25.56 (649.3)	24.06 (611.2)	23.31 (592.1)	22.75 (577.9)	24.06 (611.2)	12.62 (320.7)	17.31 (439.7)
181-317-061	29.06 (738.2)	25.56 (649.3)	24.06 (611.2)	23.31 (592.1)	22.75 (577.9)	29.06 (738.2)	17.62 (447.7)	22.31 (566.7)

Part No.	J	K	L	M	N	X	Y	Z
181-317-021	5.88 (149.2)	19.50 (495.3)	15.50 (393.7)	20.38 (517.5)	20.94 (531.8)	13.88 (352.4)	18.94 (481.0)	24.00 (609.6)
181-317-031	10.88 (276.2)	19.50 (495.3)	20.50 (520.7)	20.38 (517.5)	25.94 (658.8)	19.50 (495.3)	24.62 (625.5)	29.69 (754.1)
181-317-051	5.88 (149.2)	24.50 (622.3)	15.50 (393.7)	25.38 (644.5)	20.94 (531.8)	13.88 (352.4)	18.94 (481.0)	24.00 (609.6)
181-317-061	10.88 (276.2)	24.50 (622.3)	20.50 (520.7)	25.38 (644.5)	25.94 (658.8)	19.50 (495.3)	24.62 (625.5)	29.69 (754.1)

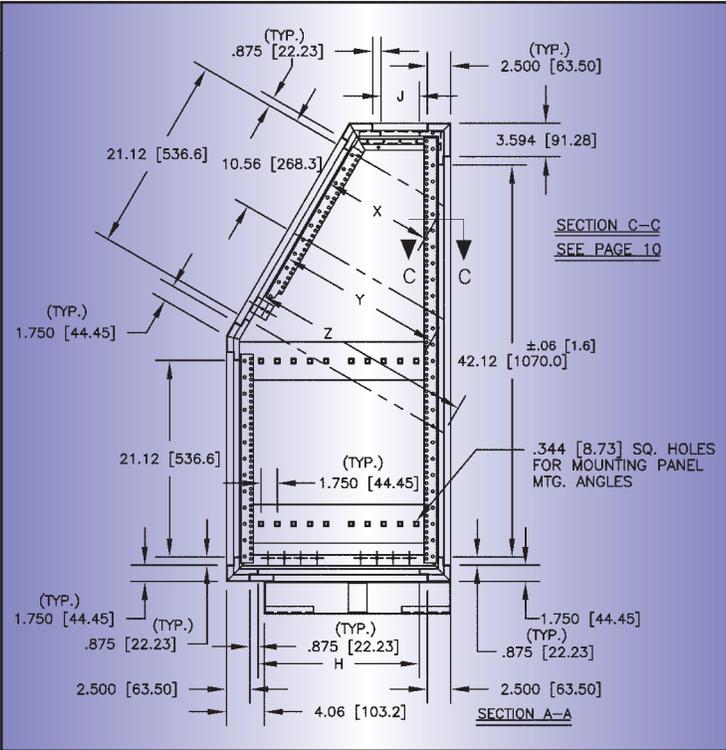


# 30° Sloped Front Consoles

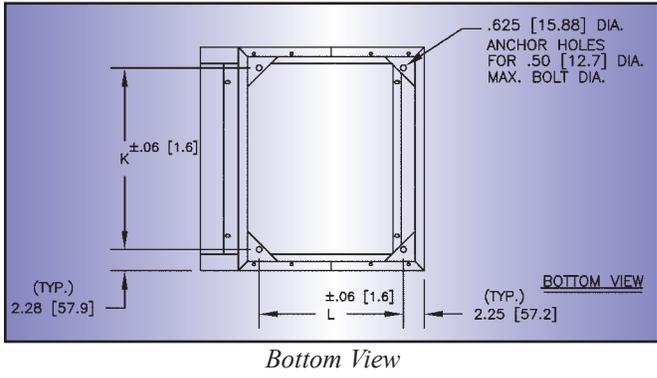
**19" & 24" Wide, 21" High Panel Space on Slope, 24 1/16" & 29 1/16" Deep**



Top and Front Views



Section AA and Section CC



Bottom View

**Note:** Frames on this page shown with optional recessed base

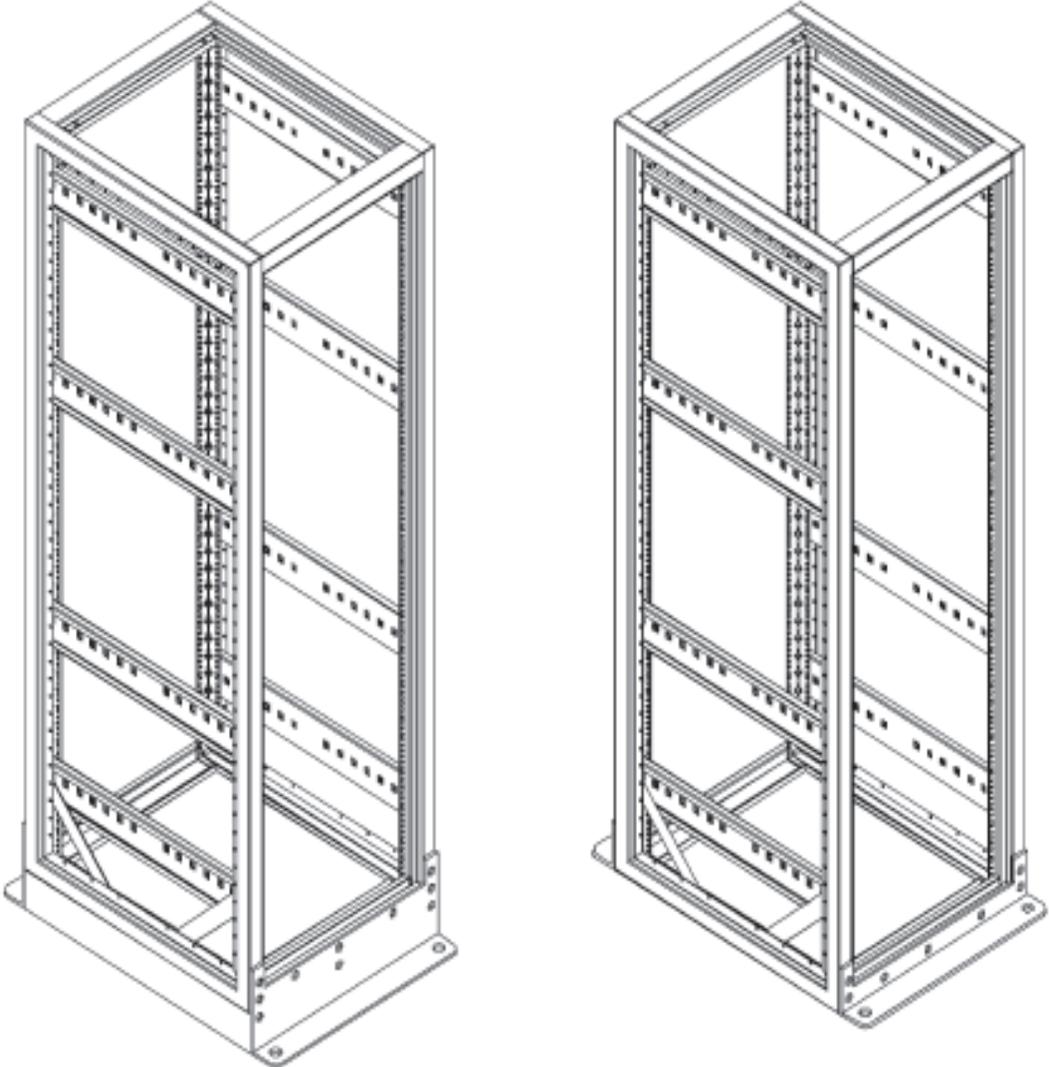
Part No.	A	B	C	D	E	F	G	H
181-321-021	24.06 (611.2)	20.56 (522.3)	19.06 (484.2)	18.31 (465.1)	17.75 (450.9)	24.06 (611.2)	10.88 (276.2)	17.31 (439.7)
181-321-031	24.06 (611.2)	20.56 (522.3)	19.06 (484.2)	18.31 (465.1)	17.75 (450.9)	29.06 (738.2)	15.88 (403.2)	22.31 (566.7)
181-321-051	29.06 (738.2)	25.56 (649.3)	24.06 (611.2)	23.31 (592.1)	22.75 (577.9)	24.06 (611.2)	10.88 (276.2)	17.31 (439.7)
181-321-061	29.06 (738.2)	25.56 (649.3)	24.06 (611.2)	23.31 (592.1)	22.75 (577.9)	29.06 (738.2)	15.88 (403.2)	22.31 (566.7)

Part No.	J	K	L	M	N	X	Y	Z
181-321-021	4.12 (104.8)	19.50 (495.3)	15.50 (393.7)	20.38 (517.5)	20.94 (531.8)	11.70 (297.3)	17.80 (452.0)	24.00 (609.6)
181-321-031	9.12 (231.8)	19.50 (495.3)	20.50 (520.7)	20.38 (517.5)	25.94 (658.8)	17.48 (444.1)	23.58 (598.9)	29.69 (754.1)
181-321-051	4.12 (104.8)	24.50 (622.3)	15.50 (393.7)	25.38 (644.5)	20.94 (531.8)	11.70 (297.3)	17.80 (452.0)	24.00 (609.6)
181-321-061	9.12 (231.8)	24.50 (622.3)	20.50 (520.7)	25.38 (644.5)	25.94 (658.8)	17.48 (444.1)	23.58 (598.9)	29.69 (754.1)

# Seismic Hardening Kits

## Seismic Hardening Kits

Seismic Hardening Kits provide extra strength to help assemblies meet strength, shock and vibration requirements such as NEBS Seismic Zone 4. Kits consist of additional welding of front and rear seams at top and bottom, additional gussets in the lower corners, addition of seismic mounting braces and necessary mounting hardware and instructions.



### For Racks with Bases

Zone 4 Seismic Hardening on Heavy Duty Vertical or Sloped Racks with Base	
Seismic Hardening Kit No.	For Racks With Panel Width
291-001-019-__*	19-1/16"
291-001-024-__*	24-1/16"
291-001-030-__*	30-1/16"

### For Racks without Bases

Zone 4 Seismic Hardening on Heavy Duty Vertical or Sloped Racks without Base	
Seismic Hardening Kit No.	For Racks With Panel Width
291-002-019-__*	19-1/16"
291-002-024-__*	24-1/16"
291-002-030-__*	30-1/16"

\* Add suffix to correspond to frame depth. Options are "17", "24", "29" and "36" to match the overall frame depth.

Be sure to choose the ‘prep’d for seismic’ option (see page A4) when choosing your frame part number



# Accessories

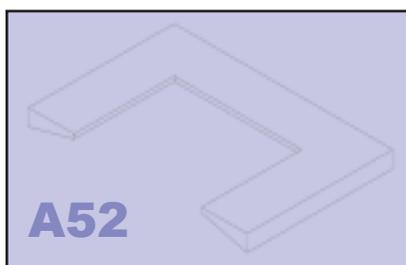
## Accessories for the most effective packaging of electronic equipment

The Enclosure System of Modular Cabinets is the most efficient and advanced way to house electronic equipment and instrumentation. At Equipto, we offer the flexibility, versatility and functionality you need, therefore also offering a wide selection of compatible accessories. Our engineers have developed a line of accessories for use with the Equipto Enclosure System, which are functional, dependable and ruggedly built to compliment the use of the basic cabinets in the Equipto Enclosure System of your choice.

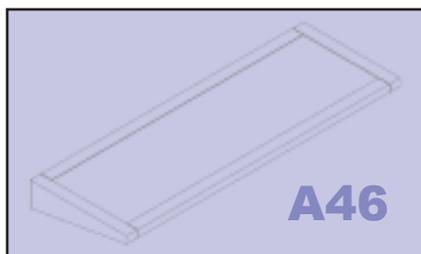
The accessories which are available to you include; Caster Bases, Caster Dollies and Storage Drawers, Sliding Shelves and many styles of Work/Writing Shelves, Turrets and Laminated Plastic Tops.

### Product Features

- ▶ All accessories are designed to expand the flexibility of Systems
- ▶ Caster Dollies are ruggedly constructed for safe mobility under heavy loading or uneven floors
- ▶ Storage drawers used to accommodate and support electronic equipment
- ▶ Work Writing Shelves offer comfort and convenience, operator ease, easy maintenance, and a nice appearance



*Angular Laminate Console Shelf*



*Invertible Work/Writing Shelf*

### bases & base accessories

- A29** Flush and Recessed Bases
- A32** Caster Frame Bases
- A33** Casters for Caster Frame Bases
- A34** Caster Dollies, Flush
- A36** Caster Dollies, Extended
- A38** Cabinet Trucks, Flush
- A40** Cabinet Trucks, Extended
- A45** Casters for Dollies and Cabinet Trucks
- A39** Floor Locks for Cabinet Trucks

### panels

- A75** Flat (1/8" Thick) Plate Instrument Panels
- A76** Flush Filler Panels
- A80** Formed (5/8" thick) Instrument Panels
- A75** Panel Shims

### shelves - internal

- A83** Cantilevered Shelves
- A83** Equipment Shelves
- A57** Hinged Drawer Shelves
- A56** "Pull-Out" Convenience Shelf
- A85** Sliding Chassis Shelves

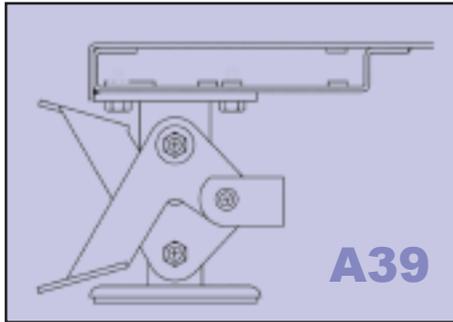
### shelves - external

- A46** Invertible Work/Writing Shelf
- A52** Angular Laminate Console Shelves
- A50** Console Laminate Shelves
- A47** Shelf Insert Panels, Laminated or Steel

### miscellaneous accessories

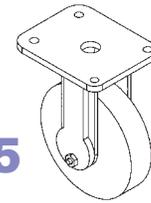
- A44** Angle Support Channels
- A91** Buss Bars, Insulated Copper
- A84** Chassis Guides and Supports
- A62** Doors, Extended and Double
- A88** Gasketing
- A90** Hardware
- A89** Joining Hardware Kits, Studs and Channels
- A88** Lift Bolts
- A42** Vertical Mounting Rails
- A91** Plugmold
- A58** Storage Drawers
- A54** Laminate Tops for Multiple Pedestal Consoles
- A87** Laminate Tops for Single Pedestal Cabinets
- A63** Turrets

# Accessories



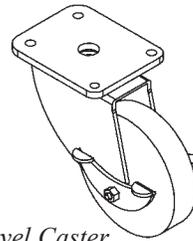
Floor Lock

**A39**

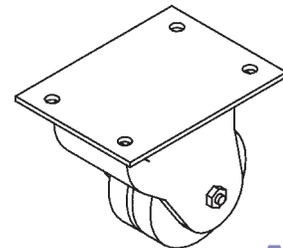


**A45**

Rigid Caster

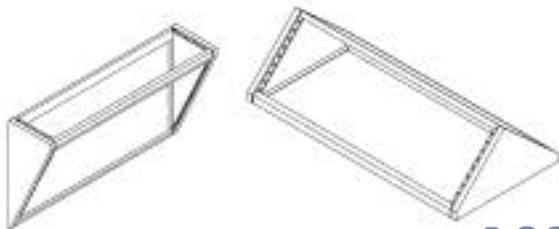


Swivel Caster



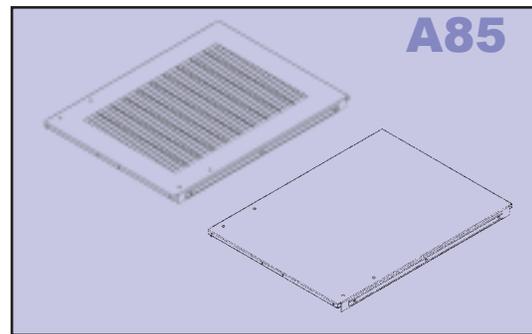
Dual wheel Caster

**A33**



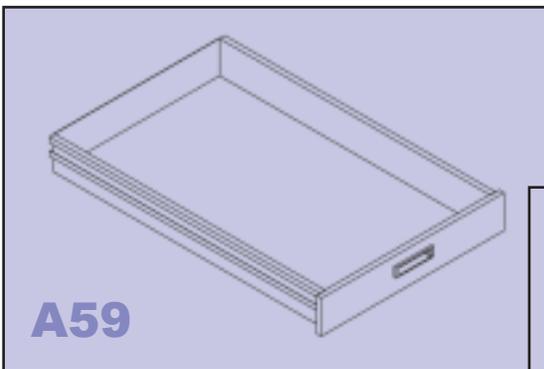
Single and Double Slope Turrets

**A63**



**A85**

Sliding Chassis Shelves, Plain and Grilled



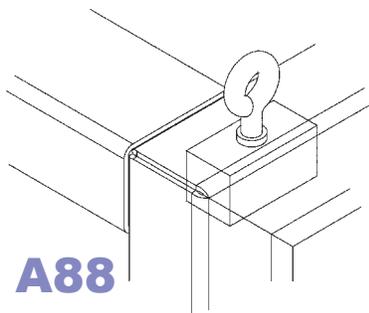
**A59**

Storage Drawer



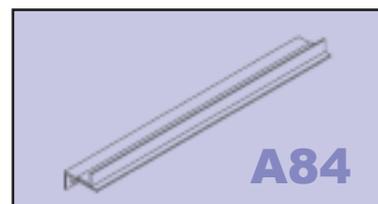
**A34**

Caster Dolly



**A88**

Lift Bolt



**A84**

Adjustable Guide Angle



# Introduction to Bases

## Choosing a Base to Fit Your Needs

The Heavy Duty product line offers several base options. The following information can help you select the best option for your requirements.

Casters are not required if the frame will not be moved. You may choose a Flush Frame Base or a Recessed Pontoon Base, which has 4" of toe space in front. Both bases will add 3 1/2" to the height of the frame. In addition, both of these bases are available plain or one of a combination of Duplex outlet, levelers or anti-tip legs. (Levelers and anti-tip legs must be ordered separately).

If the frame must be moved then casters are required. Consider how much weight will be loaded and the type of surface the frame will be moved across before you choose your base.

If the equipment and frame weigh 800 lbs. or less and will be moved over a smooth surface, select a Caster Base. Otherwise,

select a Caster Dolly or Cabinet Truck. You may select an Extended Caster Dolly or Extended Cabinet Truck if heavy equipment will be extended from the front of the frame. Anti-tip legs also work well in this situation.

A Caster Dolly is made of heavier material than a Cabinet Truck—11-gauge as opposed to 12-gauge steel. The Caster Dolly accommodates Locking Casters rather than Floor Locks. A Floor Lock will raise the front of the frame about 1/8", which makes a frame assembly on a Floor Lock slightly less stable than one on Locking Casters. For demanding applications, it is best to use a Caster Dolly and Locking Casters instead of a Cabinet Truck with Floor Locks.

For more information on these products, please see the following pages. If you have any questions, please call (800) 204-7225.

Environment	Base	Base Options
		Features and Options
Standard	Caster Base	<ul style="list-style-type: none"> <li>▶ 16-gauge steel construction</li> <li>▶ 2" diameter dual wheel casters (rated at 200 or 400 lbs. each)</li> <li>▶ Adds 3 1/2" (w/200 lb. casters) and 3 7/8" (w/400 lb. casters) to height of frame</li> </ul>
	Recessed Base	<ul style="list-style-type: none"> <li>▶ 12-gauge steel construction</li> <li>▶ 4" deep toe space</li> <li>▶ Adds 3-1/2" to height of frame</li> </ul>
	Flush Base	<ul style="list-style-type: none"> <li>▶ 12-gauge steel construction</li> <li>▶ Flush with front of frame</li> <li>▶ Adds 3-1/2" to height of frame</li> </ul>
	Caster, flush & recessed	<ul style="list-style-type: none"> <li>▶ Provisions for levelers, anti-tip legs or duplex outlet</li> </ul>
Heavy Duty	Flush Caster Dolly	<ul style="list-style-type: none"> <li>▶ 11-gauge steel construction</li> <li>▶ 4" diameter swivel or rigid casters (300 or 550 lbs. per caster capacity)</li> <li>▶ Locking casters</li> <li>▶ Adds 6 1/2" to height of frame</li> </ul>
	Extended Caster Dolly	<ul style="list-style-type: none"> <li>▶ 11-gauge steel construction</li> <li>▶ 4" diameter swivel or rigid casters (rated at 300 or 500 lbs. each)</li> <li>▶ Locking casters</li> <li>▶ Adds 6 1/2" to height of frame</li> </ul>
	Flush Cabinet Truck	<ul style="list-style-type: none"> <li>▶ 12-gauge steel construction</li> <li>▶ 4" diameter swivel or rigid casters (300 or 550 lbs. per caster capacity)</li> <li>▶ Floor Locks</li> <li>▶ Adds 6 1/2" to height of frame</li> </ul>
Severe	Extended Cabinet Truck	<ul style="list-style-type: none"> <li>▶ 12-gauge steel construction</li> <li>▶ 4" diameter swivel or rigid casters (300 or 550 lbs. per caster capacity)</li> <li>▶ Floor Locks</li> <li>▶ Adds 6 1/2" to height of frame</li> </ul>

# Flush & Recessed Frame Bases

## Flush Frame Bases

Flush Frame Bases are flush with all sides of the cabinet frame. A variety of base styles are available. Specify Flush Bases instead of Pontoon Bases when increased stability is needed because of the load distribution in the cabinet. Double and triple-width bases are shipped separately.



Flush Bases flush all four sides

### Product Features

- ▶ 12-gauge cold-rolled steel construction
- ▶ Channel design for maximum strength
- ▶ Reinforced corners
- ▶ Painted to match cabinet frame

Flush Frame Bases					
Part No.	A	B	C	D	E
021-020-060	24.00 (609.6)	24.00 (609.6)	19.50 (495.3)	19.50 (495.3)	22.62 (574.7)
021-030-060	29.00 (736.6)	24.00 (609.6)	24.50 (622.3)	19.50 (495.3)	22.62 (574.7)
021-036-060	36.00 (914.4)	24.00 (609.6)	31.50 (800.1)	19.50 (495.3)	22.62 (574.7)
021-050-060	24.00 (609.6)	29.00 (736.6)	19.50 (495.3)	24.50 (622.3)	27.62 (701.7)
021-060-060	29.00 (736.6)	29.00 (736.6)	24.50 (622.3)	24.50 (622.3)	27.62 (701.7)
021-066-060	36.00 (914.4)	29.00 (736.6)	31.50 (800.1)	24.50 (622.3)	27.62 (701.7)
021-080-060	24.00 (609.6)	35.00 (889.0)	19.50 (495.3)	30.50 (774.7)	33.62 (854.1)
021-090-060	29.00 (736.6)	35.00 (889.0)	24.50 (622.3)	30.50 (774.7)	33.62 (854.1)
021-096-060	36.00 (914.4)	35.00 (889.0)	31.50 (800.1)	30.50 (774.7)	33.62 (854.1)

## Recessed Pontoon Bases

Pontoon Bases are structurally identical to Flush Bases except for a 4" toe recess in the front. Pontoon Bases can be ordered in several styles; Duplex outlet, levelers and anti-tip legs are available. Single-bay bases are shipped attached to the cabinet frames. Double and triple-width bases are shipped separately. Select an Extended caster Dolly or Extended Cabinet Truck if heavy equipment will be extended from the front of the frame.



Recessed Pontoon Base has a 4" toe recess in front, flush sides and back

### Product Features

- ▶ 12-gauge cold-rolled steel construction
- ▶ Completely welded
- ▶ Reinforced corners
- ▶ Available in single and multiple widths

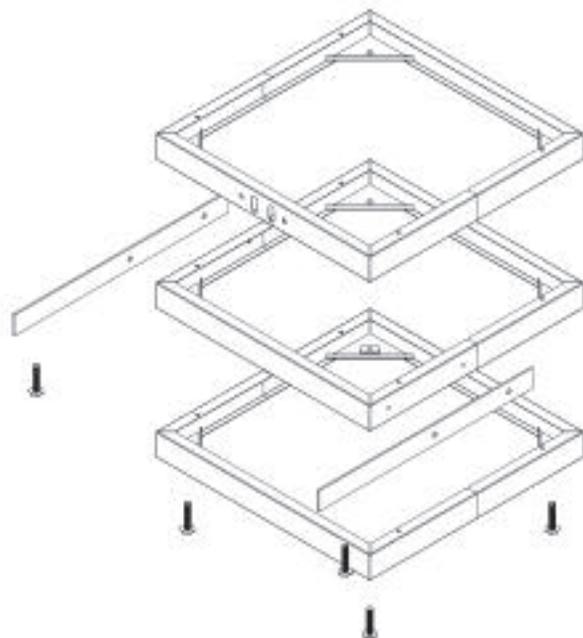
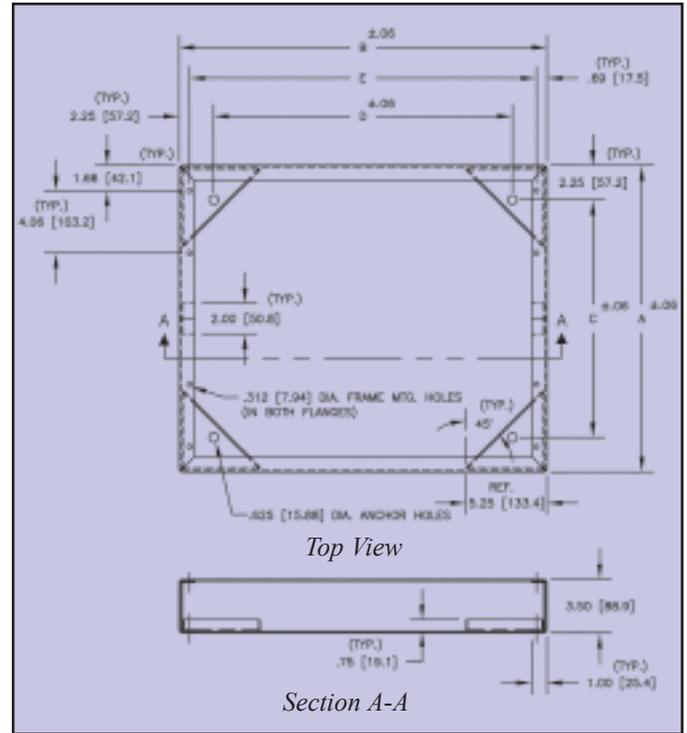
Recessed Frame Bases					
Part No.	A	B	C	D	E
021-020-010	20.00 (508.0)	24.00 (609.6)	15.50 (393.7)	19.50 (495.3)	22.62 (574.7)
021-030-010	25.00 (635.0)	24.00 (609.6)	20.50 (520.7)	19.50 (495.3)	22.62 (574.7)
021-036-010	32.00 (812.8)	24.00 (609.6)	27.50 (698.5)	19.50 (495.3)	22.62 (574.7)
021-050-010	20.00 (508.0)	29.00 (736.6)	15.50 (393.7)	24.50 (622.3)	27.62 (701.7)
021-060-010	25.00 (635.0)	29.00 (736.6)	20.50 (520.7)	24.50 (622.3)	27.62 (701.7)
021-066-010	32.00 (812.8)	29.00 (736.6)	27.50 (698.5)	24.50 (622.3)	27.62 (701.7)
021-080-010	20.00 (508.0)	35.00 (889.0)	15.50 (393.7)	30.50 (774.7)	33.62 (854.1)
021-090-010	25.00 (635.0)	35.00 (889.0)	20.50 (520.7)	30.50 (774.7)	33.62 (854.1)
021-096-010	32.00 (812.8)	35.00 (889.0)	27.50 (698.5)	30.50 (774.7)	33.62 (854.1)



# Flush & Recessed Frame Bases

**For use with 24 1/16", 29 1/16" and 36 1/16" Frame Depths (Single width)**

FLUSH AND PONTOON BASES For Vertical Rack and Sloped Front Cabinets			
Depth of Cabinet Frame	A Single Frame Only	Two Frames Joined Side-By-Side	Three Frames Joined Side-By-Side
	Part No.	Part No.	Part No.
<b>FLUSH FRAME BASES</b>			
<b>For cabinet frames with a 19" wide panel space</b>			
17"	021-010-06*	022-010-06*	023-010-06*
24"	021-020-06	022-020-06	023-020-06
29"	021-030-06	022-030-06	023-030-06
36"	021-036-06	022-036-06	023-036-06
<b>For cabinet frames with a 24" wide panel space</b>			
17"	021-040-06*	022-040-06*	023-040-06*
24"	021-050-06	022-050-06	023-050-06
29"	021-060-06	022-060-06	023-060-06
36"	021-066-06	022-066-06	023-066-06
<b>RECESSED PONTOON FRAME BASES</b>			
<b>For cabinet frames with a 19" wide panel space</b>			
17"	021-010-01*	022-010-01*	023-010-01*
24"	021-020-01	022-020-01	023-020-01
29"	021-030-01	022-030-01	023-030-01
36"	021-036-01	022-036-01	023-036-01
<b>For cabinet frames with a 24" wide panel space</b>			
17"	021-040-01*	022-040-01*	023-040-01*
24"	021-050-01	022-050-01	023-050-01
29"	021-060-01	022-060-01	023-060-01
36"	021-066-01	022-066-01	023-066-01



\*Add this style number to the partial part number of base selected in chart above.

- 0—Plain
- 1—With provision for Duplex Outlet
- 3—With provisions for levelers
- 4—With provisions for anti-tip legs
- 5—With provisions for Duplex Outlet and levelers
- 7—With provisions for anti-tip legs and levelers
- 8—With provisions for anti-tip legs and Duplex Outlet
- 9—With provisions for anti-tip legs, levelers and Duplex Outlet

If ordering a flush frame base to be used with a seismic kit (Pge A25), then change the last 3 digits of the flush base P/N to '160'

Example: 021-030-160

**Leveling Glides**  
(4 required per base)

Part No. 81-0505-03

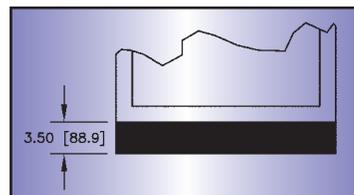
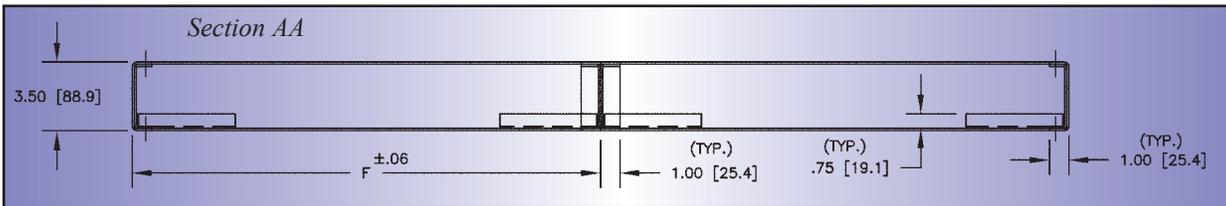
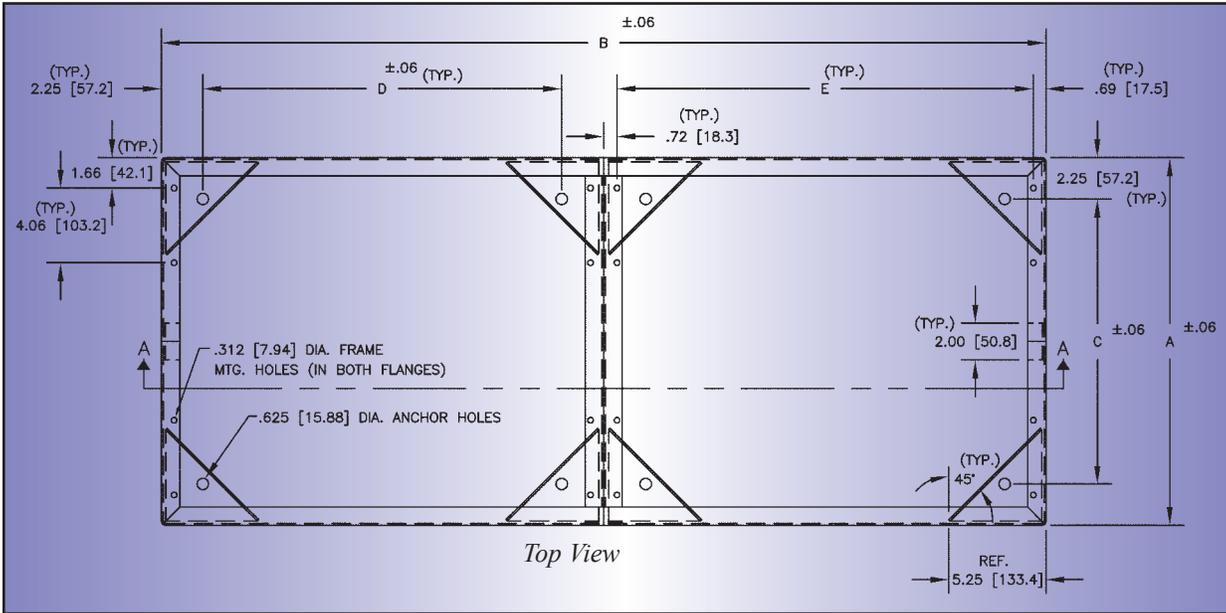
**Anti-Tip Legs**  
(Order in pairs)

Part No. 81-0706-02

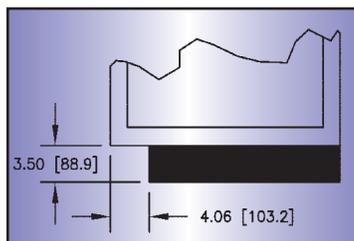
Leveling glides and anti-tip legs are not included with bases and must be ordered separately.

# Flush & Recessed Frame Bases

For use with 24 1/16", 29 1/16" and 36 1/16" Frame Depths (Double width)



Flush Base



Recessed Base

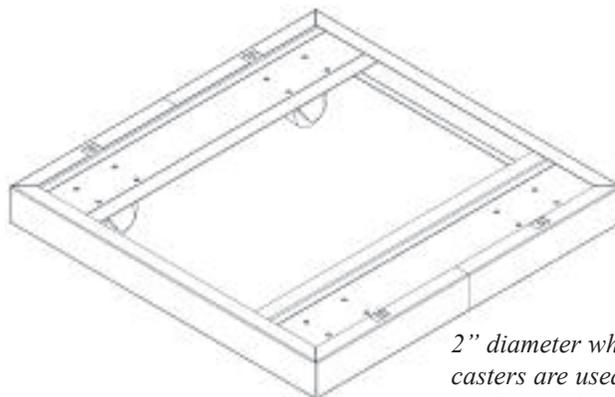
Flush Frame Bases						
Part No.	A	B	C	D	E	F
022-020-060	24.00 (609.6)	48.06 (1220.8)	19.50 (495.3)	19.50 (495.3)	22.62 (574.7)	24.03 (610.4)
022-030-060	29.00 (736.6)	48.06 (1220.8)	24.50 (622.3)	19.50 (495.3)	22.62 (574.7)	24.03 (610.4)
022-036-060	36.00 (914.4)	48.06 (1220.8)	31.50 (800.1)	19.50 (495.3)	22.62 (574.7)	24.03 (610.4)
022-050-060	24.00 (609.6)	58.06 (1474.8)	19.50 (495.3)	24.50 (622.3)	27.62 (701.7)	29.03 (737.4)
022-060-060	29.00 (736.6)	58.06 (1474.8)	24.50 (622.3)	24.50 (622.3)	27.62 (701.7)	29.03 (737.4)
022-066-060	36.00 (914.4)	58.06 (1474.8)	31.50 (800.1)	24.50 (622.3)	27.62 (701.7)	29.03 (737.4)
022-080-060	24.00 (609.6)	70.06 (1779.6)	19.50 (495.3)	30.50 (774.7)	33.62 (854.1)	35.03 (889.8)
022-090-060	29.00 (736.6)	70.06 (1779.6)	24.50 (622.3)	30.50 (774.7)	33.62 (854.1)	35.03 (889.8)
022-096-060	36.00 (914.4)	70.06 (1779.6)	31.50 (800.1)	30.50 (774.7)	33.62 (854.1)	35.03 (889.8)

Recessed Frame Bases						
Part No.	A	B	C	D	E	F
022-020-010	20.00 (508.0)	48.06 (1220.8)	15.50 (393.7)	19.50 (495.3)	22.62 (574.7)	24.03 (610.4)
022-030-010	25.00 (635.0)	48.06 (1220.8)	20.50 (520.7)	19.50 (495.3)	22.62 (574.7)	24.03 (610.4)
022-036-010	32.00 (812.8)	48.06 (1220.8)	27.50 (698.5)	19.50 (495.3)	22.62 (574.7)	24.03 (610.4)
022-050-010	20.00 (508.0)	58.06 (1474.8)	15.50 (393.7)	24.50 (622.3)	27.62 (701.7)	29.03 (737.4)
022-060-010	25.00 (635.0)	58.06 (1474.8)	20.50 (520.7)	24.50 (622.3)	27.62 (701.7)	29.03 (737.4)
022-066-010	32.00 (812.8)	58.06 (1474.8)	27.50 (698.5)	24.50 (622.3)	27.62 (701.7)	29.03 (737.4)
022-080-010	20.00 (508.0)	70.06 (1779.6)	15.50 (393.7)	30.50 (774.7)	33.62 (854.1)	35.03 (889.8)
022-090-010	25.00 (635.0)	70.06 (1779.6)	20.50 (520.7)	30.50 (774.7)	33.62 (854.1)	35.03 (889.8)
022-096-010	32.00 (812.8)	70.06 (1779.6)	27.50 (698.5)	30.50 (774.7)	33.62 (854.1)	35.03 (889.8)

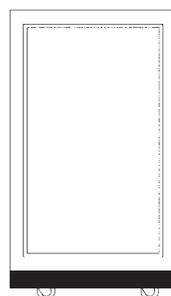


# Caster Frame Bases

Caster Frame Bases are used for moving frame assemblies with standard equipment loads when uneven floors do not exist. Caster Bases are available for all of the Heavy Duty cabinet frames. They can be used for single frame cabinets as well as two and three bay side-by-side assemblies. Single frame bases are shipped attached to the frame, while multiple-bay bases are shipped separately to minimize shipping charges. All of the necessary mounting hardware is included. Casters for Bases must be ordered separately.



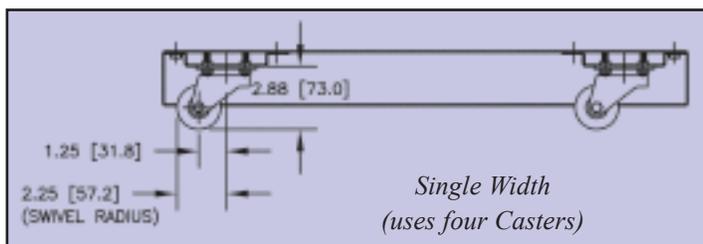
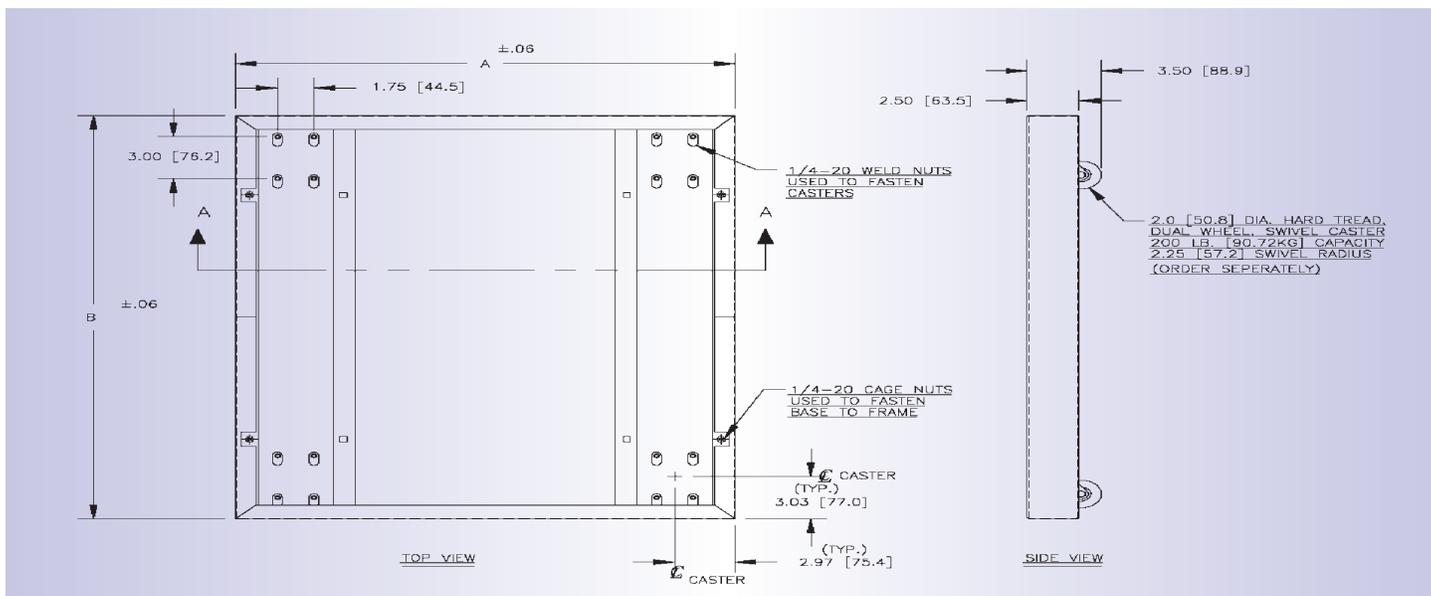
2" diameter wheel casters are used on all Caster Frame Bases



Vertical Rack cabinets can be equipped with Caster Bases in single or multiple bay widths

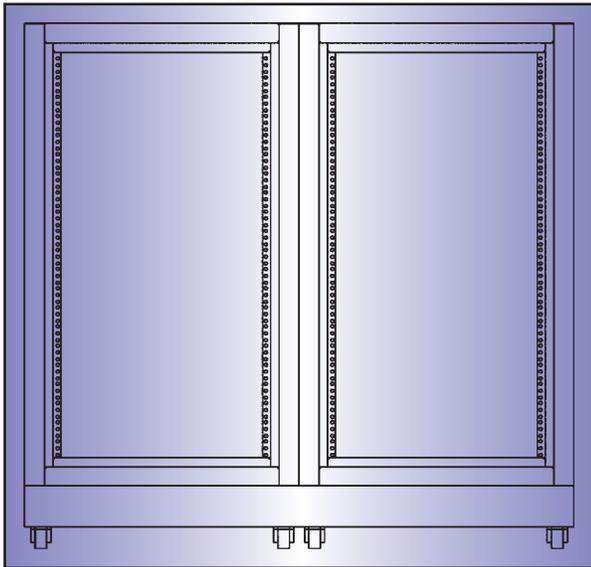
## Product Features

- ▶ Fabricated of 16-gauge cold rolled steel channel body
- ▶ 14-gauge steel caster platforms
- ▶ Spot-welded construction for rugged assembly and maximum stability
- ▶ Sides flush with all sides of the cabinet frame
- ▶ Bases are painted to match the cabinet frame



Single Width		
Part No.	A	B
021-020-050	24.00 (609.6)	24.00 (609.6)
021-030-050	24.00 (609.6)	29.00 (736.6)
021-036-050	24.00 (609.6)	36.00 (914.4)
021-050-050	29.00 (736.6)	24.00 (609.6)
021-060-050	29.00 (736.6)	29.00 (736.6)
021-066-050	29.00 (736.6)	36.00 (914.4)

# Caster Frame Bases

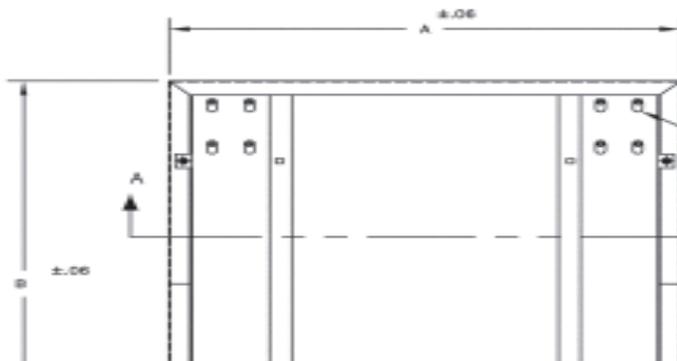


Two cabinets joined side-by-side on a double width caster base

## Dual Wheel Swivel Casters

All of the caster bases are designed as a stable, mobile platform to transport cabinet assemblies which require Dual-Wheel Swivel Casters. Because of their low overall height and wide floor contact, the Dual Wheel casters are ideally suited for moving heavy electronic equipment. Since their main function is to keep the equipment load distributed evenly, the casters are spaced as widely apart as possible to take full advantage of the wheelbase available, which assures ease of mobility. Four casters are required for each frame. For example, as shown in the illustration, eight casters are required on double-width units.

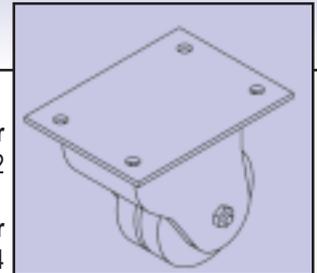
A caster base with 200-lb. casters adds 3.5" to the overall height of the frame with 1" floor clearance; 400-lb. casters add .375" to both height and clearance. Four casters are required for each frame.



Eight Dual Wheel Swivel Casters are used on double-width bases with total rating of 1600 lbs.

## Product Features

- ▶ Hard tread composition
- ▶ Self-lubricating wheels
- ▶ 2" diameter, rated at 200 and 400 lbs. per caster
- ▶ Mounted to base with 1/4"-20 machine screws
- ▶ All metal parts plated



200 Lbs. per caster, order  
Part No. 09-2045-12

400 Lbs. per caster, order  
Part No. 051-020-104

Caster Frame Bases For Vertical Rack and Sloped Front Cabinets			
Depth of Cabinet Frame	A Single Frame Only	Two Frames Joined Side-By-Side	Three Frames Joined Side-By-Side
	Part No.	Part No.	Part No.
<b>For cabinet frames with a 19" wide panel space</b>			
17"	*	*	*
24"	021-020-050	022-020-050	023-020-050
29"	021-030-050	022-030-050	023-030-050
36"	021-036-050	022-036-050	023-036-050
<b>For cabinet frames with a 24" wide panel space</b>			
17"	*	*	*
24"	021-050-050	022-050-050	023-050-050
29"	021-060-050	022-060-050	023-060-050
36"	021-066-050	022-066-050	023-066-050

Double Width		
Part No.	A	B
022-020-050	48.06 (1220.8)	24.00 (609.6)
022-030-050	48.06 (1220.8)	29.00 (736.6)
022-036-050	48.06 (1220.8)	36.00 (914.4)
022-050-050	58.06 (1474.8)	24.00 (609.6)
022-060-050	58.06 (1474.8)	29.00 (736.6)
022-066-050	58.06 (1474.8)	36.00 (914.4)
Triple Width		
023-020-050	72.12 (1832.0)	24.00 (609.6)
023-030-050	72.12 (1832.0)	29.00 (736.6)
023-036-050	72.12 (1832.0)	36.00 (914.4)
023-050-050	87.12 (2213.0)	24.00 (609.6)
023-060-050	87.12 (2213.0)	29.00 (736.6)
023-066-050	87.12 (2213.0)	36.00 (914.4)

\* Contact factory for applications for 17" deep frames



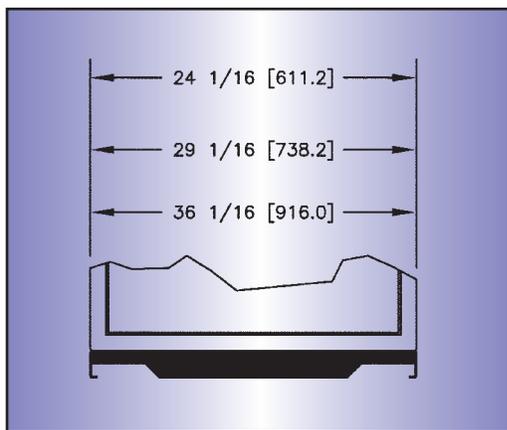
# Flush Caster Dollies

Caster Dollies are recommended when floor surfaces are uneven or frames are heavily loaded. They are designed to be used with 4" diameter single-wheel Casters. The unique corner design means the greatest possible wheelbase and permits the most efficient use of locking wheel casters. With the bridge-like construction, it is possible to use one-piece Caster dollies for double - and triple-bay cabinet assemblies and be assured that high loads can be handled. When a high center of gravity or mounting heavy equipment on slides could cause an unstable condition, Extended Caster Dollies are recommended.

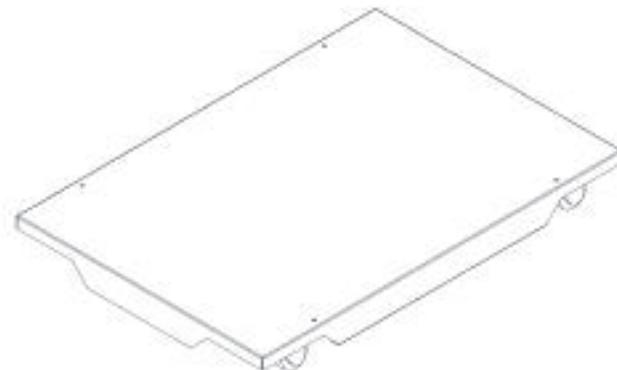
Single width caster dollies are shipped attached to the cabinet frame, while double and triple width units are shipped separately, including all installation hardware. Casters for the dollies are not included with the dolly and must be ordered and shipped separately. Please see following pages for other options.

## Product Features

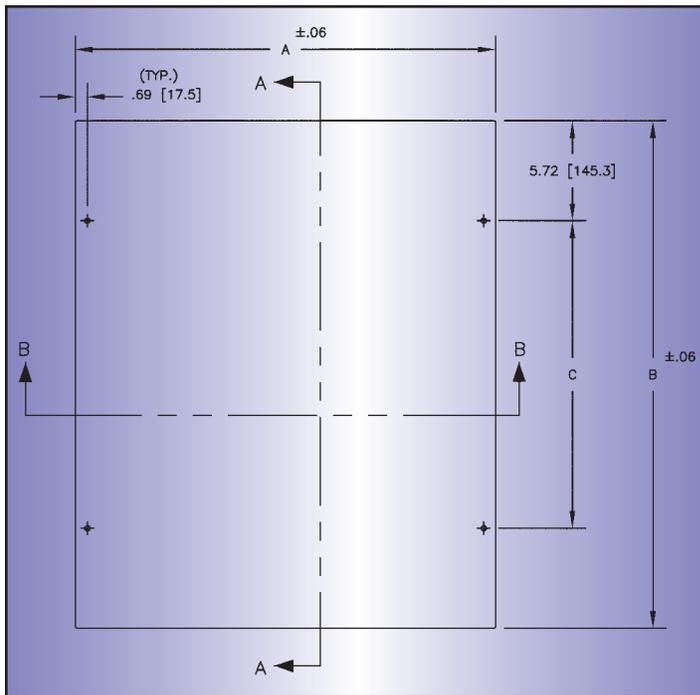
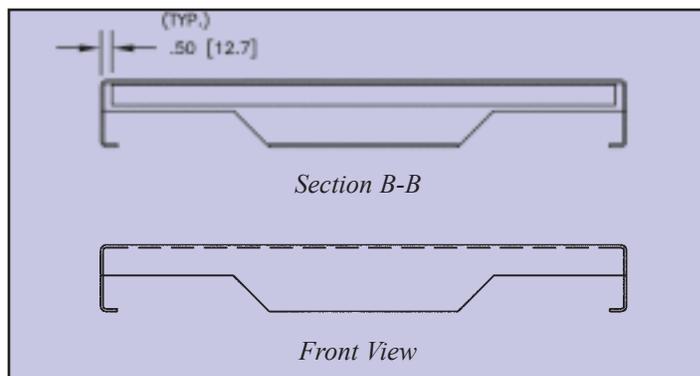
- ▶ Heavy-duty 11-gauge cold rolled steel assembly
- ▶ Arc-welded construction
- ▶ Designed and reinforced for maximum strength



Side View



Flush Caster Dolly



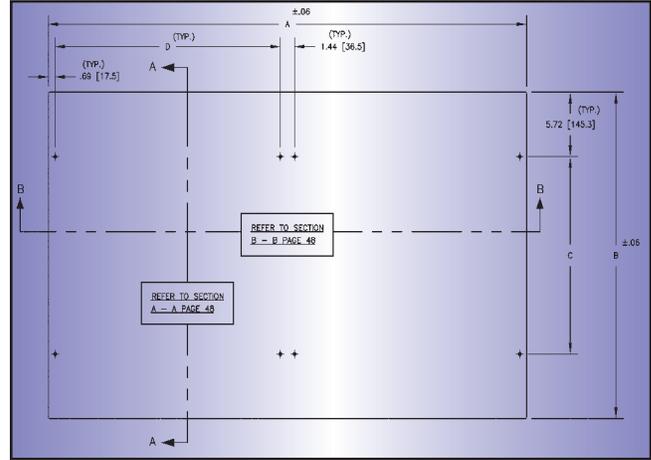
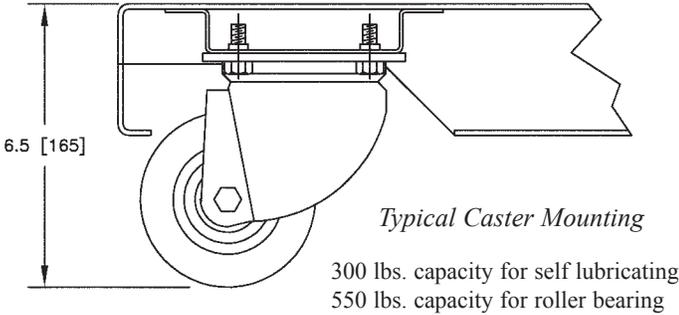
Top View

## Single Width Base Options

Part No.	A	B	C
081-020-050	24.00 (609.6)	24.00 (609.6)	12.56 (319.1)
081-050-050	29.00 (736.6)	24.00 (609.6)	12.56 (319.1)
081-030-050	24.00 (609.6)	29.00 (736.6)	17.56 (446.1)
081-060-050	29.00 (736.6)	29.00 (736.6)	17.56 (446.1)
081-036-050	24.00 (609.6)	36.00 (914.4)	24.56 (623.9)
081-066-050	29.00 (736.6)	36.00 (914.4)	24.56 (623.9)

# Flush Caster Dollies

Single-wheel 4" diameter hard rubber casters provide ease of use and smooth operation when moving frame assemblies in a variety of conditions. Casters are not included with Caster Dollies and must be ordered separately. See page A45 for caster information.

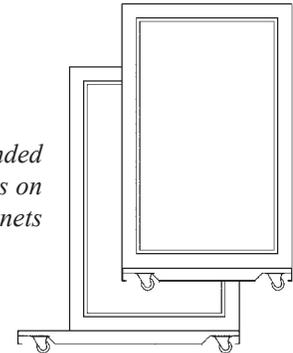


*Top View of Double-Width Caster Dolly*



*Front View*

*Flush and Extended Caster Dollies on Vertical Rack Cabinets*

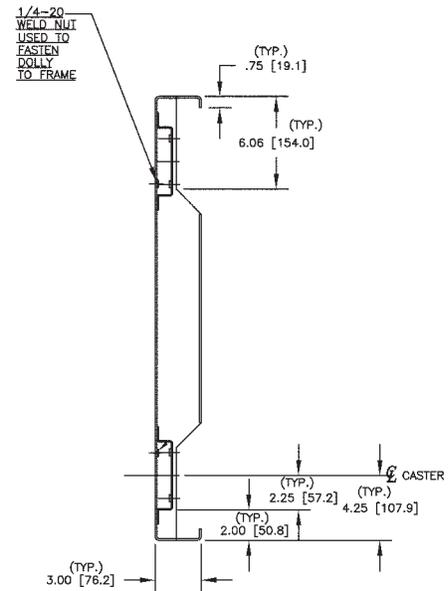


FLUSH CASTER DOLLIES For Vertical Rack and Sloped Front Cabinets			
Depth of Cabinet Frame	A Single Frame Only	Two Frames Joined Side-By-Side	Three Frames Joined Side-By-Side
	Part No.	Part No.	Part No.
<b>For cabinet frames with a 19" wide panel space</b>			
17"	(1)	(1)	(1)
24"	081-020-050	082-020-050	083-020-050
29"	081-030-050	082-030-050	083-030-050
36"	081-036-050	082-036-050	083-036-050
<b>For cabinet frames with a 24" wide panel space</b>			
17"	(1)	(1)	(1)
24"	081-050-050	082-050-050	083-050-050
29"	081-060-050	082-060-050	083-060-050
36"	081-066-050	082-066-050	083-066-050

(1) consult factory for 17" deep applications

Double Width				
Part No.	A	B	C	D
082-020-050	48.06 (1220.8)	24.00 (609.6)	12.56 (319.1)	22.62 (574.7)
082-050-050	58.06 (1474.8)	24.00 (609.6)	12.56 (319.1)	27.62 (701.7)
082-030-050	48.06 (1220.8)	29.00 (736.6)	17.56 (446.1)	22.62 (574.7)
082-060-050	58.06 (1474.8)	29.00 (736.6)	17.56 (446.1)	27.62 (701.7)
082-036-050	48.06 (1220.8)	36.00 (914.4)	24.56 (623.9)	22.62 (574.7)
082-066-050	58.06 (1474.8)	36.00 (914.4)	24.56 (623.9)	27.62 (701.7)

Triple Width				
Part No.	A	B	C	D
083-020-050	72.12 (1832.0)	24.00 (609.6)	12.56 (319.1)	22.62 (574.7)
083-050-050	87.12 (2213.0)	24.00 (609.6)	12.56 (319.1)	27.62 (701.7)
083-030-050	72.12 (1832.0)	29.00 (736.6)	17.56 (446.1)	22.62 (574.7)
083-060-050	87.12 (2213.0)	29.00 (736.6)	17.56 (446.1)	27.62 (701.7)
083-036-050	72.12 (1832.0)	36.00 (914.4)	24.56 (623.9)	22.62 (574.7)
083-066-050	87.12 (2213.0)	36.00 (914.4)	24.56 (623.9)	27.62 (701.7)



*Section A-A Single-Width*

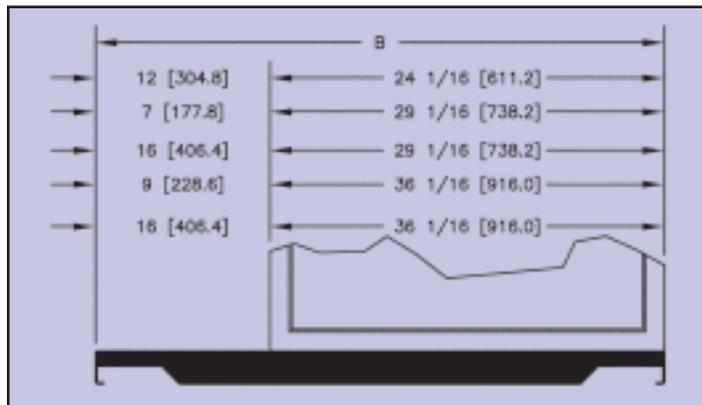


# Extended Caster Dollies

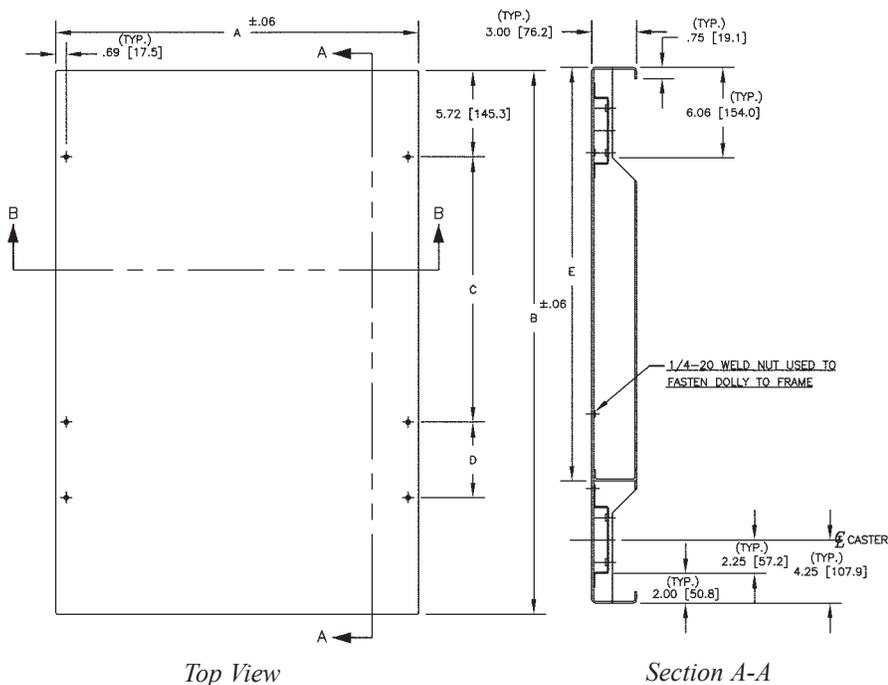
Extended Caster Dollies are flush with the rear and sides of a cabinet frame. These dollies are intended for better mobility and increased safety when uneven floors and heavy loading are factors. The length of the extension is based on the depth of the frame at the bottom. Their unique corner design assures full wheel base, enabling the most efficient use of locking wheel casters. The Extended Caster Dollies are recommended when mobility must be maintained under load conditions where the center of gravity is high or far forward.

## Product Features

- ▶ Fabricated of 11-gauge cold rolled steel
- ▶ Arc welded construction
- ▶ Designed to be utilized with 4" diameter single wheel casters
- ▶ Designed and reinforced for maximum strength

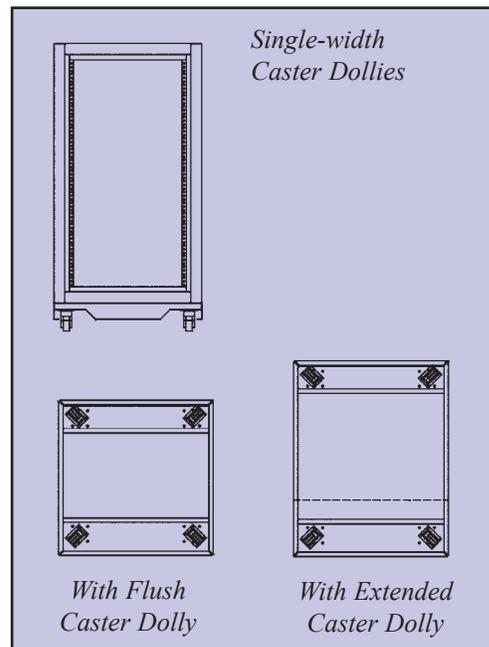


Side view of Extended Caster Dolly with frame mounted



Top View

Section A-A



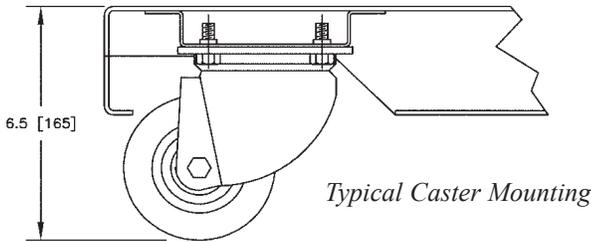
Shown with four self lubricating 4" casters with a total capacity of 1200 lbs. If using roller bearing 4" casters the total load capacity would be 2100 lbs.

Single Width						
Frame Depth	Part No.	A	B	C	D	E
24 1/16 (611.2)	081-020-010	24.00 (609.6)	36.00 (914.4)	12.56 (319.1)	5.00 (127.0)	22.78 (578.6)
	081-050-010	29.00 (736.6)	36.00 (914.4)	12.56 (319.1)	5.00 (127.0)	22.78 (578.6)
29 1/16 (738.2)	081-030-010	24.00 (609.6)	45.00 (1143.0)	17.56 (446.1)	7.00 (177.8)	27.78 (705.6)
	081-060-010	29.00 (736.6)	45.00 (1143.0)	17.56 (446.1)	7.00 (177.8)	27.78 (705.6)
36 1/16 (916.0)	081-036-010	24.00 (609.6)	52.00 (1320.8)	24.56 (623.9)	N/A	34.78 (883.4)
	081-066-010	29.00 (736.6)	52.00 (1320.8)	24.56 (623.9)	N/A	34.78 (883.4)

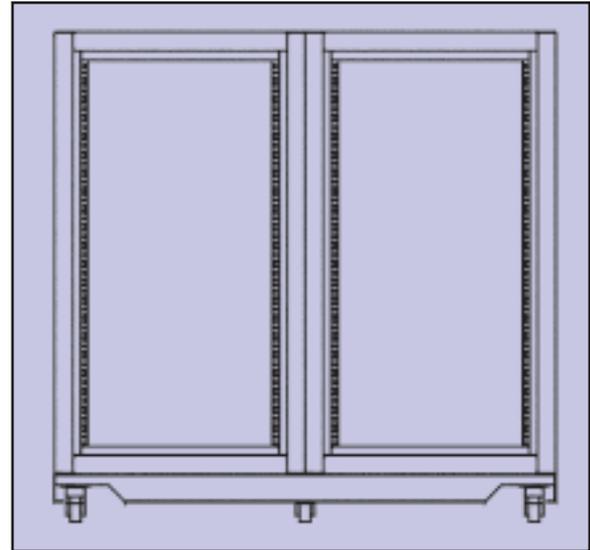
# Extended Caster Dollies



Section B-B

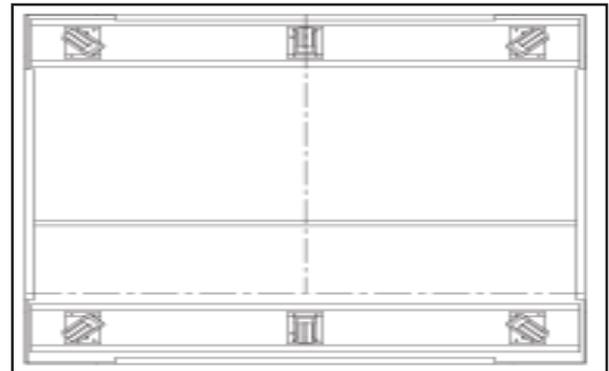


Typical Caster Mounting



Front View of two cabinets joined side-by-side on a double width Extended Caster Dolly

EXTENDED CASTER DOLLIES For Vertical Rack and Sloped Front Cabinets			
Depth of Cabinet Frame	A Single Frame Only	Two Frames Joined Side-By-Side	Three Frames Joined Side-By-Side
	Part No.	Part No.	Part No.
<b>For cabinet frames with a 19" wide panel space</b>			
17"	**	**	**
24"	081-020-010*	082-020-010*	083-020-010*
29"	081-030-010	082-030-010	083-030-010
36"	081-036-010	082-036-010	083-036-010
<b>For cabinet frames with a 24" wide panel space</b>			
17"	**	**	**
24"	081-050-010*	082-050-010*	083-050-010*
29"	081-060-010	082-060-010	083-060-010
36"	081-066-010	082-066-010	083-066-010



Bottom View typical caster arrangement for double width caster dollies

\* May also be used for frames 29" deep but dolly will extend only 7" from the front of the frame.

\*\* Consult factory for applications on a 17" deep frame

Double Width						
Frame Depth	Part No.	A	B	C	D	E
24 1/16 (611.2)	082-020-010	48.06 (1220.8)	36.00 (914.4)	12.56 (319.1)	5.00 (127.0)	22.78 (578.6)
	082-050-010	58.06 (1474.8)	36.00 (914.4)	12.56 (319.1)	5.00 (127.0)	22.78 (578.6)
29 1/16 (738.2)	082-030-010	48.06 (1220.8)	45.00 (1143.0)	17.56 (446.1)	7.00 (177.8)	27.78 (705.6)
	082-060-010	58.06 (1474.8)	45.00 (1143.0)	17.56 (446.1)	7.00 (177.8)	27.78 (705.6)
36 1/16 (916.0)	082-036-010	48.06 (1220.8)	52.00 (1320.8)	24.56 (623.9)	N/A	34.78 (883.4)
	082-066-010	58.06 (1474.8)	52.00 (1320.8)	24.56 (623.9)	N/A	34.78 (883.4)

Triple Width						
Frame Depth	Part No.	A	B	C	D	E
24 1/16 (611.2)	083-020-010	72.12 (1832.0)	36.00 (914.4)	12.56 (319.1)	5.00 (127.0)	22.78 (578.6)
	083-050-010	87.12 (2213.0)	36.00 (914.4)	12.56 (319.1)	5.00 (127.0)	22.78 (578.6)
29 1/16 (738.2)	083-030-010	72.12 (1832.0)	45.00 (1143.0)	17.56 (446.1)	7.00 (177.8)	27.78 (705.6)
	083-060-010	87.12 (2213.0)	45.00 (1143.0)	17.56 (446.1)	7.00 (177.8)	27.78 (705.6)
36 1/16 (916.0)	083-036-010	72.12 (1832.0)	52.00 (1320.8)	24.56 (623.9)	N/A	34.78 (883.4)
	083-066-010	87.12 (2213.0)	52.00 (1320.8)	24.56 (623.9)	N/A	34.78 (883.4)

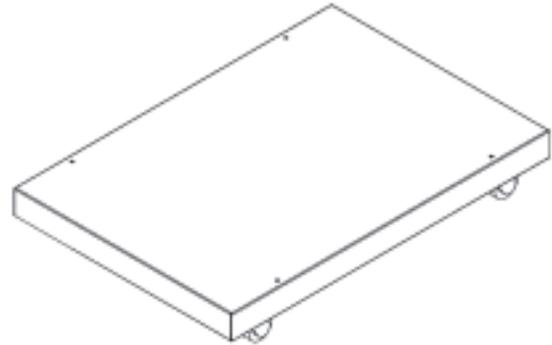


# Flush Cabinet Trucks

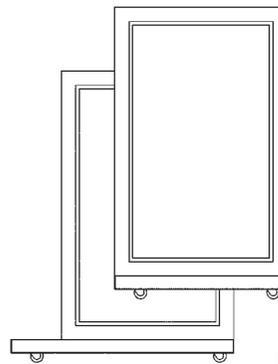
Flush Cabinet Trucks are designed to be used to move frame assemblies under normal mobility conditions. Because of their channel design, it is possible to use one piece trucks for double and triple-bay cabinet assemblies assuring high load carrying capacities. Single width units are shipped installed on the cabinet frame, while multiple-width trucks are shipped separately with all the necessary hardware included. Floor Locks are used to lock Cabinet trucks in a stationary position. Casters for Cabinet trucks are shipped separately to minimize shipping costs.

## Product Features

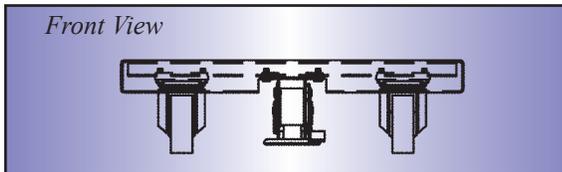
- ▶ 12-gauge cold-rolled steel all-welded construction
- ▶ 4" diameter casters, swivel or rigid (300 or 550 lbs. per caster capacity)
- ▶ Floor locks
- ▶ Adds 6 1/2" to height of frame



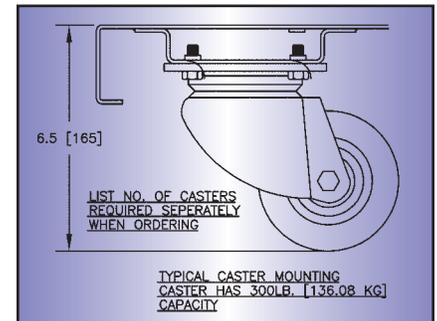
12-gauge cold rolled steel platform



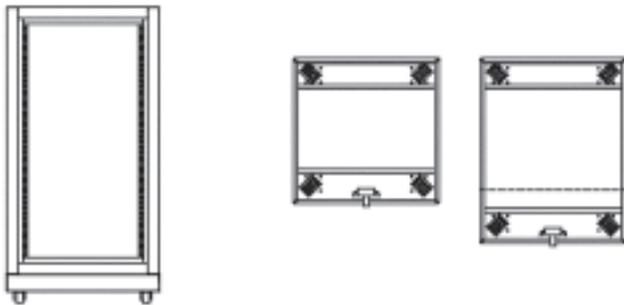
Vertical Rack Cabinets



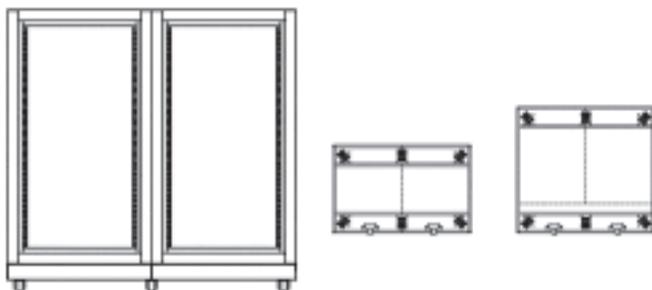
Front View



Typical Caster Mounting



Front View of Single width uses four casters

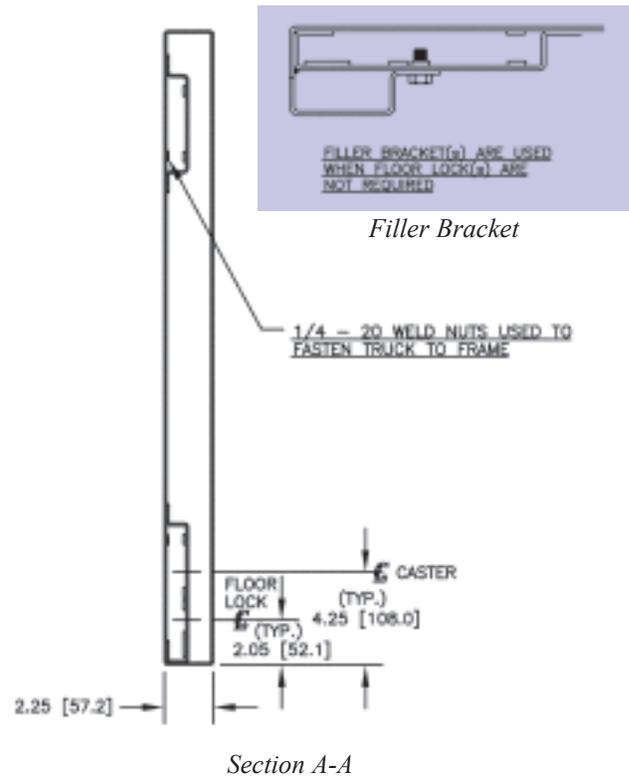
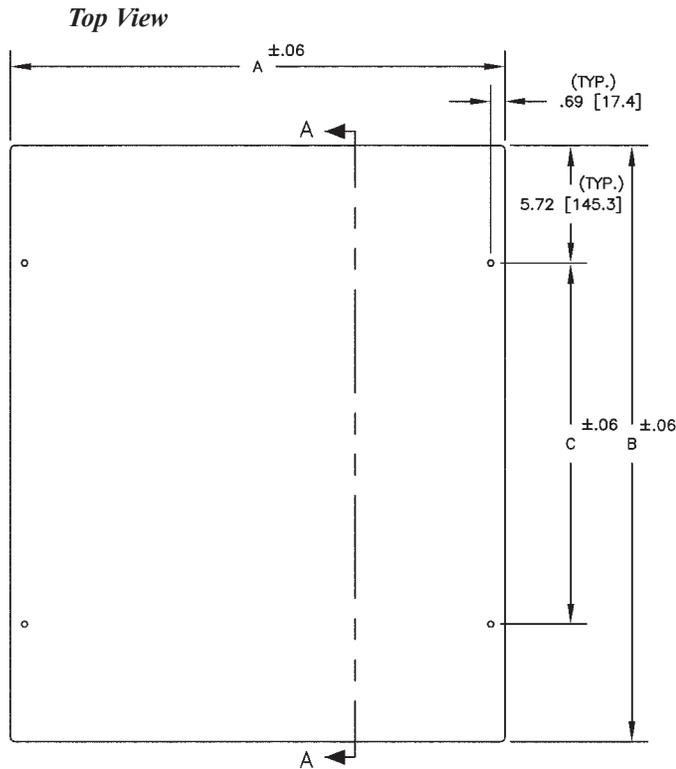


Front View Double width uses six casters

Single Width			
Part No.	A	B	C
681-020-050	24.00 (609.6)	24.00 (609.6)	12.56 (319.1)
681-050-050	29.00 (736.6)	24.00 (609.6)	12.56 (319.1)
681-030-050	24.00 (609.6)	29.00 (736.6)	17.56 (446.1)
681-060-050	29.00 (736.6)	29.00 (736.6)	17.56 (446.1)
681-036-050	24.00 (609.6)	36.00 (914.4)	24.56 (623.9)
681-066-050	29.00 (736.6)	36.00 (914.4)	24.56 (623.9)

Double Width			
Part No.	A	B	C
682-020-050	48.06 (1220.8)	24.00 (609.6)	12.56 (319.1)
682-050-050	58.06 (1474.8)	24.00 (609.6)	12.56 (319.1)
682-030-050	48.06 (1220.8)	29.00 (736.6)	17.56 (446.1)
682-060-050	58.06 (1474.8)	29.00 (736.6)	17.56 (446.1)
682-036-050	48.06 (1220.8)	36.00 (914.4)	24.56 (623.9)
682-066-050	58.06 (1474.8)	36.00 (914.4)	24.56 (623.9)

# Flush Cabinet Trucks and Floor Locks



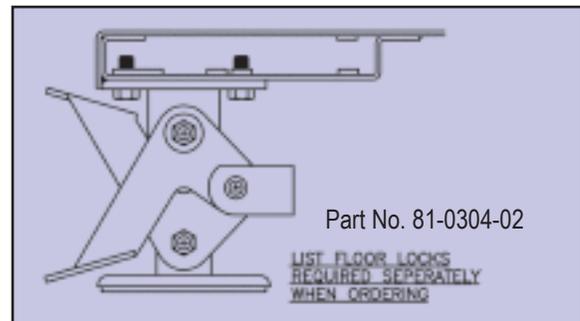
Triple Width			
Part No.	A	B	C
683-020-050	72.12 (1832.0)	24.00 (609.6)	12.56 (319.1)
683-050-050	87.12 (2213.0)	24.00 (609.6)	12.56 (319.1)
683-030-050	72.12 (1832.0)	29.00 (736.6)	17.56 (446.1)
683-060-050	87.12 (2213.0)	29.00 (736.6)	17.56 (446.1)
683-036-050	72.12 (1832.0)	36.00 (914.4)	24.56 (623.9)
683-066-050	87.12 (2213.0)	36.00 (914.4)	24.56 (623.9)

FLUSH CABINET TRUCKS For Vertical Rack and Sloped Front Cabinets			
Depth of Cabinet Frame	A Single Frame Only	Two Frames Joined Side-By-Side	Three Frames Joined Side-By-Side
	Part No.	Part No.	Part No.
<b>For cabinet frames with a 19" wide panel space</b>			
17"	*	*	*
24"	681-020-050	682-020-050	683-020-050
29"	681-030-050	682-030-050	683-030-050
36"	681-036-050	682-036-050	683-036-050
<b>For cabinet frames with a 24" wide panel space</b>			
17"	*	*	*
24"	681-050-050	682-050-050	683-050-050
29"	681-060-050	682-060-050	683-060-050
36"	681-066-050	682-066-050	683-066-050

\* Contact factory for applications on a 17" deep frame.

## Floor Locks

All Cabinet Trucks are equipped with mounting brackets for Floor Locks and should be specified whenever it is necessary to lock truck mounting cabinet assemblies in a stationary position. The foot operated locking lever is used to place the spring loaded pressure pad on the floor and prevent the cabinet assembly from moving. One floor lock is required for all single width cabinet trucks, while two locks on all double and triple bay units should be installed. The Floor Locks are zinc plated and are shipped separately complete with all hardware necessary for installation.



Floor Locks

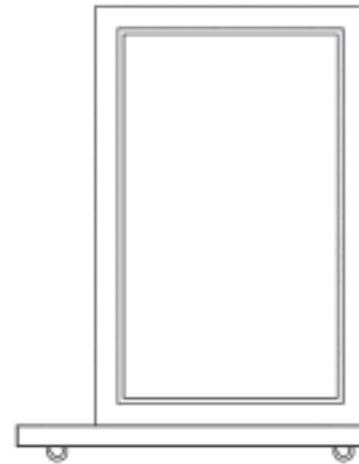


# Extended Cabinet Trucks

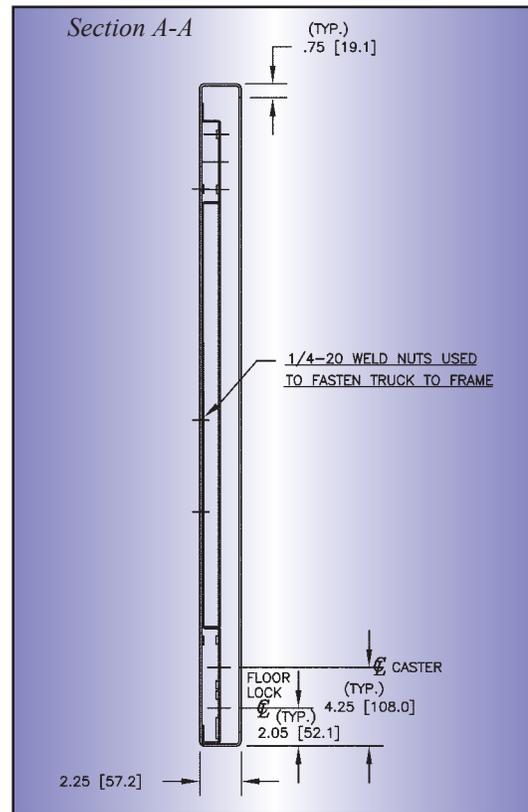
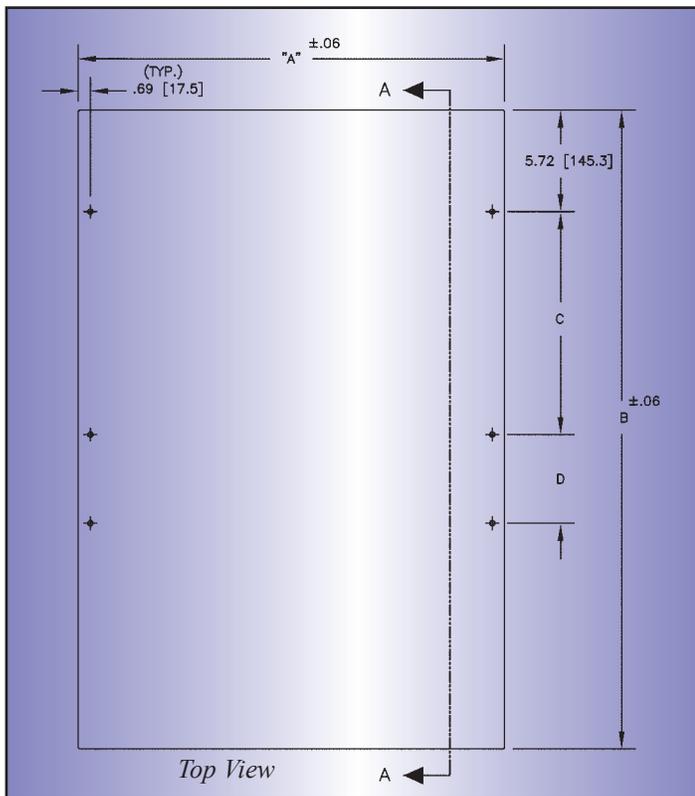
Extended Cabinet Trucks are recommended where the location or heavy equipment mounting could cause an unstable condition. Floor Locks are used to lock Cabinet Trucks in a stationary position. Single width units are shipped installed on the cabinet frame, while multiple-width trucks are shipped separately with all the necessary hardware included. Casters for Cabinet trucks are shipped separately to minimize shipping costs.

## Product Features

- ▶ 12-gauge cold-rolled steel all-welded construction
- ▶ 4" diameter casters, swivel or rigid (300 or 550 lbs. per caster capacity)
- ▶ Floor locks
- ▶ Adds 6 1/2" to height of frame

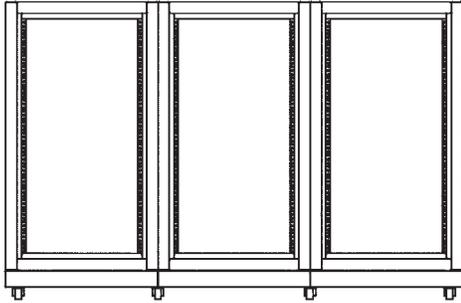
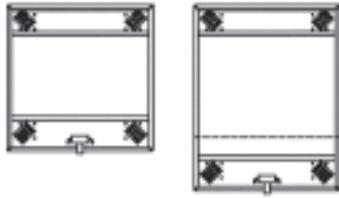
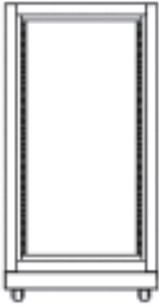


Extended Cabinet Truck



Single Width					
Frame Depth	Part No.	A	B	C	D
24 1/16 (611.2)	681-020-010	24.00 (609.6)	36.00 (914.4)	12.56 (319.1)	5.00 (127.0)
	681-050-010	29.00 (736.6)	36.00 (914.4)	12.56 (319.1)	5.00 (127.0)
29 1/16 (738.2)	681-030-010	24.00 (609.6)	45.00 (1143.0)	17.56 (446.1)	7.00 (177.8)
	681-060-010	29.00 (736.6)	45.00 (1143.0)	17.56 (446.1)	7.00 (177.8)
36 1/16 (916.0)	681-036-010	24.00 (609.6)	52.00 (1320.8)	24.56 (623.9)	N/A
	681-066-010	29.00 (736.6)	52.00 (1320.8)	24.56 (623.9)	N/A

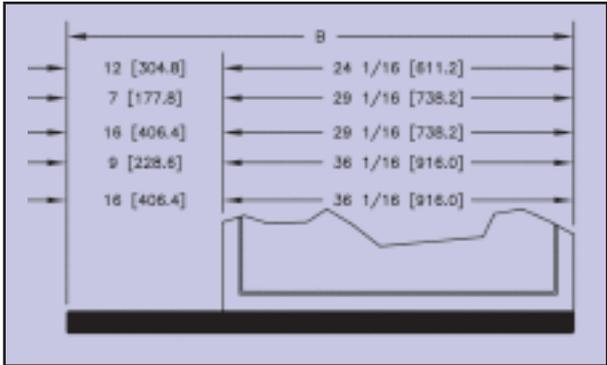
# Extended Cabinet Trucks



Single width Cabinet Trucks with four self lubricating 4" diameter casters can transport 1200 lbs. total capacity; with four roller bearing 4" diameter casters can transport 2100 lbs. total capacity



EXTENDED CABINET TRUCKS For Vertical Rack and Sloped Front Cabinets			
Depth of Cabinet Frame	A Single Frame Only	Two Frames Joined Side-By-Side	Three Frames Joined Side-By-Side
	Part No.	Part No.	Part No.
<b>For cabinet frames with a 19" wide panel space</b>			
17"	**	**	**
24"	681-020-010*	682-020-010*	683-020-010*
29"	681-030-010	682-030-010	683-030-010
36"	681-036-010	682-036-010	683-036-010
<b>For cabinet frames with a 24" wide panel space</b>			
17"	**	**	**
24"	681-050-010*	682-050-010*	683-050-010*
29"	681-060-010	682-060-010	683-060-010
36"	681-066-010	682-066-010	683-066-010



Side view with frame mounted

\* May also be used for frames 29" deep but dolly will extend only 7" from the front of the frame.

Double Width					
Frame Depth	Part No.	A	B	C	D
24 1/16 (611.2)	682-020-010	48.06 (1220.8)	36.00 (914.4)	12.56 (319.1)	5.00 (127.0)
	682-050-010	58.06 (1474.8)	36.00 (914.4)	12.56 (319.1)	5.00 (127.0)
29 1/16 (738.2)	682-030-010	48.06 (1220.8)	45.00 (1143.0)	17.56 (446.1)	7.00 (177.8)
	682-060-010	58.06 (1474.8)	45.00 (1143.0)	17.56 (446.1)	7.00 (177.8)
36 1/16 (916.0)	682-036-010	48.06 (1220.8)	52.00 (1320.8)	24.56 (623.9)	N/A
	682-066-010	58.06 (1474.8)	52.00 (1320.8)	24.56 (623.9)	N/A

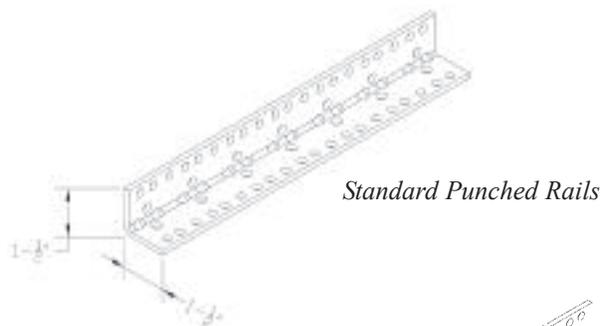
Triple Width					
Frame Depth	Part No.	A	B	C	D
24 1/16 (611.2)	683-020-010	72.12 (1832.0)	36.00 (914.4)	12.56 (319.1)	5.00 (127.0)
	683-050-010	87.12 (2213.0)	36.00 (914.4)	12.56 (319.1)	5.00 (127.0)
29 1/16 (738.2)	683-030-010	72.12 (1832.0)	45.00 (1143.0)	17.56 (446.1)	7.00 (177.8)
	683-060-010	87.12 (2213.0)	45.00 (1143.0)	17.56 (446.1)	7.00 (177.8)
36 1/16 (916.0)	683-036-010	72.12 (1832.0)	52.00 (1320.8)	24.56 (623.9)	N/A
	683-066-010	87.12 (2213.0)	52.00 (1320.8)	24.56 (623.9)	N/A

\*\* Consult factory for applications on a 17" deep frame.

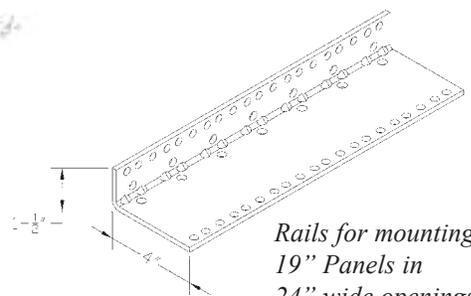


# Vertical Mounting Rails

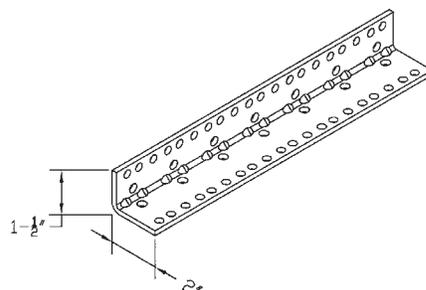
Vertical Mounting Rails are used for mounting equipment in the interior of the cabinet. They are available either punched for Speed Nuts® and 10B sheet metal screws or tapped 10-32 (Panel Opening Leg only) for machine screws, with all holes for mounting instrument panels spaced to comply with the universal EIA standard RS-310. They are fabricated of hot rolled steel, formed into a rugged structural angle shape with rolled edges to eliminate sharp edges. Please see the table below for size selection you need with your Vertical Rack Frame. Rails are shipped installed in the cabinet frame unless they are ordered separately as an extra.



Standard Punched Rails



Rails for mounting 19" Panels in 24" wide openings



Rails for mounting 23" wide telephone equipment in 24" Wide Panel Openings

## Product Features

- ▶ Vertical Mounting Rails, punched or tapped are Zinc plated with Trivalent Chromium Passivation
- ▶ 1 1/2"x1 1/2"x3/16" steel panel angles give increased support under rugged conditions
- ▶ Vertical Mounting Rails are removable and adjustable

## VERTICAL MOUNTING RAILS For Vertical Rack Frames

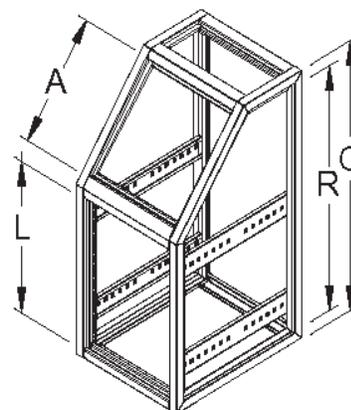
Height of Panel Space	Standard Rails For Front or Rear Openings		24 to 19 Adapter Rails For Front or Rear Openings		24 to 23 Adapter Rails For Front or Rear Openings	
	Zinc Plated		Painted*		Painted*	
	Punched	Tapped	Punched	Tapped	Punched	Tapped
21 1/8"	010-021-010	010-021-012	016-021-010	016-021-012	017-021-010	017-021-012
28 1/8"	010-028-010	010-028-012	016-028-010	016-028-012	017-028-010	017-028-012
35 1/8"	010-035-010	010-035-012	016-035-010	016-035-012	017-035-010	017-035-012
42 1/8"	010-042-010	010-042-012	016-042-010	016-042-012	017-042-010	017-042-012
49 1/8"	010-049-010	010-049-012	016-049-010	016-049-012	017-049-010	017-049-012
56 1/8"	010-056-010	010-056-012	016-056-010	016-056-012	017-056-010	017-056-012
63 1/8"	010-063-010	010-063-012	016-063-010	016-063-012	017-063-010	017-063-012
70 1/8"	010-070-010	010-070-012	016-070-010	016-070-012	017-070-010	017-070-012
77 1/8"	010-077-010	010-077-012	016-077-010	016-077-012	017-077-010	017-077-012
84 1/8"	010-084-010	010-084-012	016-084-010	016-084-012	017-084-010	017-084-012

\*Can be obtained plated

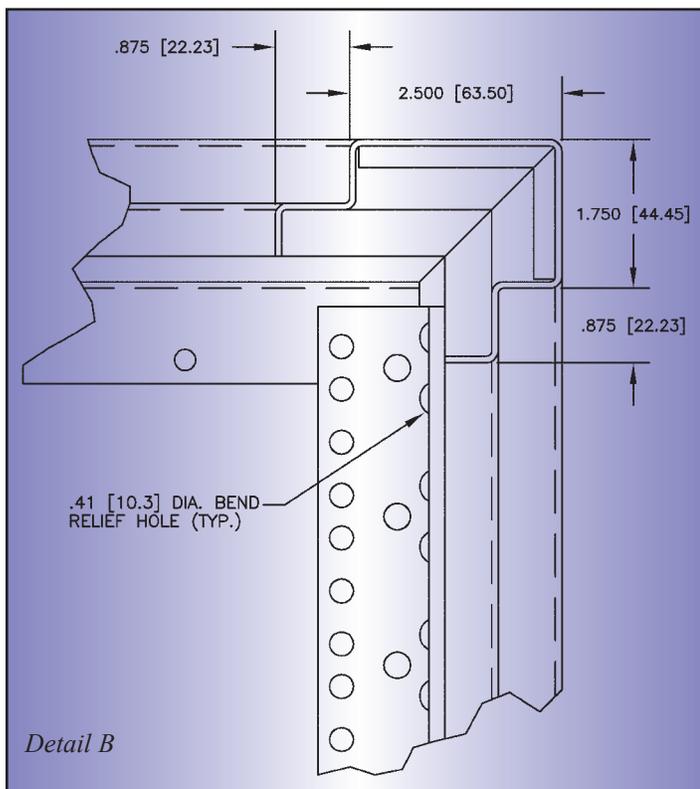
# Vertical Mounting Rails

## Vertical Mounting Rails for Sloped Front Cabinets

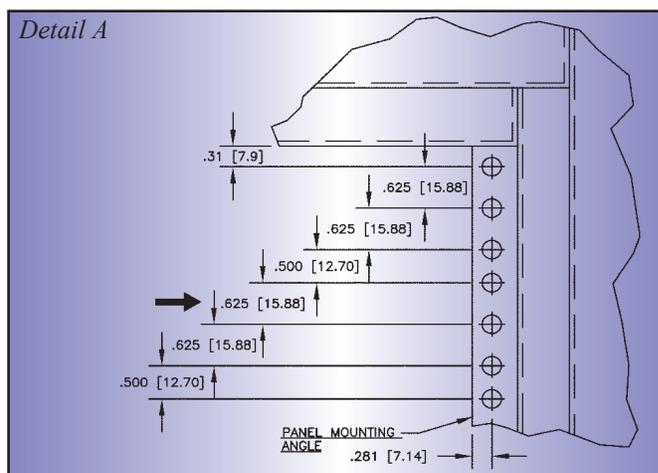
All Sloped Front Cabinets are supplied with six Vertical Mounting Rails - two in the rear and four in the front. Please see the chart below for any additional or substitute Vertical Mounting Rails you require with the Sloped Front Cabinet you are using. In addition, the table below lists the specifications of the Vertical Mounting Rails.



30° Sloped Front Console



Detail B



Detail A

VERTICAL MOUNTING RAILS			
When Overall Height at "O" is	Height of Panel Space at "A" is	Height of Panel Space at "L" is	Height of Panel Space at "R" is
<b>For 30° Sloped Front Console Frames</b>			
43 5/32"	14 1/8"	21 1/8"	36 7/8"
46 3/16"	17 5/8"	21 1/8"	40 3/8"
49 7/32"	21 1/8"	21 1/8"	42 1/8"
<b>For 15° Sloped Front Console Frames</b>			
51 27/32"	21 1/8"	21 1/8"	45 5/8"
58 39/64"	28 1/8"	21 1/8"	52 5/8"
65 3/8"	35 1/8"	21 1/8"	59 5/8"

VERTICAL MOUNTING RAILS For Sloped Front Frames		
Height of Panel Space at "A"	For Sloped Front Frame Front Openings Zinc Plated	
	Punched	Tapped
14 1/8"	010-014-010	010-014-012
17 5/8"	010-017-010	010-017-012
21 1/8"	010-021-010	010-021-012
28 1/8"	010-028-010	010-028-012
35 1/8"	010-035-010	010-035-012
Height of Panel Space at "R"	For Sloped Front Frame Rear Openings Zinc Plated	
	36 7/8"	013-114-010   013-114-012
	40 3/8"	013-117-010   013-117-012
	42 1/8"	013-121-010   013-121-012
	45 5/8"	011-121-010   011-121-012
	52 5/8"	011-128-010   011-128-012
	59 5/8"	011-135-010   011-135-012



# Rail Support Channels

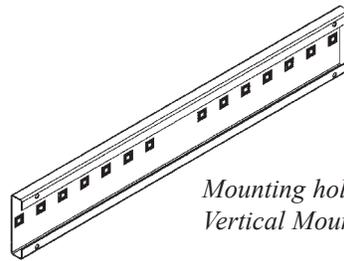
Vertical Mounting Rail Support Channels are used to support the Vertical Mounting Rails so that the equipment load can be evenly distributed. They can be moved upward or downward in 1 3/4" increments to minimize any interference with cabling or transverse air for cooling. The Support Channels are not welded in a fixed position, but rather fastened to the cabinet frame with four, 10 Bax 23/32" Phillips Hex Head sheet metal screws and four SpeedNuts®. They are shipped attached to the cabinet unless ordered separately as an extra.

## Product Features

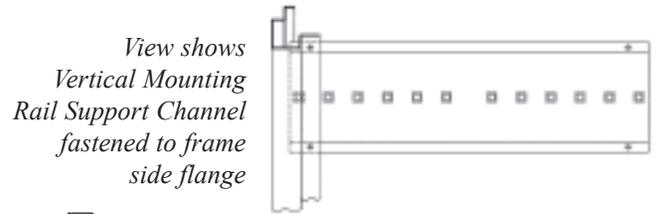
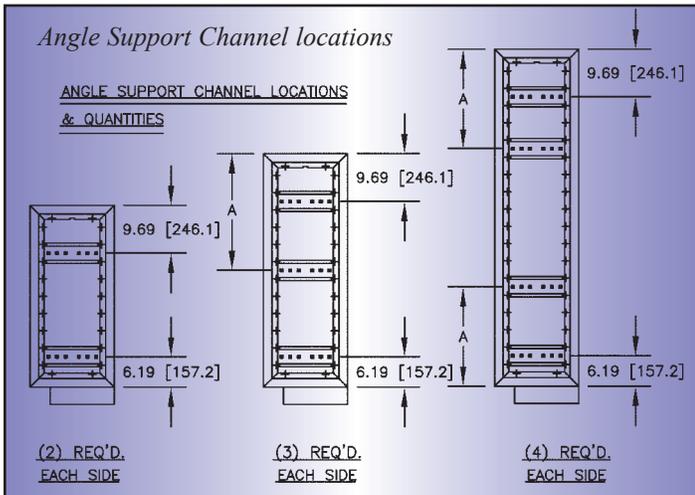
- ▶ 16-gauge cold rolled steel
- ▶ Outward facing edges to increase safety during installation or maintenance
- ▶ Adjustable up or down in 1 3/4" increments



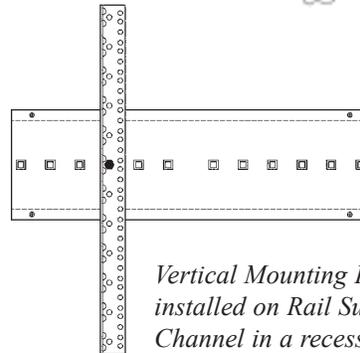
Mounting Angle Support Channels



Mounting holes for recessing Vertical Mounting Rails

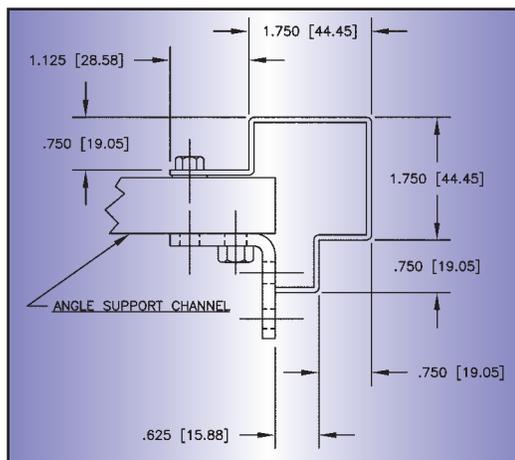


View shows Vertical Mounting Rail Support Channel fastened to frame side flange



Vertical Mounting Rail installed on Rail Support Channel in a recessed position

See Page 9 for a chart showing the quantity of vertical support channels supplied in each frame

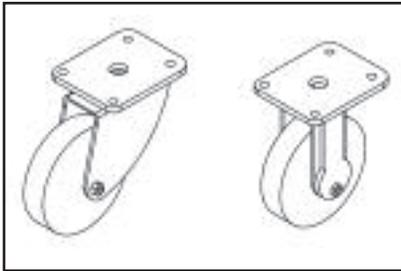


ANGLE SUPPORT CHANNELS For Vertical Rack and Sloped Front Frames	
Overall Depth of Frame	The Vertical Mounting Rail Support Channels Below will Fit
17"	066-417-170
24"	066-424-170
29"	066-429-170
36"	066-436-170

# Casters for Dollies and Trucks

## Single Wheel Casters

The 4" diameter single-wheel, 1 1/2" wide, hard rubber casters provide ease of use and smooth operation when moving frame assemblies in a variety of conditions. They are available with self-lubricating or roller bearing nut-and-bolt axles, with or without wheel locks. Where a truck or dolly assembly must be moved frequently or ease of mobility under heavy loading is required, it is recommended to use roller bearing wheels. Positive directional mobility can be achieved by using a pair of rigid base casters, in combination with swivel base casters. The swivel base types have two separate large diameter, ball bearing raceways, while the rigid base types have heavy embossed legs welded to a heavy top plate. Casters are not included with a Caster Dolly or Cabinet Truck and must be ordered separately. They are also shipped separately.



### Product Features

- ▶ Base plate and body constructed of heavy gauge cold rolled steel
- ▶ Base and body are zinc-plated
- ▶ Hard rubber wheels are black
- ▶ Rigid or Swivel type
- ▶ With or without wheel locks
- ▶ Self-lubricated have 300 lb load capacity
- ▶ Roller bearing have 550 lb. load capacity

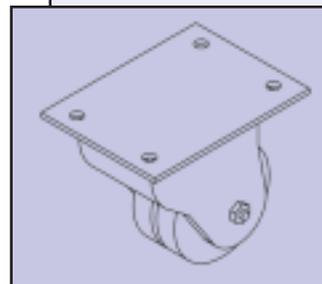
## Dual Wheel Swivel Casters

All of the caster bases are designed as a stable, mobile platform to transport cabinet assemblies which require Dual-Wheel Swivel Casters. Because of their low overall height and wide floor contact, the Dual Wheel casters are ideally suited for moving heavy electronic equipment. Since their main function is to keep the equipment load distributed evenly, the casters are spaced as widely apart as possible to take full advantage of the wheelbase available, which assures ease of mobility. Four dual wheel casters are used on single-width bases. Eight casters are required on double-width units and twelve on triple-width assemblies.

A caster base with 200-lb. casters adds 3.5" to the overall height of the frame with 1" floor clearance; 400-lb. casters add .375" to both height and clearance. Four casters are required for each frame.

### Product Features

- ▶ Hard tread composition
- ▶ Self-lubricating wheels
- ▶ 2" diameter, rated at 200 and 400 lbs. per caster
- ▶ Mounted to base with 1/4-20 machine screws
- ▶ All metal parts plated



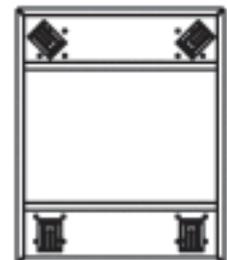
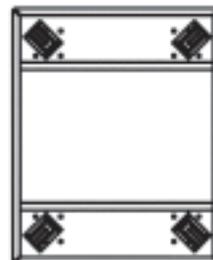
200 Lbs. per caster, order Part No. 09-2045-12

400 Lbs. per caster, order Part No. 051-020-104

CASTERS For Dollies and Trucks				
Type of Caster	Self-lubricated Caster		Roller Bearing Caster	
	*With Wheel Lock	**Without Wheel Lock	*With Wheel Lock	**Without Wheel Lock
Swivel	051-040-101	09-4041-12	051-040-104	09-4042-12
Rigid		09-4011-12		09-4012-12

\*Use Only on Caster Dollies

\*\*Use on Caster Dollies or Cabinet Trucks

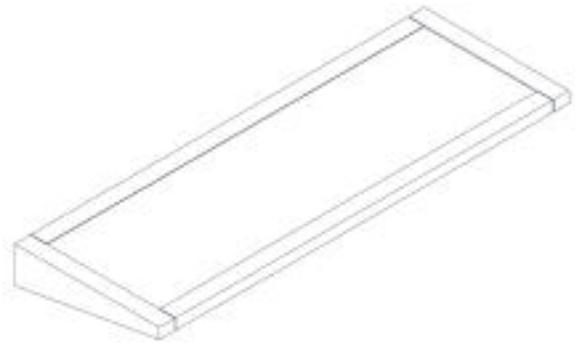


4 swivel or 2 swivel and 2 rigid single bay unit



# Invertible Work/Writing Shelves

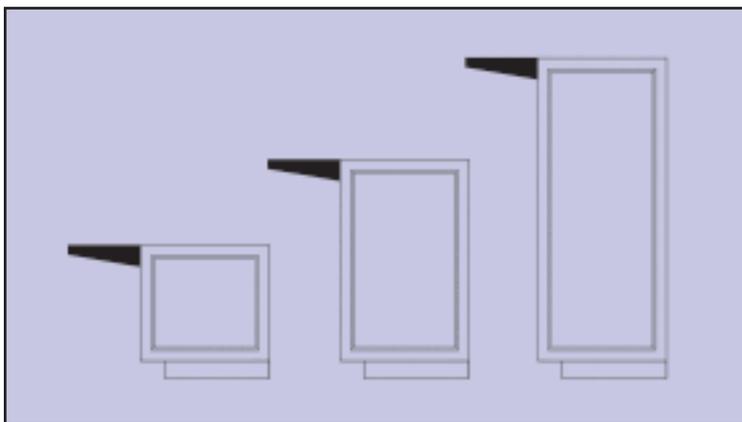
Invertible Work Writing Shelves designed to form extended work or control equipment surfaces. They can be attached to all Vertical Rack and Sloped Front Cabinets. The Invertible Shelves can be attached either with the top surface horizontal or sloped 11 1/2°. When mounted horizontally, they are recommended for use as heavy duty work surfaces or for installing auxiliary equipment. When sloped, they create an ideal area for control panel applications. They are available in three basic work heights, but may also be installed in various positions on Vertical Rack cabinets to meet any shelf location requirement.



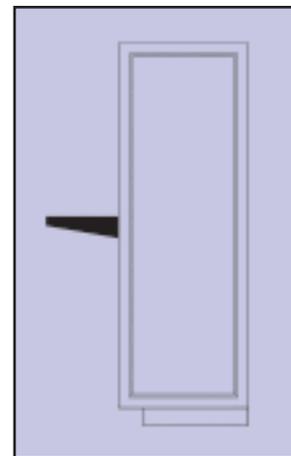
*Invertible Work/Writing Shelf*

## Product Features

- ▶ Constructed of 16-gauge cold-rolled steel
- ▶ Attached with 14-gauge steel support arms
- ▶ Underside of shelves closed with 16-gauge steel panel and finished to match shelf



*Extended work areas are created by mounting Invertible Work/Writing Shelves at top of three basic work height Vertical Racks*



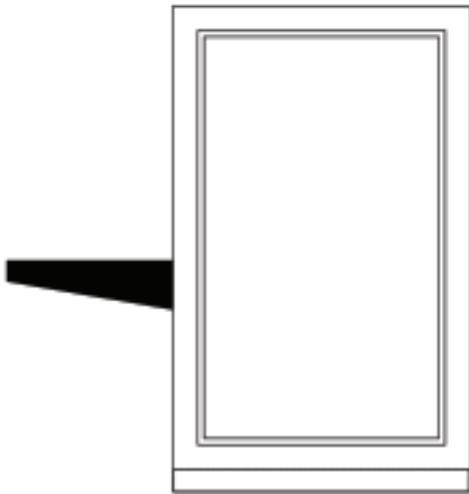
*Shelves may be installed at many intermediate locations on large racks*

See page A47 for insert panels

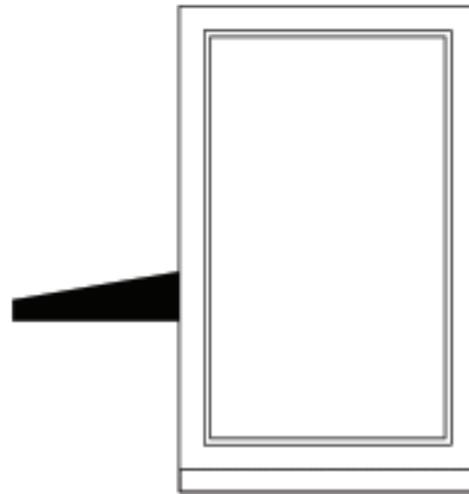
INVERTIBLE WORK/WRITING SHELVES For Vertical Rack and Sloped Front Cabinets						
All Other Racks and Consoles to be Used with Invertible Work/Writing Shelf	Single Frame Only		Two Frames Joined Side-By-Side		Three Frames Joined Side-By-Side	
	Width of Panel Space		Width of Panel Space		Width of Panel Space	
	19"	24"	19"	24"	19"	24"
Vertical Rack Cabinets*	201-010-010	201-040-010	202-010-010	202-040-010	203-010-010	203-040-010
Desk Height Racks						
Bench Height Racks						
Counter Height Racks						
30° Sloped Front Consoles	201-010-020	201-040-020	202-010-020	202-040-020	203-010-020	203-040-020
15° Sloped Front Consoles						

\* Vertical racks with an overall height of more than 43 7/8" or on shorter racks when shelf is not mounted at the top

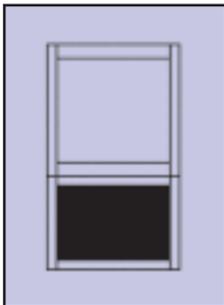
# Invertible Work/Writing Shelves and Insert Panels



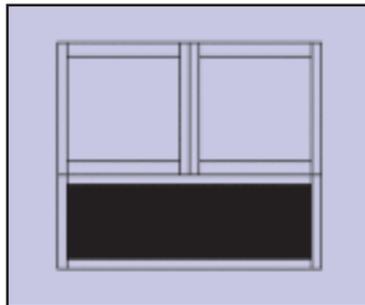
*Shelf mounted with top surface horizontal*



*Inverted mounting with top surface sloped 11 1/2°*



*Single cabinet and shelf assembly*

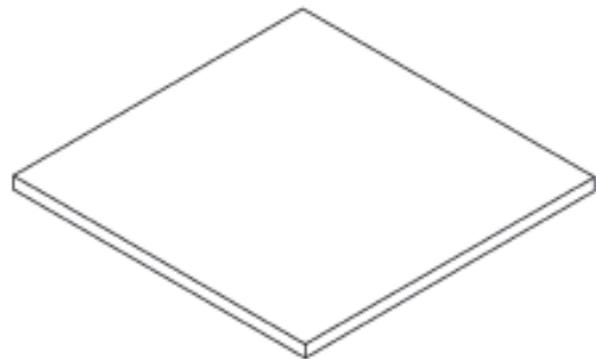


*Double-width shelf installed on two cabinets joined side-by-side*



*Three cabinet assembly with a Triple- Width Invertible Work/Writing Shelf attached*

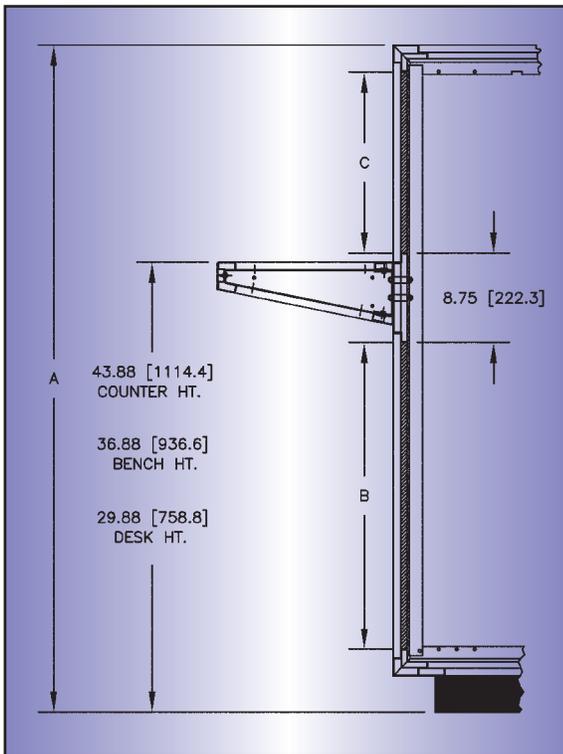
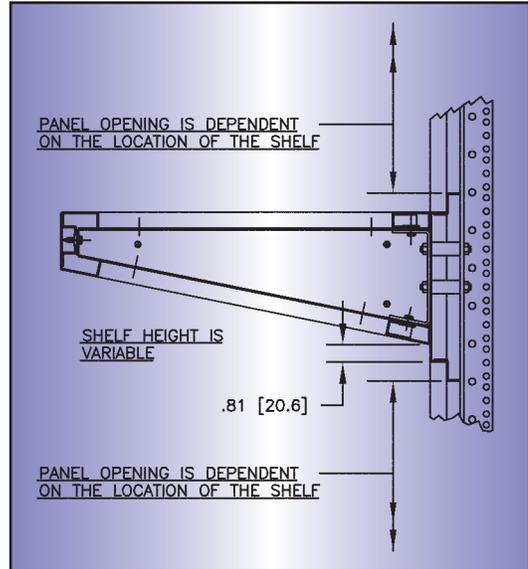
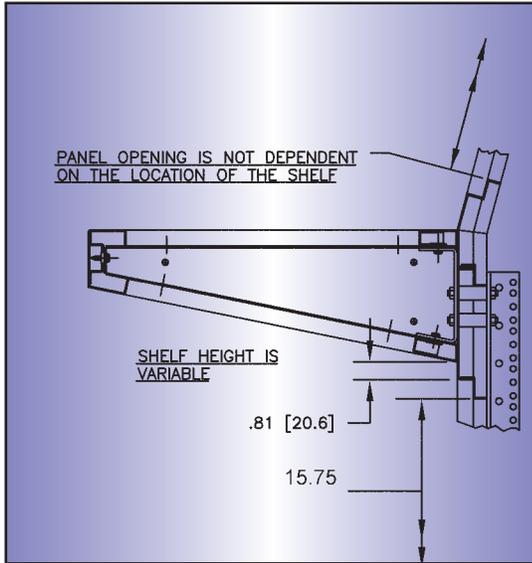
LAMINATED PLASTIC OR STEEL INSERT PANELS				
Invertible Work/Writing Shelf Number	Laminated Plastic Panel Top Insert	Formed Steel Panel Top Insert	Size of Insert Panel	
			Depth	Width
201-010-010	376-010-001	376-010-010	13 1/2"	20 1/2"
201-010-020				
202-010-010	376-210-001	376-210-010	13 1/2"	44 1/2"
202-010-020				
203-010-010	376-310-001	376-310-010	13 1/2"	68 1/2"
203-010-020				
201-040-010	376-040-001	376-040-010	13 1/2"	25 1/2"
201-040-020				
202-040-010	376-240-001	376-240-010	13 1/2"	54 1/2"
202-040-020				
203-040-010	376-340-001	376-340-010	13 1/2"	83 1/2"
203-040-020				



*Either Laminated Plastic, bonded to 5/8" thick particle board, or 16 gauge formed steel panels are used in the top recess of Invertible Work/Writing Shelves listed in the table to the left*

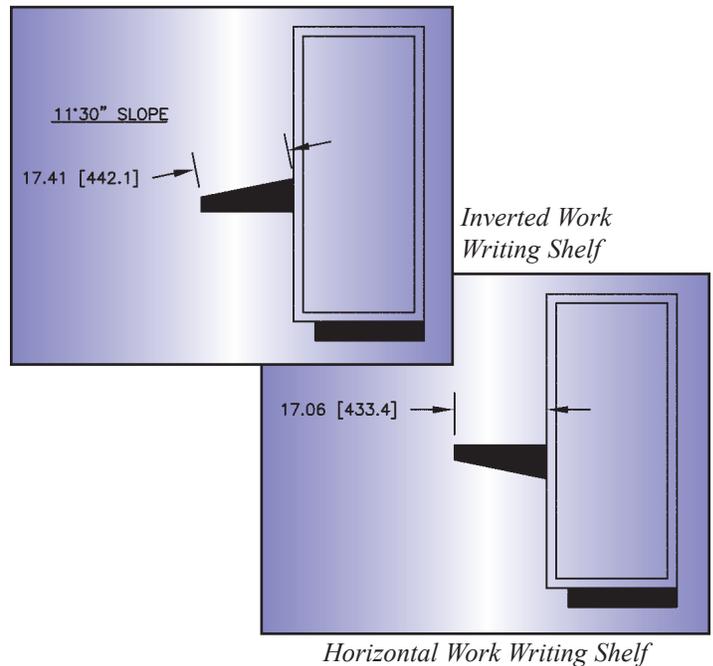


# Invertible Work/Writing Shelf Mounting Details



Three heights

Three Basic Shelf Locations	Lower Panel Size B
Desk Height	15.75 (400.1)
Bench Height	22.75 (577.9)
Counter Height	29.75 (755.7)

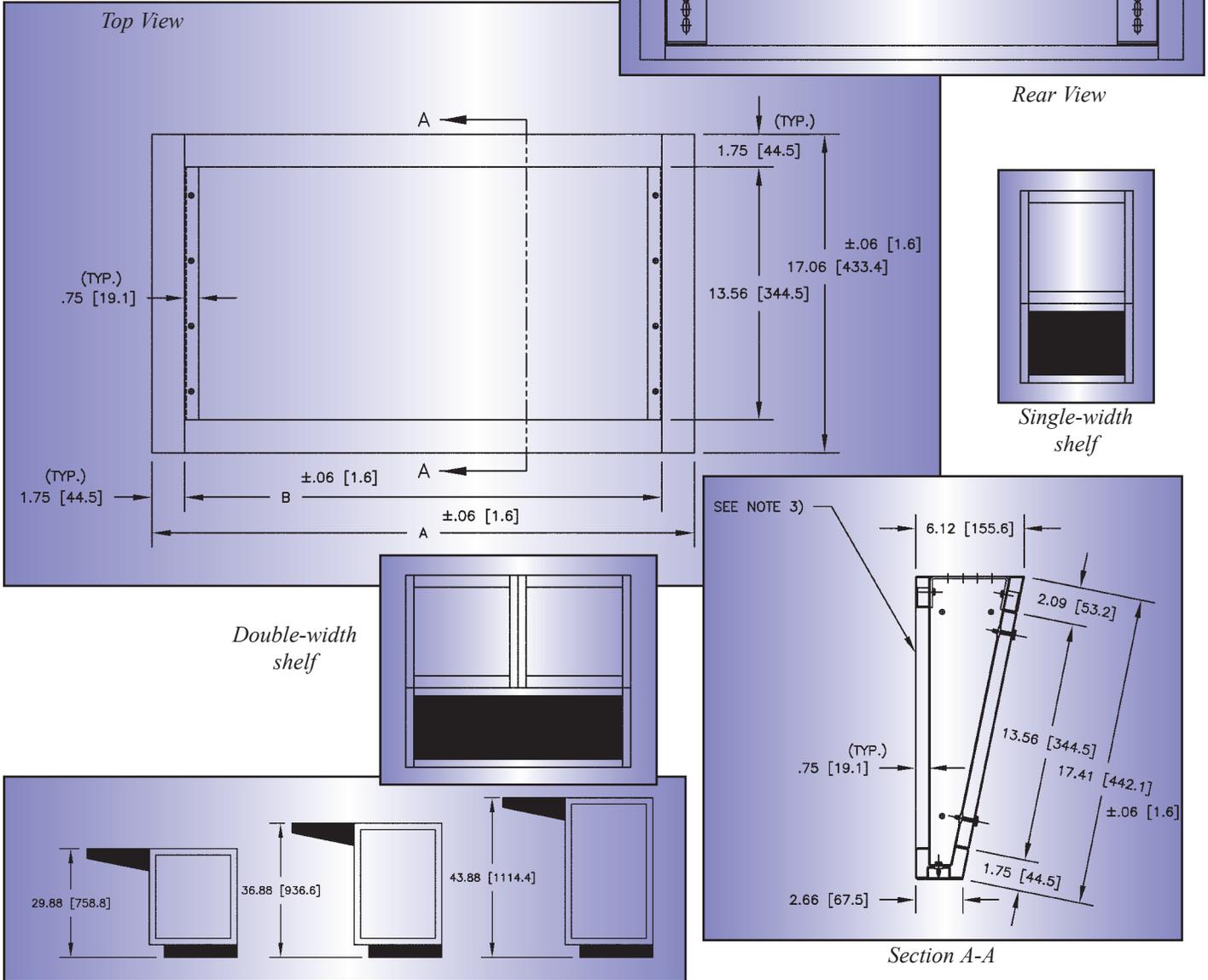


Overall Frame Height A	UPPER PANEL SIZE C		
	Desk Height	Bench Height	Counter Height
29.88 (758.8)	N/A	N/A	N/A
36.88 (936.6)	3.50 (88.9)	N/A	N/A
43.88 (1114.4)	10.50 (266.7)	3.50 (88.9)	N/A
50.88 (1292.2)	17.50 (444.5)	10.50 (266.7)	3.50 (88.9)
57.88 (1470.0)	24.50 (622.3)	17.50 (444.5)	10.50 (266.7)
64.88 (1647.8)	31.50 (800.1)	24.50 (622.3)	17.50 (444.5)
71.88 (1825.6)	38.50 (977.9)	31.50 (800.1)	24.50 (622.3)
78.88 (2003.4)	45.50 (1155.7)	38.50 (977.9)	31.50 (800.1)
85.88 (2181.2)	52.50 (1333.5)	45.50 (1155.7)	38.50 (977.9)
92.88 (2359.0)	59.50 (1511.3)	52.50 (1333.5)	45.50 (1155.7)

# Invertible Work/Writing Shelves

Heavy Duty

**17" Work Space, Available in Single, Double and Triple Widths**



Available Work Space				
Part No.- Mtd. Vertical Rack	Part Number*	Panel Width	A	B
<b>Single Width</b>				
201-010-010	201-010-020	19" (482.6)	24.06 (611.2)	20.56 (522.3)
201-040-010	201-040-020	24" (609.6)	29.06 (738.2)	25.56 (649.3)
<b>Double Width</b>				
202-010-010	202-010-020	19" (482.6)	48.12 (122.4)	44.62 (1133.5)
202-040-010	202-040-020	24" (609.6)	29.06 (1476.4)	54.62 (1387.5)
<b>Triple Width</b>				
203-010-010	203-010-020	19" (482.6)	72.19 (1833.6)	68.69 (1744.7)
203-040-010	203-040-020	24" (609.6)	87.19 (2214.6)	83.69 (2125.7)

Visit our web site at [www.equiptoelec.com](http://www.equiptoelec.com) for the latest technical data or a price quote



# Laminated Console Shelves

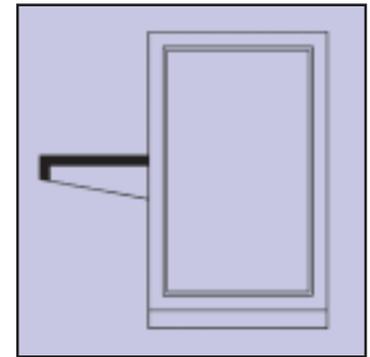
Laminated Console Shelves are ideal for use as a general work or writing surface. They can be easily attached to all three basic cabinet frames. When attached to Sloped Front Cabinets, the top surface of the shelf is at desk height; when attached to large Vertical Rack Cabinets, they can be placed at any practical height. The console Shelves are attached to the cabinet frame with 14-gauge steel support arms and bolted directly to the 3/16" thick Vertical Mounting Rails for support. Laminated Plastic Console Shelves are shipped separately with all hardware included.



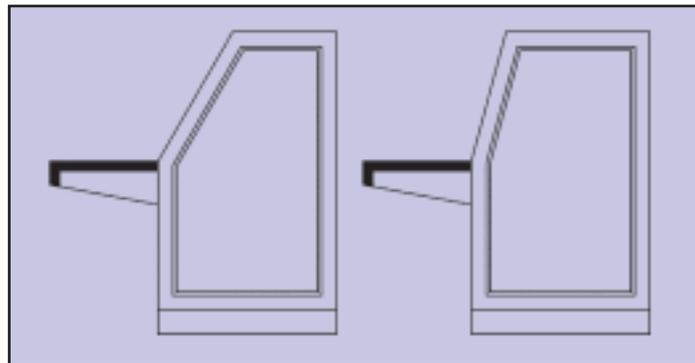
*Laminated Plastic Console Shelf*

## Product Features

- ▶ Laminated plastic available in a variety of colors and styles, including anti-static
- ▶ Constructed of 3/4" thick particle board
- ▶ Attached with 14-gauge steel support arms
- ▶ Support Arms and adapter panels finished to match cabinet frame
- ▶ Neutral-colored laminated plastic sheet bonded to bottom to minimize warpage and distortion



*Vertical Rack Cabinet*



*15° and 30° Sloped Front Consoles*

LAMINATED PLASTIC CONSOLE SHELVES For Vertical Rack and Sloped Front Cabinets						
Type of Cabinet to which Laminated Plastic Console Shelf will be attached	Single Frame Only		Two Frames Joined Side-By-Side		Three Frames Joined Side-By-Side	
	Width of Panel Space		Width of Panel Space		Width of Panel Space	
	19"	24"	19"	24"	19"	24"
Vertical Rack Cabinets*	581-010-101	581-040-101	582-010-101	582-040-101	583-010-101	583-040-101
Desk Height Racks Bench Height Racks Counter Height Racks 30° Sloped Front Consoles 15° Sloped Front Vertical Racks	581-010-201	581-040-201	582-010-201	582-040-201	583-010-201	583-040-201

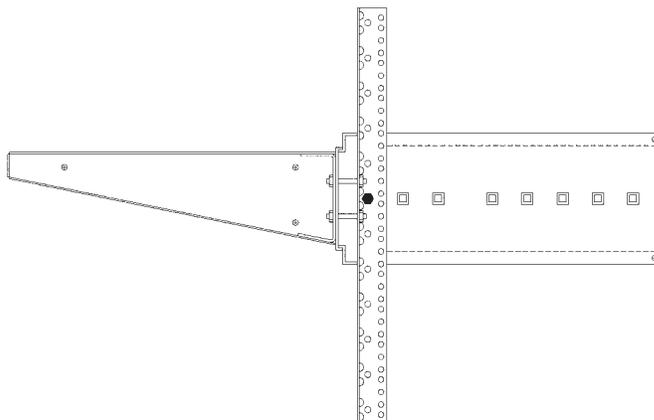
\* Vertical racks with an overall height of more than 43 7/8" or on shorter racks when shelf is not mounted at the top.

# Laminated Plastic Console Shelves

## Single, Double, or Triple Width Console Shelves

Laminated Console Shelves are available in single, double and triple-width units. The single or multiple cabinet assemblies use frames with a 19" or 24" instrument panel width. Laminated Plastic Console Shelves are shipped separately with all hardware included.

When using Laminated Plastic Console Shelves on desk, bench or counter height Vertical Rack Cabinets, you get an extended work surface that is flush with the top of the cabinet. In addition to the three basic work heights, they can also be attached to the Vertical Rack Cabinets in any intermediate position.



*Laminated Plastic Console Shelves are attached to the cabinet frame with 14-gauge cold rolled steel support arms bolted directly to the Panel Mounting Angles*

- \* Uses 8 3/4" of vertical panel space on Vertical Rack Frames
- \* Uses 5 1/4" of vertical panel space on Sloped Front Cabinets



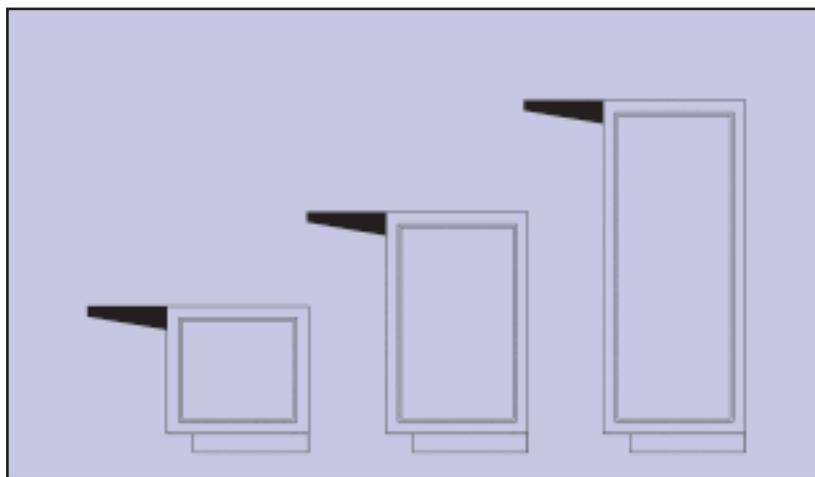
*Single Cabinet Shelf Assembly*



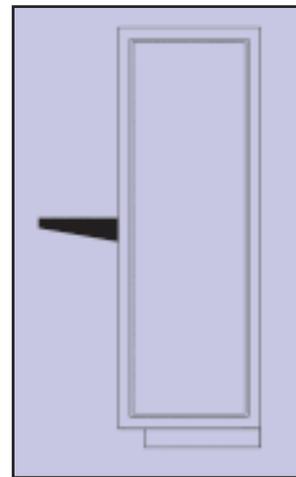
*Two Cabinets with double-width Laminated Plastic Shelf*



*Triple-width Laminated Plastic Console Shelf attached to three bay cabinet assembly*



*Laminated Plastic Console Shelves can be installed flush with the top surface of the three basic work height cabinets shown above*

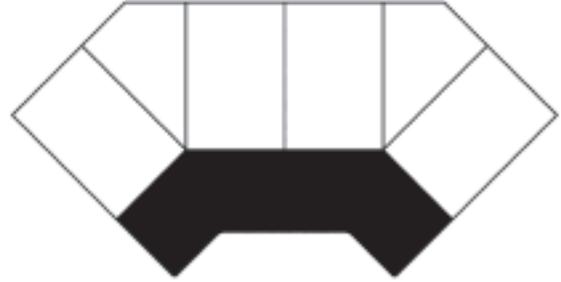


*Installation may be made at many intermediate locations on large racks*



# Angular Laminate Console Shelves

Laminated Angular Console Shelves are ideal for use as a general work or writing surface on multi-bay console assemblies. The console Shelves are attached to the cabinet frame with 14-gauge steel support arms and bolted directly to the 3/16" thick Vertical Mounting Rails for support. Laminated Angular Console Shelves are available for a variety of combinations of regular and angular frames. Laminated Angular Console Shelves are shipped separately with all hardware included.



*A typical four bay Angular Console with Laminated Plastic Shelf*

## Product Features

- ▶ Laminated plastic available in a variety of colors and styles, including anti-static
- ▶ Constructed of 3/4" thick particle board
- ▶ Attached with 14-gauge steel support arms
- ▶ Support Arms and frame adapter panel finished to match cabinet frame
- ▶ Neutral-colored laminated plastic sheet bonded to bottom to minimize warpage and distortion



*Angular Laminated Plastic Shelf attached to six cabinet Angular Console Assembly*



*The three basic cabinet frame types shown above can be joined side-by-side, with Angular Frames to form angular console assemblies*

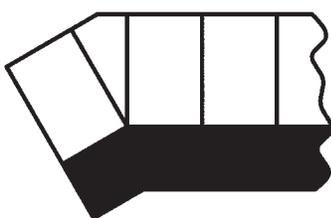
# Laminated Plastic Angular Console Shelves

Angular Console Shelves are used to create a seamless work area for multi-bay assemblies using angular frames. The unique design of the Angular Frames allows the cabinet frames in any angular console assembly to be joined side-by-side with no loss of space at the juncture. This ensures a much neater appearance as well as a more exact fit where the shelf joins the cabinet assembly. Angular frames are available in 30°, 45°, and 60° angle configurations as shown in the illustration below.

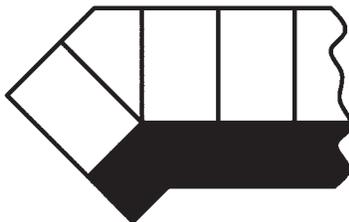


*Typical multi-bay assembly with angular frame*

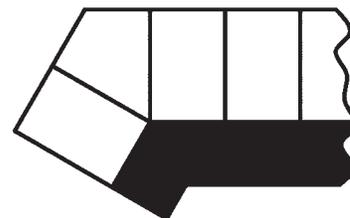
*Laminated Console Shelves with varying angular consoles*



30°



45°



60°

LAMINATED PLASTIC ANGULAR CONSOLE SHELVES						
For Angular Console Assemblies						
All Other Racks and Consoles to which Laminated Plastic Angular Shelf will be attached	Four Cabinet Frames with Two Angular Frames		Five Cabinet Frames with Two Angular Frames		Six Cabinet Frames with Two Angular Frames	
	Width of Panel Space		Width of Panel Space		Width of Panel Space	
	19"	24"	19"	24"	19"	24"
<b>For Use with 30° Angular Cabinet Frames</b>						
Vertical Rack Cabinets*	594-010-131	594-040-131	595-010-131	595-040-131	596-010-131	596-040-131
Desk Height Racks						
Bench Height Racks						
Counter Height Racks	594-010-231	594-040-231	595-010-231	595-040-231	596-010-231	596-040-231
30° Sloped Front Consoles						
15° Sloped Front Consoles						
<b>For Use with 45° Angular Cabinet Frames</b>						
Vertical Rack Cabinets*	594-010-141	594-040-141	595-010-141	595-040-141	596-010-141	596-040-141
Desk Height Racks						
Bench Height Racks						
Counter Height Racks	594-010-241	594-040-241	595-010-241	595-040-241	596-010-041	596-040-241
30° Sloped Front Consoles						
15° Sloped Front Consoles						
<b>For Use with 60° Angular Cabinet Frames</b>						
Vertical Rack Cabinets*	594-010-161	594-040-161	595-010-161	595-040-161	596-010-161	596-040-161
Desk Height Racks						
Bench Height Racks						
Counter Height Racks	594-010-261	594-040-261	595-010-261	595-040-261	596-010-261	596-040-261
30° Sloped Front Consoles						
15° Sloped Front Consoles						

\* Vertical racks with an overall height of more than 43 7/8" or on shorter racks when shelf is not mounted at the top.



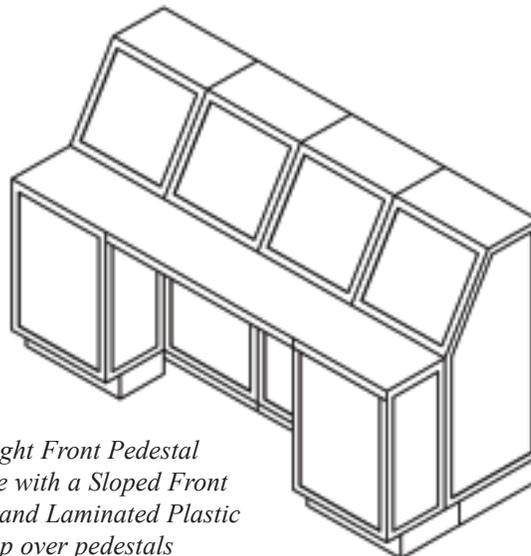
# Laminated Tops for Multiple Pedestal Consoles

Laminated Plastic Tops are designed to be used with straight front Pedestal Consoles made up of either Vertical Rack or Sloped Front Consoles, where a smooth work area or writing surface is desired. The tops are attached to and supported by the desk high Vertical Rack cabinet pedestals at each end of the console.

When used with Sloped Front cabinets, the Laminated Plastic Console Tops add 13/16" to the height of the pedestals, but use no instrument panel space, however, when used with Vertical Rack cabinets, they do infringe upon the panel space by 13/16". They are shipped separately with all necessary mounting hardware included.

## Product Features

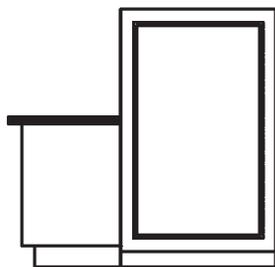
- ▶ Laminated plastic available in a variety of colors and styles, including anti-static
- ▶ Tops are constructed of 3/4" thick particle board
- ▶ Neutral color plastic bonded to the bottom surface to minimize distortion
- ▶ Tops are properly reinforced



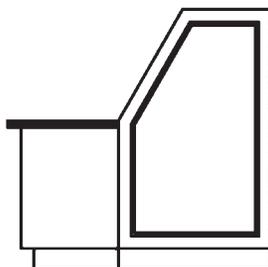
*Straight Front Pedestal Console with a Sloped Front Cabinet and Laminated Plastic Top over pedestals*



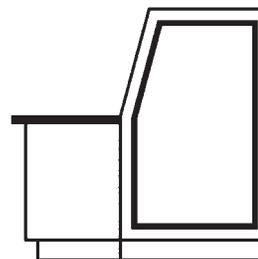
*Plastic Top for Pedestal Console*



*Installed on Console with Vertical Racks*



*30° Sloped Front Console Cabinets*



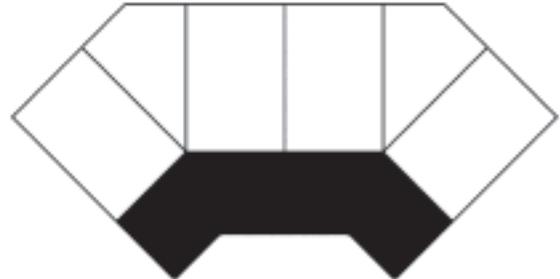
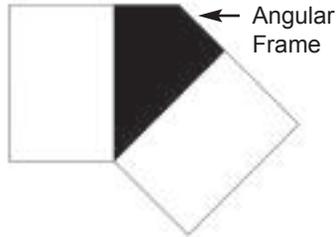
*15° Sloped Front Console Cabinets*

## LAMINATED PLASTIC CONSOLE TOPS For Straight Front Pedestal Console Assemblies

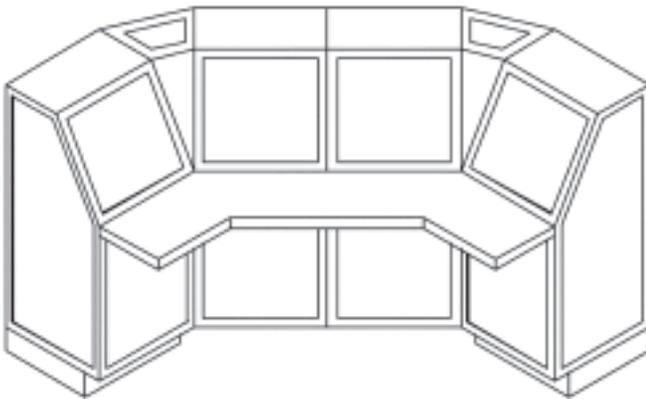
Type of Cabinet Used at Console rear with one Desk Height Vertical Rack Pedestal at front at each end	For Pedestal Console with 2 Cabinets Side By Side		For Pedestal Console with 3 Cabinets Side By Side		For Pedestal Console with 4 Cabinets Side By Side	
	Width of Panel Space		Width of Panel Space		Width of Panel Space	
	19"	24"	19"	24"	19"	24"
Vertical Rack Cabinets	572-020-101	572-050-101	573-020-101	573-050-101	574-020-101	574-050-101
30° Sloped Front Consoles	572-020-201	572-050-201	573-020-201	573-050-201	574-020-201	574-050-201
15° Sloped Front Vertical Racks	572-020-301	572-050-301	573-020-301	573-050-301	574-020-301	574-050-301

# Laminated Tops for Angular Pedestal Consoles

The Plastic Top for the Angular Pedestal Console is designed to give an efficient work area and writing space with no loss of space at the angular juncture. This results in a much neater appearance as well as a better fit of the laminated Plastic Top where the top joins the console assembly. The tops are available in 30°, 45°, and 60° angle configurations. All tops are shipped separately.



Four bay Angular Pedestal Console with Laminated Plastic Top



Typical Angular Pedestal Console using Vertical Rack Cabinets at the rear with Laminated Plastic Top supported by Pedestals



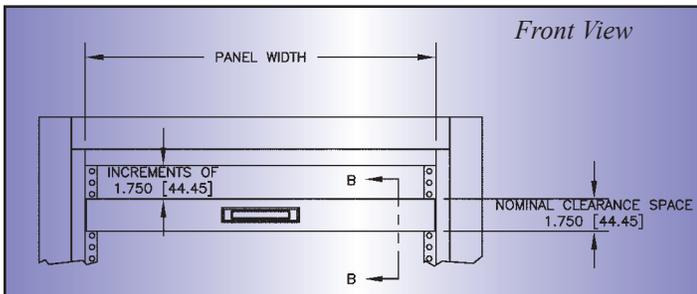
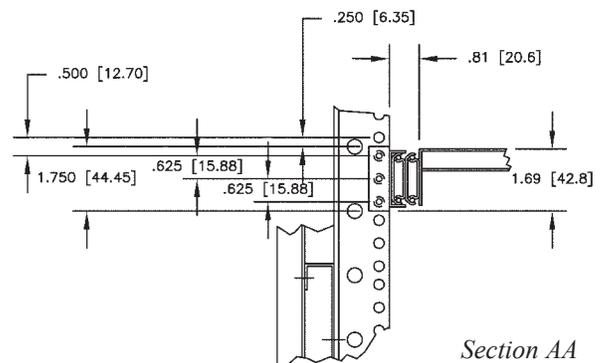
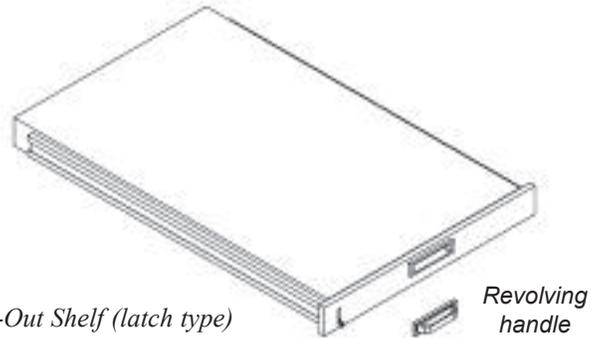
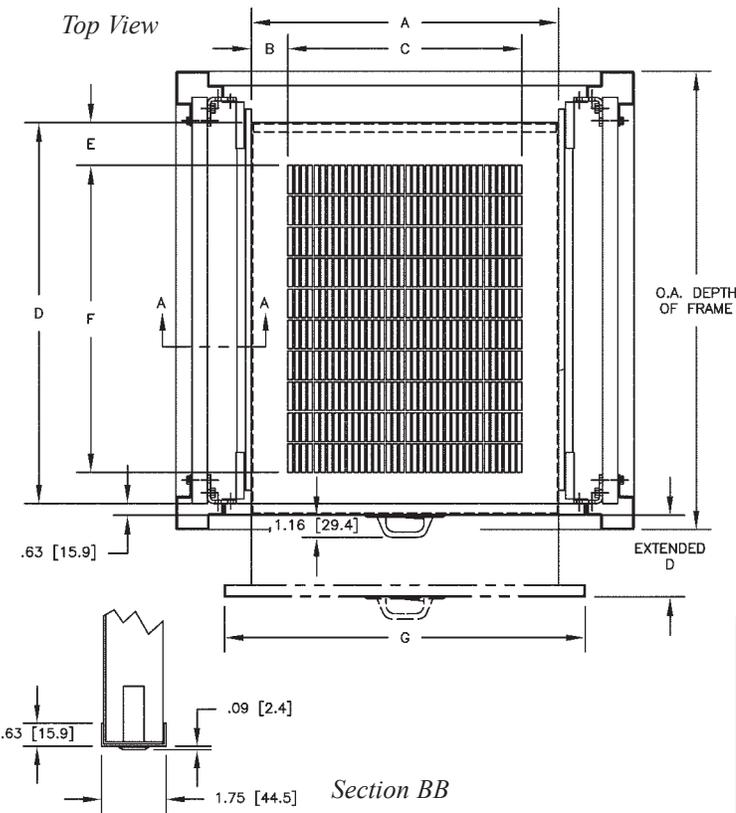
Six bay Angular Pedestal Console with Laminated Plastic Top

LAMINATED PLASTIC ANGULAR TOPS For Angular Pedestal Consoles				
Type of Cabinet Used at Angular Console rear with one Desk Height Vertical Rack Pedestal at front at each end	For Console with 4 Cabinet Frames 2 Angular Frames and 2 Pedestals		For Console with 5 Cabinet Frames 2 Angular Frames and 2 Pedestals	
	Width of Panel Space		Width of Panel Space	
	19"	24"	19"	24"
<b>For Use with 30° Angular Cabinet Frames</b>				
Vertical Rack Cabinets	604-020-131	604-050-131	605-020-131	605-050-131
30° Sloped Front Consoles	604-020-231	604-050-231	605-020-231	605-050-231
15° Sloped Front Vertical Racks	604-020-331	604-050-331	605-020-331	605-050-331
<b>For Use with 45° Angular Cabinet Frames</b>				
Vertical Rack Cabinets	604-020-141	604-050-141	605-020-141	605-050-141
30° Sloped Front Consoles	604-020-241	604-050-241	605-020-241	605-050-241
15° Sloped Front Vertical Racks	604-020-341	604-050-341	605-020-341	605-050-341
<b>For Use with 60° Angular Cabinet Frames</b>				
Vertical Rack Cabinets	604-020-161	604-050-161	605-020-161	605-050-161
30° Sloped Front Consoles	604-020-261	604-050-261	605-020-261	605-050-261
15° Sloped Front Vertical Racks	604-020-361	604-050-361	605-020-361	605-050-361



# Pull-Out Shelves

A Pull-Out Shelf is designed to be installed anywhere in Vertical Rack Cabinets or in the lower sections of Sloped Front Consoles. They are mounted on ball bearing extension slides and have a capacity of 125 lb. distributed load.



"PULL OUT" CONVENIENCE SHELVES				
Depth of Cabinet Frame	Plain Shelf Assembly Part No.		Grilled Shelf Assembly Part No.	
	Non-Latch Type	Latch Type	Non-Latch Type	Latch Type
<b>For cabinet frames with a 19" wide panel space</b>				
17 1/16"	511-010-010	511-010-011	511-010-030	511-010-031
24 1/16"	511-020-010	511-020-011	511-020-030	511-020-031
29 1/16"	511-030-010	511-030-011	511-030-030	511-030-031
36 1/16"	511-036-010	511-036-011	511-036-030	511-036-031
<b>For cabinet frames with a 24" wide panel space</b>				
17 1/16"	511-040-010	511-040-011	511-040-030	511-040-031
24 1/16"	511-050-010	511-050-011	511-050-030	511-050-031
29 1/16"	511-060-010	511-060-011	511-060-030	511-060-031
36 1/16"	511-066-010	511-066-011	511-066-030	511-066-031

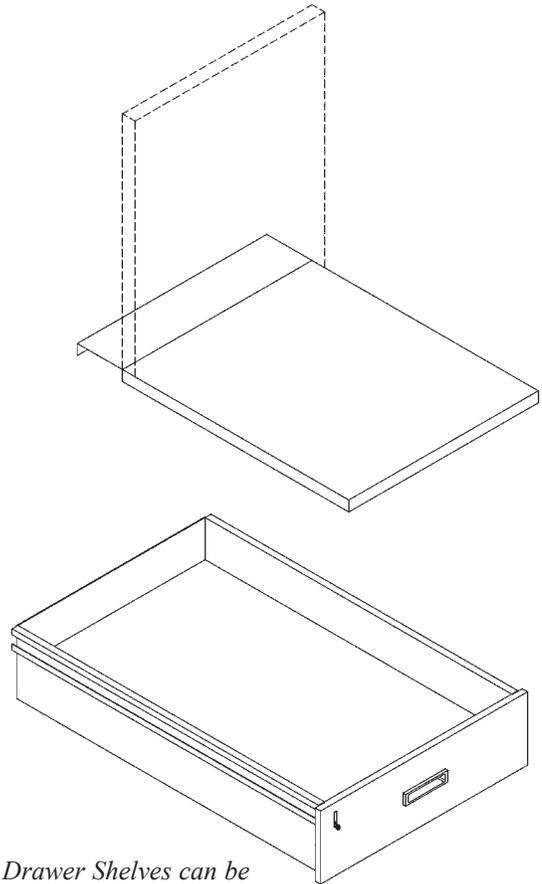
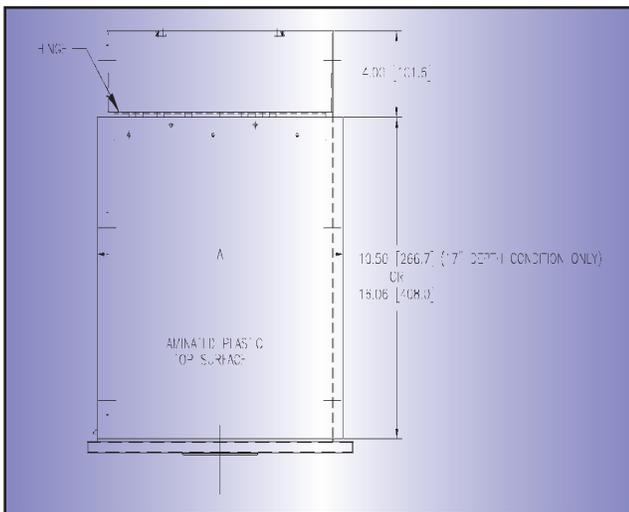
Panel Width Of Cabinet Frame	Overall Depth of Cabinet Frame	Part No. of Plain Shelf Assembly		Part No. of Grilled Shelf Assembly		A	B	C	D	E	F	G
		Non-Latch Type	Latch Type	Non-Latch Type	Latch Type							
19.06" (484.2)	17.06 (433.4)	511-010-010	511-010-011	511-010-030	511-010-031	16.12 (409.6)	1.92 (48.8)	12.28 (311.9)	13.44 (341.3)	1.91 (48.4)	9.62 (244.5)	18.94 (481.0)
	24.06 (611.2)	511-020-010	511-020-011	511-020-030	511-020-031							
	29.06 (738.2)	511-030-010	511-030-011	511-030-030	511-030-031							
	36.06 (916.0)	511-036-010	511-036-011	511-036-030	511-036-031							
24.06" (611.2)	17.06 (433.4)	511-040-010	511-040-011	511-040-030	511-040-031	21.12 (536.6)	3.39 (86.1)	14.34 (364.3)	13.44 (341.3)	1.91 (48.4)	9.62 (244.5)	23.94 (608.0)
	24.06 (611.2)	511-050-010	511-050-011	511-050-030	511-050-031							
	29.06 (738.2)	511-060-010	511-060-011	511-060-030	511-060-031							
	36.06 (916.0)	511-066-010	511-066-011	511-066-030	511-066-031							

# Hinged Drawer Shelves

The Hinged Drawer Shelves are used to convert storage drawers to usable work areas. They are designed to expand the available work surface upon which to set test instruments or similar equipment during use. The Hinged Drawer Shelf is attached to the steel rear support panel with a continuous hinge and extends beyond the sides of the drawer body providing a convenient finger lift.

## Product Features

- ▶ Constructed of thick particle board
- ▶ Laminated plastic available in a variety of colors and styles
- ▶ Neutral color plastic sheet bonded to the bottom surface to minimize distortion

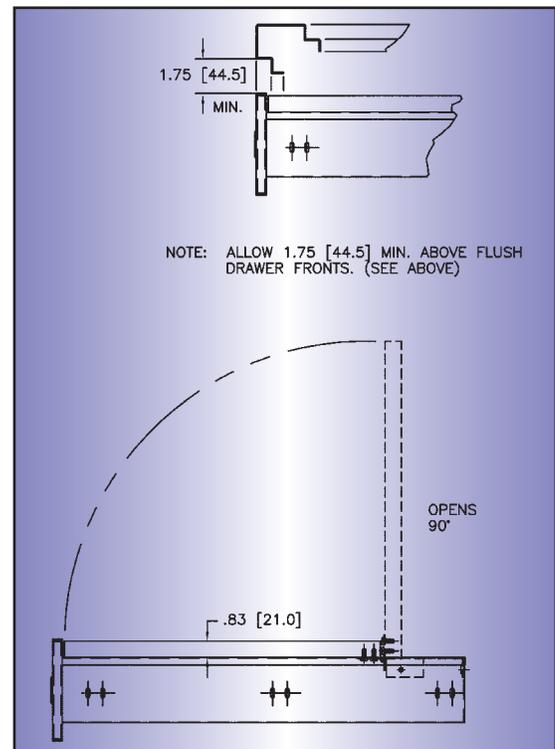


*Hinged Drawer Shelves can be installed on Storage Drawers*

Drawer Width	Part Number	A
19" (482.6)	16-1920-01	17.50 (444.5)
24" (609.6)	16-2420-01	22.50 (571.5)

For 17" deep frames and ...	Part Number
19" Panel Width	16-1918-01
24" Panel Width	16-2418-01

24", 29" and 36" deep frames and ...	Part Number
19" Panel Width	16-1920-01
24" Panel Width	16-2420-01





# Storage Drawers

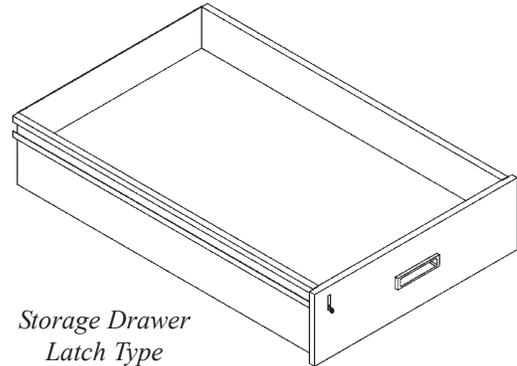
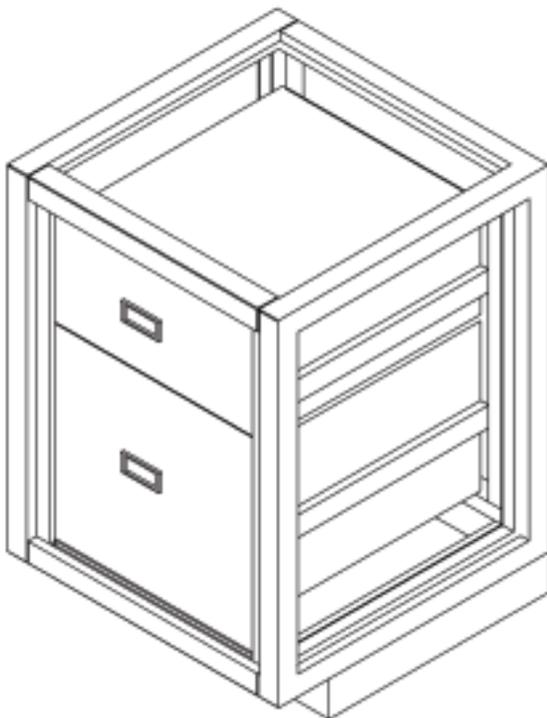
Flush or Recessed mounted Storage Drawers are designed as a functional accessory that will house and support test equipment, recorders or other operational gear. All Storage Drawers are mounted on easy acting ball bearing extension slides with a rated capacity of 125 lbs. when fully extended. They are available with or without a safety latch, which insures positive closure of the drawer and is recommended where vibration is a factor. All Storage Drawers are normally shipped installed in the cabinet in the specified location.

## Product Features

- ▶ Drawer fronts formed of 16-gauge cold-rolled steel spot welded to 20-gauge cold-rolled steel bodies
- ▶ Ball bearing extension slides 125 lb. capacity are zinc-plated
- ▶ Drawer handles are finished black to match other Equipto Electronic cabinet hardware
- ▶ Available with or without safety latch

## Flush Storage Drawers

When the drawer is in the closed position, the drawer front on Flush Mounted Storage Drawers rests into the cabinet frame recess, flush with the frame surface. This makes it possible to use drawers in combination with Flush Filler Panels or Doors in the same cabinet opening.



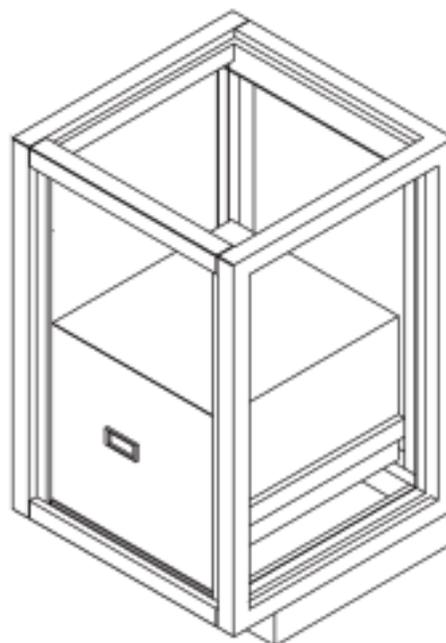
Storage Drawer  
Latch Type

FLUSH MOUNTED STORAGE DRAWERS					
Height of Drawer Front	19" Panel Width		24" Panel Width		
	Non-Latch Type	Latch Type	Non-Latch Type	Latch Type	
<b>For cabinet frames with a 17" overall depth</b>					
3 1/2"	124-103-025	124-103-020	124-203-025	124-203-020	
5 1/4"	124-105-025	124-105-020	124-205-025	124-205-020	
7"	124-107-025	124-107-020	124-207-025	124-207-020	
8 3/4"	124-108-025	124-108-020	124-208-025	124-208-020	
10 1/2"	124-110-025	124-110-020	124-210-025	124-210-020	
12 1/4"	124-112-025	124-112-020	124-212-025	124-212-020	
14"	124-114-025	124-114-020	124-214-025	124-214-020	
<b>For cabinet frames with a 24" overall depth</b>					
3 1/2"	125-103-025	125-103-020	125-203-025	125-203-020	
5 1/4"	125-105-025	125-105-020	125-205-025	125-205-020	
7"	125-107-025	125-107-020	125-207-025	125-207-020	
8 3/4"	125-108-025	125-108-020	125-208-025	125-208-020	
10 1/2"	125-110-025	125-110-020	125-210-025	125-210-020	
12 1/4"	125-112-025	125-112-020	125-212-025	125-212-020	
14"	125-114-025	125-114-020	125-214-025	125-214-020	
<b>For cabinet frames with a 29" overall depth</b>					
3 1/2"	126-103-025	126-103-020	126-203-025	126-203-020	
5 1/4"	126-105-025	126-105-020	126-205-025	126-205-020	
7"	126-107-025	126-107-020	126-207-025	126-207-020	
8 3/4"	126-108-025	126-108-020	126-208-025	126-208-020	
10 1/2"	126-110-025	126-110-020	126-210-025	126-210-020	
12 1/4"	126-112-025	126-112-020	126-212-025	126-212-020	
14"	126-114-025	126-114-020	126-214-025	126-214-020	
<b>For cabinet frames with a 36" overall depth</b>					
3 1/2"	128-103-025	128-103-020	128-203-025	128-203-020	
5 1/4"	128-105-025	128-105-020	128-205-025	128-205-020	
7"	128-107-025	128-107-020	128-207-025	128-207-020	
8 3/4"	128-108-025	128-108-020	128-208-025	128-208-020	
10 1/2"	128-110-025	128-110-020	128-210-025	128-210-020	
12 1/4"	128-112-025	128-112-020	128-212-025	128-212-020	
14"	128-114-025	128-114-020	128-214-025	128-214-020	
<b>Inside Width of Drawers</b>		<b>Inside Depth of Drawers</b>			
19" Panel	24" Panel	17" Rack	24" Rack	29" Rack	36" Rack
16 1/16"	21 1/16"	14 15/16"	20 7/16"	20 7/16"	20 7/16"

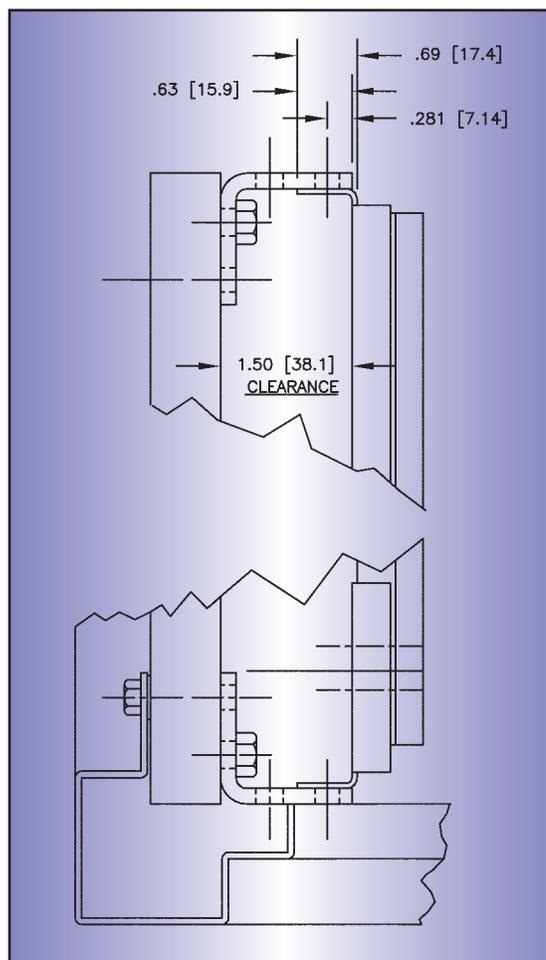
# Storage Drawers

## Recessed Storage Drawers

The Recessed Storage Drawers are designed to close directly against the Panel Mounting Angles allowing the drawer to be front flush with the ledge of the cabinet frame recess. It is also in the same vertical plane as Formed Instrument Panels, mounted in the same cabinet opening with the drawer. These drawers are either available with a safety latch or non-latching type.

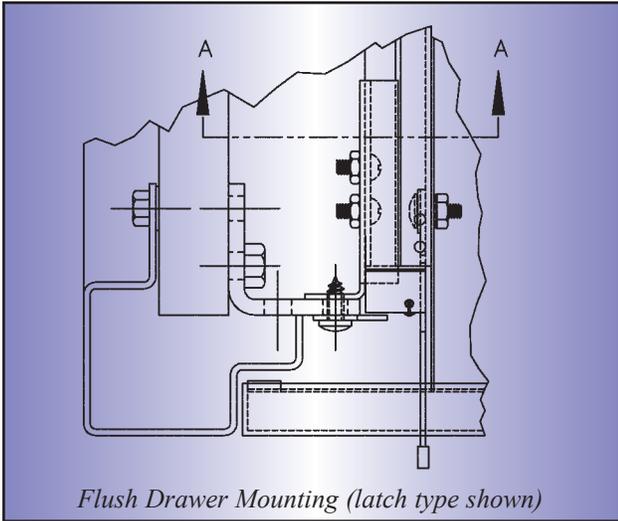


RECESSED MOUNTED STORAGE DRAWERS				
Height of Drawer Front	19" Panel Width		24" Panel Width	
	Non-Latch Type	Latch Type	Non-Latch Type	Latch Type
<b>For cabinet frames with a 17" overall depth</b>				
3 1/2"	124-103-015	124-103-010	124-203-015	124-203-010
5 1/4"	124-105-015	124-105-010	124-205-015	124-205-010
7"	124-107-015	124-107-010	124-207-015	124-207-010
8 3/4"	124-108-015	124-108-010	124-208-015	124-208-010
10 1/2"	124-110-015	124-110-010	124-210-015	124-210-010
12 1/4"	124-112-015	124-112-010	124-212-015	124-212-010
14"	124-114-015	124-114-010	124-214-015	124-214-010
<b>For cabinet frames with a 24" overall depth</b>				
3 1/2"	125-103-015	125-103-010	125-203-015	125-203-010
5 1/4"	125-105-015	125-105-010	125-205-015	125-205-010
7"	125-107-015	125-107-010	125-207-015	125-207-010
8 3/4"	125-108-015	125-108-010	125-208-015	125-208-010
10 1/2"	125-110-015	125-110-010	125-210-015	125-210-010
12 1/4"	125-112-015	125-112-010	125-212-015	125-212-010
14"	125-114-015	125-114-010	125-214-015	125-214-010
<b>For cabinet frames with a 29" overall depth</b>				
3 1/2"	126-103-015	126-103-010	126-203-015	126-203-010
5 1/4"	126-105-015	126-105-010	126-205-015	126-205-010
7"	126-107-015	126-107-010	126-207-015	126-207-010
8 3/4"	126-108-015	126-108-010	126-208-015	126-208-010
10 1/2"	126-110-015	126-110-010	126-210-015	126-210-010
12 1/4"	126-112-015	126-112-010	126-212-015	126-212-010
14"	126-114-015	126-114-010	126-214-015	126-214-010
<b>For cabinet frames with a 36" overall depth</b>				
3 1/2"	128-103-015	128-103-010	128-203-015	128-203-010
5 1/4"	128-105-015	128-105-010	128-205-015	128-205-010
7"	128-107-015	128-107-010	128-207-015	128-207-010
8 3/4"	128-108-015	128-108-010	128-208-015	128-208-010
10 1/2"	128-110-015	128-110-010	128-210-015	128-210-010
12 1/4"	128-112-015	128-112-010	128-212-015	128-212-010
14"	128-114-015	128-114-010	128-214-015	128-214-010
<b>Inside Width of Drawers</b>		<b>Inside Depth of Drawers</b>		
19" Panel	24" Panel	17" Rack	24" Rack	29" Rack
16 1/16"	21 1/16"	14 15/16"	20 7/16"	20 7/16"



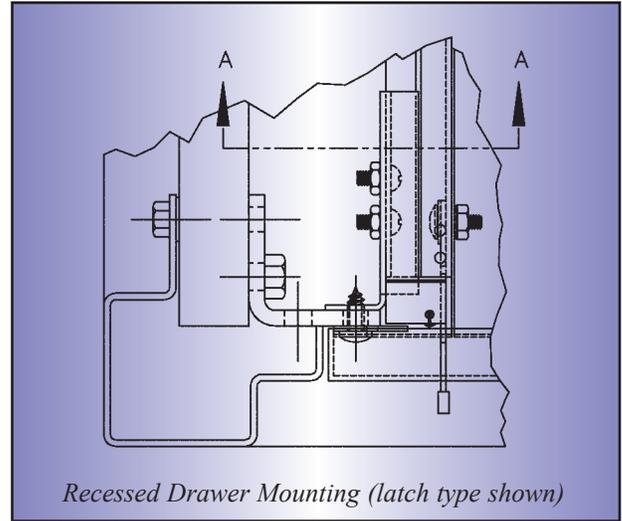


# Drawer Mounting Details



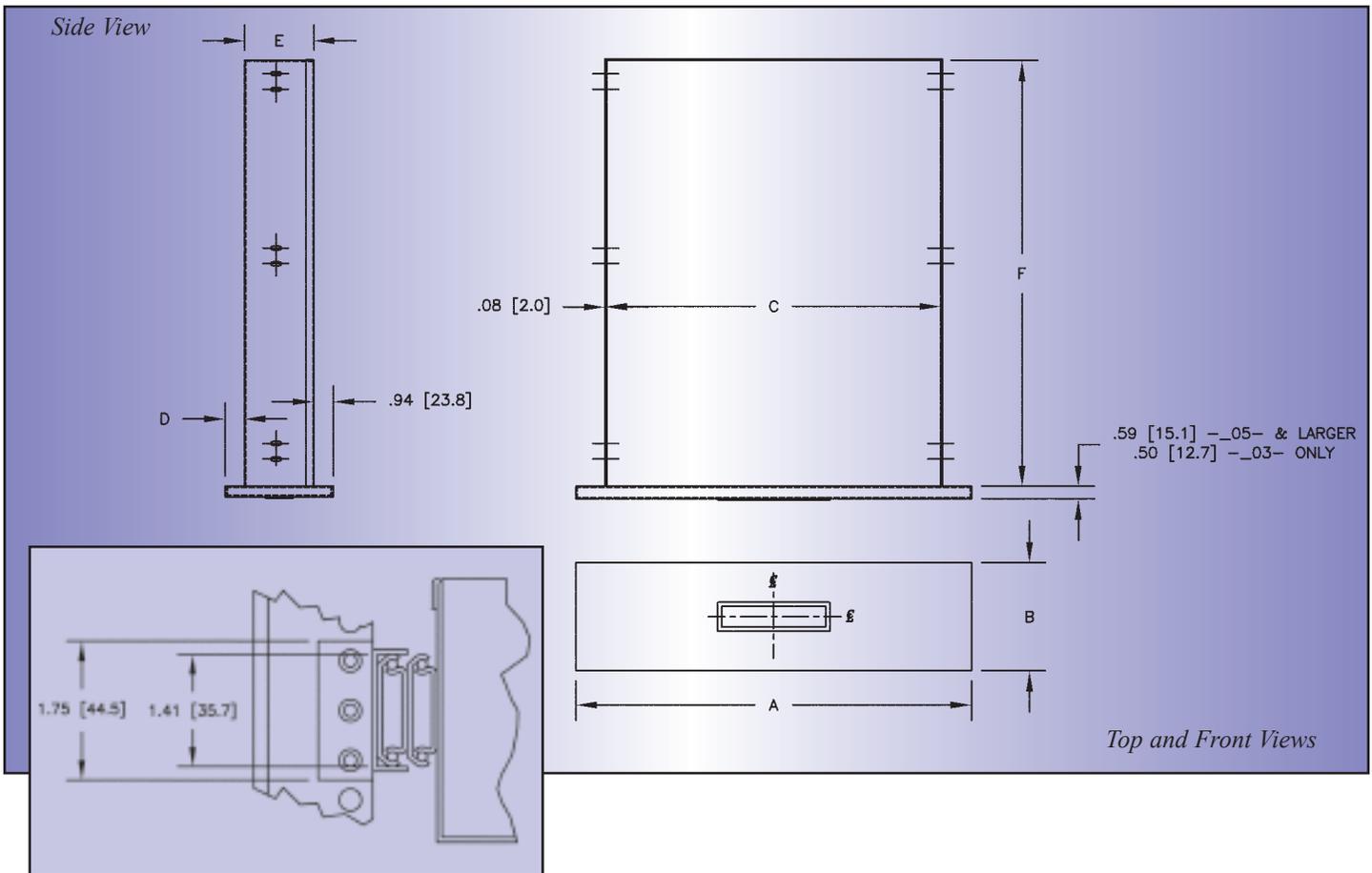
*Flush Drawer Mounting (latch type shown)*

*Flush Storage Drawers fit into the cabinet frame outside recess flush with the frame surface and are compatible with flush filler panels and doors.*



*Recessed Drawer Mounting (latch type shown)*

*Recessed Storage Drawers close against the Panel Mounting Angles in the same vertical plane as the Formed Instrument Panels used with them.*



*Section A-A*

*Top and Front Views*

# Flush and Recessed Storage Drawers

FOR USE WITH CABINET FRAMES WITH 17.06" (433.4) OVER-ALL DEPTH										
RECESSED MOUNTED STORAGE DRAWERS				FLUSH MOUNTED STORAGE DRAWERS				B	D	E
19.06" (484.2) Panel Width		24.06" (611.2) Panel Width		19.06" (484.2) Panel Width		24.06" (611.2) Panel Width				
A=18.94 (481.0)	C=16.06 (408.0)	A=23.94 (608.0)	C=21.06 (535.0)	A=20.44 (519.1)	C=16.06 (408.0)	A=25.44 (646.1)	C=21.06 (535.0)			
Non-Latch Type	Latch Type	Non-Latch Type	Latch Type	Non-Latch Type	Latch Type	Non-Latch Type	Latch Type			
124-103-015	124-103-010	124-203-015	124-203-010	124-103-025	124-103-020	124-203-025	124-203-020	3.44 (87.3)	.06 (1.6)	2.42 (61.5)
124-105-015	124-105-010	124-205-015	124-205-010	124-105-025	124-105-020	124-205-025	124-205-020	5.19 (131.8)	.94 (23.8)	3.31 (84.1)
124-107-015	124-107-010	124-207-015	124-207-010	124-107-025	124-107-020	124-207-025	124-207-020	6.94 (176.2)	.94 (23.8)	5.06 (128.6)
124-108-015	124-108-010	124-208-015	124-208-010	124-108-025	124-108-020	124-208-025	124-208-020	8.69 (220.7)	.94 (23.8)	6.81 (173.0)
124-110-015	124-110-010	124-210-015	124-210-010	124-110-025	124-110-020	124-210-025	124-210-020	10.44 (265.1)	.94 (23.8)	8.56 (217.5)
124-112-015	124-112-010	124-212-015	124-212-010	124-112-025	124-112-020	124-212-025	124-212-020	12.19 (309.6)	.94 (23.8)	10.31 (261.9)
124-114-015	124-114-010	124-214-015	124-214-010	124-114-025	124-114-020	124-214-025	124-214-020	13.94 (354.0)	.94 (23.8)	12.06 (306.4)
FOR USE WITH CABINET FRAMES WITH 24.06" (611.2) OVER-ALL DEPTH										
125-103-015	125-103-010	125-203-015	125-203-010	125-103-025	125-103-020	125-203-025	125-203-020	3.44 (87.3)	.06 (1.6)	2.42 (61.5)
125-105-015	125-105-010	125-205-015	125-205-010	125-105-025	125-105-020	125-205-025	125-205-020	5.19 (131.8)	.94 (23.8)	3.31 (84.1)
125-107-015	125-107-010	125-207-015	125-207-010	125-107-025	125-107-020	125-207-025	125-207-020	6.94 (176.2)	.94 (23.8)	5.06 (128.6)
125-108-015	125-108-010	125-208-015	125-208-010	125-108-025	125-108-020	125-208-025	125-208-020	8.69 (220.7)	.94 (23.8)	6.81 (173.0)
125-110-015	125-110-010	125-210-015	125-210-010	125-110-025	125-110-020	125-210-025	125-210-020	10.44 (265.1)	.94 (23.8)	8.56 (217.5)
125-112-015	125-112-010	125-212-015	125-212-010	125-112-025	125-112-020	125-212-025	125-212-020	12.19 (309.6)	.94 (23.8)	10.31 (261.9)
125-114-015	125-114-010	125-214-015	125-214-010	125-114-025	125-114-020	125-214-025	125-214-020	13.94 (354.0)	.94 (23.8)	12.06 (306.4)
FOR USE WITH CABINET FRAMES WITH 29.06" (738.2) OVER-ALL DEPTH										
126-103-015	126-103-010	126-203-015	126-203-010	126-103-025	126-103-020	126-203-025	126-203-020	3.44 (87.3)	.06 (1.6)	2.42 (61.5)
126-105-015	126-105-010	126-205-015	126-205-010	126-105-025	126-105-020	126-205-025	126-205-020	5.19 (131.8)	.94 (23.8)	3.31 (84.1)
126-107-015	126-107-010	126-207-015	126-207-010	126-107-025	126-107-020	126-207-025	126-207-020	6.94 (176.2)	.94 (23.8)	5.06 (128.6)
126-108-015	126-108-010	126-208-015	126-208-010	126-108-025	126-108-020	126-208-025	126-208-020	8.69 (220.7)	.94 (23.8)	6.81 (173.0)
126-110-015	126-110-010	126-210-015	126-210-010	126-110-025	126-110-020	126-210-025	126-210-020	10.44 (265.1)	.94 (23.8)	8.56 (217.5)
126-112-015	126-112-010	126-212-015	126-212-010	126-112-025	126-112-020	126-212-025	126-212-020	12.19 (309.6)	.94 (23.8)	10.31 (261.9)
126-114-015	126-114-010	126-214-015	126-214-010	126-114-025	126-114-020	126-214-025	126-214-020	13.94 (354.0)	.94 (23.8)	12.06 (306.4)
FOR USE WITH CABINET FRAMES WITH 36.06" (916.0) OVER-ALL DEPTH										
128-103-015	128-103-010	128-203-015	128-203-010	128-103-025	128-103-020	128-203-025	128-203-020	3.44 (87.3)	.06 (1.6)	2.42 (61.5)
128-105-015	128-105-010	128-205-015	128-205-010	128-105-025	128-105-020	128-205-025	128-205-020	5.19 (131.8)	.94 (23.8)	3.31 (84.1)
128-107-015	128-107-010	128-207-015	128-207-010	128-107-025	128-107-020	128-207-025	128-207-020	6.94 (176.2)	.94 (23.8)	5.06 (128.6)
128-108-015	128-108-010	128-208-015	128-208-010	128-108-025	128-108-020	128-208-025	128-208-020	8.69 (220.7)	.94 (23.8)	6.81 (173.0)
128-110-015	128-110-010	128-210-015	128-210-010	128-110-025	128-110-020	128-210-025	128-210-020	10.44 (265.1)	.94 (23.8)	8.56 (217.5)
128-112-015	128-112-010	128-212-015	128-212-010	128-112-025	128-112-020	128-212-025	128-212-020	12.19 (309.6)	.94 (23.8)	10.31 (261.9)
128-114-015	128-114-010	128-214-015	128-214-010	128-114-025	128-114-020	128-214-025	128-214-020	13.94 (354.0)	.94 (23.8)	12.06 (306.4)

INSIDE DEPTH OF DRAWER BODY (F DIM.)			
17.06 (433.4) Deep Rack	24.06 (611.2) Deep Rack	29.06 (738.2) Deep Rack	36.06 (916.0) Deep Rack
14.94 (379.4)	20.44 (519.1)	20.44 (519.1)	20.44 (519.1)



# Double and Extended Doors

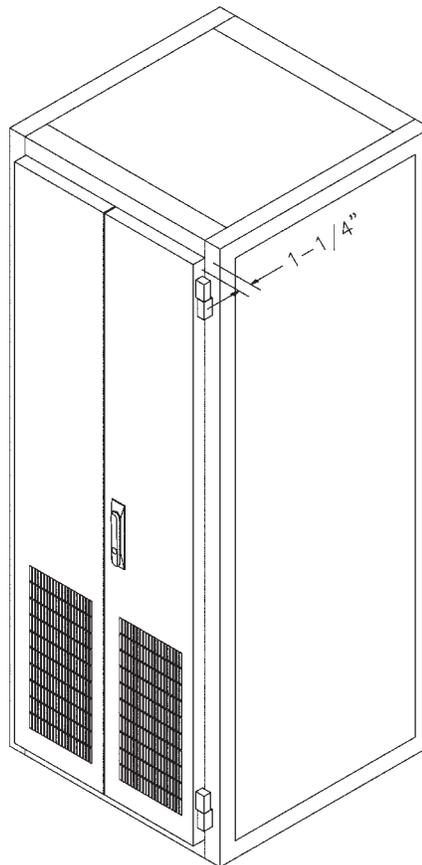
Double Doors are designed to be excellent space savers for networking/switching sites, banking, Internet storage and more. They are ideal anywhere that you need extra aisle space, requiring only one-half the aisle space for full cabinet access.

## Product Features

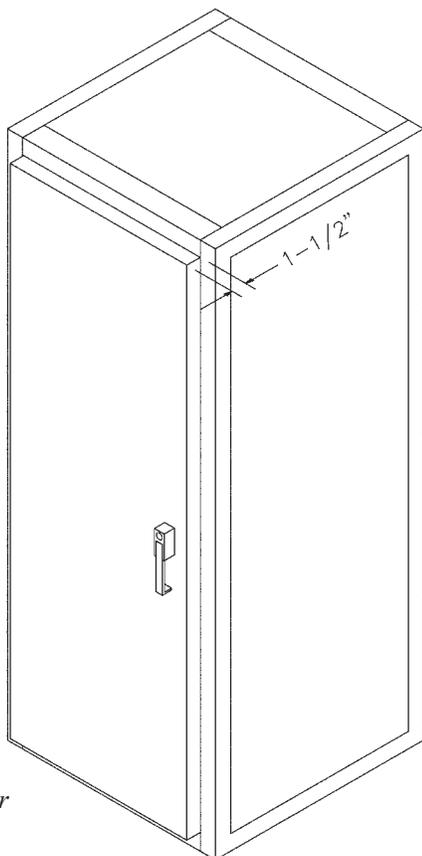
- ▶ Available in heights from 49" to 84" for 19" and 24" panel openings
- ▶ Two-point latching system
- ▶ Grills available with or without filters
- ▶ Double Doors can be used with seismic, shock or EMI/RFI requirements

## Extended Doors

Extended Doors are used when front panels, card cages, or chassis have protruding handles or buttons that interfere with a standard 5/8" thick door. If you would like to order an Extended Door, select the door and style part number from catalog pg. number A5-A24. Just change the prefix from 091 or 092 to E91 or E92.



Double Door



Extended Door

DOUBLE DOORS (shown above)		
Height of Panel Opening	19" Panel Width	24" Panel Width
	Part No.	Part No.
49"	D93-149-__	D93-249-__
56"	D93-156-__	D93-256-__
63"	D93-163-__	D93-263-__
70"	D93-170-__	D93-270-__
77"	D93-177-__	D93-277-__
84"	D93-184-__	D93-284-__

Add suffix style number to the partial part number of door in chart above from number below.

- 010—Plain
- 016—Grilled at top less filter
- 036—Grilled at top with filter
- 017—Grilled at bottom less filter
- 037—Grilled at bottom with filter
- 018—Grilled top and bottom less filter
- 038—Grilled top and bottom with filter

# Turrets

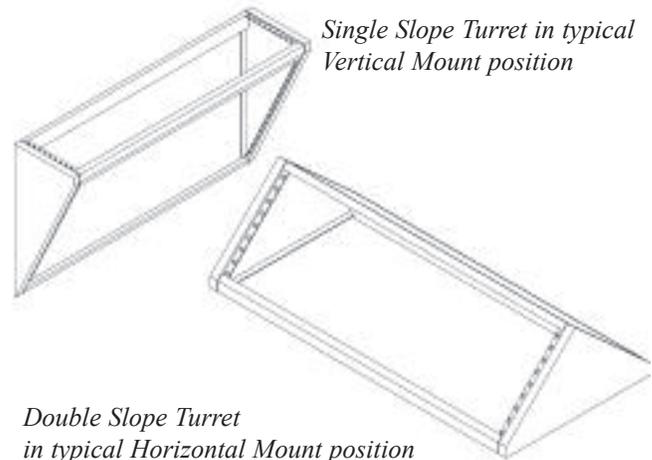
## Single or Double Slope

### Single or Double Slope Turrets

Turrets are generally used to meet human engineering and environmental requirements. They are used to bring fingertip control to operational equipment and provide closer operator surveillance functions.

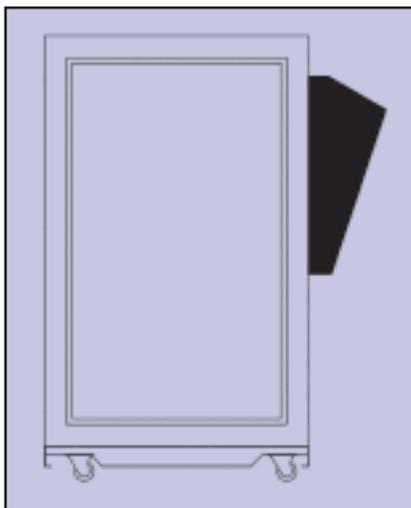
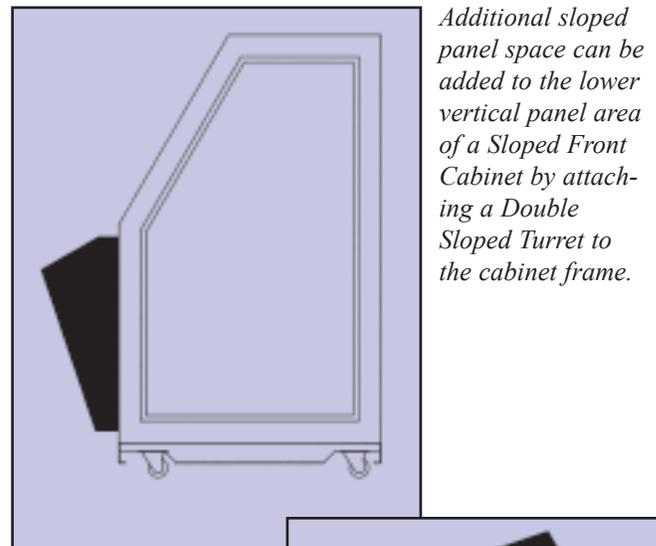
Turrets are available in two types: Vertical Mount and Horizontal Mount. Vertically mounted units are usually installed on the vertical front or rear surfaces of Vertical Rack and Sloped Front Cabinet frames. Horizontally mounted Turrets are designed to fit into the top recess of desk, bench or counter height Vertical Rack Cabinets. Either the Vertical or the Horizontal Mount may also be used as a free standing unit on a desk, bench or counter top. The two styles available in each type are the Single slope and Double slope.

When installed on the Vertical surfaces of vertical Rack or Sloped Front cabinets, they fit into the frame recess and are fastened with 14-gauge steel joining channels directly to the panel mounting angles for support. The joining channels and all necessary mounting hardware are included with each Turret.



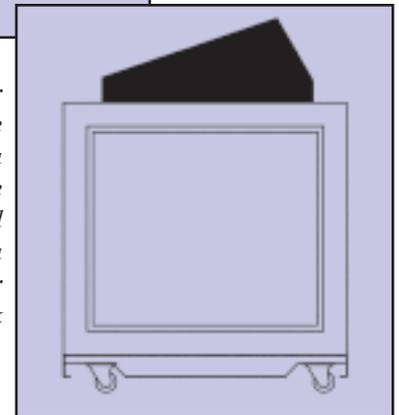
### Product Features

- ▶ Constructed of 16-gauge cold-rolled steel
- ▶ Formed and welded into a strong frame with side panels and instrument panel mounting angles
- ▶ Flat or 5/8" formed instrument panels can be installed in either type or style of Turret
- ▶ Panel Mounting Angles punched 9/32" dia. holes for spring type fasteners, on centers per E.I.A. Standard RS-310



*Double Slope Turret attached to the front of a Vertical Rack Cabinet allows mounting equipment in an angled plane for easier observation.*

*A control center console can be assembled with either a Single or Double Slope Turret, which is fitted into the top recess of a desk, bench or counter height Vertical Rack Cabinet frame.*





# Turrets Horizontal Mount

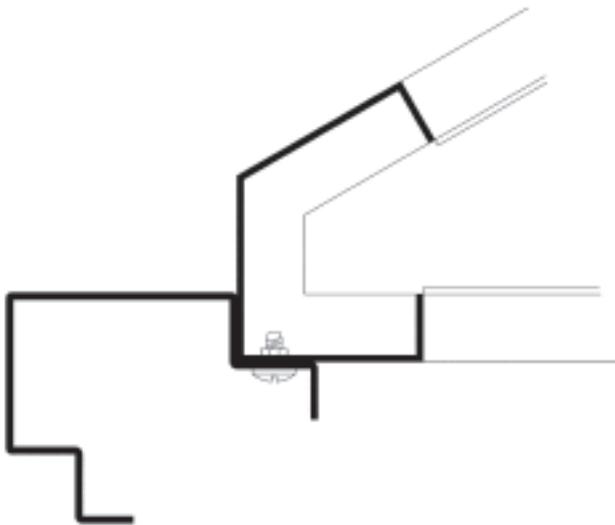
Horizontal Mounted Single or Double Slope Turrets are designed to fit directly into the top panel recess of desk, bench, or counter height Vertical Rack Cabinet frames. By adding a bottom panel and rubber feet, these Turrets may also be used independently as desk top units. Panels used in Turrets must be ordered separately.

## Product Features

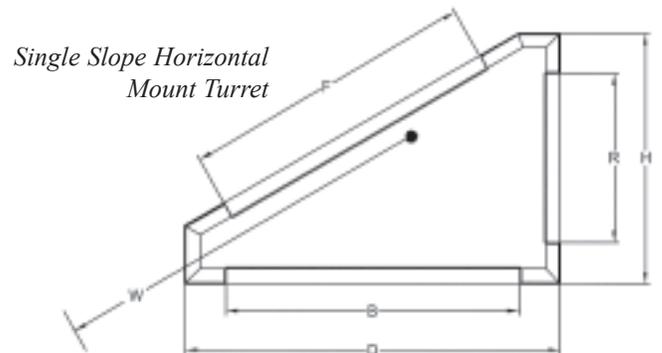
- ▶ Available in several sizes so various consoles may be assembled for stand up control operations.
- ▶ May be adapted for use on the vertical panel areas of Sloped Front and Vertical Rack Cabinets.



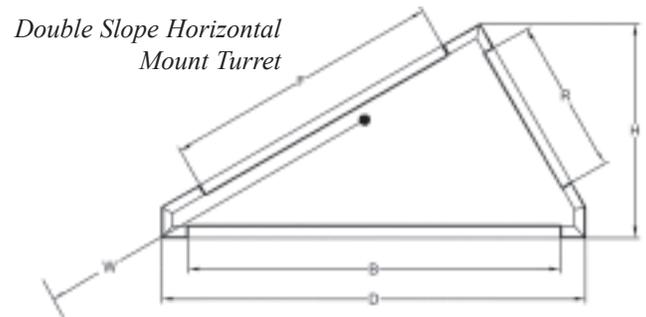
Double Slope Turret installed in the top recess of Vertical Racks



Partial section showing method of joining Turret into the top recess of a Vertical Rack frame



Single Slope Horizontal Mount Turret



Double Slope Horizontal Mount Turret

## HORIZONTAL MOUNT TURRETS

Type of Slope	Width of Instrument Panel Space	Overall Depth of Cabinet Frame*	Height of Instrument Panel Space			Overall Size of Turret			Part Number of Turret
			FRONT "F"	REAR "R"	BOTTOM "B"	HEIGHT "H"	WIDTH "W"	DEPTH "D"	
Single	19"	24"	15 3/4"	7"	15 3/4"	11 27/64"	20 1/2"	18 15/16"	193-615-020
	19"	29"	22 3/4"	10 1/2"	19 1/4"	14 9/32"	20 1/2"	23 15/16"	193-622-030
Single	24"	24"	15 3/4"	7"	15 3/4"	11 27/64"	25 1/2"	18 15/16"	193-615-050
	24"	29"	22 3/4"	10 1/2"	19 1/4"	14 9/32"	25 1/2"	23 15/16"	193-622-060
Double	19"	24"	12 1/4"	7"	15 3/4"	9 31/32"	20 1/2"	18 63/64"	194-612-020
	19"	29"	15 3/4"	8 3/4"	21"	12 1/8"	20 1/2"	23 31/32"	194-615-030
Double	24"	24"	12 1/4"	7"	15 3/4"	9 31/32"	25 1/2"	18 63/64"	194-612-050
	24"	29"	15 3/4"	8 3/4"	21"	12 1/8"	25 1/2"	23 31/32"	194-615-060

\* Contact factory for applications for 17" and 36" deep frames

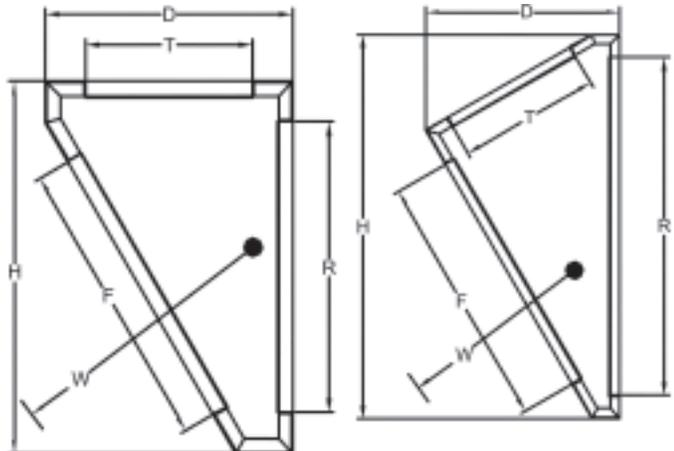
# Turrets Vertical Mount

Heavy Duty

Vertical Mounted Turrets are designed to fit securely into the recess of the frame on Vertical Rack Cabinets and on the vertical panel areas of Sloped Front cabinets. When attached at the top of the panel opening, Turrets place instrumentation in a line-of-sight with the operator. When used in lower positions they can position strategic equipment within finger-tip control for maximum surveillance. All Turrets are shipped separately with all mounting hardware included. Panels used in Turret panel openings must be ordered separately.

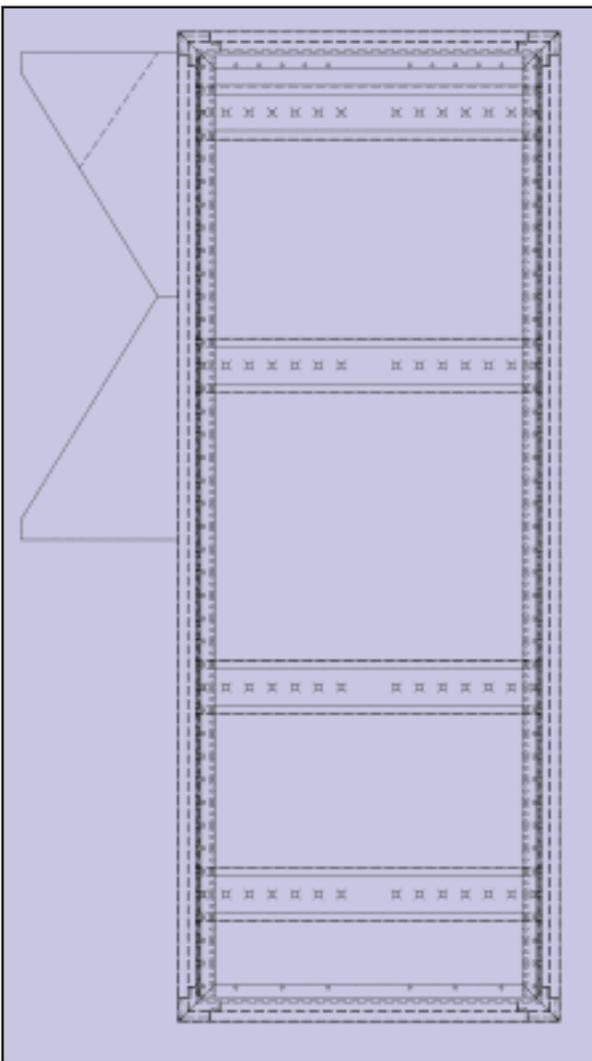
### Product Features

- ▶ Turrets may also be used as free standing desk top units by adding a bottom panel and rubber feet
- ▶ Can mount at top of panel opening or some intermediate position.



Single Slope Vertical Mount Turret

Double Slope Vertical Mount Turret



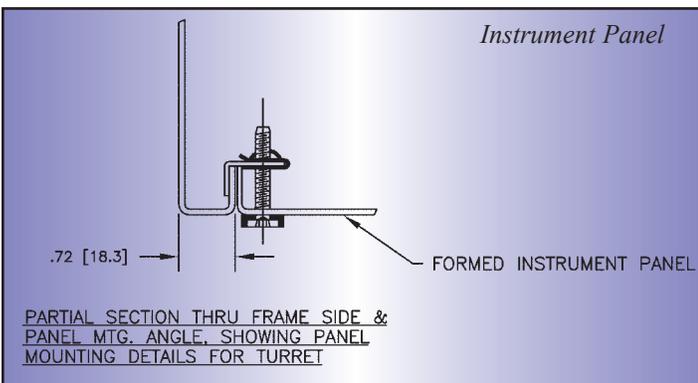
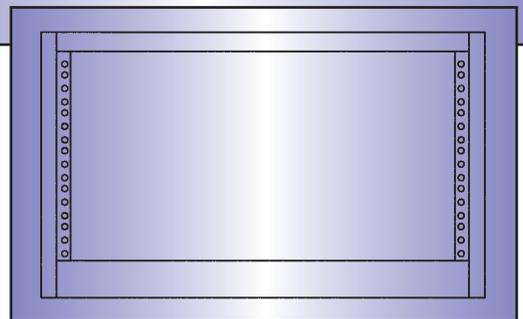
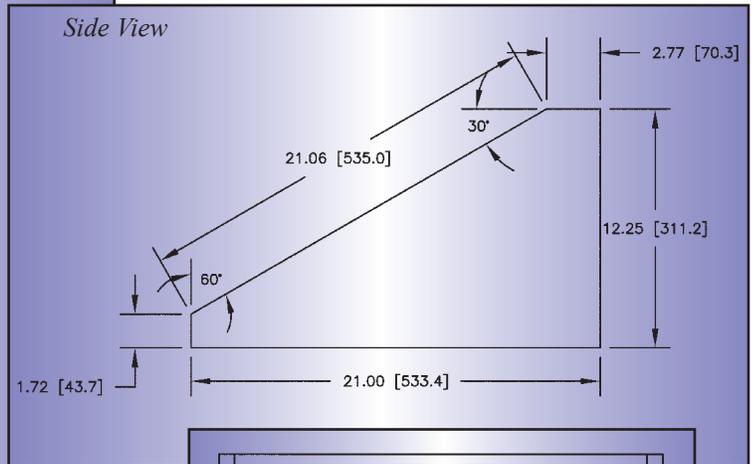
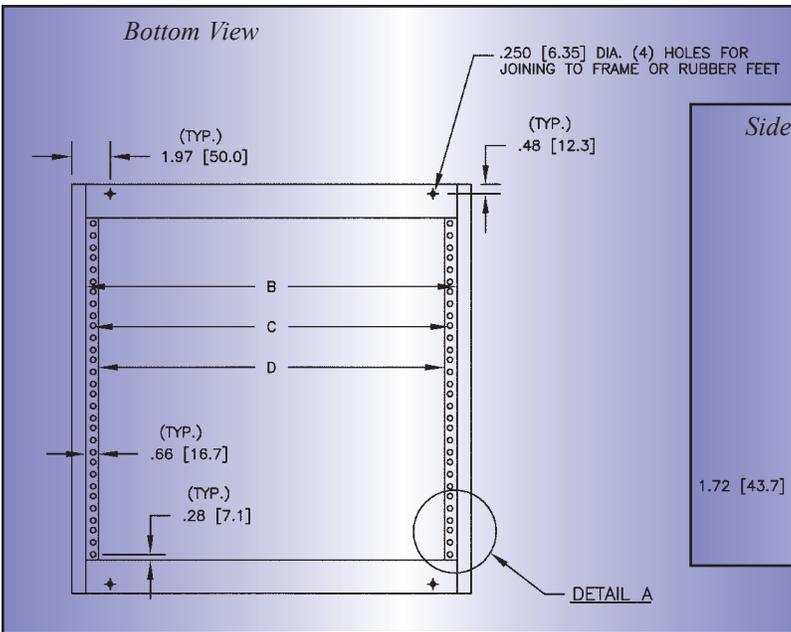
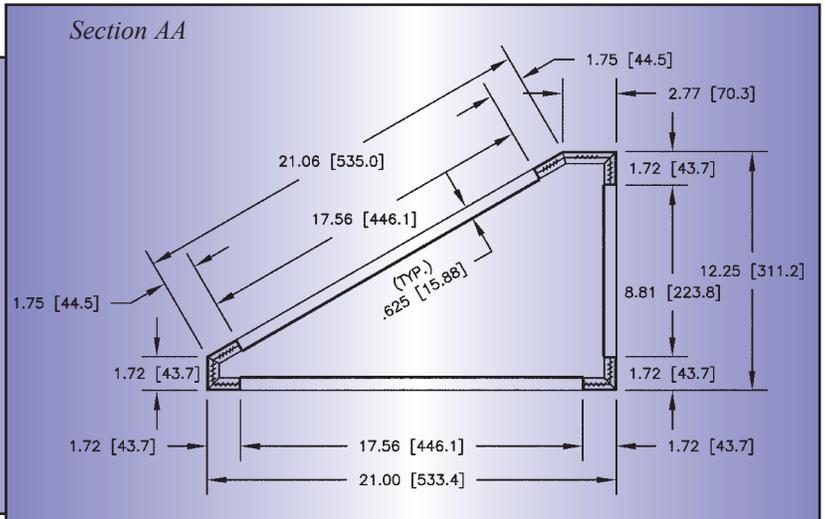
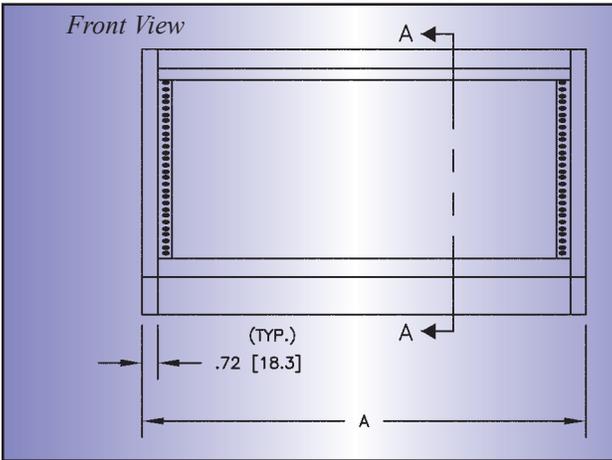
Sectional view of a typical Vertical Rack Cabinet illustrating mounting of Vertical Mount Turrets at top of panel as well as at intermediate positions

VERTICAL MOUNT TURRETS									
Type of Slope	Width of Instrument Panel Space	Overall Width of Cabinet Frame*	Height of Instrument Panel Space			Overall Size of Turret			Part Number of Turret
			FRONT "F"	REAR "R"	TOP "T"	HEIGHT "H"	WIDTH "W"	DEPTH "D"	
Single	19"	24"	12 1/4"	12 1/4"	7"	15 3/4"	20 1/2"	10 1/2"	191-612-010
	24"	29"	12 1/4"	12 1/4"	7"	15 3/4"	25 1/2"	10 1/2"	191-612-040
Single	19"	24"	17 1/2"	17 1/2"	8 3/4"	21"	20 1/2"	12 1/4"	191-617-010
	24"	29"	17 1/2"	17 1/2"	8 3/4"	21"	25 1/2"	12 1/4"	191-617-040
Double	19"	24"	14"	17 1/2"	7"	21"	20 1/2"	10 27/32"	192-614-010
	24"	29"	14"	17 1/2"	7"	21"	25 1/2"	10 27/32"	192-614-040
Double	19"	24"	17 1/2"	22 3/4"	8 3/4"	26 1/4"	20 1/2"	13 1/8"	192-617-010
	24"	29"	17 1/2"	22 3/4"	8 3/4"	26 1/4"	25 1/2"	13 1/8"	192-617-040



# Turret Frame, 60° Slope

**For 19" and 24" Wide, 17 1/2" High  
Panel Space on Slope**

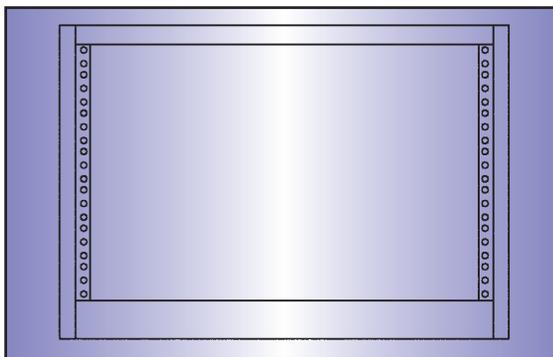
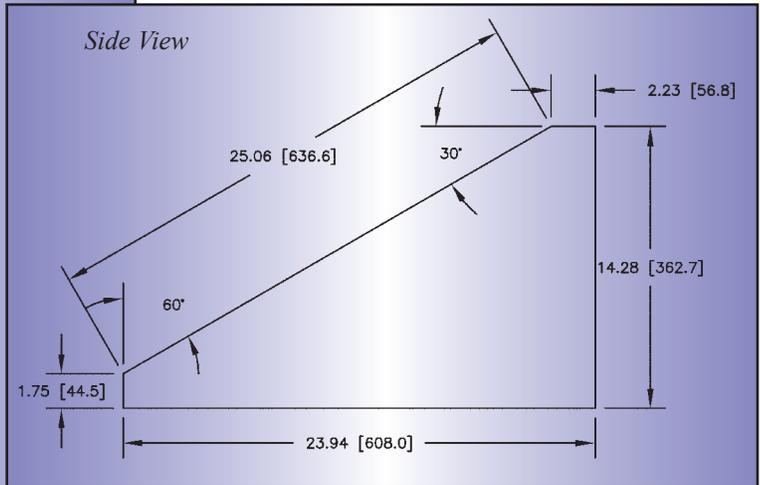
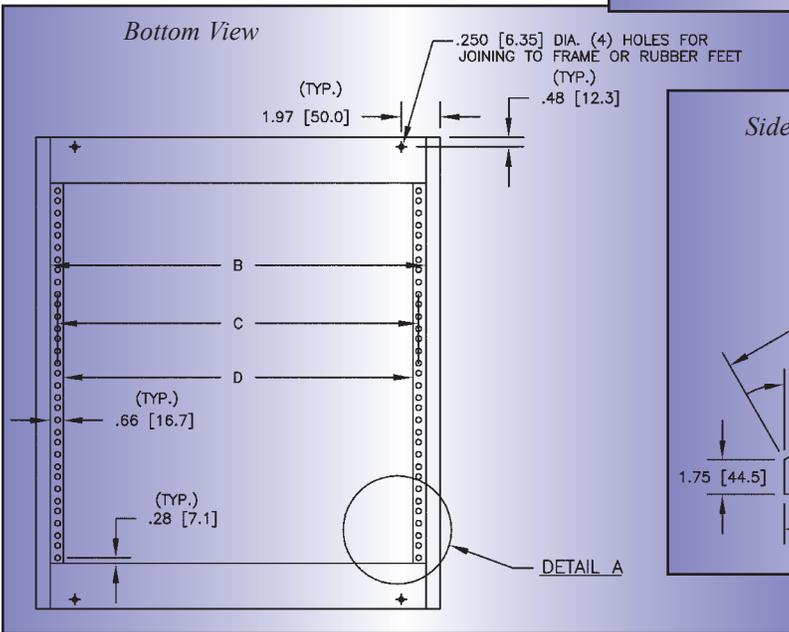
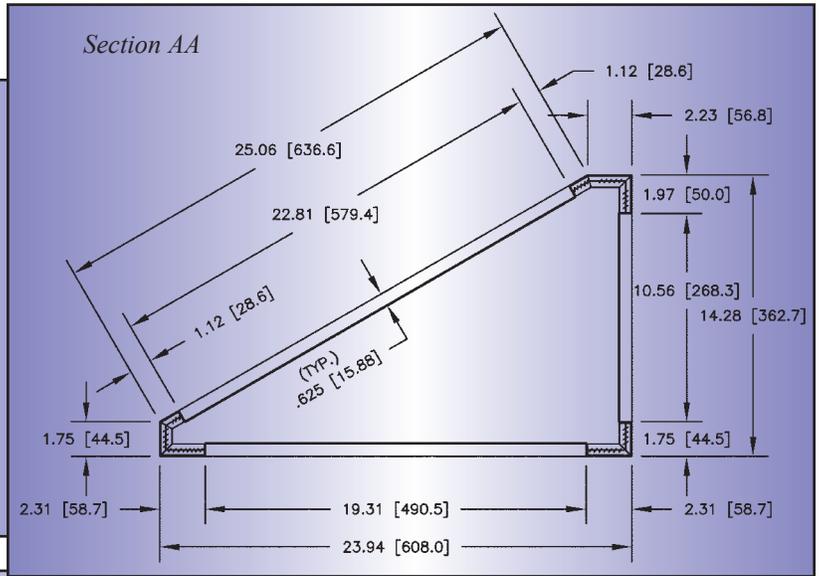
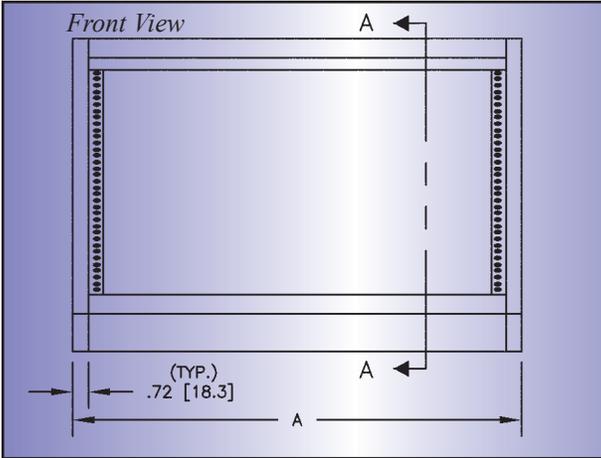


Part No.	A	B	C	D
191-617-010	20.50 (520.7)	19.06 (484.2)	18.31 (465.1)	17.75 (450.9)
191-617-040	25.50 (647.7)	24.06 (611.2)	23.31 (592.1)	22.75 (577.9)

# Turret Frame, 60° Slope

For 19" and 24" Wide, 22 3/4" High Panel Space on Slope

Heavy Duty



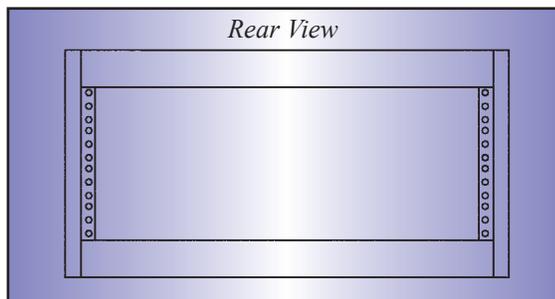
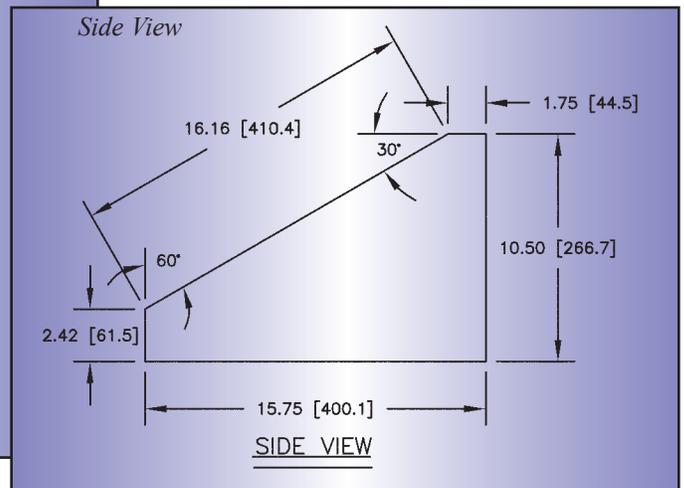
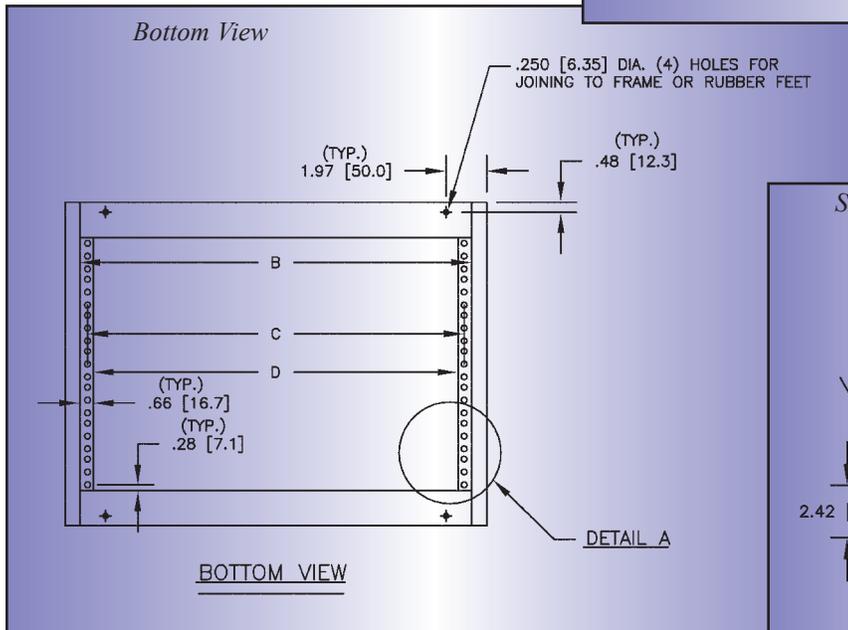
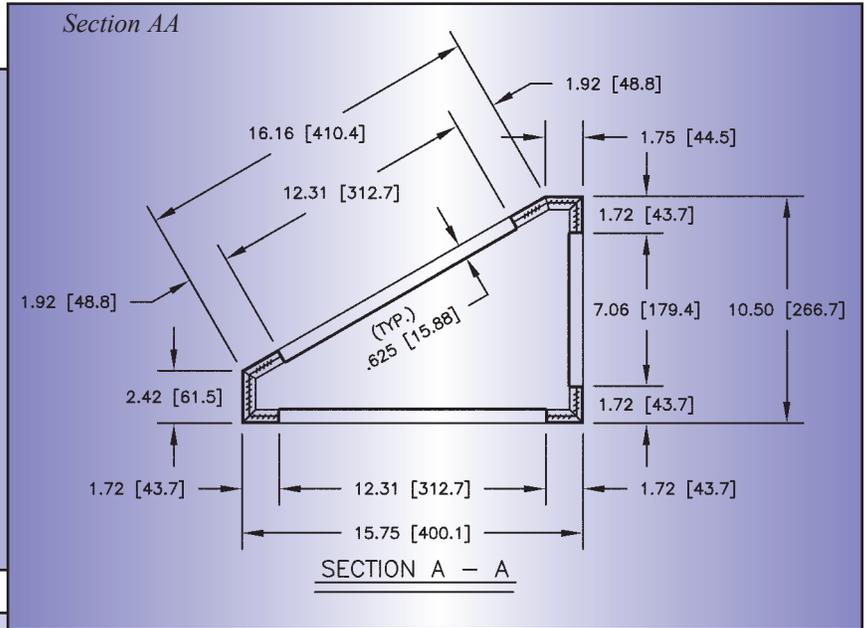
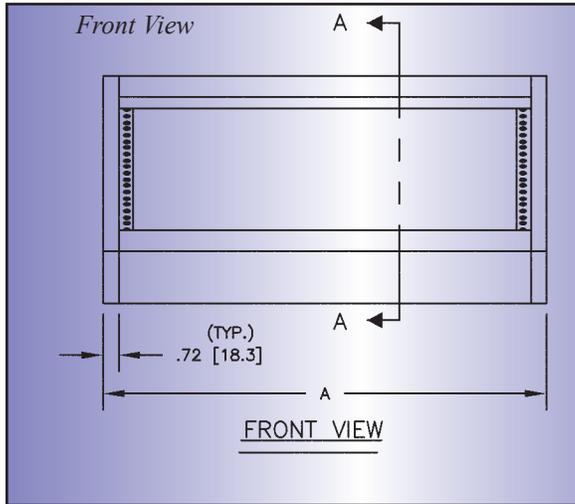
Rear View

Part No.	A	B	C	D
193-622-030	20.50 (520.7)	19.06 (484.2)	18.31 (465.1)	17.75 (450.9)
193-622-060	25.50 (647.7)	24.06 (611.2)	23.31 (592.1)	22.75 (577.9)



# Turret Frame, 60° Slope

**For 19" and 24" Wide, 12 1/4" High Panel Space on Slope**

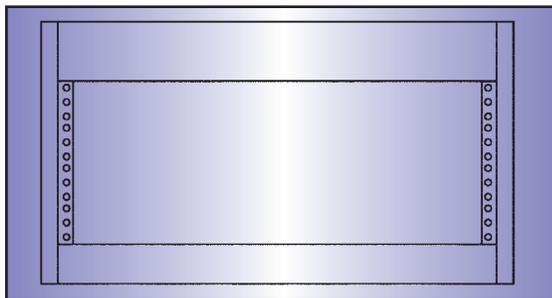
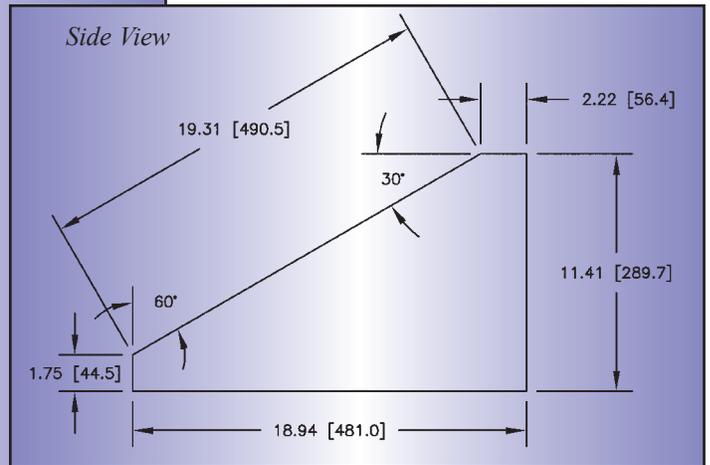
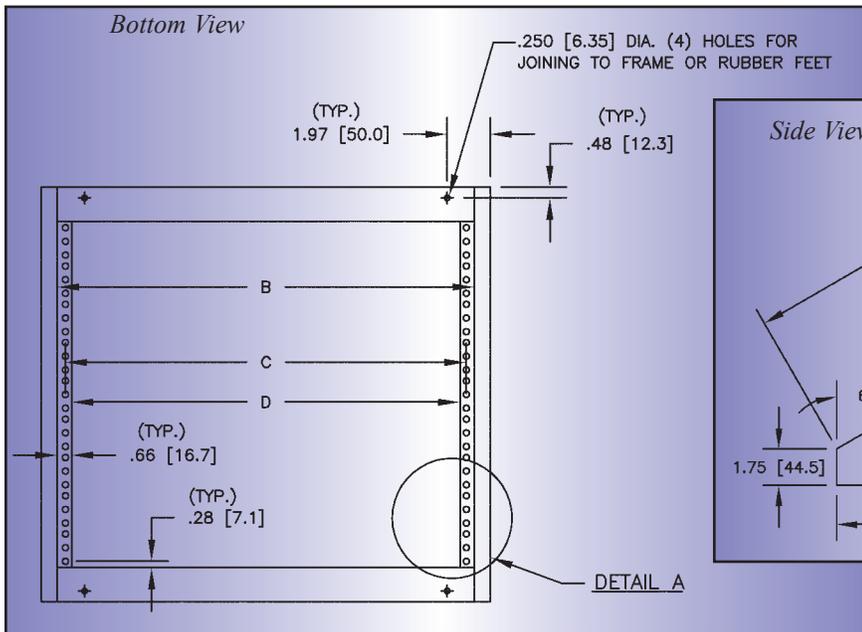
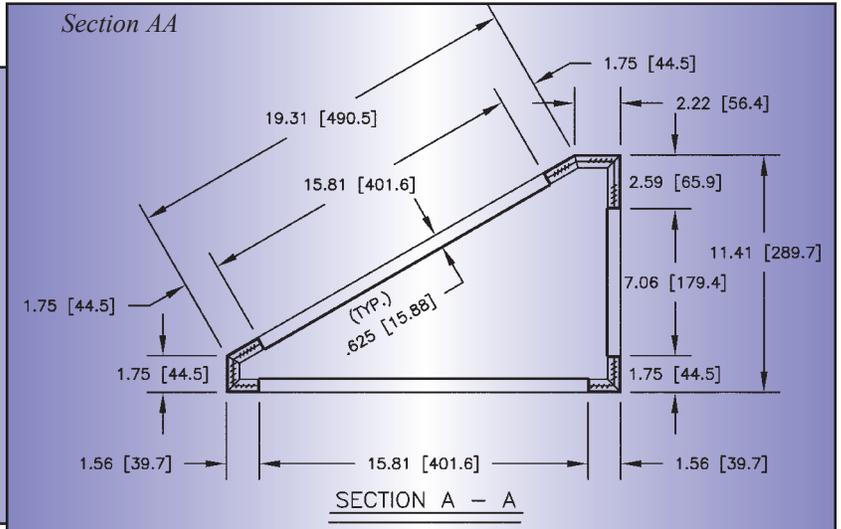
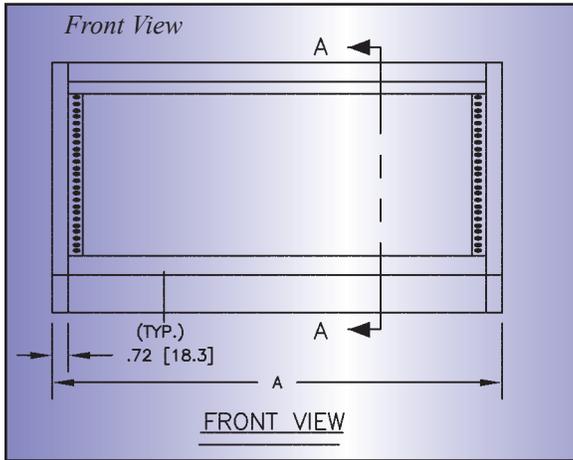


Part No.	A	B	C	D
191-612-010	20.50 (520.7)	19.06 (484.2)	18.31 (465.1)	17.75 (450.9)
191-612-040	25.50 (647.7)	24.06 (611.2)	23.31 (592.1)	22.75 (577.9)

# Turret Frame, 60° Slope

For 19" and 24" Wide, 15 3/4" High  
Panel Space on Slope

Heavy Duty



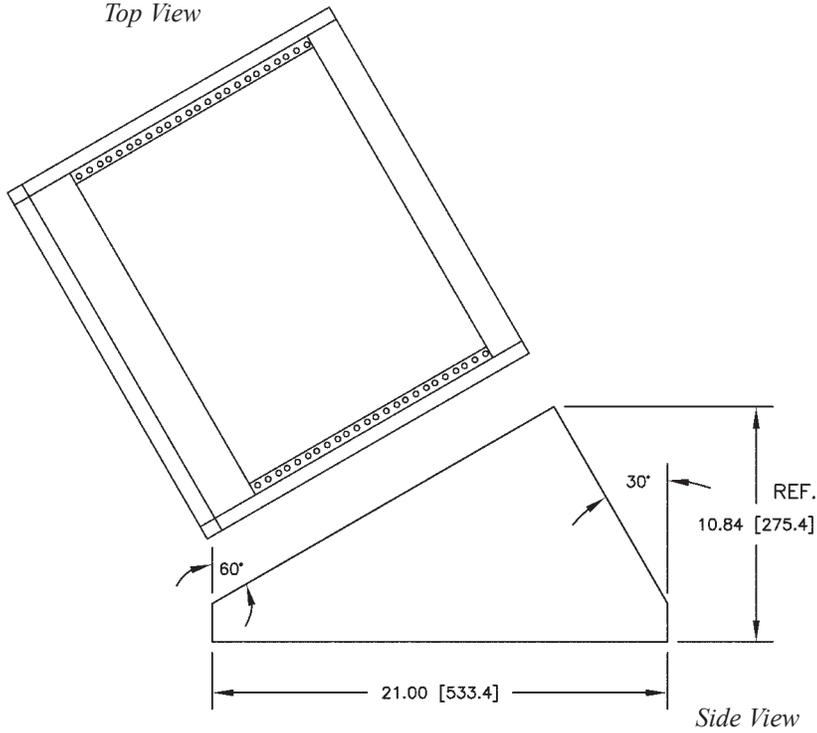
Part No.	A	B	C	D
193-615-020	20.50 (520.7)	19.06 (484.2)	18.31 (465.1)	17.75 (450.9)
193-615-050	25.50 (647.7)	24.06 (611.2)	23.31 (592.1)	22.75 (577.9)



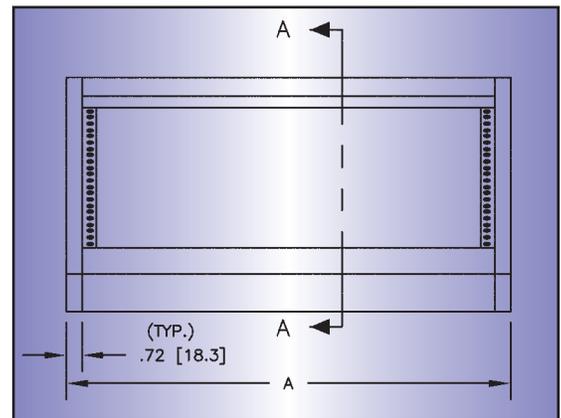
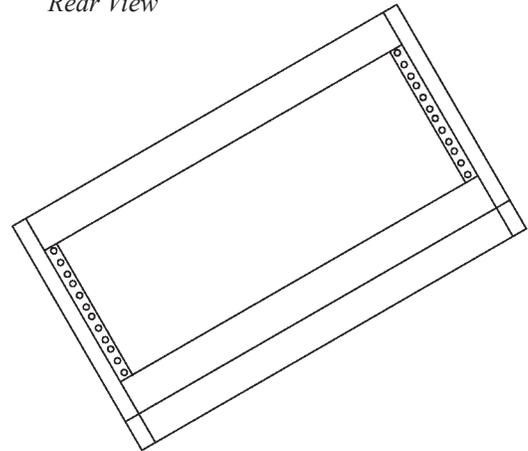
# Turret Frames, Double Slope

**For 19" and 24" Wide Panels,  
14" Panel Space on 60° Slope,  
7" Panel Space on 30° Slope**

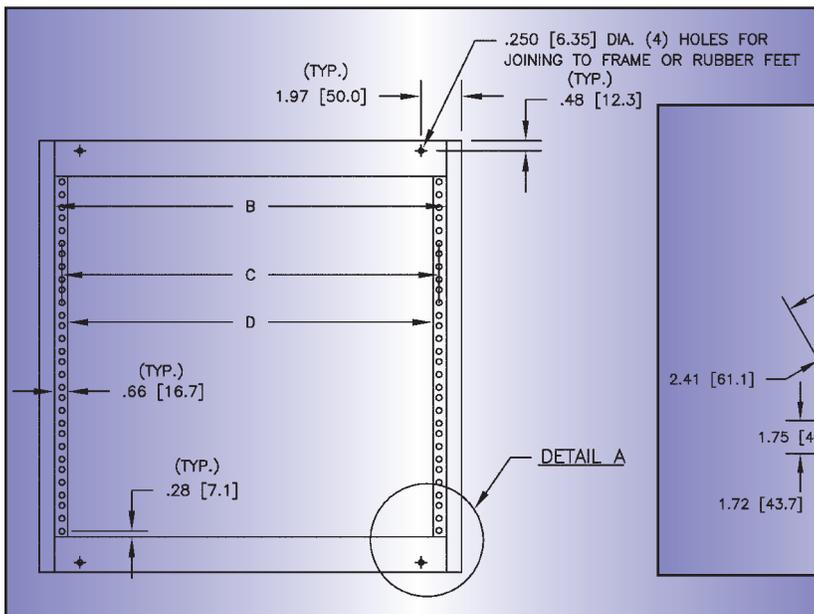
Top View



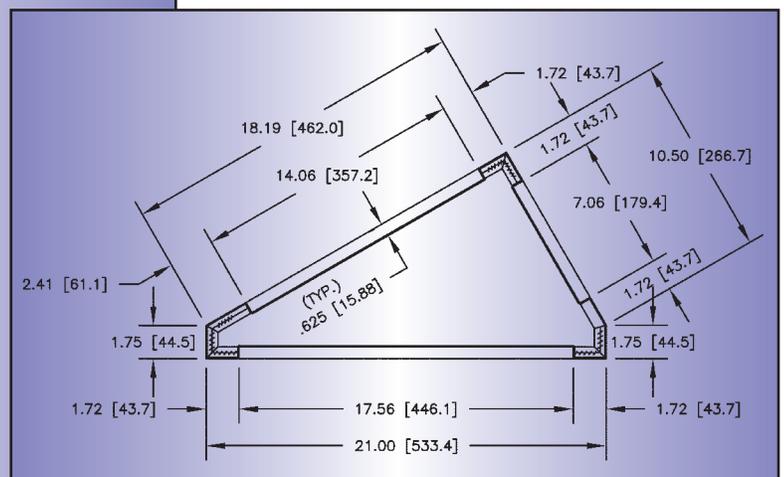
Rear View



Front View



Bottom View

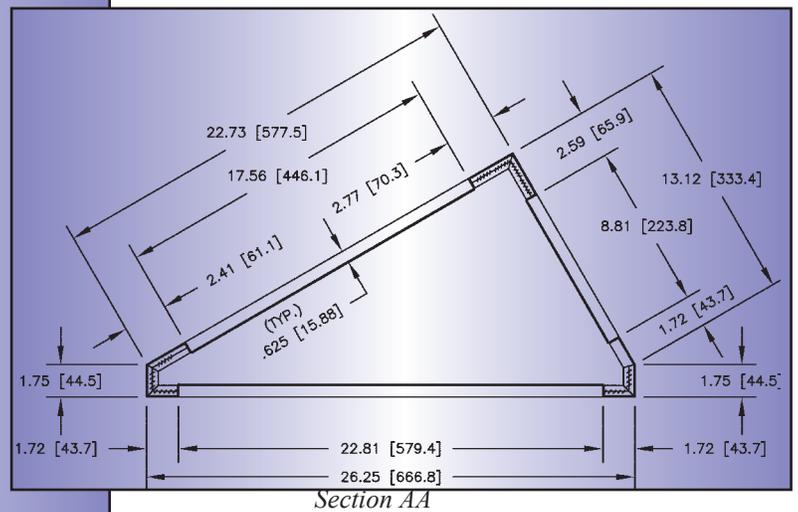
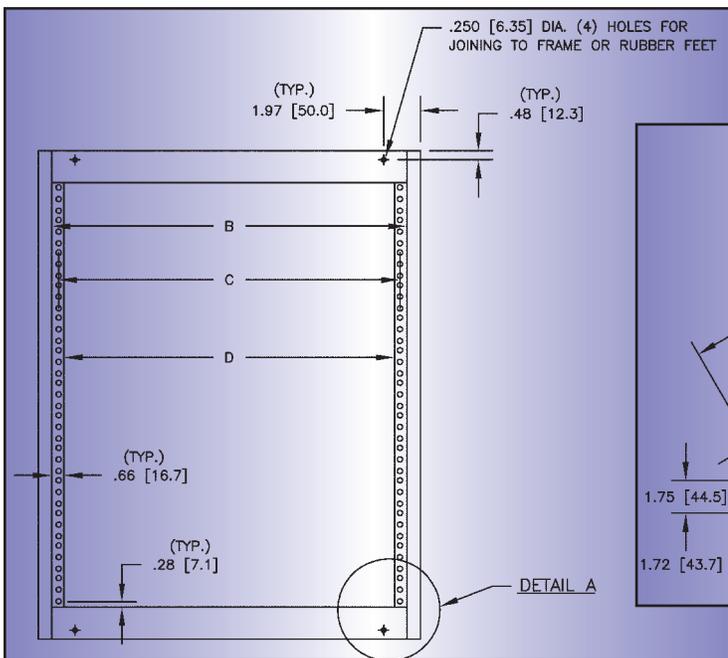
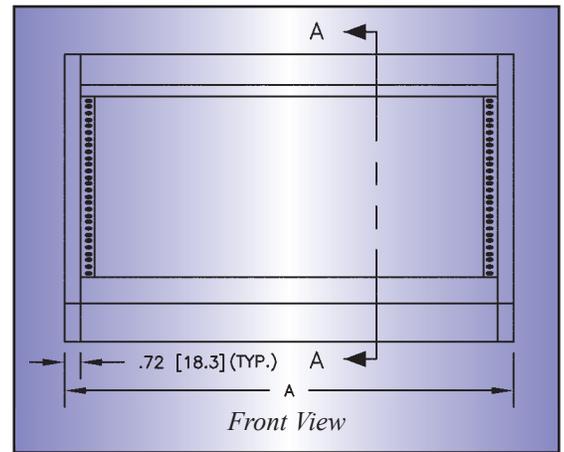
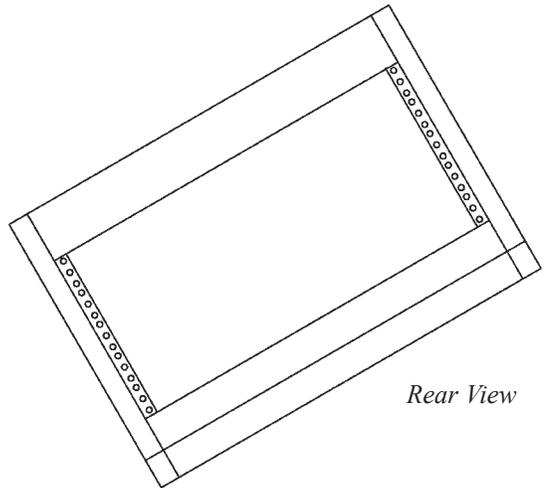
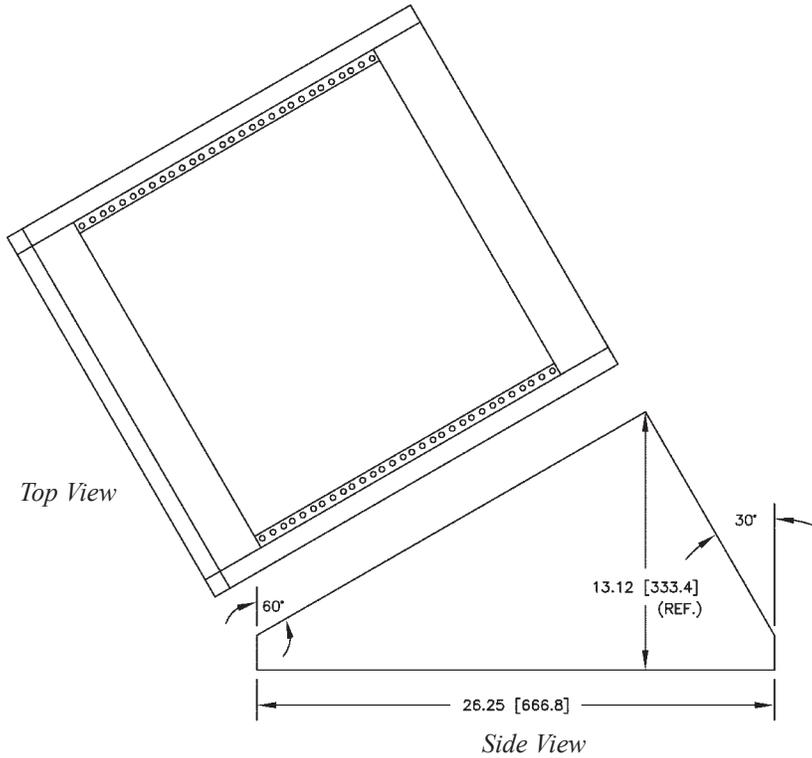


Section AA

Part No.	A	B	C	D
192-614-010	20.50 (520.7)	19.06 (484.2)	18.31 (465.1)	17.75 (450.9)
192-614-040	25.50 (647.7)	24.06 (611.2)	23.31 (592.1)	22.75 (577.9)

# Turret Frames, Double Slope

**For 19" and 24" Wide Panels,  
17 1/2" Panel Space on 60° Slope,  
8 3/4" Panel Space on 30° Slope**

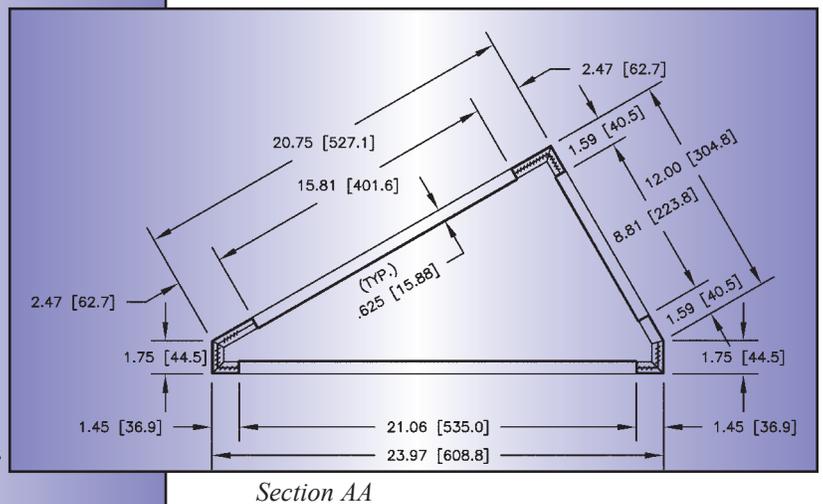
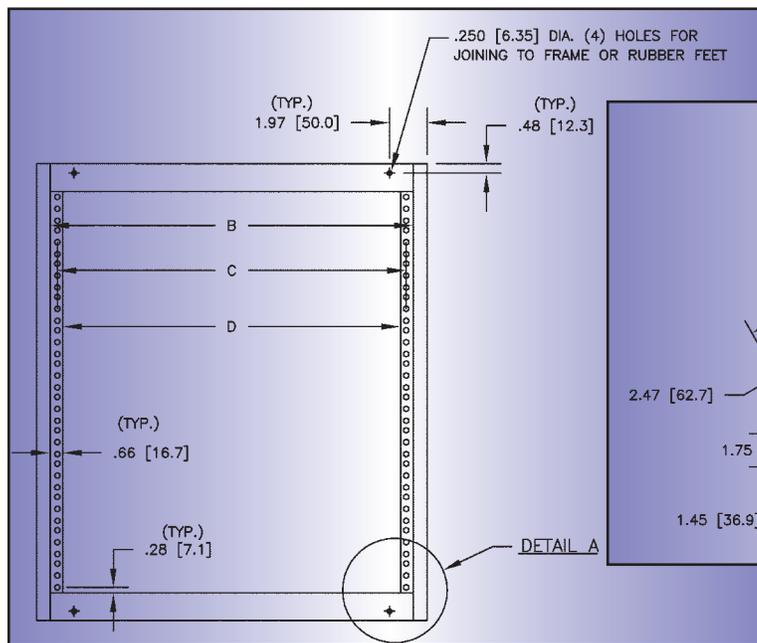
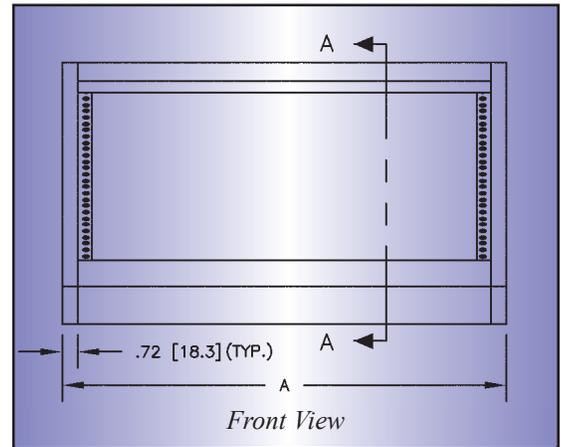
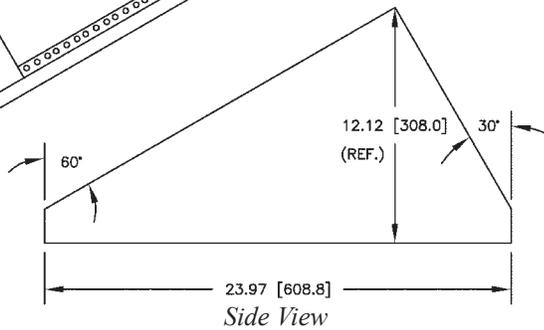
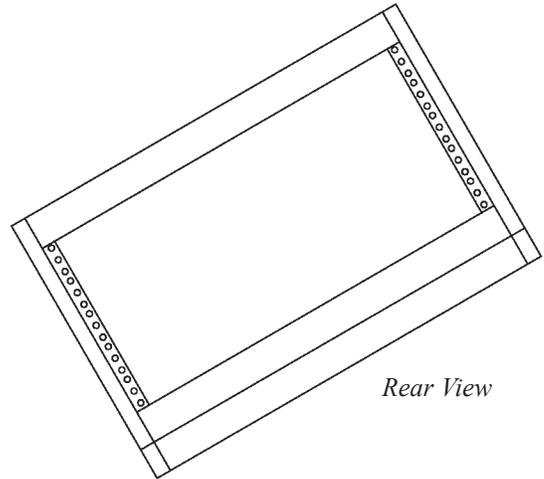
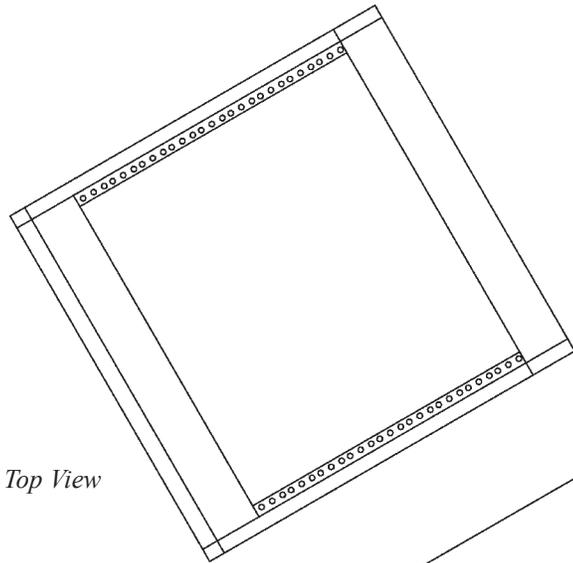


Part No.	A	B	C	D
192-617-010	20.50 (520.7)	19.06 (484.2)	18.31 (465.1)	17.75 (450.9)
192-617-040	25.50 (647.7)	24.06 (611.2)	23.31 (592.1)	22.75 (577.9)



# Turret Frames, Double Slope

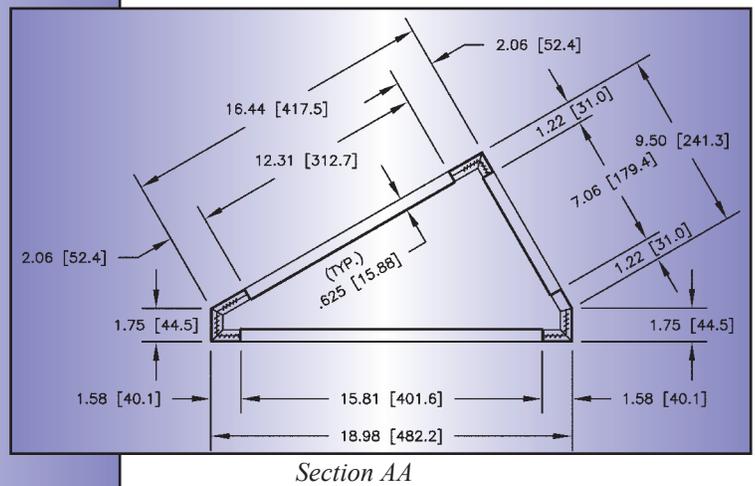
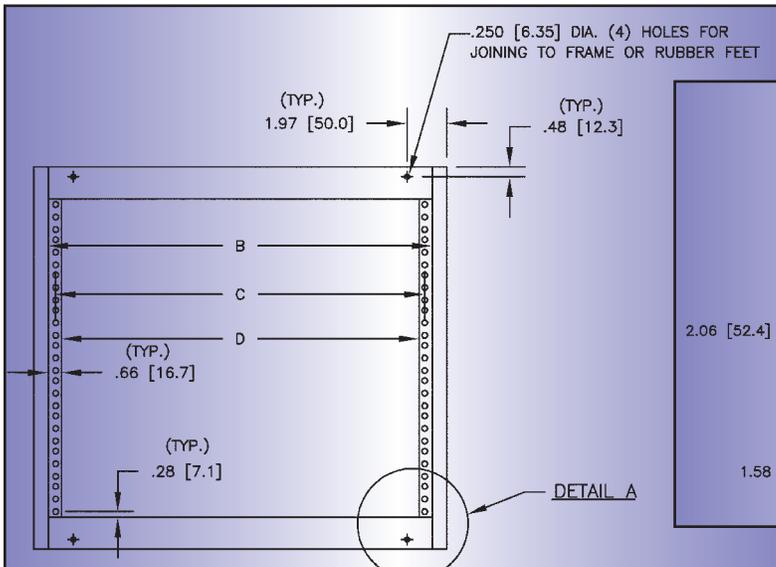
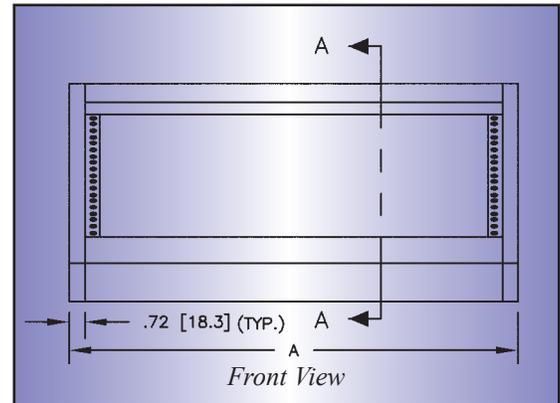
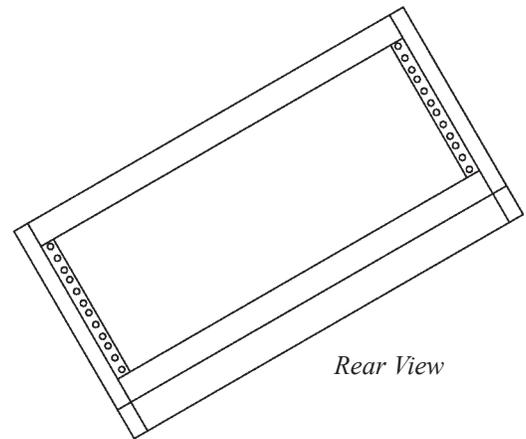
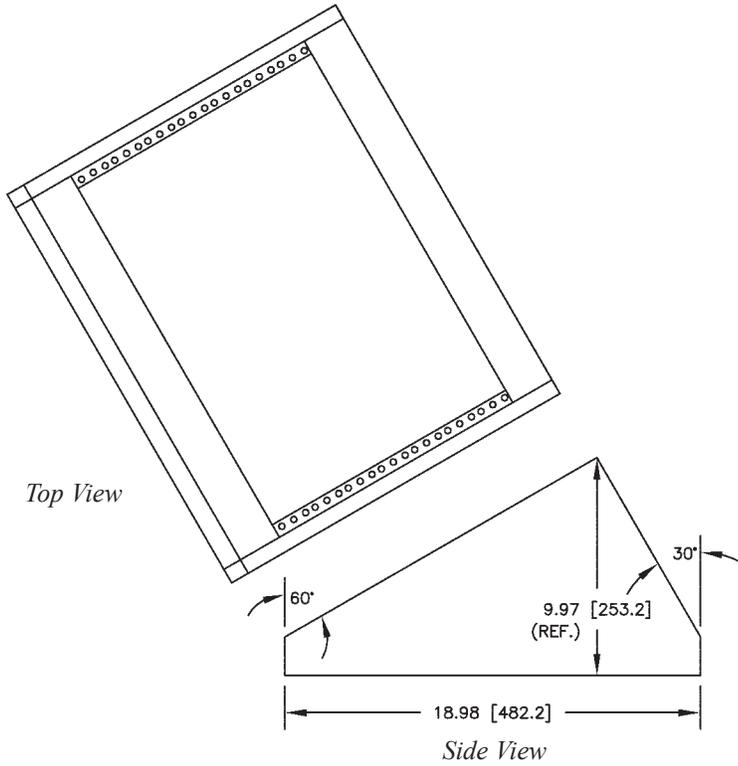
**For 19" and 24" Wide Panels,  
15 3/4" Panel Space on 60° Slope,  
8 3/4" Panel Space on 30° Slope**



Part No.	A	B	C	D
194-615-030	20.50 (520.7)	19.06 (484.2)	18.31 (465.1)	17.75 (450.9)
194-615-060	25.50 (647.7)	24.06 (611.2)	23.31 (592.1)	22.75 (577.9)

# Turret Frames, Double Slope

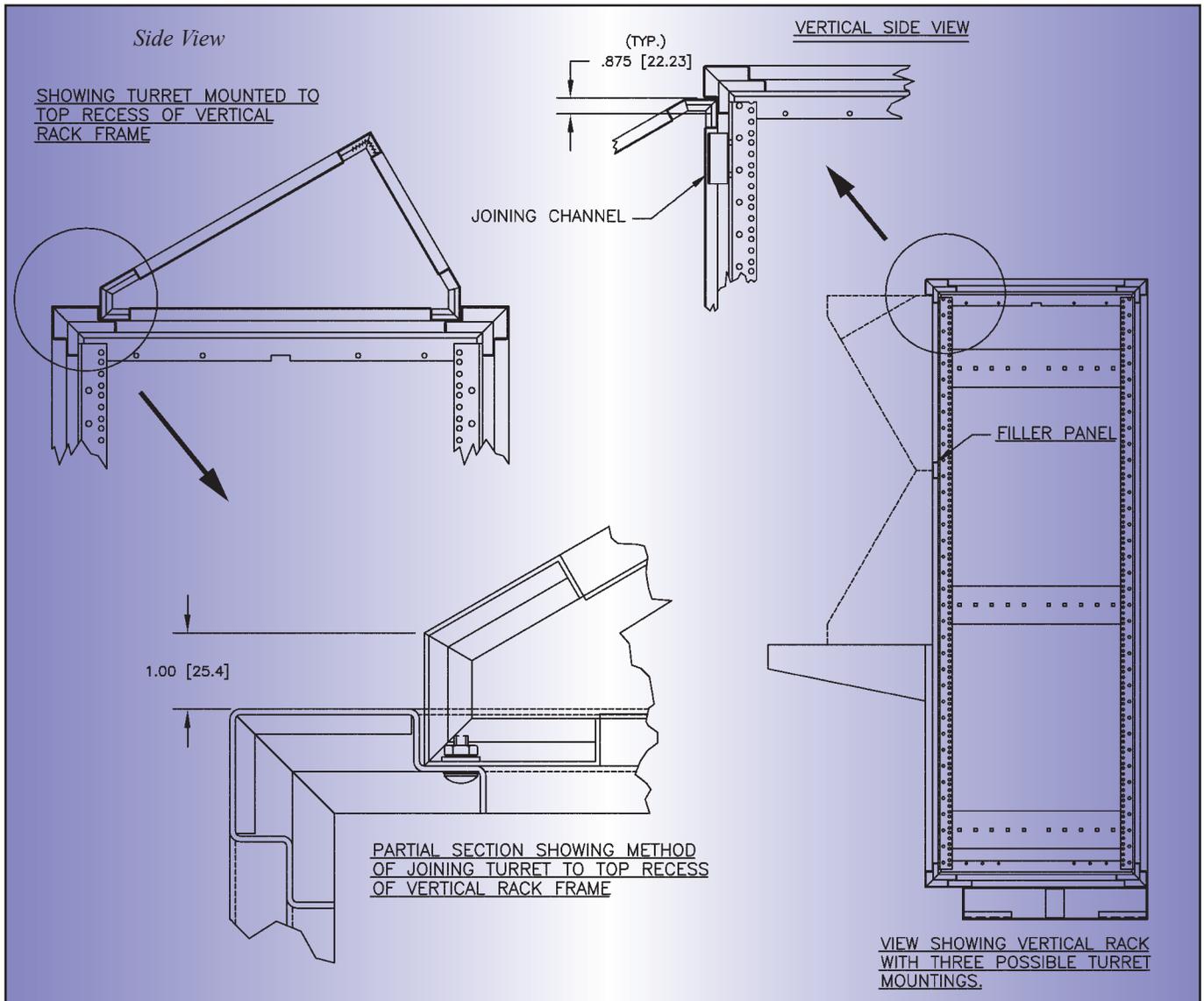
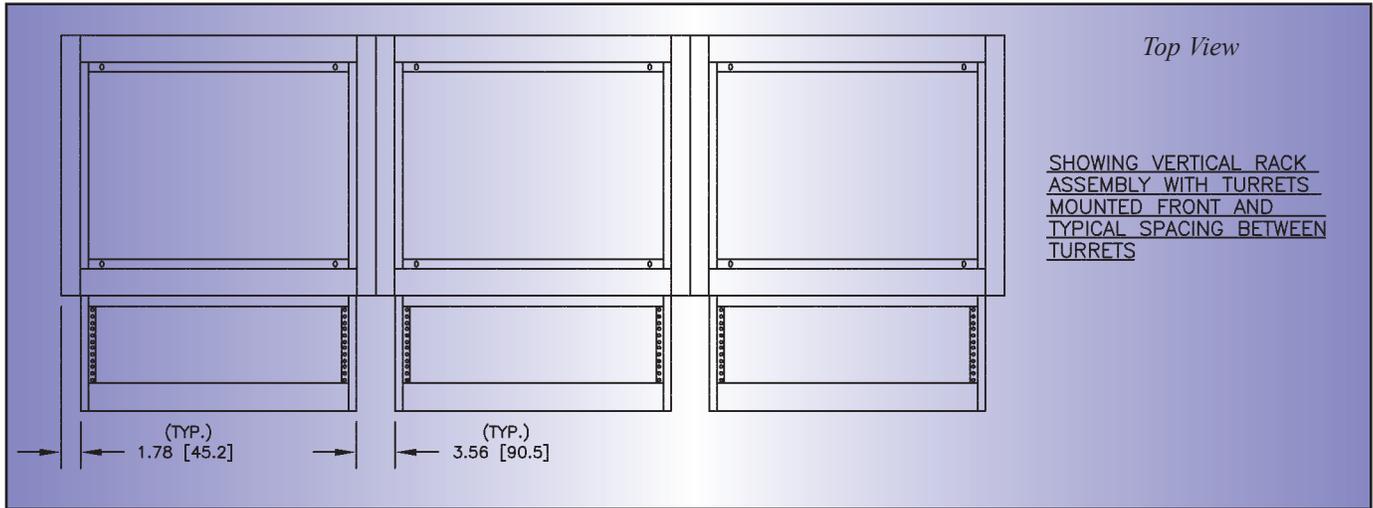
**For 19" and 24" Wide Panels,  
12 1/4" Panel Space on 60° Slope,  
7" Panel Space on 30° Slope**



Part No.	A	B	C	D
194-612-020	20.50 (520.7)	19.06 (484.2)	18.31 (465.1)	17.75 (450.9)
194-612-050	25.50 (647.7)	24.06 (611.2)	23.31 (592.1)	22.75 (577.9)



# Turret Mounting Details

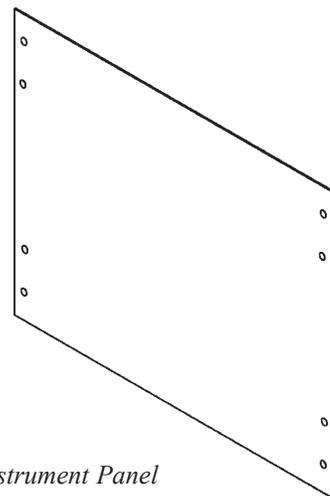


# Flat (1/8" Thick) Instrument Panels and Panel Shims

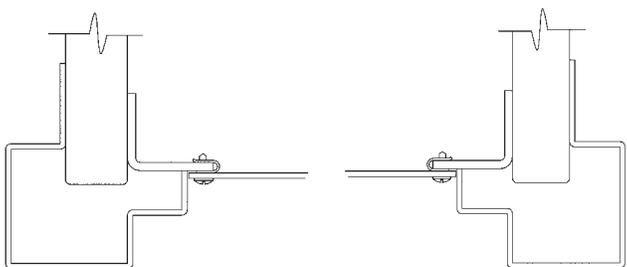
Flat Plate Instrument Panels are available in 1/8" thick cold rolled steel or aluminum in both 19" and 24" panel widths and in twelve heights. They are punched for E.I.A. Universal Standards RS-310 hole spacing. The panels are shipped attached to the cabinet frame in the locations specified, usually fastened with 10B Phillips Head sheet metal screws, using Mar-Proof recessed black nylon washers and Speed Nuts®.

## Product Features

- ▶ Constructed of 1/8" thick cold rolled steel or aluminum
- ▶ Available in 19" and 24" panel widths and 12 heights



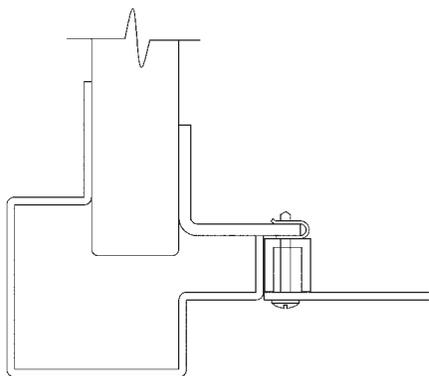
Flat Plate Instrument Panel



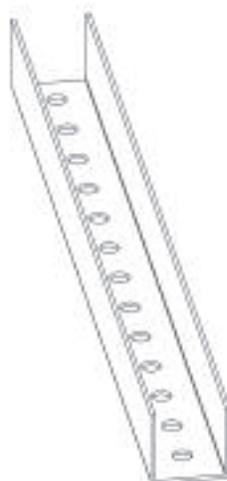
Sectional view of Flat Plate Instrument Panel mounted in cabinet frame recess.

## Panel Shims

Panel Shims are constructed of 16-gauge cold rolled steel and are formed into a "U" shaped channel. When Flat Plate Instrument Panels are used in combination with 5/8" Formed Instrument Panels in the same panel area, the Panel Shims are designed to bring flat panels into alignment with the frame recess ledge.



View of Panel Shim in place between flat plate panel and Panel Mounting Angle.



Panel Shim

1/8" THICK FLAT PLATE INSTRUMENT PANELS				
Height of Flat Panel	Steel Panels		Aluminum Panels	
	19" Panel Width	24" Panel Width	19" Panel Width	24" Panel Width
	Part No.	Part No.	Part No.	Part No.
1 3/4"	21-0112-11	21-0122-11	21-0112-41	21-0122-41
3 1/2"	21-0312-11	21-0322-11	21-0312-41	21-0322-41
5 1/4"	21-0512-11	21-0522-11	21-0512-41	21-0522-41
7"	21-0712-11	21-0722-11	21-0712-41	21-0722-41
8 3/4"	21-0812-11	21-0822-11	21-0812-41	21-0822-41
10 1/2"	21-1012-11	21-1022-11	21-1012-41	21-1022-41
12 1/4"	21-1212-11	21-1222-11	21-1212-41	21-1222-41
14"	21-1412-11	21-1422-11	21-1412-41	21-1422-41
15 3/4"	21-1512-11	21-1522-11	21-1512-41	21-1522-41
17 1/2"	21-1712-11	21-1722-11	21-1712-41	21-1722-41
19 1/4"	21-1912-11	21-1922-11	21-1912-41	21-1922-41
21"	21-2112-11	21-2122-11	21-2112-41	21-2122-41

PANEL SHIMS For use with 1/8" Thick Panels	
Height of Panel	Part Number of Shim
1 3/4"	H86-0112-02
3 1/2"	H86-0312-02
5 1/4"	H86-0512-02
7"	H86-0712-02
8 3/4"	H86-0812-02
10 1/2"	H86-1012-02
12 1/4"	H86-1212-02
14"	H86-1412-02
15 3/4"	H86-1512-02
17 1/2"	H86-1712-02
19 1/4"	H86-1912-02
21"	H86-2112-02

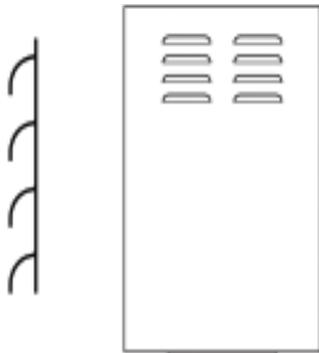
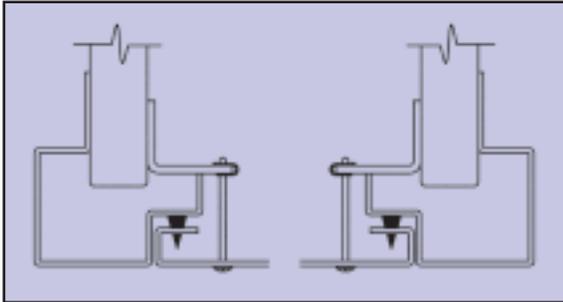


# Flush Filler Panels

Flush Filler Panels fit into the cabinet frame recess flush with the frame surface and are generally used above or below doors, rear panels, or drawers as may be required. They are fastened from the outside to the Panel Mounting Angles, normally with 10B Phillips Head sheet metal screws, with recessed Mar-Proof black nylon washers and Speed Nuts®. Rubber spacers can be removed when gasketing is required.

## Product Features

- ▶ Constructed of 16-gauge cold rolled steel, formed 5/8" thick with a return flange.
- ▶ Available plain, louvered, or grilled for flexibility in meeting ventilating requirements.



Detail of louver design with sectional view showing size, location and spacing



Plain Flush Filler Panel rear view showing rubber spacers installed



Louvered Flush Filler Panel used to provide for normal venting applications



Grilled Flush Filler Panels provide much greater airflow for increased ventilation



Grill design detail showing size of openings and spacing. Grill area is 67% open

OPENING FOR AIR PASSAGE IN LOUVERS AND GRILLS						
Height of Flush Filler Panel	Louvered 19" or 24" Panel Width		With Grill 19" or 24" Panel Width			
	Louvers Each Row	Square Inches Open	No. of Grills	Size of Grill Opening		Square Inches Open
				HEIGHT	WIDTH	
7"	3	6.0	1	3 11/16"	16 1/8"	39.8
8 3/4"	4	8.0	1	3 11/16"	16 1/8"	39.8
10 1/2"	6	12.0	1	7 1/8"	16 1/8"	77.0
12 1/4"	7	14.0	1	7 1/8"	16 1/8"	77.0
14"	9	18.0	1	7 1/8"	16 1/8"	77.0
15 3/4"	10	20.0	1	7 1/8"	16 1/8"	77.0

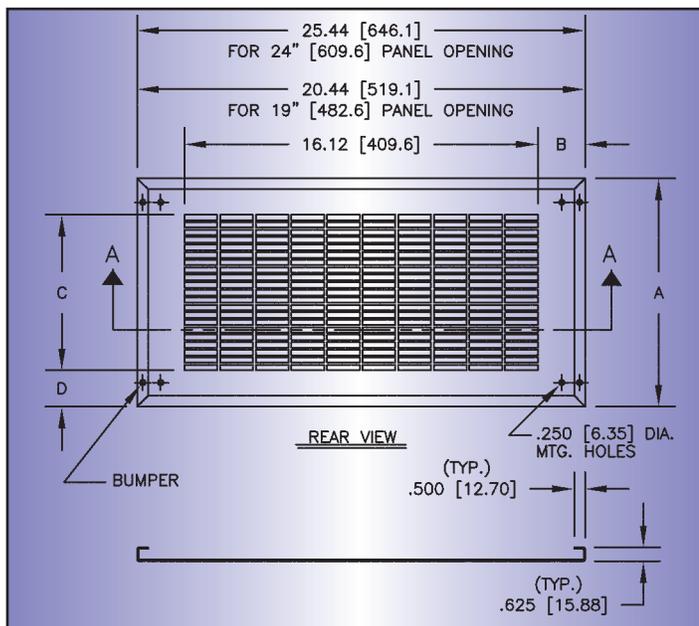
# Flush Filler Panels

## Plain, Grilled, or Louvered

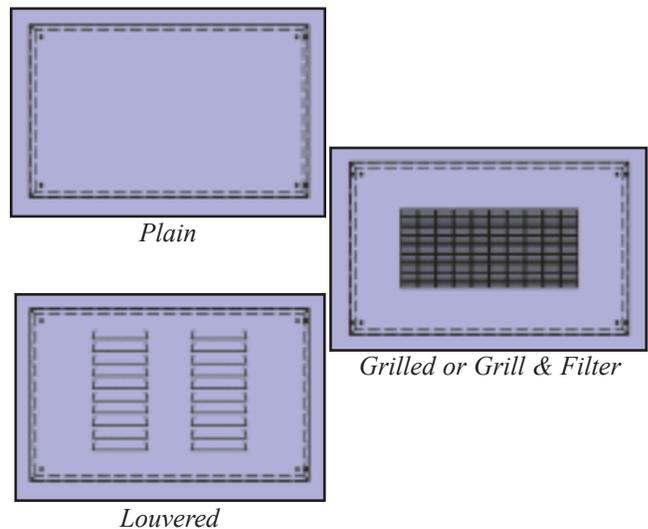
Part No. Plain Flush Filler Panel		
For 19" (482.6)	For 24" (609.6)	A
401-101-010	401-201-010	1.69 (42.9)
401-103-010	401-203-010	3.44 (87.3)
401-105-010	401-205-010	5.19 (131.8)
401-107-010	401-207-010	6.94 (176.2)
401-108-010	401-208-010	8.69 (220.7)
401-110-010	401-210-010	10.44 (265.1)
401-112-010	401-212-010	12.19 (309.6)
401-114-010	401-214-010	13.94 (354.0)
401-115-010	401-215-010	15.69 (398.5)

Part No. Louvered Flush Filler Panel		
For 19" (482.6)	For 24" (609.6)	A
401-107-014	401-207-014	6.94 (176.2)
401-108-014	401-208-014	8.69 (220.7)
401-110-014	401-210-014	10.44 (265.1)
401-112-014	401-212-014	12.19 (309.6)
401-114-014	401-214-014	13.94 (354.0)
401-115-014	401-215-014	15.69 (398.5)

Part No. Grilled or Grilled and Filtered Flush Filler Panel						
Grilled	Grilled & Filtered	A	B	C	D	Panel Opening
401-107-019	401-107-039	6.94 (176.2)	2.16 (54.8)	3.69 (93.7)	1.62 (41.3)	For 19" (482.6)
401-207-019	401-207-039	6.94 (176.2)	4.66 (118.3)	3.69 (93.7)	1.62 (41.3)	For 24" (609.6)
401-108-019	401-108-039	8.69 (220.7)	2.16 (54.8)	3.69 (93.7)	2.50 (63.5)	For 19" (482.6)
401-208-019	401-208-039	8.69 (220.7)	4.66 (118.3)	3.69 (93.7)	2.50 (63.5)	For 24" (609.6)
401-110-019	401-110-039	10.44 (265.1)	2.16 (54.8)	7.12 (181.0)	1.66 (42.1)	For 19" (482.6)
401-210-019	401-210-039	10.44 (265.1)	4.66 (118.3)	7.12 (181.0)	1.66 (42.1)	For 24" (609.6)
401-112-019	401-112-039	12.19 (309.6)	2.16 (54.8)	7.12 (181.0)	2.53 (64.3)	For 19" (482.6)
401-212-019	401-212-039	12.19 (309.6)	4.66 (118.3)	7.12 (181.0)	2.53 (64.3)	For 24" (609.6)
401-114-019	401-114-039	13.94 (354.0)	2.16 (54.8)	7.12 (181.0)	3.41 (86.5)	For 19" (482.6)
401-214-019	401-214-039	13.94 (354.0)	4.66 (118.3)	7.12 (181.0)	3.41 (86.5)	For 24" (609.6)
401-115-019	401-115-039	15.69 (398.5)	2.16 (54.8)	7.12 (181.0)	4.28 (108.7)	For 19" (482.6)
401-215-019	401-215-039	15.69 (398.5)	4.66 (118.3)	7.12 (181.0)	4.28 (108.7)	For 24" (609.6)

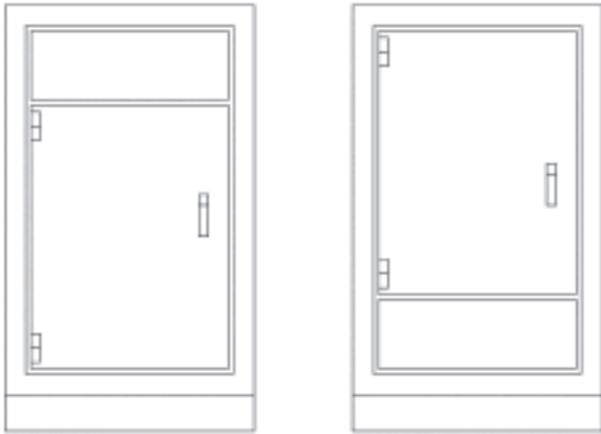


Rear View and Section AA

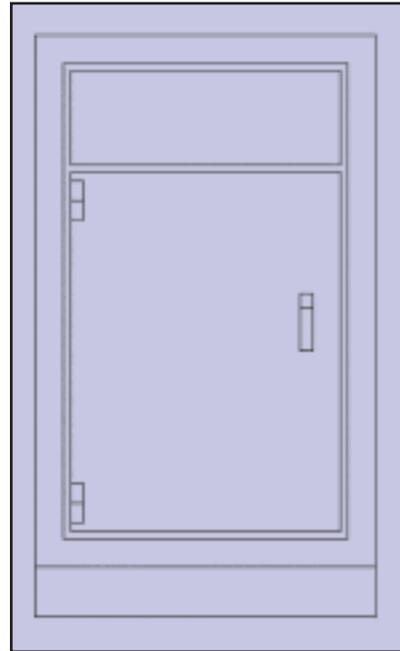




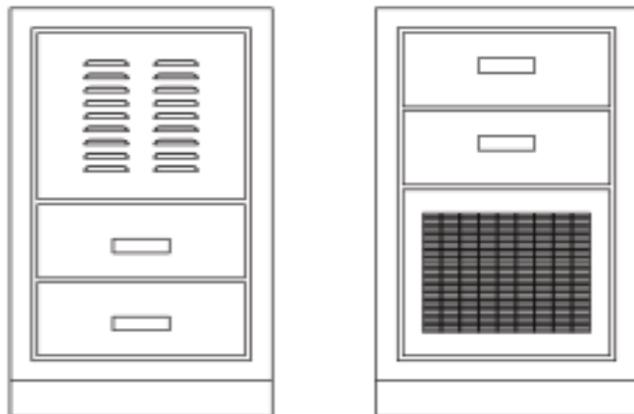
# Flush Filler Panels



Typical installations of Flush Filler Panels above or below doors using plain, louvered or grilled panels

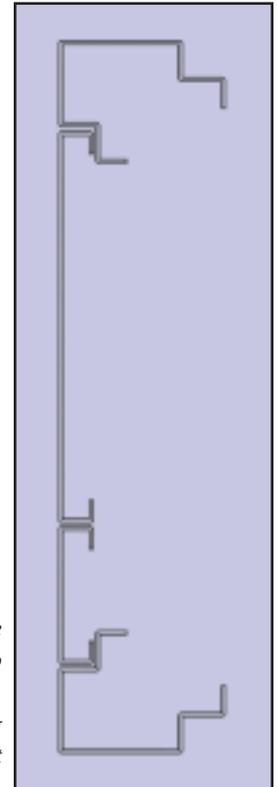


Typical installation of a 7" Flush Filler Panel above a 21" Door in a Vertical Rack cabinet with a 28" vertical panel height.



Typical installations of Flush Filler Panels above or below drawers using plain, louvered or grilled panels

This sectional view shows the dimensional relationship between the Flush Filler Panel, the door and the panel opening of the cabinet

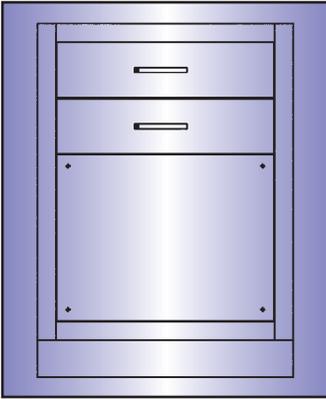


## FLUSH FILLER PANELS For Plain, Louvered, Grilled and Grilled with Filter

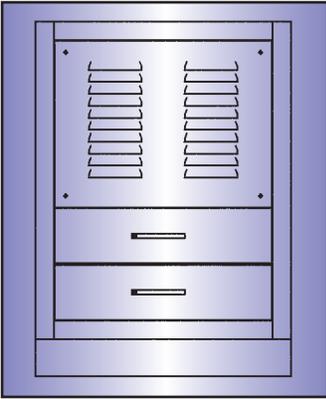
Height of Flush Filler Panel	Plain Panels		Louvered Panels		Grilled Panels		Grilled with Filter	
	Width of Panel Space		Width of Panel Space		Width of Panel Space		Width of Panel Space	
	19"	24"	19"	24"	19"	24"	19"	24"
1 3/4"	401-101-010	401-201-010	Not Available		Not Available		Not Available	
3 1/2"	401-103-010	401-203-010	in these sizes		in these sizes		in these sizes	
5 1/4"	401-105-010	401-205-010						
7"	401-107-010	401-207-010	401-107-014	401-207-014	401-107-019	401-207-019	401-107-039	401-207-039
8 3/4"	401-108-010	401-208-010	401-108-014	401-208-014	401-108-019	401-208-019	401-108-039	401-208-039
10 1/2"	401-110-010	401-210-010	401-110-014	401-210-014	401-110-019	401-210-019	401-110-039	401-210-039
12 1/4"	401-112-010	401-212-010	401-112-014	401-212-014	401-112-019	401-212-019	401-112-039	401-212-039
14"	401-114-010	401-214-010	401-114-014	401-214-014	401-114-019	401-214-019	401-114-039	401-214-039
15 3/4"	401-115-010	401-215-010	401-115-014	401-215-014	401-115-019	401-215-019	401-115-039	401-215-039

# Flush Filler Panels

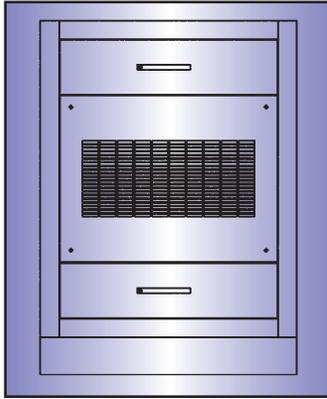
## Flush Filler Panel Mounting Variations



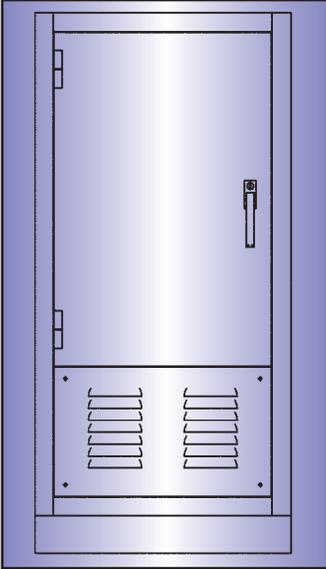
*Plain Flush Filler Panel  
shown below drawers*



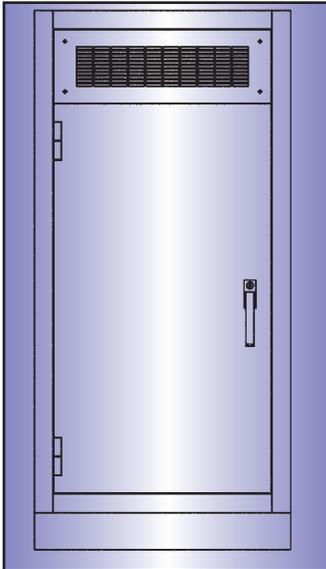
*Louvered Flush Filler Panel  
shown above drawers*



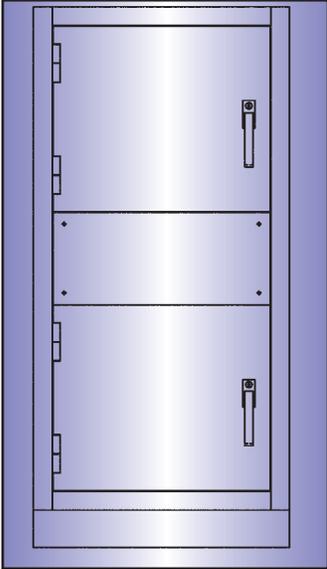
*Gridded Flush Filler Panel  
shown between drawers*



*Louvered Flush Filler Panel  
shown below door*



*Gridded Flush Filler Panel  
shown above door*



*Plain Flush Filler Panel  
shown between doors*

Flush Filler Panels can be used in combination with Rear panels, Doors and Drawers as required



# Formed (5/8" Thick) Instrument Panels - Plain

Formed Instrument Panels are available plain, louvered, perforated or grilled and are designed to be used to mount instrumentation, as speaker grills, or as ventilators. They mount directly to the Vertical Mounting Rails, usually with 10B Phillips Head sheet metal screws, with Mar-proof recessed black nylon washers and Speed Nuts®, flush with the ledge of the cabinet frame recess. Plain Formed Instrument Panels are available in 18 heights; louvered or grilled panels are not available in heights less than 7" because the available open area is not sufficient to be practical. All Formed Instrument Panels are available in 19" and 24" panel widths. They are normally shipped attached to the cabinet in the positions specified.

## Product Features

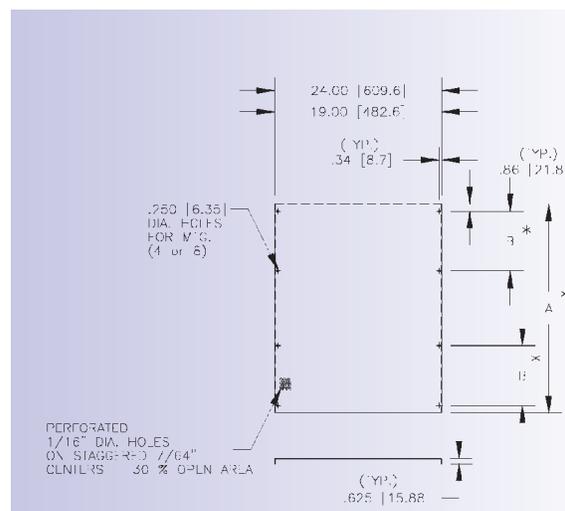
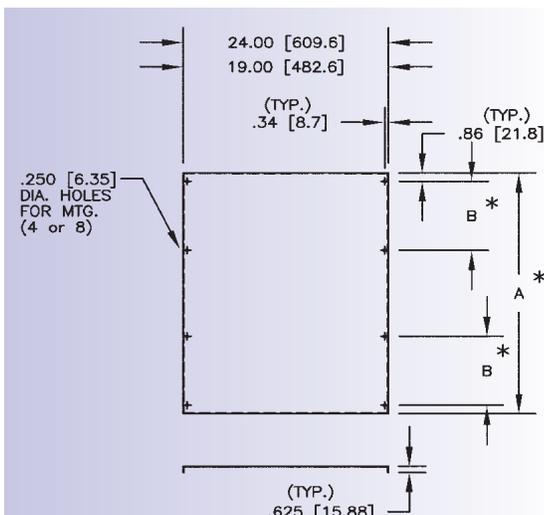
- ▶ Constructed of 16-gauge cold rolled steel, formed 5/8" thick with a single flange.
- ▶ Available plain, louvered, perforated or grilled for flexibility in meeting ventilating requirements.

## Plain or Perforated Formed Panels for 19" and 24" Panel Width

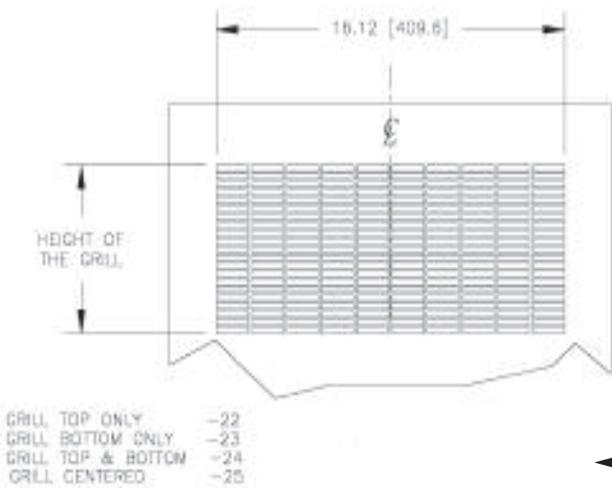
Panel Height	Part No.*		Part No.*		A*	B*
	For 19" (482.6)	For 24" (609.6)	For 19" (482.6)	For 24" (609.6)		
	Plain Instrument Panels		Perforated Instrument Panels			
1.75 (44.5)	20-0112-46	20-0122-46	20-0112-31	20-0122-31	1.72 (43.7)	N/A
3.50 (88.9)	20-0312-46	20-0322-46	20-0312-31	20-0322-31	3.47 (88.1)	N/A
5.25 (133.4)	20-0512-46	20-0522-46	20-0512-31	20-0522-31	5.22 (132.6)	N/A
7.00 (177.8)	20-0712-46	20-0722-46	20-0712-31	20-0722-31	6.97 (177.0)	N/A
8.75 (222.3)	20-0812-46	20-0822-46	20-0812-31	20-0822-31	8.72 (221.5)	N/A
10.50 (266.7)	20-1012-46	20-1022-46	20-1012-31	20-1022-31	10.47 (265.9)	N/A
12.25 (311.2)	20-1212-46	20-1222-46	20-1212-31	20-1222-31	12.22 (310.4)	N/A
14.00 (355.6)	20-1412-46	20-1422-46	20-1412-31	20-1422-31	13.97 (354.8)	N/A
15.75 (400.1)	20-1512-46	20-1522-46	20-1512-31	20-1522-31	15.72 (399.3)	N/A
17.50 (444.5)	20-1712-46	20-1722-46	20-1712-31	20-1722-31	17.47 (443.7)	N/A
19.25 (489.0)	20-1912-46	20-1922-46	20-1912-31	20-1922-31	19.22 (488.2)	N/A
21.00 (533.4)	20-2112-46	20-2122-46	20-2112-31	20-2122-31	20.97 (532.6)	N/A
22.75 (577.9)	20-2212-46	20-2222-46	20-2212-31	20-2222-31	22.72 (577.1)	7.00 (177.8)
24.50 (622.3)	20-2412-46	20-2422-46	20-2412-31	20-2422-31	24.47 (621.5)	7.00 (177.8)
26.25 (666.8)	20-2612-46	20-2622-46	20-2612-31	20-2622-31	26.22 (666.0)	8.75 (222.3)
28.00 (711.2)	20-2812-46	20-2822-46	20-2812-31	20-2822-31	27.97 (710.4)	8.75 (222.3)
31.50 (800.1)	20-3112-46	20-3122-46	20-3112-31	20-3122-31	31.47 (799.3)	8.75 (222.3)
35.00 (889.0)	20-3512-46	20-3522-46	20-3512-31	20-3522-31	34.97 (888.2)	10.50 (266.7)

If mounting to punched Heavy Duty vertical mtg rails, add an 'H' prefix to panel P/N Example: H20-0112-46

If mounting to tapped vertical mtg rails, add a 'T' prefix to panel P/N Example: T20-0112-46



# Formed Instrument Panels - Grilled



Grill design used in Grilled Formed Instrument Panels with size of individual openings. Grill area is 67% open assuring maximum passage of air.

\*Use the suffix #'s to the left to complete the part numbers for panels with the grill at the top, bottom or top and bottom.

Note: An internal filter can be added by changing the -2\_ to a -6\_ using the above suffix chart (i.e. 20-2612-65)

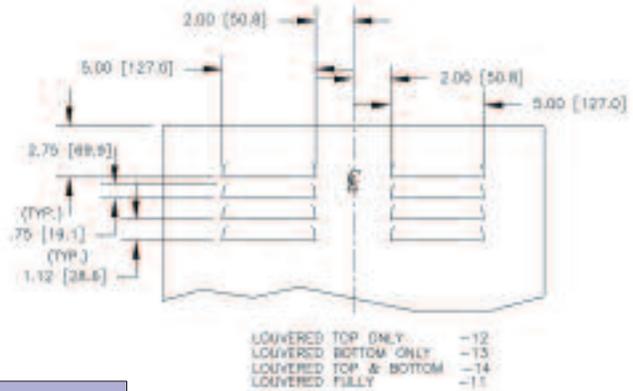
5/8" Formed Grilled Instrument Panels**				
Height of	Panel Width		Height of Grill Opening	Square Inches Open
	19"	24"		
Part Numbers				
Grill - Top and / or Bottom				
22 3/4"	20-2212-__ *	20-2222-__ *	3 11/16"	39.8 each
24 1/2"	20-2412-__ *	20-2422-__ *	3 11/16"	39.8 each
26 1/4"	20-2612-__ *	20-2622-__ *	3 11/16"	39.8 each
28"	20-2812-__ *	20-2822-__ *	3 11/16"	39.8 each
31 1/2"	20-3112-__ *	20-3122-__ *	3 11/16"	39.8 each
35"	20-3512-__ *	20-3522-__ *	3 11/16"	39.8 each
Grill - Centered				
7"	20-0712-25	20-0722-25	3 11/16"	39.8
8 3/4"	20-0812-25	20-0822-25	3 11/16"	39.8
10 1/2"	20-1012-25	20-1022-25	7 1/8"	77.0
12 1/4"	20-1212-25	20-1222-25	7 1/8"	77.0
14"	20-1412-25	20-1422-25	7 1/8"	77.0
15 3/4"	20-1512-25	20-1522-25	7 1/8"	77.0
17 1/2"	20-1712-25	20-1722-25	14 11/32"	154.0
19 1/4"	20-1912-25	20-1922-25	14 11/32"	154.0
21"	20-2112-25	20-2122-25	14 11/32"	154.0
22 3/4"	20-2212-25	20-2222-25	14 11/32"	154.0
24 1/2"	20-2412-25	20-2422-25	14 11/32"	154.0
26 1/4"	20-2612-25	20-2622-25	14 11/32"	154.0
28"	20-2812-25	20-2822-25	14 11/32"	154.0
31 1/2"	20-3112-25	20-3122-25	14 11/32"	154.0
35"	20-3512-25	20-3522-25	14 11/32"	154.0

\*\*If mounting to punched Heavy Duty vertical mtg rails, add an 'H' prefix to panel P/N Example: H20-0112-46  
 If mounting to tapped vertical mtg rails, add a 'T' prefix to panel P/N Example: T20-0112-46



# Formed Instrument Panels - Louvered

Louvered Formed Instrument Panels may have top or bottom louvers depending upon the height of the panel. They are compatible with the louvers used in Flush Doors, Side Panels, Top and Rear Panels and have a nice appearance. The louvers have one square inch of opening each and are shown in the table below.



Louvered - Top and / or Bottom			
Pan Height	Part Number**		Number of Louvers
	For 19" (482.6)	For 24" (609.6)	
14.00 (355.6)	20-1412-__*	20-1422-__*	2
15.75 (400.1)	20-1512-__*	20-1522-__*	2
17.50 (444.5)	20-1712-__*	20-1722-__*	3
19.25 (489.0)	20-1912-__*	20-1922-__*	3
21.00 (533.4)	20-2112-__*	20-2122-__*	4
22.75 (577.9)	20-2212-__*	20-2222-__*	4
24.50 (622.3)	20-2412-__*	20-2422-__*	4
26.25 (666.8)	20-2612-__*	20-2622-__*	4
28.00 (711.2)	20-2812-__*	20-2822-__*	4
31.50 (800.1)	20-3112-__*	20-3122-__*	4
35.00 (889.0)	20-3512-__*	20-3522-__*	4

\*Use the chart above to complete the last 2 digits of the louvered panel part number for panels louvered at top, at bottom or at top and bottom.

Louvered - Fully			
Panel Height	Part Number**		Number of Louvers
	For 19" (482.6)	For 24" (609.6)	
7.00 (177.8)	20-0712-11	20-0722-11	3
8.75 (222.3)	20-0812-11	20-0822-11	4
10.50 (266.7)	20-1012-11	20-1022-11	6
12.25 (311.2)	20-1212-11	20-1222-11	7
14.00 (355.6)	20-1412-11	20-1422-11	9
15.75 (400.1)	20-1512-11	20-1522-11	10
17.50 (444.5)	20-1712-11	20-1722-11	12
19.25 (489.0)	20-1912-11	20-1922-11	13
21.00 (533.4)	20-2112-11	20-2122-11	15
22.75 (577.9)	20-2212-11	20-2222-11	17
24.50 (622.3)	20-2412-11	20-2422-11	18
26.25 (666.8)	20-2612-11	20-2622-11	20
28.00 (711.2)	20-2812-11	20-2822-11	21
31.50 (800.1)	20-3112-11	20-3122-11	24
35.00 (889.0)	20-3512-11	20-3522-11	27

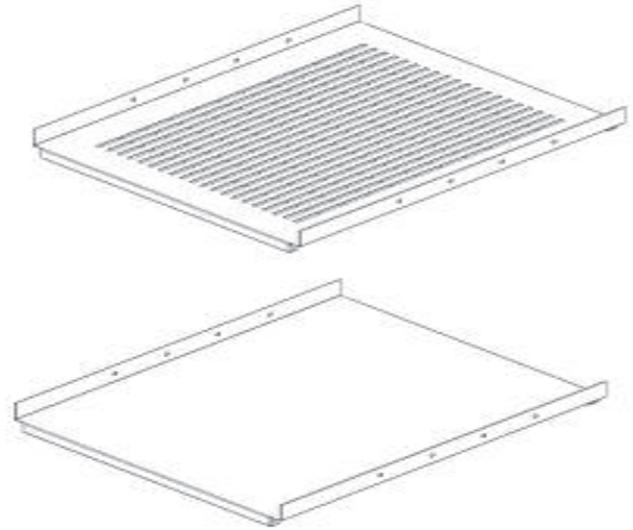
\*\*If mounting to punched Heavy Duty vertical mtg rails, add an 'H' prefix to panel P/N Example: H20-0112-11  
 If mounting to tapped vertical mtg rails, add a 'T' prefix to panel P/N Example: T20-0112-11

# Equipment Shelves and Modem Shelves

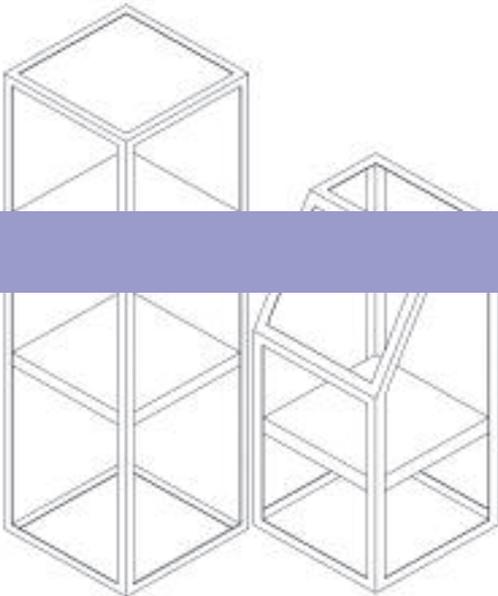
Equipment Shelves are designed to produce a rugged support surface for heavy equipment such as chassis or power supplies. They are ideal where additional support or accessibility is needed and for equipment that must be removed from time to time. Equipment Shelves can be installed in various locations in all Vertical Rack Cabinets as well as the lower frame section of all Sloped Front Consoles. They are usually shipped installed in the cabinet frame in the designated location.

## Product Features

- ▶ Constructed of 16 gauge cold rolled steel
- ▶ Available Plain or Grilled in 19" and 24" panel widths



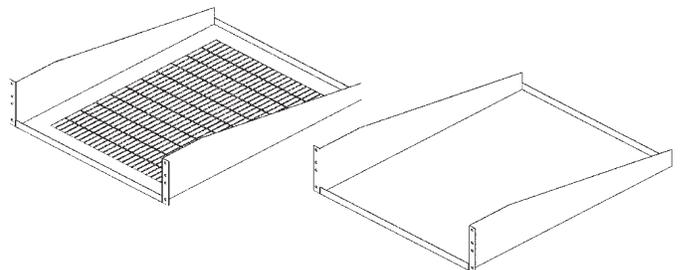
Plain and Grilled Equipment Shelves



Equipment Shelves can be placed in various positions in Vertical Rack Frames. They can also be installed in the lower portion of the Sloped Front Console frames for mounting bulky or heavy gear.

EQUIPMENT SHELVES For Vertical Rack or Sloped Front Cabinets				
Depth	Plain Equipment Shelf	Grilled Equipment Shelf	Overall Shelf Width	Overall Shelf Depth
	Part Number	Part Number		
<b>For cabinet with a 19" wide panel space</b>				
17"	481-010-010	481-010-019	20.25	13.56
24"	481-020-010	481-020-019	20.25	20.56
29"	481-030-010	481-030-019	20.25	25.56
36"	481-036-010	481-036-019	20.25	32.56
<b>For cabinet with a 24" wide panel space</b>				
17"	481-040-010	481-040-019	25.25	13.56
24"	481-050-010	481-050-019	25.25	20.56
29"	481-060-010	481-060-019	25.25	25.56
36"	481-066-010	481-066-019	25.25	32.56

MODEM SHELVES		
Overall Depth of Shelf	Plain	Grilled
	Part No.	Part No.
<b>For cabinet frame with a 19" panel width</b>		
14"	480-119-010	480-119-019
18 1/2"	480-019-010	480-019-019
<b>For cabinet frame with a 24" panel width</b>		
14"	480-124-010	480-124-019
18 1/2"	480-024-010	480-024-019



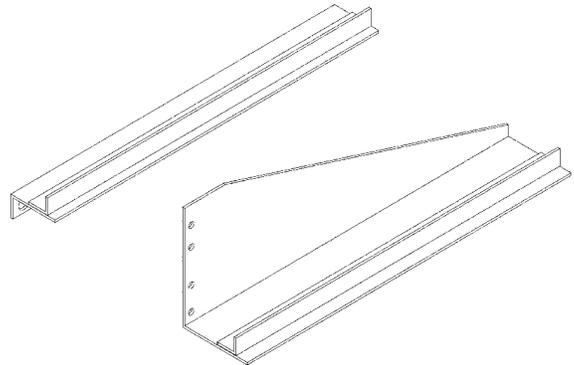
Modem Shelves are available in Plain or Grilled and can support light weight equipment such as modems up to 50 lbs. if evenly distributed.



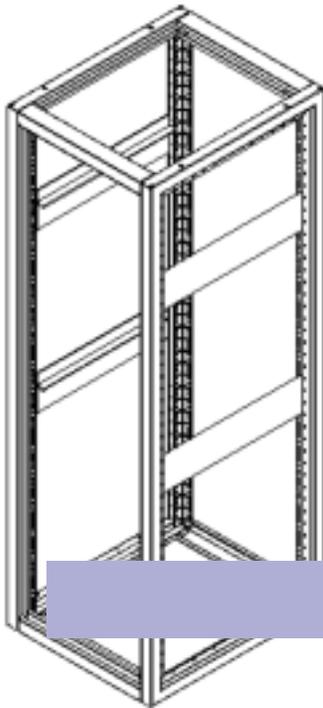
# Chassis Guides and Supports

Chassis Guides and Supports are designed to support heavily loaded chassis where it is necessary to move the equipment into or out of the cabinet on an intermittent basis. They consist of two parts, including an 11-gauge steel formed angle support bracket, which mounts directly to the Vertical Mounting Rails with 10B Phillips Head sheet metal screws and Speed Nuts®, and an adjustable 16-gauge steel guide angle. Horizontal mounted Chassis Guides and Supports can be installed in all Vertical Rack Cabinets and are usually mounted at the bottom of the top sloped opening in Sloped Front Cabinets. Chassis Guides and Supports are usually shipped installed in the cabinet in the designated location.

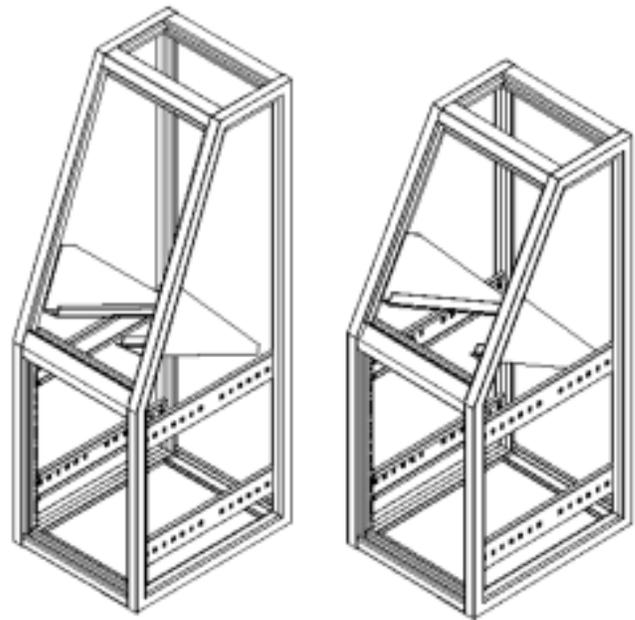
- Product Features**
- ▶ Zinc plating with Trivalent Chromium Passivation
  - ▶ Available for horizontal and angular mounting
  - ▶ Sold in pairs



*Chassis Guides and Supports for horizontal and angular mounting*



*Chassis Guides can be mounted at various locations in Vertical Rack Frames*

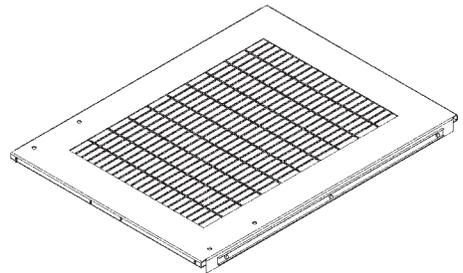
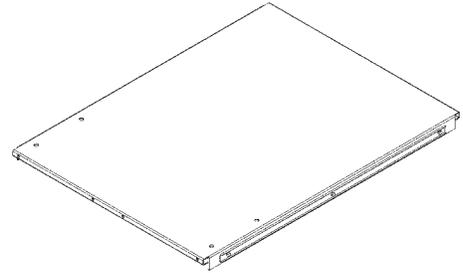


*Angular Chassis Guides installed in sloped opening of 15° and 30° Sloped Front Console Frame*

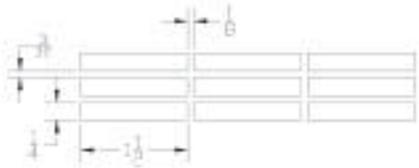
CHASSIS GUIDES AND SUPPORTS (sold in pairs)				
Frame	For Vertical Rack Cabinets		For Sloped Front Cabinets	
	Part Number	Depth	Part Number	Depth
17"	562-017-002	12.62	563-099-002	15.12
24"	562-024-002	19.62	563-099-002	15.12
29"	562-029-002	24.62	563-099-002	15.12
36"	562-036-002	31.62	563-099-002	15.12
**	562-124-002	19.38	563-099-002	15.12
** For Rear Panel Mtg Angle Recessed Condition				

# Sliding Chassis Shelves and Slides

Sliding Chassis Shelves are designed to provide easy access to chassis or other equipment for servicing or adjustment. They are available plain or gridded, mounted on ball bearing zinc-plated extension slides to assure smooth operation. They can accommodate a distribution load with a capacity of 125 lbs. which allow maximum exposure of the shelf platform when fully extended. Sliding Chassis Shelf assemblies can be mounted in all Vertical Rack Cabinets and vertical positions of Sloped Front Console Cabinets. The assemblies, complete with Shelf, Extension Slides, and Mounting Channels, are generally shipped installed in the cabinet frame.



Chassis Shelf Slides

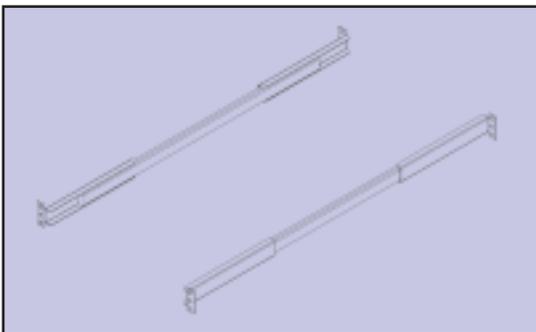


Detail of grill design showing size of openings and spacing. Grill area is 67% open, assuring maximum passage of air.

SLIDING CHASSIS SHELVES						
Depth of Cabinet Frame	Shelf Width "A"	Shelf Depth "B"	Plain Shelf Assembly Part No.		Gridded Shelf Assembly Part No.	
			Non-Latch Type	Latch Type	Non-Latch Type	Latch Type
<b>For cabinet frames with a 19" wide panel space</b>						
17"	16 1/8"	14"	515-010-010	515-010-110	515-010-019	515-010-119
24"	16 1/8"	20 9/16"	515-020-010	515-020-110	515-020-019	515-020-119
29"	16 1/8"	20 9/16"	515-030-010	515-030-110	515-030-019	515-030-119
36"	16 1/8"	20 9/16"	515-036-010	515-036-110	515-036-019	515-036-119
<b>For cabinet frames with a 24" wide panel space</b>						
17"	21 1/8"	14"	515-040-010	515-040-110	515-040-019	515-040-119
24"	21 1/8"	20 9/16"	515-050-010	515-050-110	515-050-019	515-050-119
29"	21 1/8"	20 9/16"	515-060-010	515-060-110	515-060-019	515-060-119
36"	21 1/8"	20 9/16"	515-066-010	515-066-110	515-066-019	515-066-119

If the shelf will be mounted in a rack that has *tapped* vertical mounting rails (in lieu of punched rails), then add a 'T' to the front of the part number in order to receive the proper mounting hardware.

Example: T515-030-010

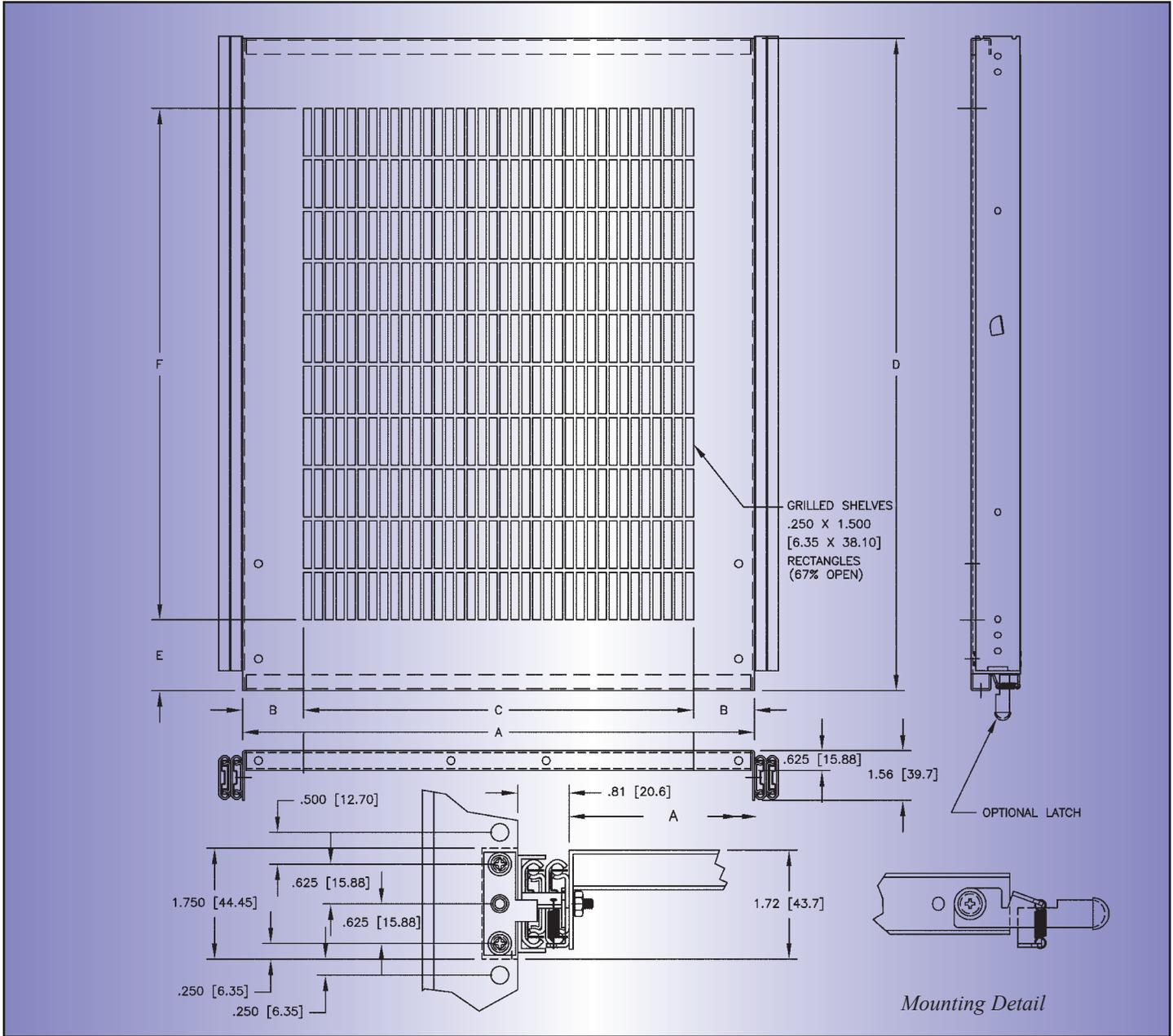


Smooth Action Ball Bearing Slides have front disconnect and optional lock in open position feature and are included with all sliding chassis shelves and drawers

Note! Chassis width will be 16-1/8" max. in 19" condition



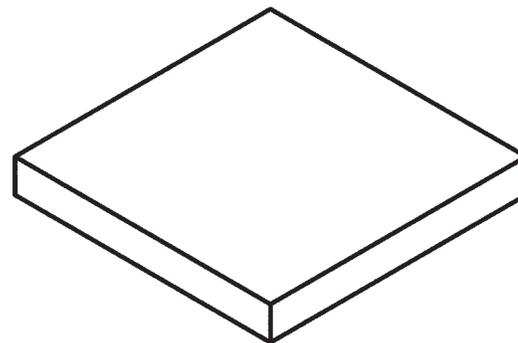
# Sliding Chassis Shelves



Panel Width Of Cabinet Frame	Overall Depth of Cabinet Frame	Part No. of Plain Shelf Assembly		Part No. of Grilled Shelf Assembly		A	B	C	D	E	F
		Non-Latch Type	Latch Type	Non-Latch Type	Latch Type						
19" (482.6)	17.06 (433.4)	515-010-010	515-010-110	515-010-019	515-010-119	16.12 (409.6)	1.92 (48.8)	12.28 (311.9)	14.00 (355.6)	2.19 (55.6)	9.62 (244.5)
	24.06 (611.2)	515-020-010	515-020-110	515-020-019	515-020-119				20.56 (522.3)	2.22 (56.4)	16.12 (409.6)
	29.06 (738.2)	515-030-010	515-030-110	515-030-019	515-030-119				20.56 (522.3)	2.22 (56.4)	16.12 (409.6)
24" (609.6)	17.06 (433.4)	515-040-010	515-040-110	515-040-019	515-040-119	21.12 (536.6)	3.39 (86.1)	14.34 (364.3)	14.00 (355.6)	2.19 (55.6)	9.62 (244.5)
	24.06 (611.2)	515-050-010	515-050-110	515-050-019	515-050-119				20.56 (522.3)	2.22 (56.4)	16.12 (409.6)
	29.06 (738.2)	515-060-010	515-060-110	515-060-019	515-060-119				20.56 (522.3)	2.22 (56.4)	16.12 (409.6)
	36.06 (916.0)	515-066-010	515-066-110	515-066-019	515-066-119				20.56 (522.3)	2.22 (56.4)	16.12 (409.6)

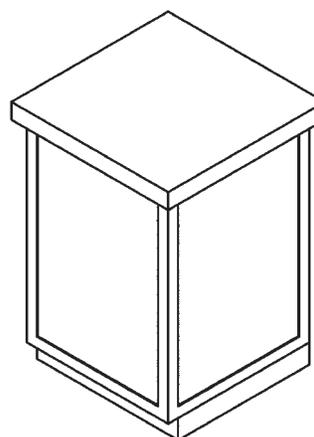
# Single Pedestal Laminated Tops

Single Pedestal Laminated Tops are designed to be used over the top of single Vertical Rack Cabinets of desk, bench or counter height. The combination of a laminated plastic top over a standard Vertical Rack Cabinet makes a sturdy keyboard terminal or instrument stand as well as a work or writing surface. It may also be utilized for mounting test equipment, data terminals or other instrumentation. The tops are shipped separately.



Single and Double Pedestal Tops are constructed of 3/4" thick particle board bonded to laminated plastic

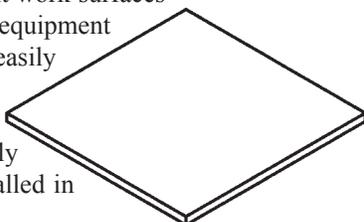
SINGLE PEDESTAL LAMINATED PLASTIC TOPS			
Depth of Vertical Rack	Laminated Top Part No.	Width of Top "W"	Depth of Top "D"
<b>For Vertical Rack Cabinet with a 19" wide panel space</b>			
17"	570-010-010	26"	19"
24"	570-020-010	26"	26"
29"	570-030-010	26"	31"
36"	570-036-010	26"	38"
<b>For Vertical Rack Cabinet with a 24" wide panel space</b>			
17"	570-040-010	31"	19"
24"	570-050-010	31"	26"
29"	570-060-010	31"	31"
36"	570-066-010	31"	38"



A single Vertical Rack Cabinet with Laminated Plastic Box Cover Style Top

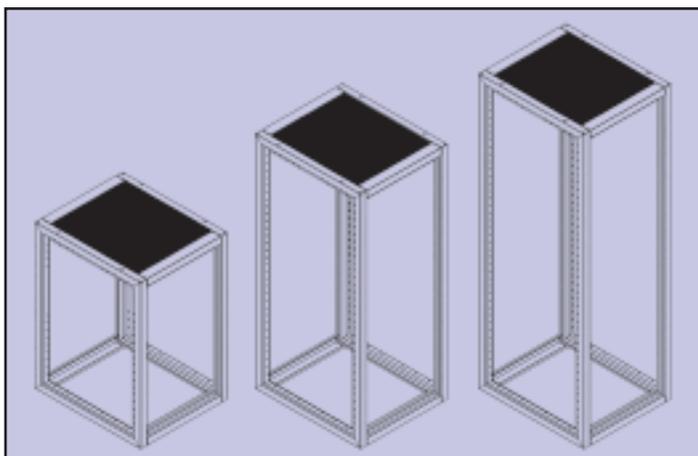
## Laminated Plastic Insert Panels

Laminated Plastic Insert Panels may be used in the top opening of Vertical Rack Cabinets in place of the formed steel panels usually used. They make excellent work surfaces or mounting plates for small equipment or instrumentation. They are easily maintained and enhance the appearance of the cabinet assembly. They are normally shipped with the cabinet, installed in the top opening.



### Product Features

- ▶ Constructed of thick particle board
- ▶ Laminated plastic available in a variety of colors and styles
- ▶ Neutral color plastic sheet bonded to the bottom surface to minimize distortion



### LAMINATED PLASTIC INSERT PANELS For Vertical Racks

Depth of Vertical Rack	Laminated Plastic Insert Panel Part No.
<b>For Cabinet with a 19" wide panel space</b>	
17"	371-010-001
24"	371-020-001
29"	371-030-001
36"	371-036-001
<b>For Cabinet with a 24" wide panel space</b>	
17"	371-040-001
24"	371-050-001
29"	371-060-001
36"	371-066-001



# Lift Bolts and Gasketing

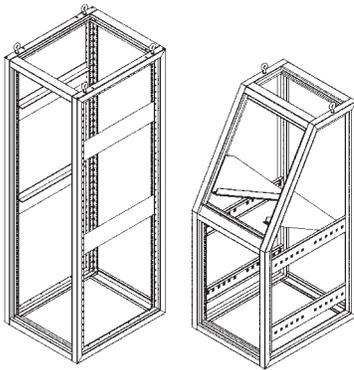
Lift Bolts are designed for the safe overhead lifting of heavily loaded assemblies. The combination of a 1/2-13 forged steel eye bolt, with an inside diameter of 1 1/16" and a 1 1/4"x1 1/4"x3" steel block welded into the frame side assembly assures maximum transportable loading. Lift Bolt assemblies must be installed at the factory and the eye bolts are detached for shipping purposes. Four Lift Bolts are used on Vertical Rack Cabinets and two Lift Bolts are used on Sloped Front Cabinets. (See P/N's at right to order)



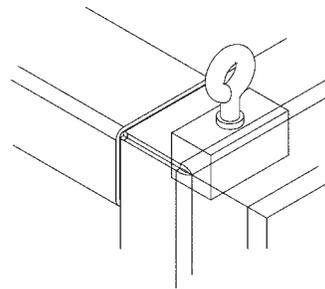
Lift Bolt

## Product Features

- ▶ Rugged construction assures maximum transportable loading
- ▶ Eye bolts are plated



Positioning of Lift Bolts on Vertical Rack Frames and Sloped Front Cabinets



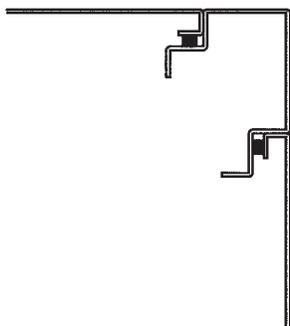
The heavy steel lifting block is welded directly into the frame side assembly for direct lift on the cabinet frame structure.

## LIFT BOLTS

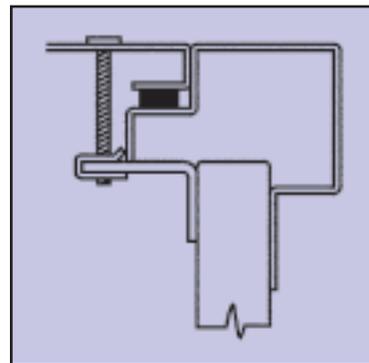
If You Want Lift Bolts For	Order Part Number
Vertical Rack Cabinets	601-00-02-0000
Sloped Front Cabinets	typically 4 per frame required
	typically 2 per frame required

## Gasketing

The Heavy Duty Enclosure System has been designed so that any cabinet assembly can be gasketed against moisture or dust with no change in the construction of the cabinet frame, panels or doors. All Flush Doors, Rear, Lower Front, Side and Top Panels and Flush Filler Panels are equipped with rubber spacers, which when removed allow a 1/8" space for gasketing. Gasketing may be installed either at the factory or in the field.



Because of the ledge design of the cabinet frame, doors or panels located in any panel opening may be gasketed.



Typical installation of Gasketing on rear panel

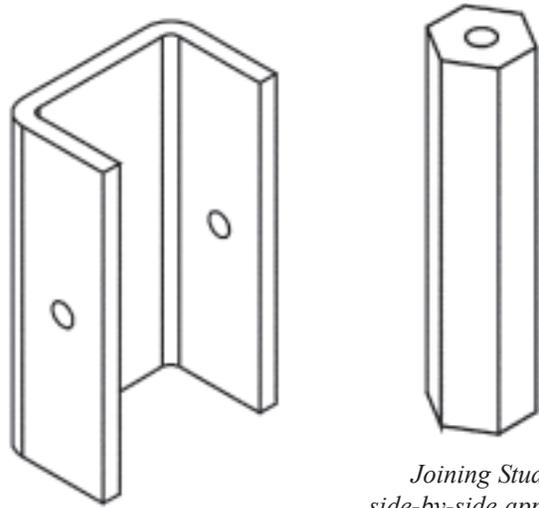
## GASKETING For Vertical Rack and All Sloped Front Cabinets

If You Want Gasketing For	Specify Catalog Part Number
Installed	85-0505-01
Unmounted	85-0605-01

# Joining Hardware Kits, Studs and Channels

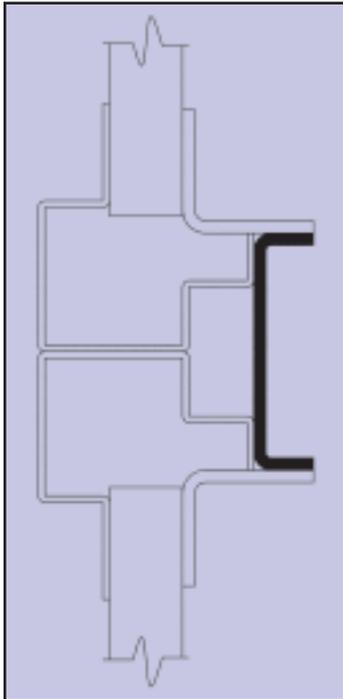
Joining Studs or Channels are designed to be used in the field to join cabinets for multiple-bay assemblies. Multiple-bay cabinet assemblies mounted on multiple-width bases can be joined at the factory with joining studs and then shipped as assembled units. If not installed at the factory, channels and studs are packaged separately with screws and nuts.

- Product Features**
- ▶ Constructed of 11-gauge steel
  - ▶ Joining stud shaped for Open-end wrench
  - ▶ Joining studs are finished zinc-plated

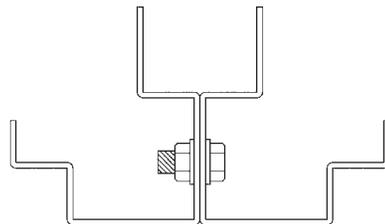


Joining Channel for front-to-rear applications.  
Part No. 282-004-005

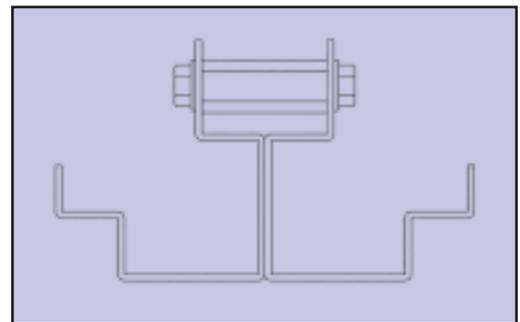
Joining Stud for side-by-side application  
Part No. 282-006-004



A Frame Joining Channel must be used when frames are joined in a front-to-back or back-to-back application



For tighter joints and more rigid assemblies, we recommend multiple bay cabinet assemblies be joined together using Hardware Kits.



Joining Studs when frames are joined side-by-side

Joining Studs - see chart below for qty req'd			Joining Hardware		Hardware Kits
	Front to Back	Back to Back	Frame Type	Height of Vertical Panel Space	add prefix from chart at the right (either 'DK' or 'AK')
4	4	4	Vertical	28" and Shorter	___-4006
6	6	6		29-3/4" to 35"	___-4006
6	6	6		36-3/4" to 61-1/4"	___-4008
8	8	8		63" to 68-1/4"	___-4010
8	8	8		70" to 77"	___-4010
10	10	10		More than 77"	___-4010
4	7	8	Sloped Front	All Heights	___-4006

## How To Order

For joining frames, side to side, we recommend a kit with all the required hardware and drilling for joining. One kit required per junction. The prefixes for hardware kits are:

**DK** -Hardware and appropriate frame drilling. Frames shipped individually and joined by customer

**AK** -Hardware, drilling and assembly at factory. Multi bay assembly will ship as a single unit.

Alternately, you may order joining studs and channels for other joining conditions. See chart for required quantities.



# Hardware

Phillips Head sheet metal screws, with recessed Mar-Proof black nylon washers and Speed Nuts® are used to fasten Instrument Panels to *punched* Vertical Mounting Rails. Screw 10B x 1 1/8" is used with 5/8" formed panels, while 10B x 5/8" is used with flat panels.

Rear Panels, Flush Filler Panels, and Front Panels are mounted in the cabinet frame recess, but fastened to the *punched* Vertical Mounting Rails with Phillips Head sheet metal screws, 10B x 2" with recessed Mar-Proof black nylon washers and Speed Nuts®. Screws and Speed Nuts® have Zinc Plating with Trivalent Chromium Passivation.

### Mar-Proof Screws and Speed Nuts®



*For mounting Flat or 5/8" Formed Instrument Panels*

*For mounting Rear Panels, Front Panels and Flush Filler Panels*

### Mar-Proof Machine Screws

If *tapped* Vertical Mounting Rails have been substituted for punched rails, the flat or 5/8" Formed Instrument Panels are fastened to the mounting rails with 10-32 Phillips Head machine screws used with a Mar-proof recessed black nylon washer. For Filler Panels and I/O Panels use 1 3/4" long.



*For mounting Flat, 5/8" Formed Instrument, or Filler and I/O Panels*

### Sheet Metal Screws and Speed Nuts®



*For mounting Screw type side panels*

Screw fastened Flush Side Panels for Vertical Rack and Sloped Front Cabinets mount in the recess of the frame side. They are fastened from inside of the frame by 10BA x 23/32" Phillips Head sheet metal screws. The screws and Speed Nuts® have Zinc Plating with Trivalent Chromium Passivation.

The Vertical Mounting Rail Support Channels are fastened to all Vertical Rack and Sloped Front Cabinet frames with 10BA x 23/32" Phillips Hex Head sheet metal screws. The screws, cage nuts and Speed Nuts® have Zinc Plating with Trivalent Chromium Passivation.

### Screws, Speed Nuts® and Cage Nuts



*For mounting Vertical Mounting Rail Support Channels*

*For attaching Vertical Mounting Rails to Vertical Mounting Rail Support Channels*

Vertical Mounting Rails are attached to Mounting Rail Support Channels with 1/4-20 x 3/4" Hex Head Sems machine screws and 1/4-20 cage nuts. When attached to fixed brackets, the angles are fastened with the same screws engaging 1/4-20 spot-weld nuts. Please see the table below for part numbers.

HARDWARE For Mounting Panels								
Type of Panel Mounting	Mar-Proof Screws	Mar-Proof Machine Screws			Sheet Metal Screws	Hex Head Screws	Cage Nut	Speed Nut®
	Part No.	1/2"	1"	1 3/4"	Part No.	Part No.	Part No.	Part No.
Flat Panels	80-0102-05	80-0202-05	80-0201-05					257-002-005
5/8" Formed Inst.	80-0101-05		80-0201-05					257-002-005
Rear Panels	251-011-004							257-002-005
Front Panels	251-011-004							257-002-005
Flush Filler	251-011-004							257-002-005
Filler and I/O				253-004-003				
Angle Spt. Channel					286-005-004			80-0405-03
Mounting Angles						80-0304-03	286-004-004	
Screw Side Panels					286-005-004			285-004-005



Part No. 80-0304-03



Part No. 80-0604-03

*Machine Screws and Hex Keps Nuts for attaching Pontoon and Flush Bases to cabinet frames.*

The recessed Pontoon Bases or the Flush Bases which are attached to Vertical Rack and Sloped Front Cabinet Frames are fastened with 1/4-20 x 3/4" Hex Head Sems machine screws and 1/4-20 Hex Keps nuts. The screws and nuts Zinc Plating with Trivalent Chromium Passivation.

## Power Strips

Power Strips are available in 5 lengths and finished in the standard tan baked enamel. The Power Strip is shipped installed in the cabinet frame, usually at the rear of the cabinet, on the right side attached to the Vertical Mounting Rail Support Channels and behind the Vertical Mounting Rails. If the Power Strip is to be installed before the Vertical Mounting Rails, please contact the factory regarding any modifications required for this type of installation.



*3 wire, single circuit, 15 amp., 125 volt, grounding, ASA standard, wired with No. 12 Type TW Conductors*

WIRED PLUGMOLD			
Vertical Panel Space	Length	Number of Outlets	Part Number
21" to 29 3/4"	18"	3	03-0306-32
31 1/2" to 35"	30"	5	03-0506-32
36 3/4" to 59 1/2"	36"	6	03-0606-32
61 1/4" to 71 3/4"	60"	10	03-1006-32
73 1/2" to 84"	72"	12	03-1206-32

\* To order a cord with 3-prong plug, add suffix  
 -6P for 6' long cord  
 -10P for 10' long cord  
 -15P for 15' long cord

Flush Drop Handles are designed as an optional assembly to replace the Lift Handle used on all Flush Doors. The flush cup is constructed of wrought bronze. The drop handle is cast bronze and the spindle is steel, bronze plate. The cup and handle are finished in polished chrome. The flush cup is 2 13/16" in diameter. To incorporate the flush handle into your door P/N change "091-" to "097-" and "092-" to "098-".



*Flush Drop Handles*

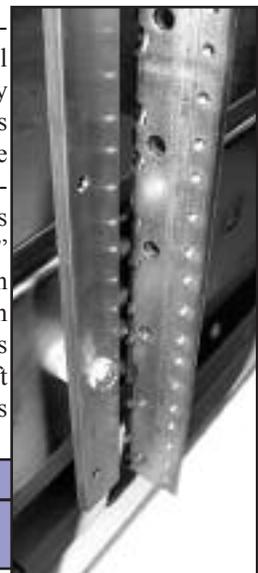
All Flush Side Panels, Rear Panels, Front Panels, Top Panels and Flush Filler Panels are equipped with white neoprene spacers, Part No. 260-018-000. These spacers also double as bumpers which assure the quiet closing of Flush Doors and Flush Hinged Side Panels. Because they are easily removed, they can provide the 1/8" space between the panels, or the doors and the cabinet frame for gasketing, if required.



*Rubber Spacers*

## Copper Buss Bars

Copper Buss Bars are mounted vertically to the Vertical Mounting Rail Support Channels of Heavy Duty Racks insulated at mounting points with nylon spacers. Buss Bars have 10-32 tapped holes spaced at 6" centers. If you do not want your Buss Bars insulated, please add "-CG" suffix to the part number when ordering and we will mount them without insulating hardware. Buss Bars are shipped mounted in the left hand rear of the enclosure unless otherwise specified.



BUSS BARS	
Vertical Panel Height	Part Number
21"	CBB-021-032
28"	CBB-028-032
35"	CBB-035-032
42"	CBB-042-032
49"	CBB-049-032
56"	CBB-056-032
63"	CBB-063-032
70" & Up **	CBB-070-032

\* For all Sloped Front Racks, use Buss Bar CBB-136-032

\*\* For 70" Lg in Panel Heights greater than 70", use CBB-070-032-\_\_ The last 2 digits are determined by the panel height of the rack you are using the bus bar in. For example, a 70" bus bar used in a 77" frame would be P/N CBB-070-032-77

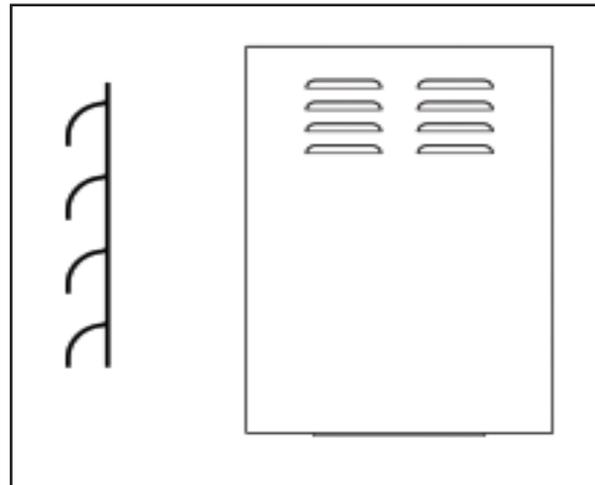


# Panel and Door Styles

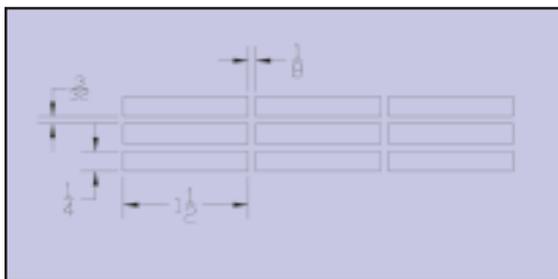
In the Equipto System, there are several types of Panel and Door styles to choose from. They include; Plain, Louvered, Grilled or an Acrylic Window Door. Generally, to provide the most airflow into or out of a frame assembly, please specify grilled panels. The details on the different options are shown below.

## Product Features

- ▶ Three types of panels include; Plain, Louvered, & Grilled
- ▶ Different panel fastening options available including latch fastened, hinged and various screw fastened
- ▶ Louvers provide one sq. inch of opening per louver
- ▶ Grilled panels provide the most air flow into or out of a frame assembly



Above is the detail of louvering. Louvers provide approximately one square inch of opening per louver.



Grill detail.

Grills are 1.5"x 0.25", providing 67% open area.

PANEL AND DOOR SUFFIX*												
Style	Plain	Louvered					Grilled				Bronze Tinted Acrylic Window Doors	
		Top Panel	Top	Bottom	Top & Bottom	Fully	Top Panel	Top	Bottom	Top & Bottom		
No Filter	-010	-014	-011*	-012	-013*	-014*	-019	-016*	-017	-018*	-040	
Filtered							-039**	-036*	-037**	-038* **		

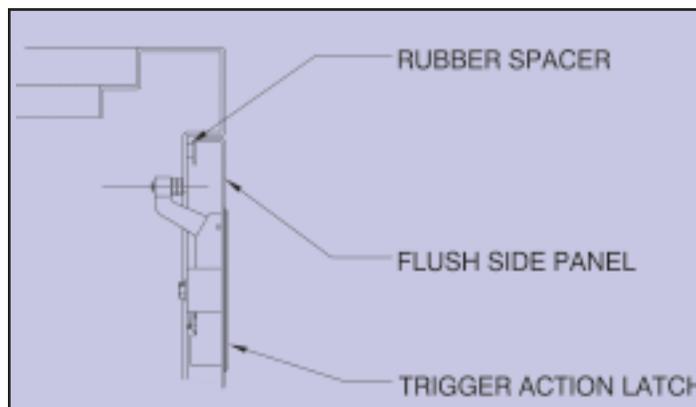
\*Add this style number to the partial part number of doors and panels.

+ Not available on slope frame side panels. ++ Available only on Latch, Hinged or Externally Screw Fastened panels.

Externally Screw Fastened (Embossed and Plain) Side Panels are available as standard items. Please consult factory for details.

## Latch-Fastened Side Panels

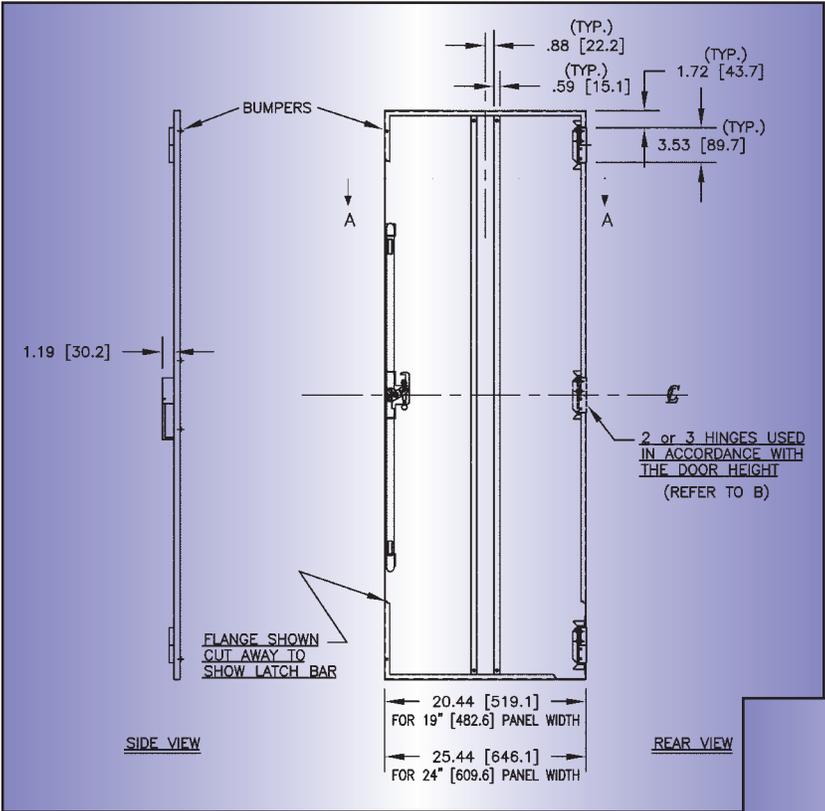
Latch fastened side panels are designed to give easy access for the servicing and maintenance of equipment and instrumentation. Trigger action Latches give instant access through a quick acting release. Mounted flush with the panel surface, they give a neat appearance. Two 5/16" dowel pins at the bottom of each panel have holes in the bottom portion of the frame to hold the panel in place while the latch engages the top frame member to ensure a safe, secure fastening of the side panel in the side recess of the cabinet frame.



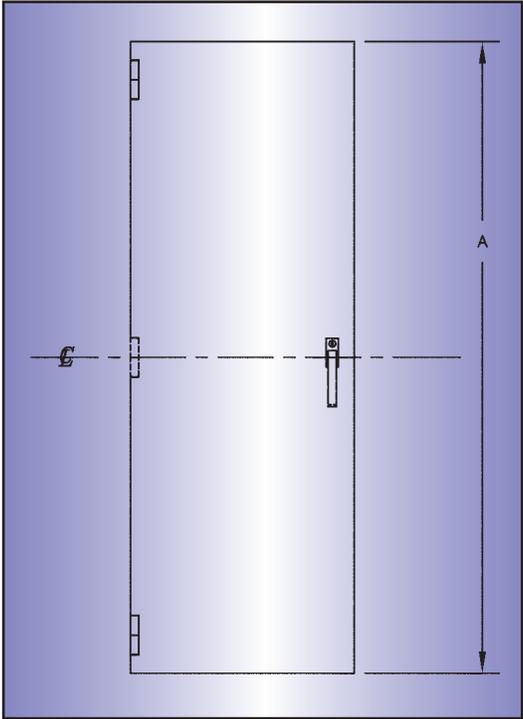
# Door Assembly

Heavy Duty

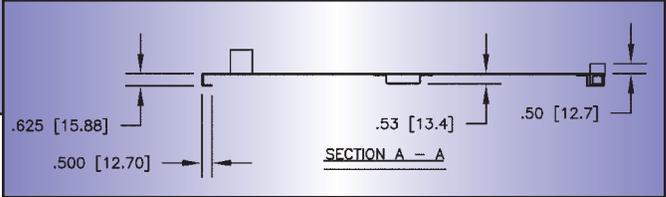
**For 19" and 24" Panel Width**



Side and Rear Views



Front View

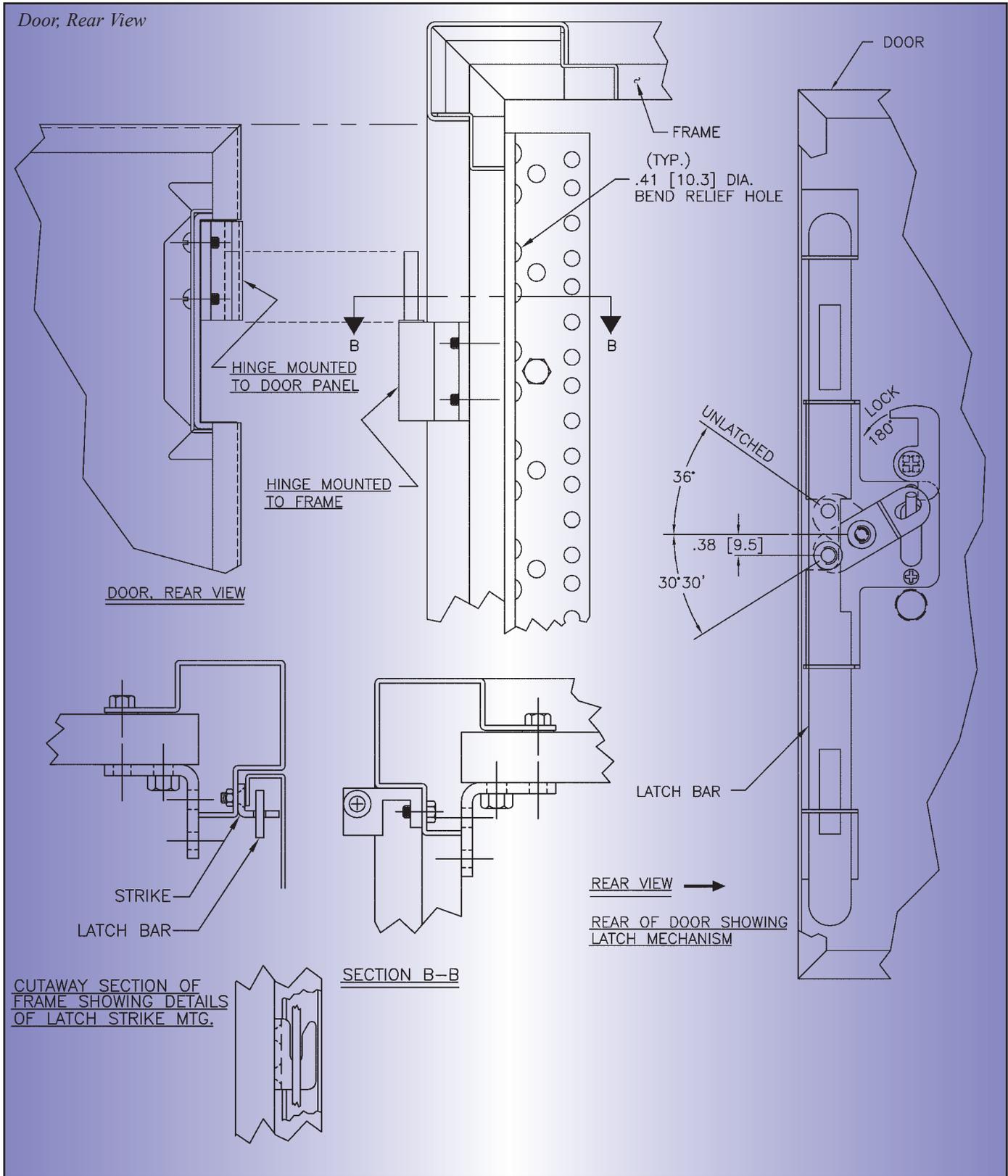


Section AA

Panel Opening Size					
19" (482.6)		24" (609.6)		A	B
Part No. L.H.	Part No. R.H.	Part No. L.H.	Part No. R.H.		
091-115-010	092-115-010	091-215-010	092-215-010	17.50 (444.5)	2
091-121-010	092-121-010	091-221-010	092-221-010	22.75 (577.9)	2
091-128-010	092-128-010	091-228-010	092-228-010	29.75 (755.7)	2
091-135-010	092-135-010	091-235-010	092-235-010	36.75 (933.5)	2
091-136-010	092-136-010	091-236-010	092-236-010	38.50 (977.9)	2
091-138-010	092-138-010	091-238-010	092-238-010	40.25 (1022.4)	2
091-140-010	092-140-010	091-240-010	092-240-010	42.00 (1066.8)	2
091-142-010	092-142-010	091-242-010	092-242-010	43.75 (1111.3)	2
091-145-010	092-145-010	091-245-010	092-245-010	47.25 (1200.2)	2
091-149-010	092-149-010	091-249-010	092-249-010	50.75 (1289.1)	2
091-152-010	092-152-010	091-252-010	092-252-010	54.25 (1378.0)	2
091-156-010	092-156-010	091-256-010	092-256-010	57.75 (1466.9)	3
091-159-010	092-159-010	091-259-010	092-259-010	61.25 (1555.8)	3
091-163-010	092-163-010	091-263-010	092-263-010	64.75 (1644.7)	3
091-170-010	092-170-010	091-270-010	092-270-010	71.75 (1822.5)	3
091-177-010	092-177-010	091-277-010	092-277-010	78.75 (2000.3)	3
091-184-010	092-184-010	091-284-010	092-284-010	85.75 (2178.1)	3



# Door Hinge & Latch Details

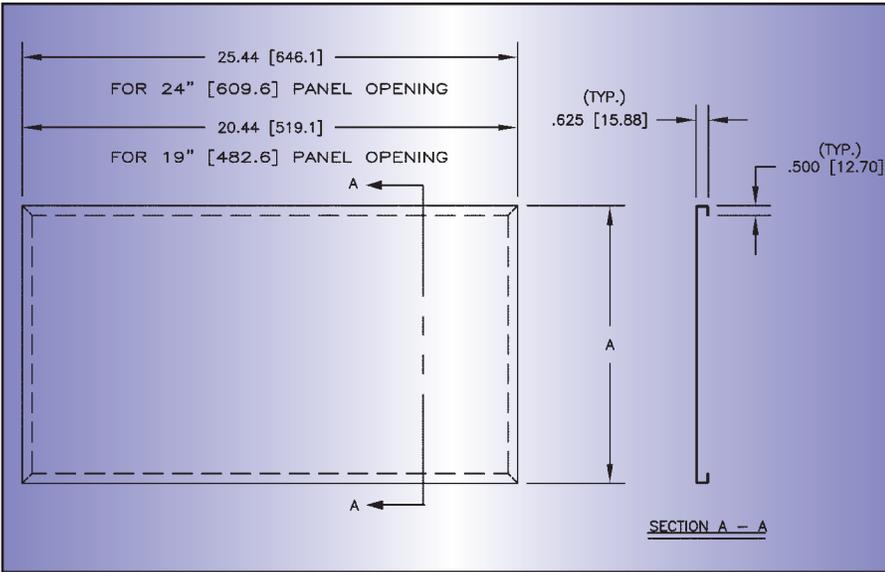


Section BB

Rear View

# Plain or Latched Flush Top Panels

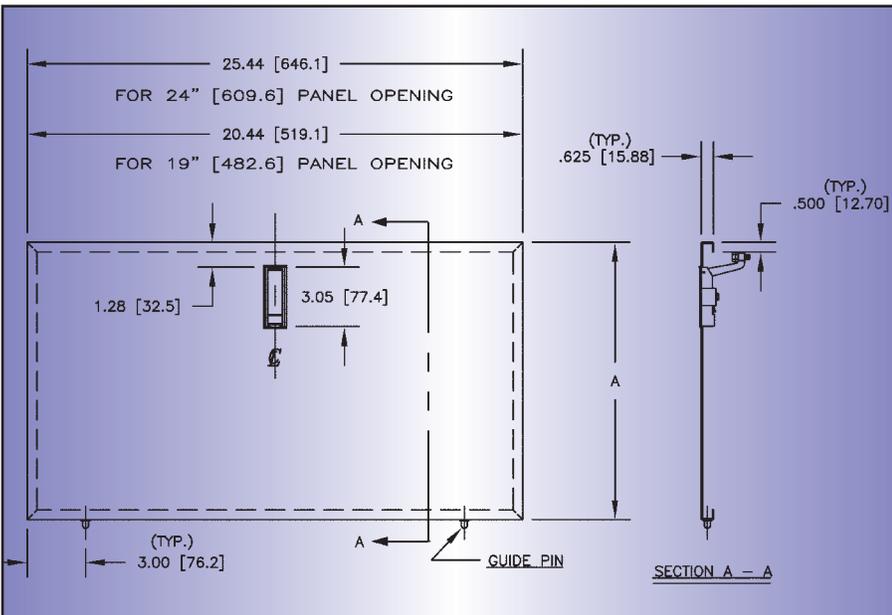
**For Use with 15° & 30° Slope Front  
Vertical Rack Frame**



Detail of Top Panel Screw Fastened

30B Slope Frame		
19" (482.6) Panel Opening	24" (609.6) Panel Opening	A
462-062-010	462-065-010	9.25 (235.0)
462-063-010	462-066-010	14.25 (362.0)
462-072-010	462-075-010	7.50 (190.5)
462-073-010	462-076-010	12.50 (317.5)
462-082-010	462-085-010	5.75 (146.1)
462-083-010	462-086-010	10.75 (273.1)

15B Slope Frame		
19" (482.6) Panel Opening	24" (609.6) Panel Opening	A
466-022-010	466-025-010	12.11 (307.6)
466-023-010	466-026-010	17.11 (434.6)
466-032-010	466-035-010	10.30 (261.5)
466-033-010	466-036-010	15.30 (388.5)
466-042-010	466-045-010	8.48 (215.5)
466-043-010	466-046-010	13.48 (342.5)



Detail of Top Panel Latch Fastened

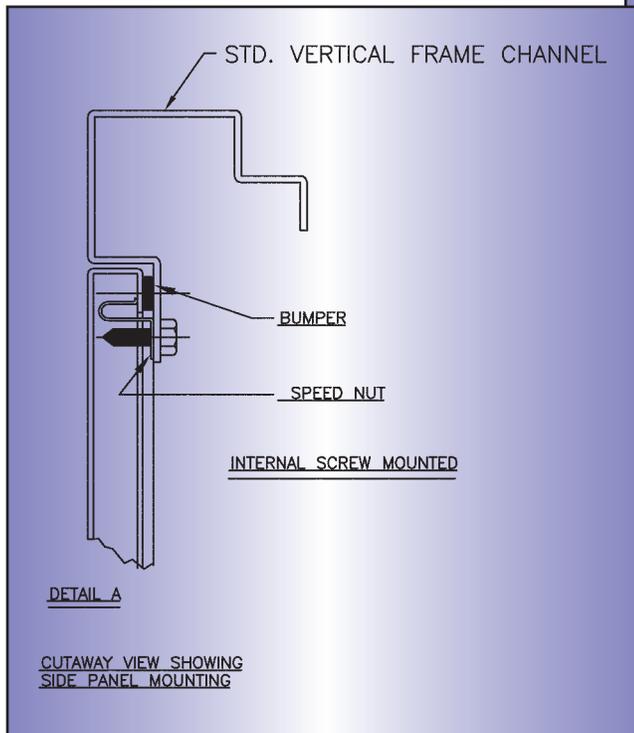
30B Slope Frame		
19" (482.6) Panel Opening	24" (609.6) Panel Opening	A
461-062-010	461-065-010	9.25 (235.0)
461-063-010	461-066-010	14.25 (362.0)
461-072-010	461-075-010	7.50 (190.5)
461-073-010	461-076-010	12.50 (317.5)
461-082-010	461-085-010	5.75 (146.1)
461-083-010	461-086-010	10.75 (273.1)

15B Slope Frame		
19" (482.6) Panel Opening	24" (609.6) Panel Opening	A
465-022-010	465-025-010	12.11 (307.6)
465-023-010	465-026-010	17.11 (434.6)
465-032-010	465-035-010	10.30 (261.5)
465-033-010	465-036-010	15.30 (388.5)
465-042-010	465-045-010	8.48 (215.5)
465-043-010	465-046-010	13.48 (342.5)

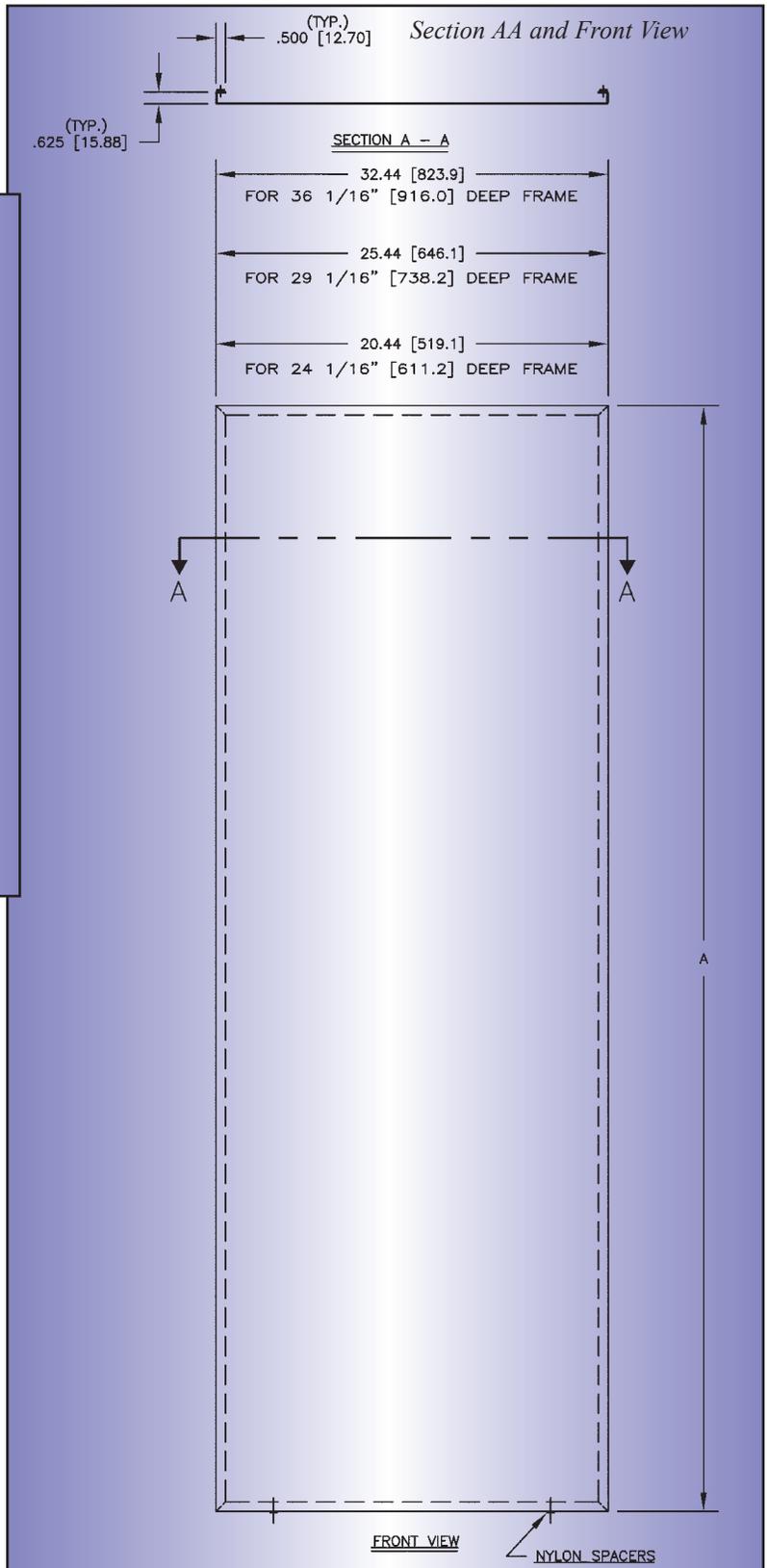


# Internal Screw Fastened Side Panel

For 24 1/16", 29 1/16", & 36 1/16" Deep Frames



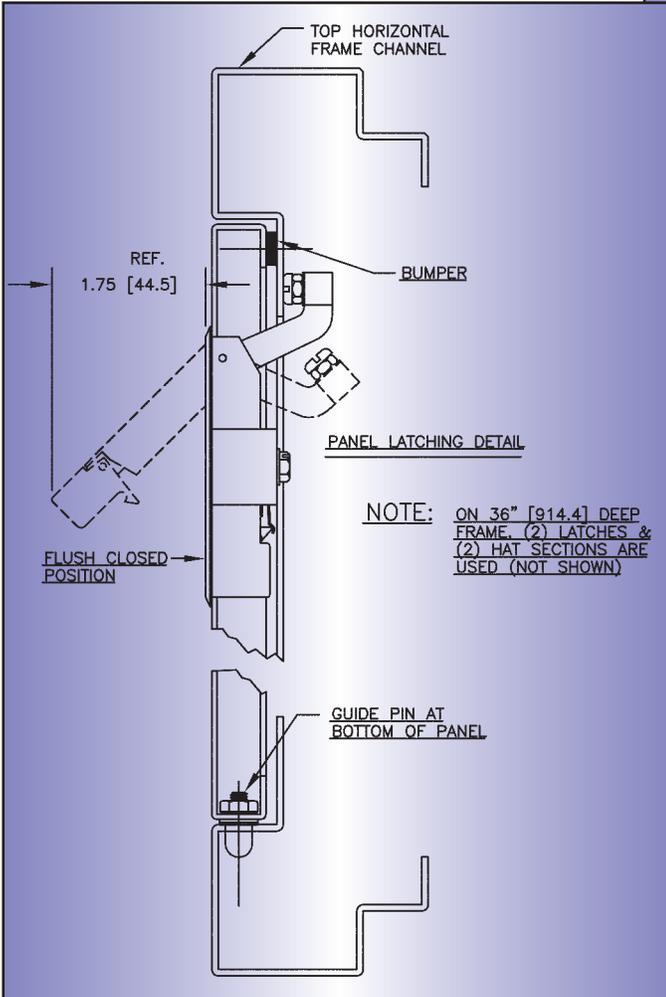
Detail A - Internal Screw Mounted



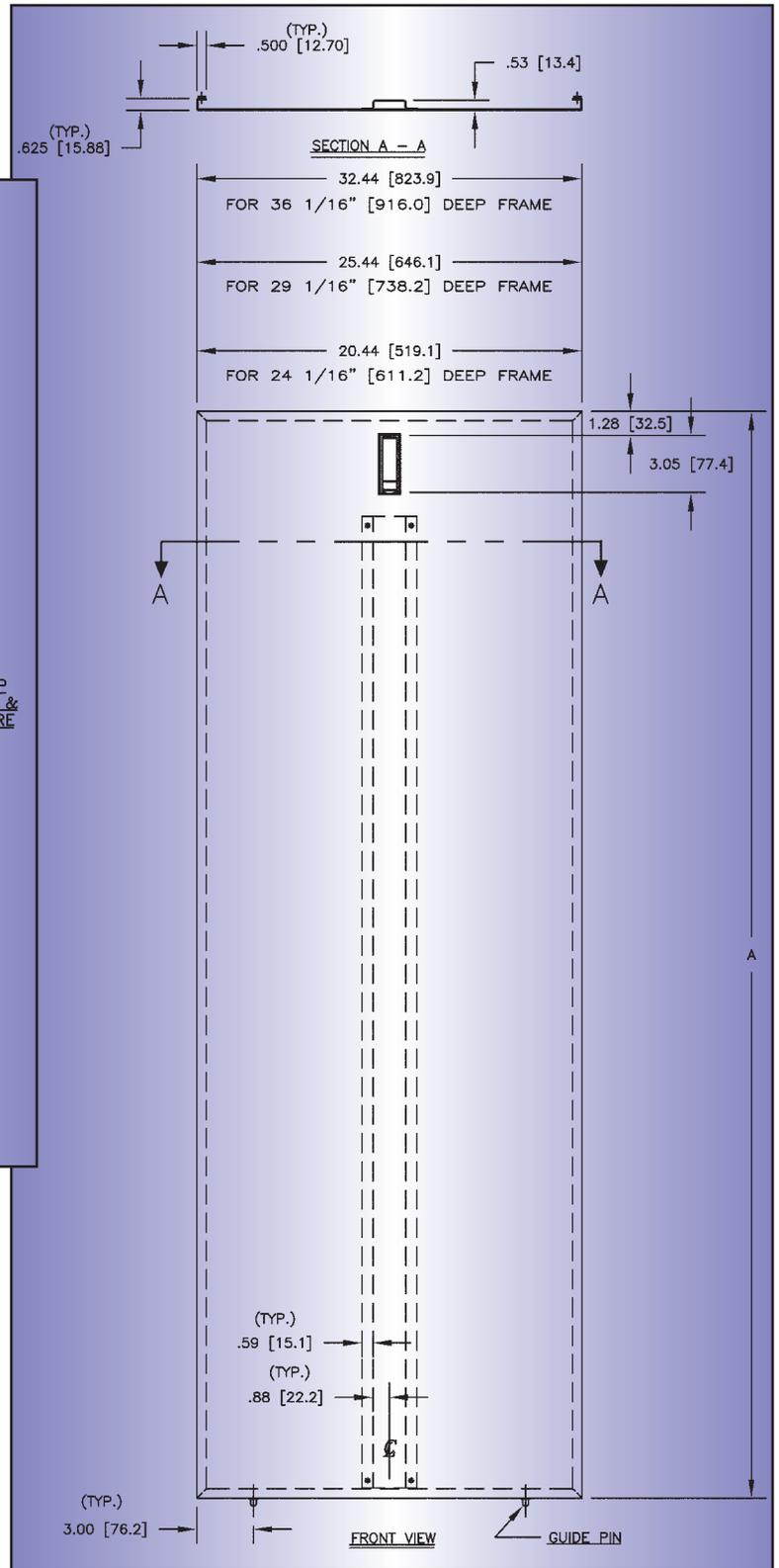
Frame Depth			
24 1/16" (611.2)	29 1/16" (736.6)	36 1/16" (916.0)	A
Part No.	Part No.	Part No.	
325-921-010	326-921-010	335-921-010	22.75 (577.9)
325-928-010	326-928-010	335-928-010	29.75 (755.7)
325-935-010	326-935-010	335-935-010	36.75 (933.5)
325-942-010	326-942-010	335-942-010	43.75 (1111.3)
325-949-010	326-949-010	335-949-010	50.75 (1289.1)
325-956-010	326-956-010	335-956-010	57.75 (1466.9)
325-963-010	326-963-010	335-963-010	64.75 (1544.7)
325-970-010	326-970-010	335-970-010	71.75 (1822.5)
325-977-010	326-977-010	335-977-010	78.75 (2000.3)
325-984-010	326-984-010	335-984-010	85.75 (2178.1)

# Latch Fastened Side Panel

For 24 1/16", 29 1/16"  
& 36 1/16" Deep Frames



Panel Latching Detail



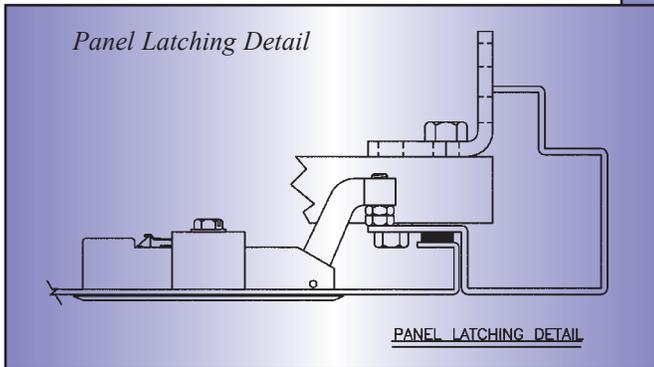
Section AA and Front View

Frame Depth			A
24 1/16"(611.2)	29 1/16"(738.2)	36" (916.0)	
Part No.	Part No.	Part No.	
315-921-010	316-921-010	334-921-010	22.75 (577.9)
315-928-010	316-928-010	334-928-010	29.75 (755.7)
315-935-010	316-935-010	334-935-010	36.75 (933.5)
315-942-010	316-942-010	334-942-010	43.75 (1111.3)
315-949-010	316-949-010	334-949-010	50.75 (1289.1)
315-956-010	316-956-010	334-956-010	57.75 (1466.9)
315-963-010	316-963-010	334-963-010	64.75 (1544.7)
315-970-010	316-970-010	334-970-010	71.75 (1822.5)
315-977-010	316-977-010	334-977-010	78.75 (2000.3)
315-984-010	316-984-010	334-984-010	85.75 (2178.1)



# Latch Fastened, Hinged Side Panel

**For 24 1/16", 29 1/16", & 36 1/16" Deep Frames**



**24 1/16" (611.2) Deep Frame**

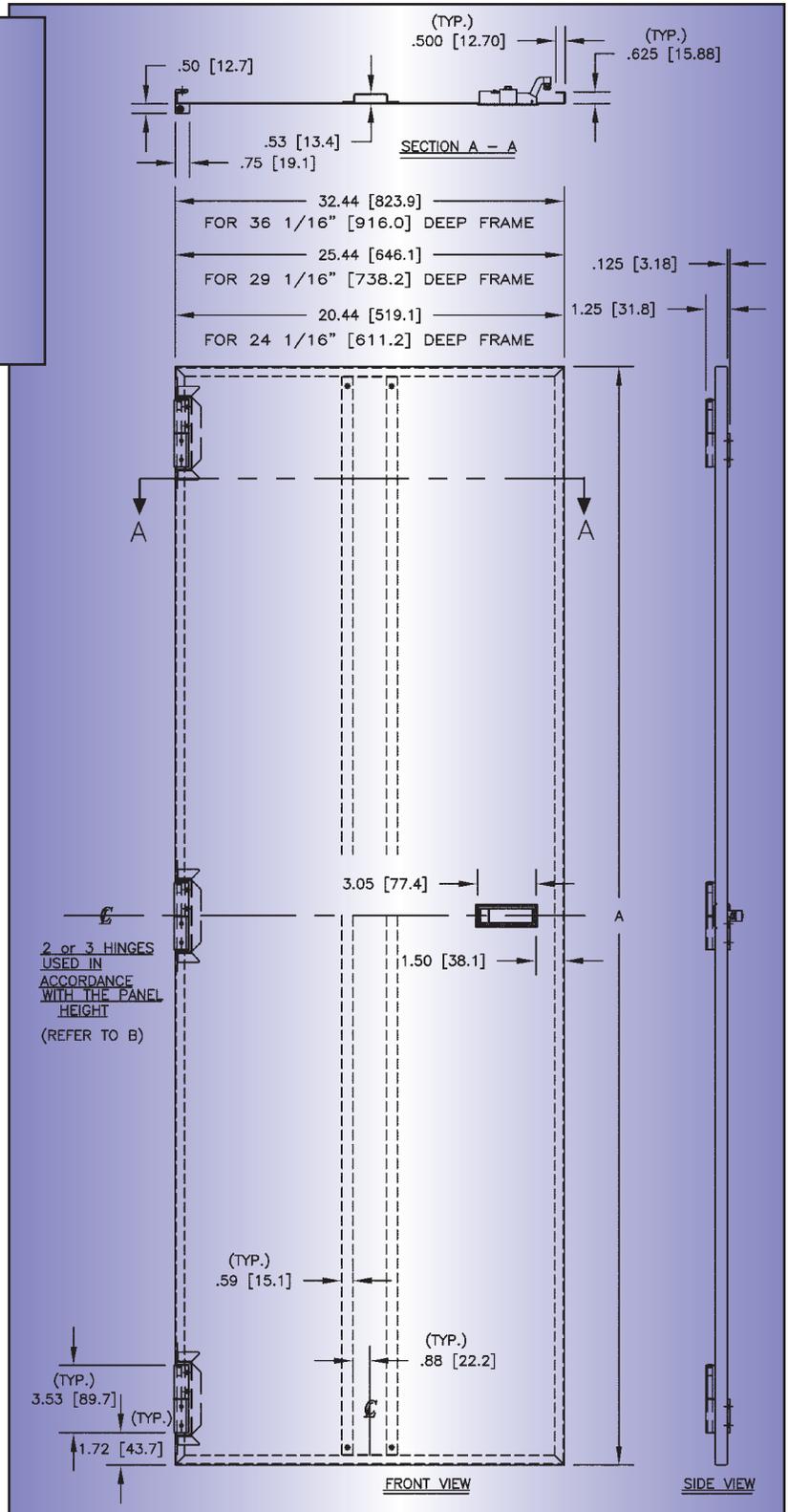
Part No. L.H.	Part No. R.H.	A	B
432-921-010	435-921-010	22.75 (577.9)	2
432-928-010	435-928-010	29.75 (755.7)	2
432-935-010	435-935-010	36.75 (933.5)	2
432-942-010	435-942-010	43.75 (1111.3)	2
432-949-010	435-949-010	50.75 (1289.1)	2
432-956-010	435-956-010	57.75 (1466.9)	3
432-963-010	435-963-010	64.75 (1544.7)	3
432-970-010	435-970-010	71.75 (1822.5)	3
432-977-010	435-977-010	78.75 (2000.3)	3
432-984-010	435-984-010	85.75 (2178.1)	3

**29 1/16" (738.2) Deep Frame**

Part No. L.H.	Part No. R.H.	A	B
433-921-010	436-921-010	22.75 (577.9)	2
433-928-010	436-928-010	29.75 (755.7)	2
433-935-010	436-935-010	36.75 (933.5)	2
433-942-010	436-942-010	43.75 (1111.3)	2
433-949-010	436-949-010	50.75 (1289.1)	2
433-956-010	436-956-010	57.75 (1466.9)	3
433-963-010	436-963-010	64.75 (1544.7)	3
433-970-010	436-970-010	71.75 (1822.5)	3
433-977-010	436-977-010	78.75 (2000.3)	3
433-984-010	436-984-010	85.75 (2178.1)	3

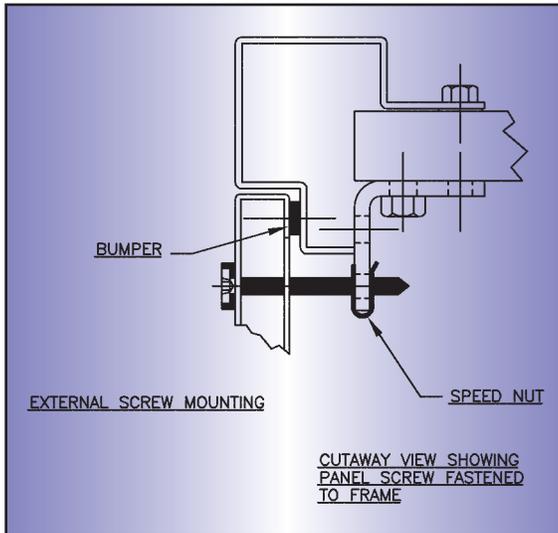
**36 1/16" (916.0) Deep Frame**

Part No. L.H.	Part No. R.H.	A	B
441-921-010	444-921-010	22.75 (577.9)	2
441-928-010	444-928-010	29.75 (755.7)	2
441-935-010	444-935-010	36.75 (933.5)	2
441-942-010	444-942-010	43.75 (1111.3)	2
441-949-010	444-949-010	50.75 (1289.1)	2
441-956-010	444-956-010	57.75 (1466.9)	3
441-963-010	444-963-010	64.75 (1544.7)	3
441-970-010	444-970-010	71.75 (1822.5)	3
441-977-010	444-977-010	78.75 (2000.3)	3
441-984-010	444-984-010	85.75 (2178.1)	3

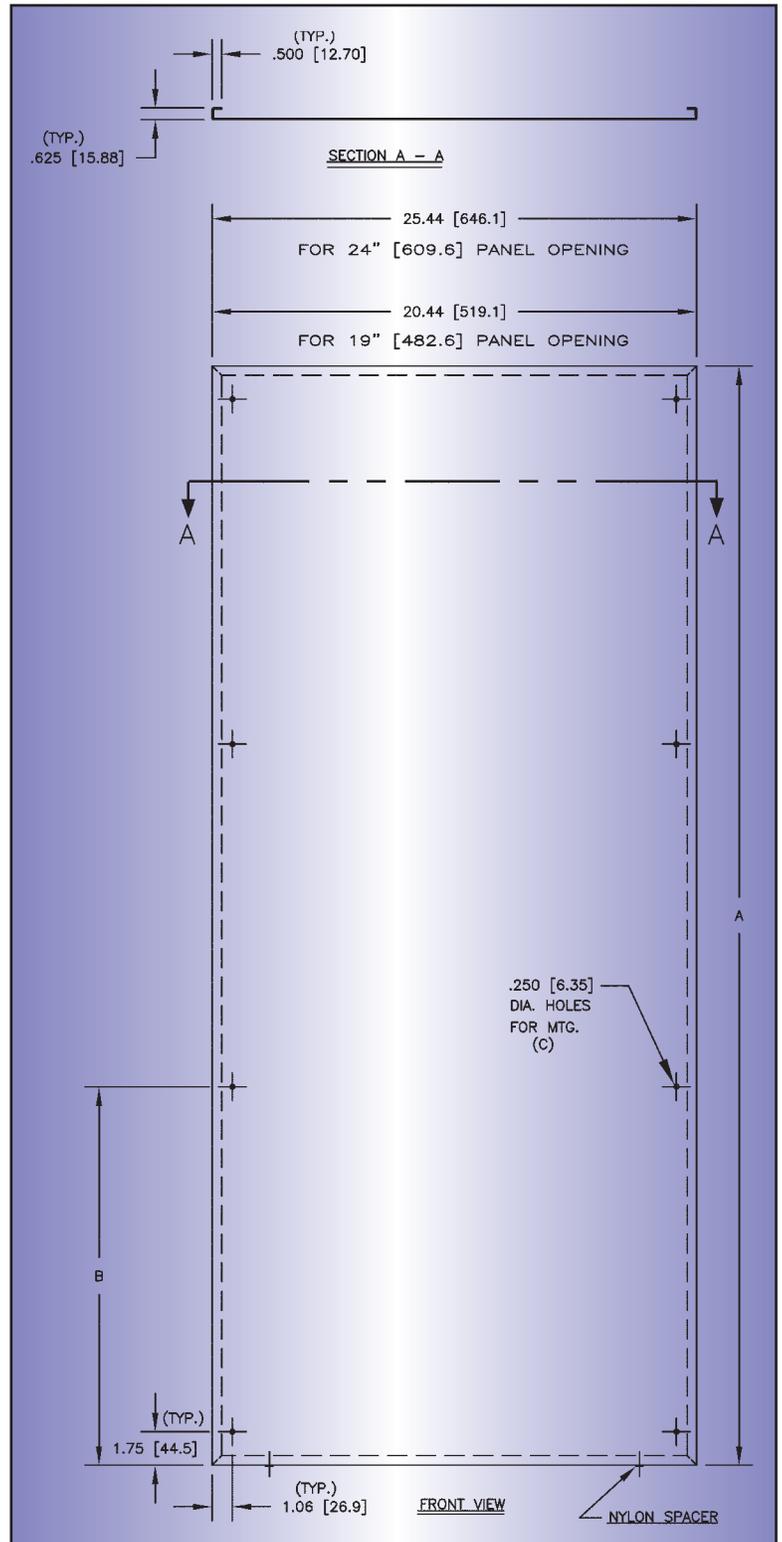


# External Screw Fastened Front and Rear Panels

## For 19" and 24" Panel Opening



External Screw Mounting



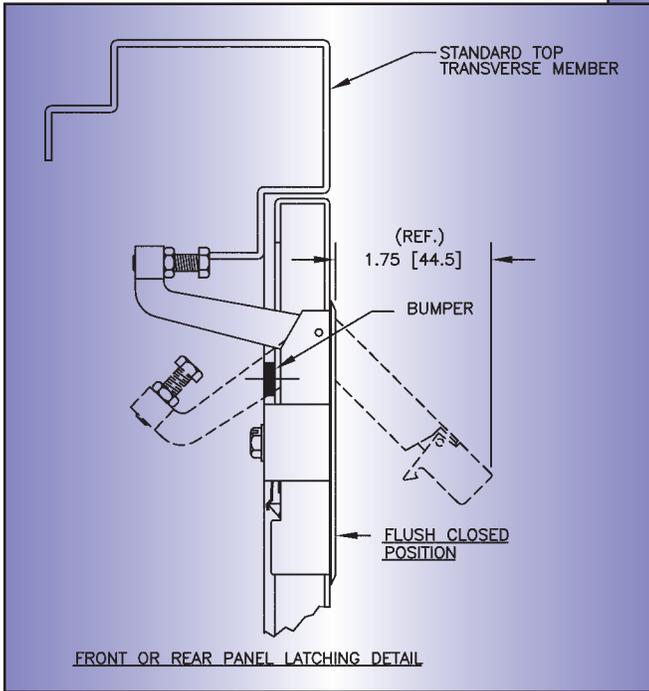
Section AA and Front View

Panels Front (& or) Rear				
19" (482.6)	24" (609.6)	A	B	C
Part No.	Part No.			
391-115-010	391-215-010	17.50 (444.5)	N/A	4
391-121-010	391-221-010	22.75 (577.9)	N/A	4
391-128-010	391-228-010	29.75 (755.7)	N/A	4
391-135-010	391-235-010	36.75 (933.5)	N/A	4
391-136-010	391-236-010	38.50 (977.9)	19.25 (489.0)	6
391-138-010	391-238-010	40.25 (1022.4)	19.25 (489.0)	6
391-140-010	391-240-010	42.00 (1066.8)	21.00 (533.4)	6
391-142-010	391-242-010	43.75 (1111.3)	21.00 (533.4)	6
391-145-010	391-245-010	47.25 (1200.2)	22.75 (577.9)	6
391-149-010	391-249-010	50.75 (1289.1)	24.50 (622.3)	6
391-152-010	391-252-010	54.25 (1378.0)	26.25 (666.8)	6
391-156-010	391-256-010	57.75 (1466.9)	19.25 (489.0)	8
391-159-010	391-259-010	61.25 (1555.8)	21.00 (533.4)	8
391-163-010	391-263-010	64.75 (1544.7)	21.00 (533.4)	8
391-170-010	391-270-010	71.75 (1822.5)	24.50 (622.3)	8
391-177-010	391-277-010	78.75 (2000.3)	26.25 (666.8)	8
391-184-010	391-284-010	85.75 (2178.1)	28.00 (711.2)	8



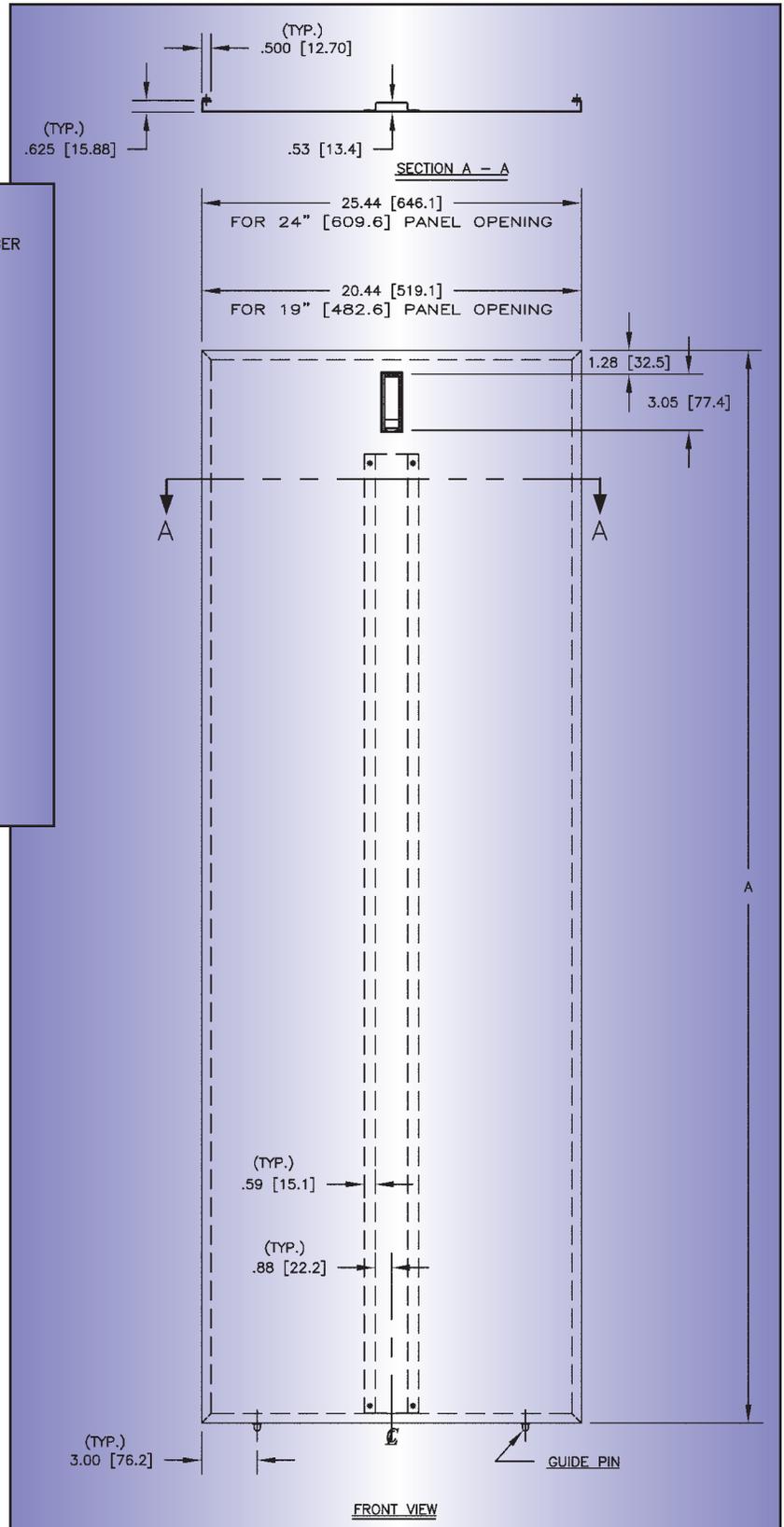
# Latch Fastened Front & Rear Panels

For 19" and 24" Panel Opening



Front or Rear Panel Latching Detail

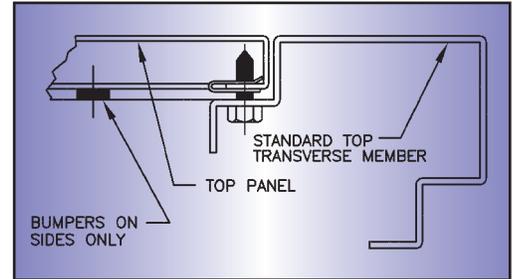
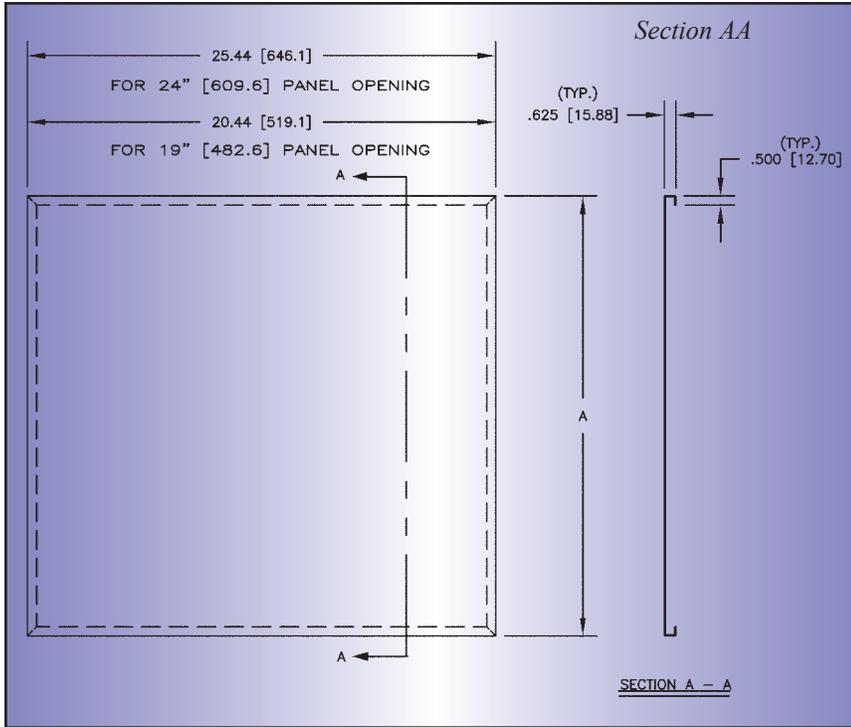
Panels Front (& or) Rear		
19" (482.6)	24" (609.6)	A
Part No.	Part No.	
381-115-010	381-215-010	17.50 (444.5)
381-121-010	381-221-010	22.75 (577.9)
381-128-010	381-228-010	29.75 (755.7)
381-135-010	381-235-010	36.75 (933.5)
381-136-010	381-236-010	38.50 (977.9)
381-138-010	381-238-010	40.25 (1022.4)
381-140-010	381-240-010	42.00 (1066.8)
381-142-010	381-242-010	43.75 (1111.3)
381-145-010	381-245-010	47.25 (1200.2)
381-149-010	381-249-010	50.75 (1289.1)
381-152-010	381-252-010	54.25 (1378.0)
381-156-010	381-256-010	57.75 (1466.9)
381-159-010	381-259-010	61.25 (1555.8)
381-163-010	381-263-010	64.75 (1544.7)
381-170-010	381-270-010	71.75 (1822.5)
381-177-010	381-277-010	78.75 (2000.3)
381-184-010	381-284-010	85.75 (2178.1)



Section AA and Front View

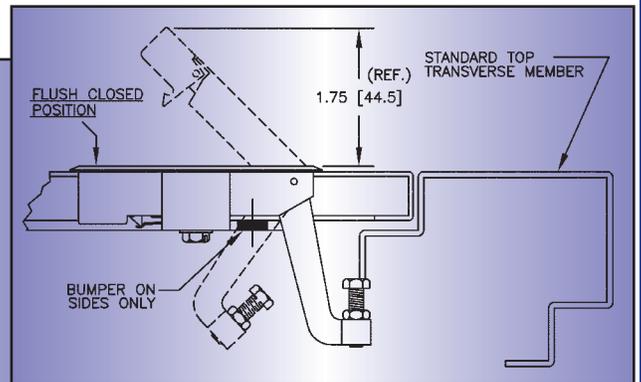
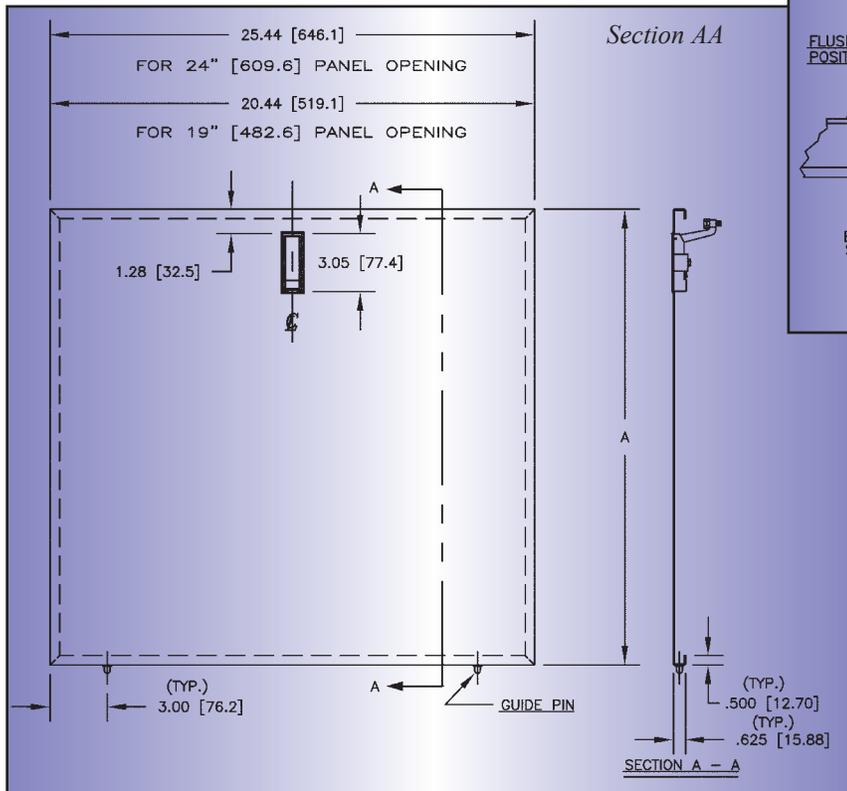
# Plain or Latched Flush Top Panels

## For 19" and 24" Panel Opening



Detail of Top Panel Screw Fastened

Screw Fastened Flush Top Panel	Panel Opening	Frame Depth	A
371-020-010	19" (482.6)	24.06 (611.2)	18.94 (481.0)
371-030-010		29.06 (738.2)	23.94 (608.0)
371-036-010		36.06 (916.0)	30.94 (785.8)
371-050-010	24" (609.6)	24.06 (611.2)	18.94 (481.0)
371-060-010		29.06 (738.2)	23.94 (608.0)
371-066-010		36.06 (916.0)	30.94 (785.8)



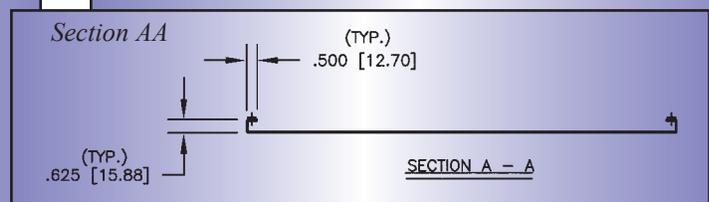
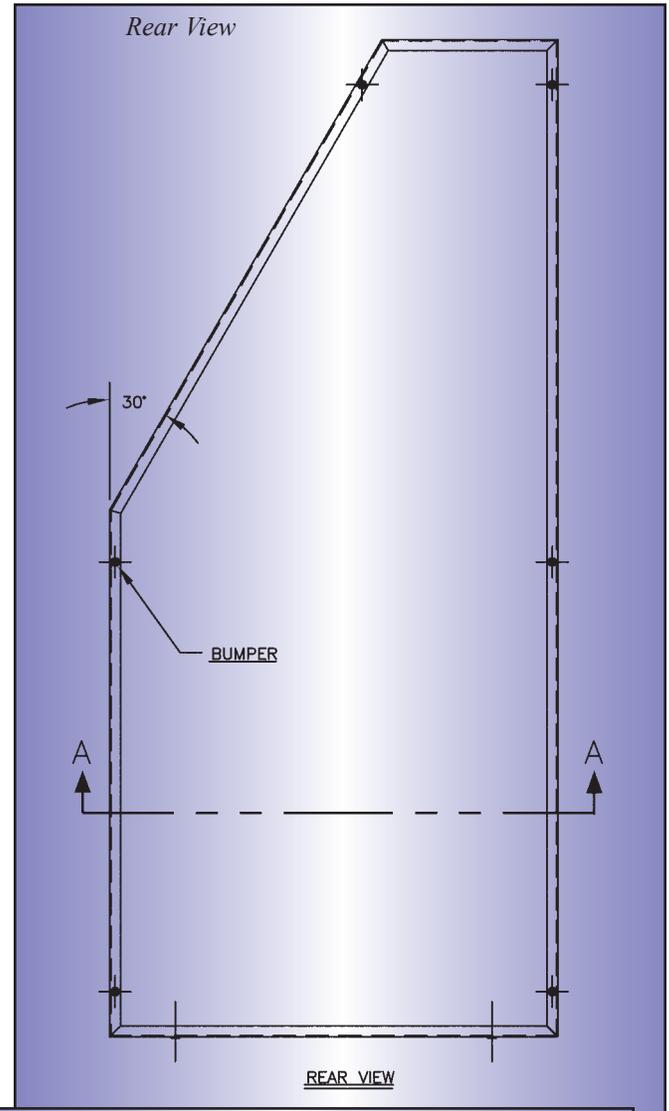
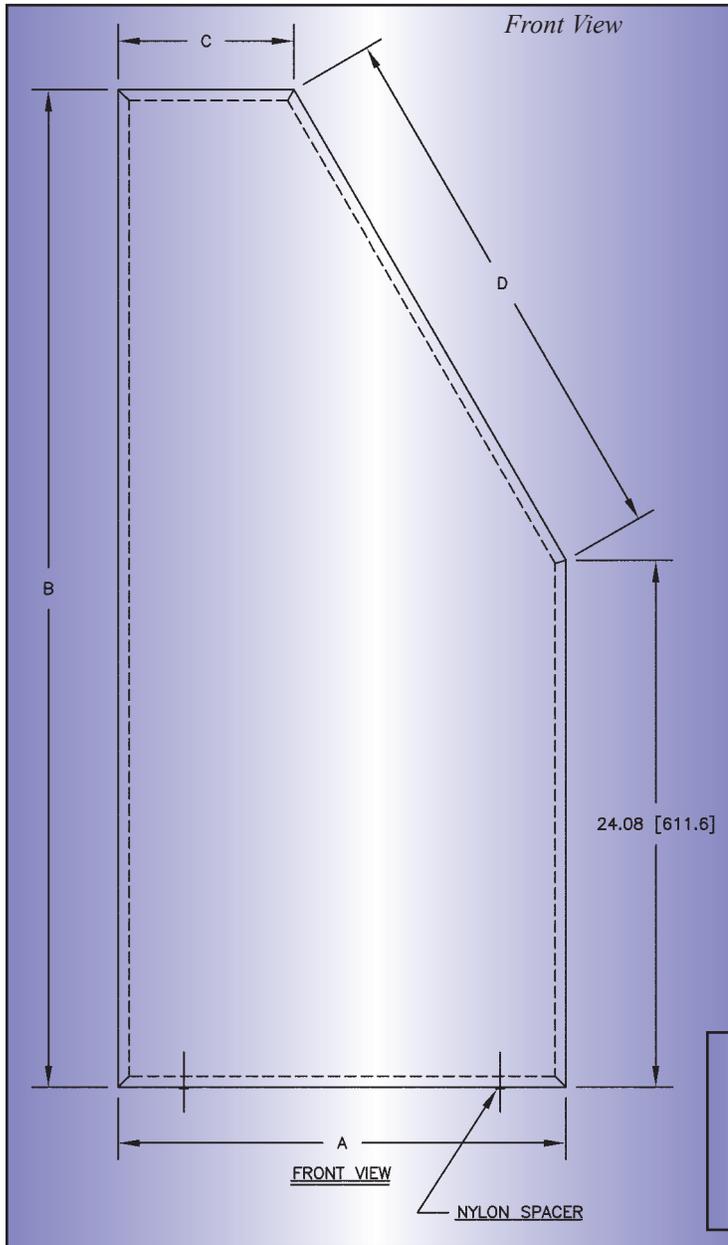
Top Panel Latching Detail

Screw Fastened Flush Top Panel	Panel Opening	Frame Depth	A
373-020-010	19" (482.6)	24.06 (611.2)	18.94 (481.0)
373-030-010		29.06 (738.2)	23.94 (608.0)
373-036-010		36.06 (916.0)	30.94 (785.8)
373-050-010	24" (609.6)	24.06 (611.2)	18.94 (481.0)
373-060-010		29.06 (738.2)	23.94 (608.0)
373-066-010		36.06 (916.0)	30.94 (785.8)



# Screw Fastened Side Panel

For 30° Slope Front Vertical Rack Frame

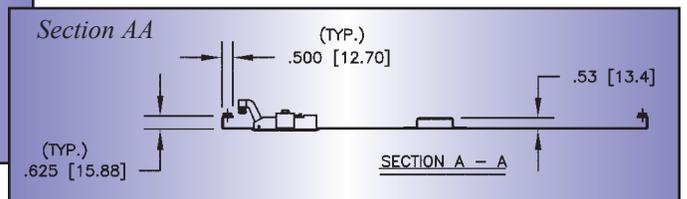
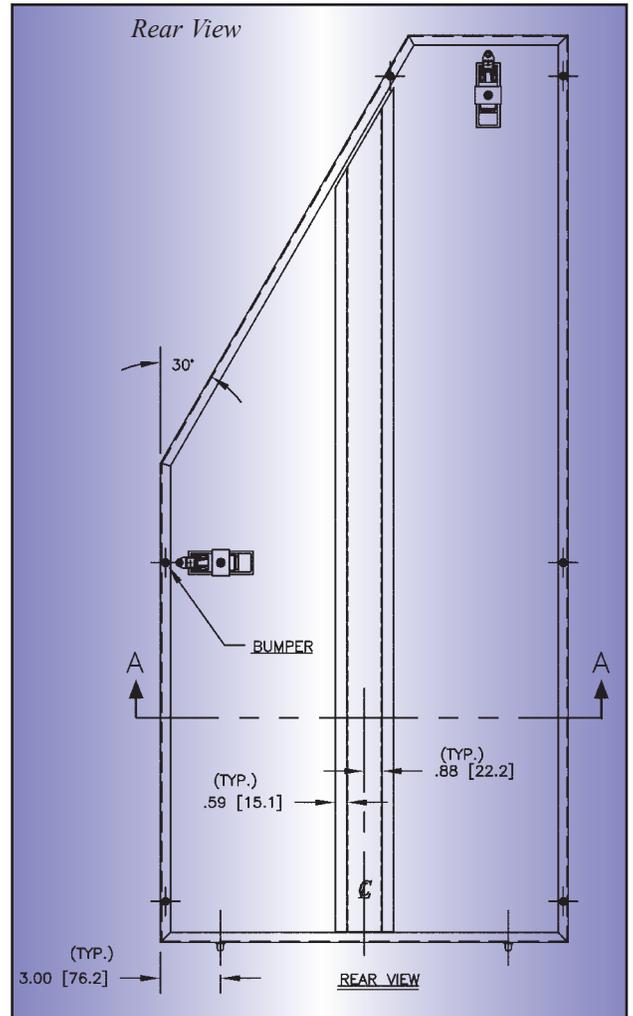
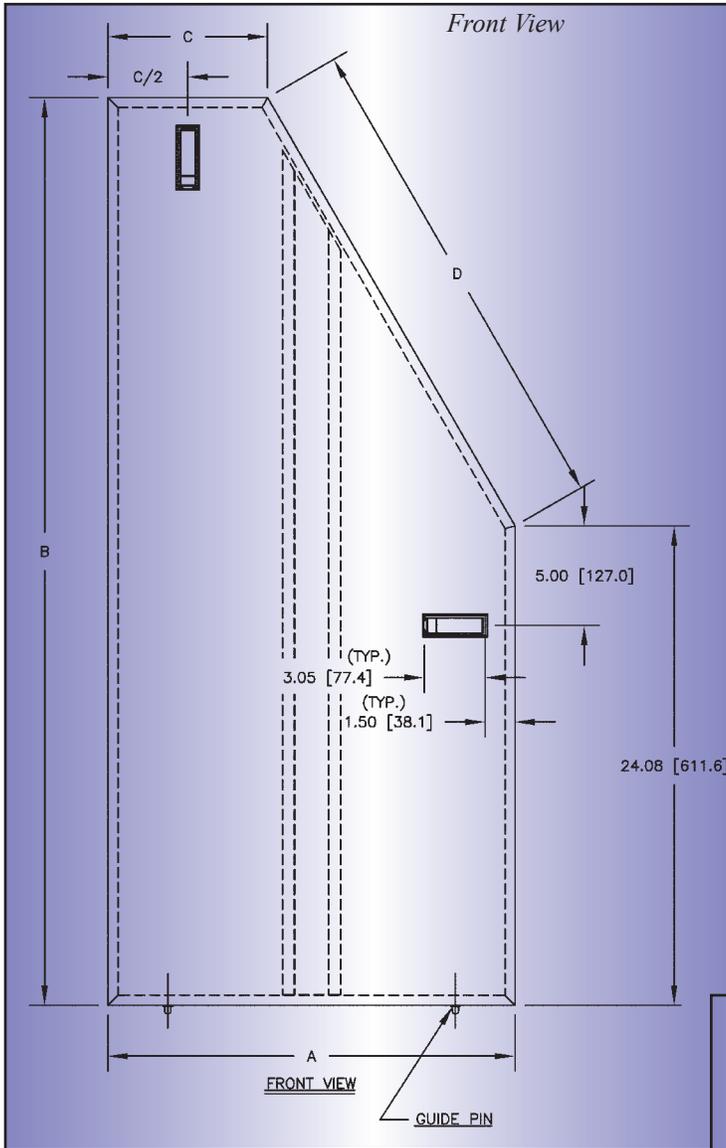


Part No. L.H.	Part No. R.H.	A	B	C	D	Frame Side Panels Will Fit
321-284-010	327-284-010	20.44 (519.1)	39.53 (1004.1)	11.52 (292.5)	17.84 (453.2)	181-314-021 & 181-314-051
321-291-010	327-291-010	25.44 (646.1)	39.53 (1004.1)	16.52 (419.5)	17.84 (453.2)	181-314-031 & 181-314-061
321-341-010	327-341-010	20.44 (519.1)	42.56 (1081.1)	9.77 (248.1)	21.34 (542.1)	181-317-021 & 181-317-051
321-348-010	327-348-010	25.44 (646.1)	42.56 (1081.1)	14.77 (375.1)	21.34 (542.1)	181-317-031 & 181-317-061
321-370-010	327-370-010	20.44 (519.1)	45.59 (1158.1)	8.02 (203.6)	24.84 (631.0)	181-321-021 & 181-321-051
321-377-010	327-377-010	25.44 (646.1)	45.59 (1158.1)	13.02 (330.6)	24.84 (631.0)	181-321-031 & 181-321-061

# Latch Fastened Side Panel

Heavy Duty

For 30° Slope Front Vertical Rack Frame

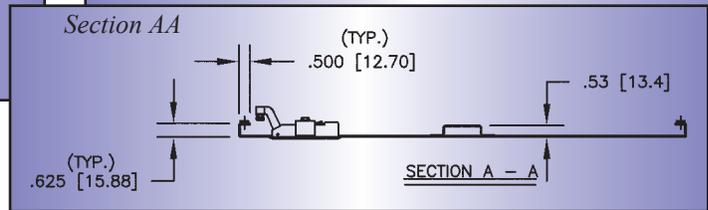
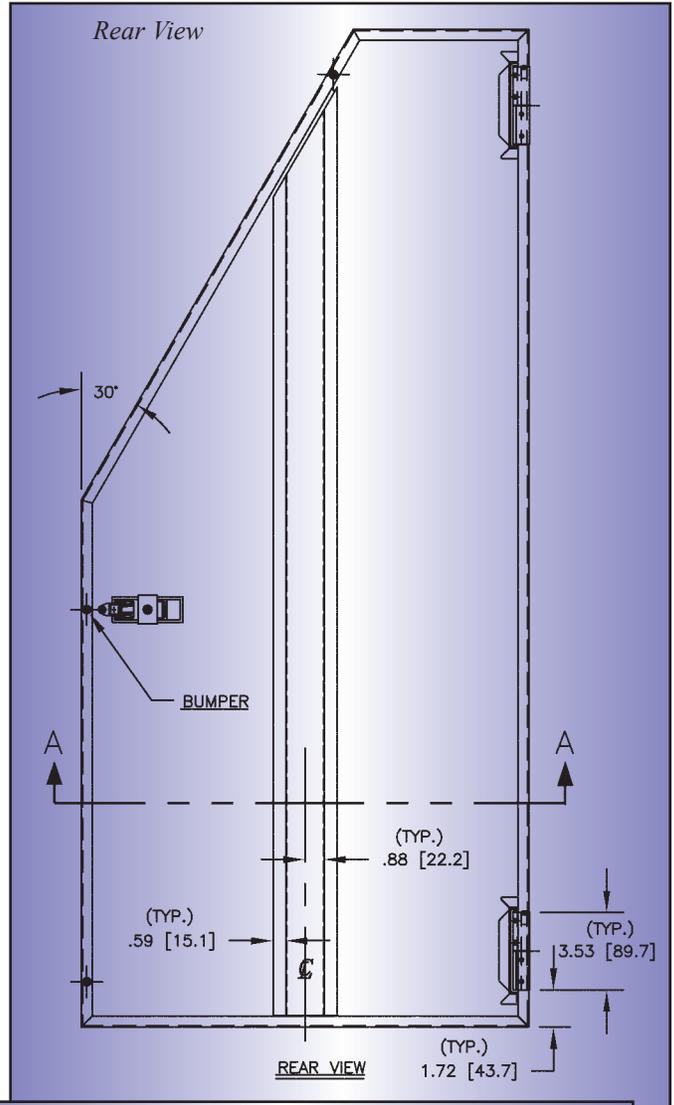
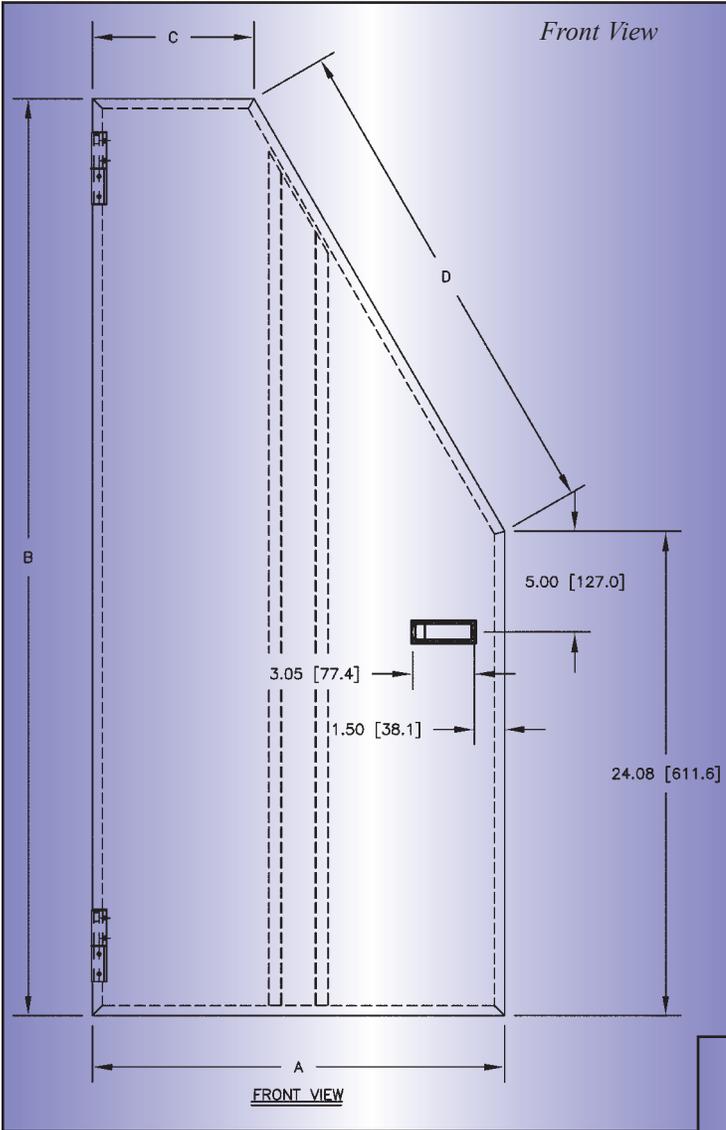


Part No. L.H.	Part No. R.H.	A	B	C	D	Frame Side Panels Will Fit
311-284-010	317-284-010	20.44 (519.1)	39.53 (1004.1)	11.52 (292.5)	17.84 (453.2)	181-314-021 & 181-314-051
311-291-010	317-291-010	25.44 (646.1)	39.53 (1004.1)	16.52 (419.5)	17.84 (453.2)	181-314-031 & 181-314-061
311-341-010	317-341-010	20.44 (519.1)	42.56 (1081.1)	9.77 (248.1)	21.34 (542.1)	181-317-021 & 181-317-051
311-348-010	317-348-010	25.44 (646.1)	42.56 (1081.1)	14.77 (375.1)	21.34 (542.1)	181-317-031 & 181-317-061
311-370-010	317-370-010	20.44 (519.1)	45.59 (1158.1)	8.02 (203.6)	24.84 (631.0)	181-321-021 & 181-321-051
311-377-010	317-377-010	25.44 (646.1)	45.59 (1158.1)	13.02 (330.6)	24.84 (631.0)	181-321-031 & 181-321-061



# Latch Fastened, Hinged Side Panel

For 30° Slope Front Vertical Rack Frame

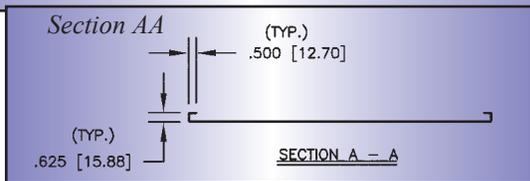
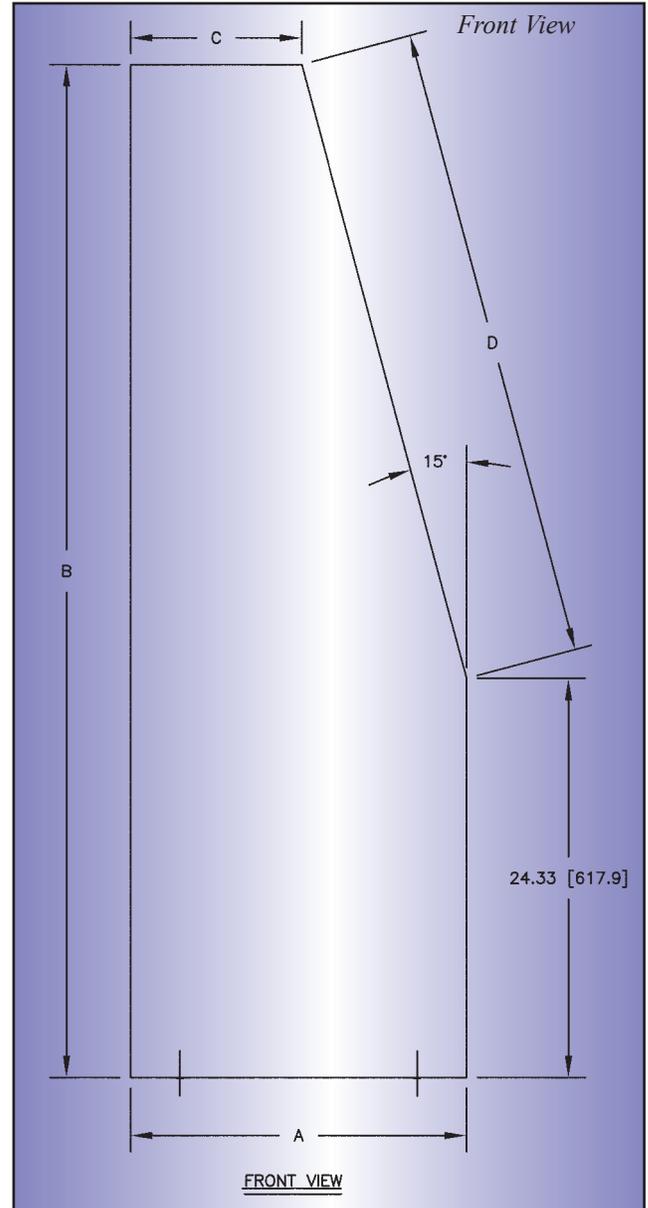
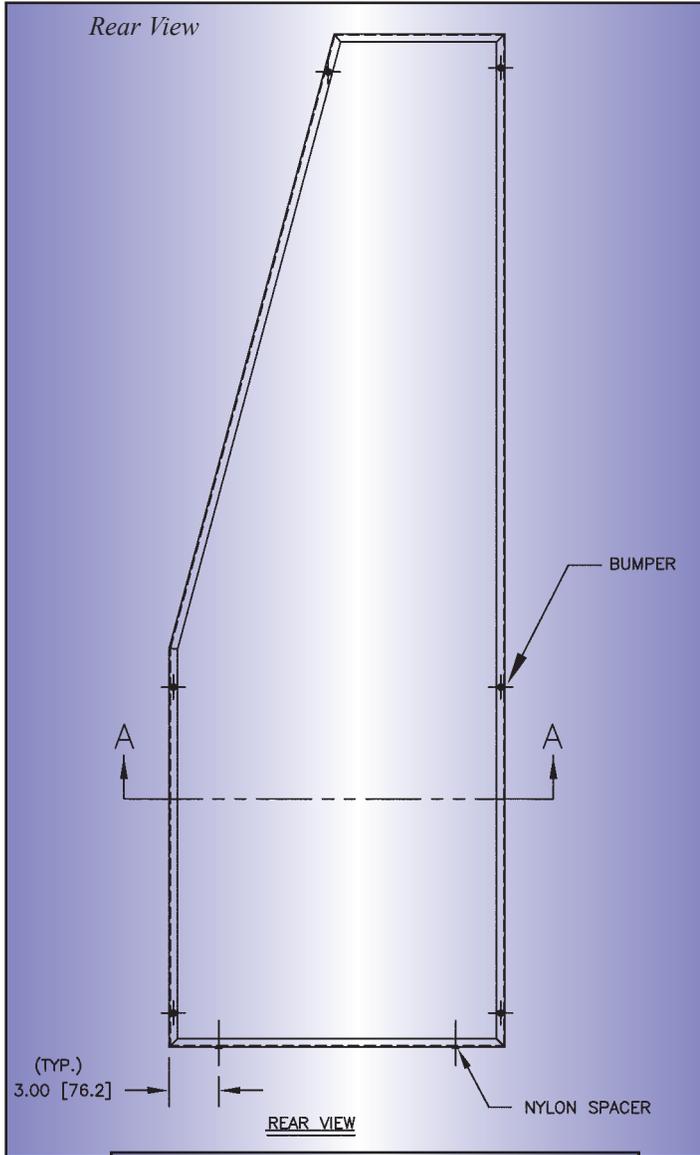


Part No. L.H.	Part No. R.H.	A	B	C	D	Frame Side Panels Will Fit
451-284-010	457-284-010	20.44 (519.1)	39.53 (1004.1)	11.52 (292.5)	17.84 (453.2)	181-314-021 & 181-314-051
451-291-010	457-291-010	25.44 (646.1)	39.53 (1004.1)	16.52 (419.5)	17.84 (453.2)	181-314-031 & 181-314-061
451-341-010	457-341-010	20.44 (519.1)	42.56 (1081.1)	9.77 (248.1)	21.34 (542.1)	181-317-021 & 181-317-051
451-348-010	457-348-010	25.44 (646.1)	42.56 (1081.1)	14.77 (375.1)	21.34 (542.1)	181-317-031 & 181-317-061
451-370-010	457-370-010	20.44 (519.1)	45.59 (1158.1)	8.02 (203.6)	24.84 (631.0)	181-321-021 & 181-321-051
451-377-010	457-377-010	25.44 (646.1)	45.59 (1158.1)	13.02 (330.6)	24.84 (631.0)	181-321-031 & 181-321-061

# Screw Fastened Side Panel

For 15° Slope Front Vertical Rack Frame

Heavy Duty

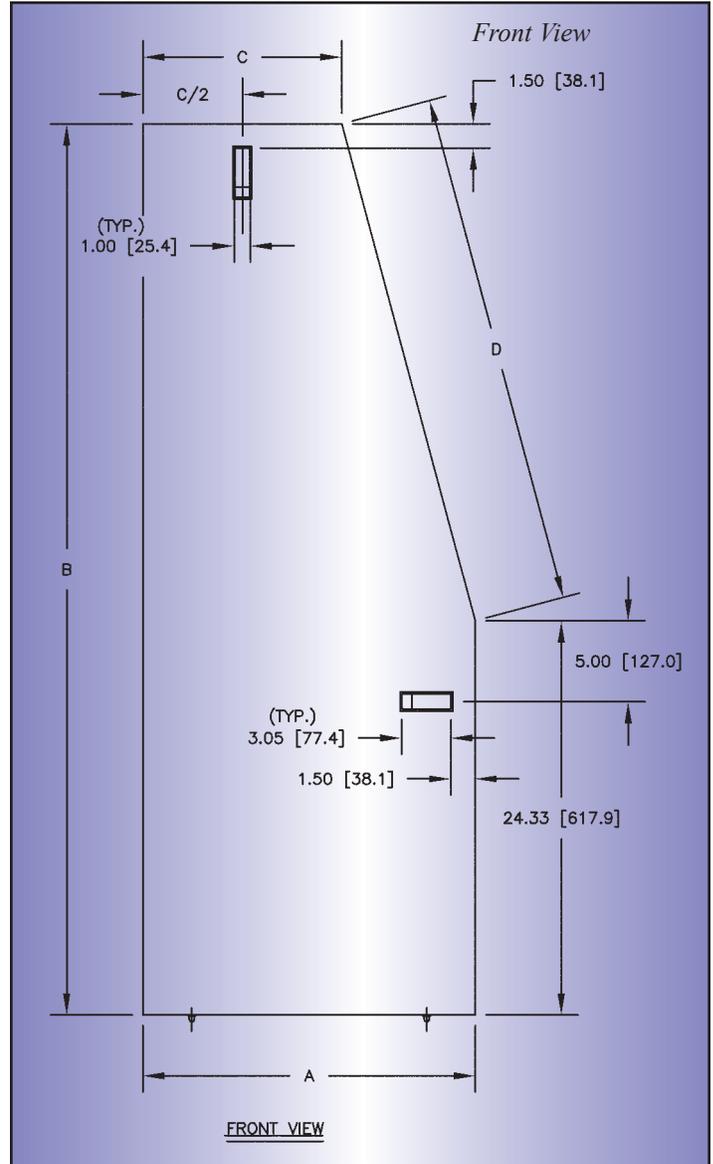
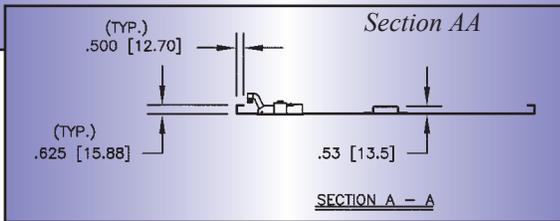
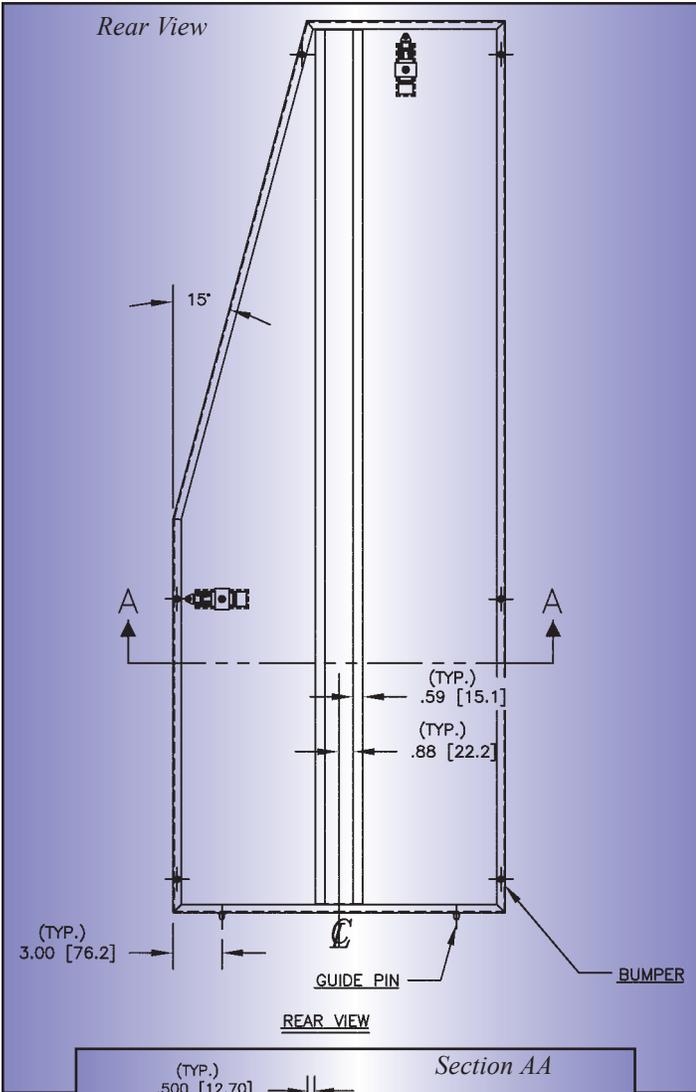


Left Hand Part No.	Right Hand Part No.	A	B	C	D	Frame Side Panels Will Fit These Angular Frames
323-407-010	329-407-010	20.44 (519.1)	48.22 (1224.8)	14.03 (356.4)	24.75 (628.7)	183-121-021 & 183-121-051
323-414-010	329-414-010	25.44 (646.1)	48.22 (1224.8)	19.03 (483.4)	24.75 (628.7)	183-121-031 & 183-121-061
323-506-010	329-506-010	20.44 (519.1)	54.98 (1396.6)	12.22 (310.4)	31.75 (806.5)	183-128-021 & 183-128-051
323-513-010	329-513-010	25.44 (646.1)	54.98 (1396.6)	17.22 (437.4)	31.75 (806.5)	183-128-031 & 183-128-061
323-605-010	329-605-010	20.44 (519.1)	61.75 (1568.5)	10.41 (264.3)	38.75 (984.3)	183-135-021 & 183-135-051
323-612-010	329-612-010	25.44 (646.1)	61.75 (1568.5)	15.41 (391.3)	38.75 (984.3)	183-135-031 & 183-135-061



# Latch Fastened Side Panel

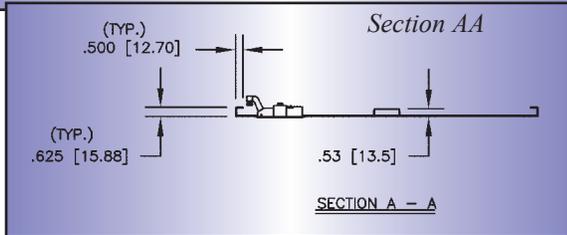
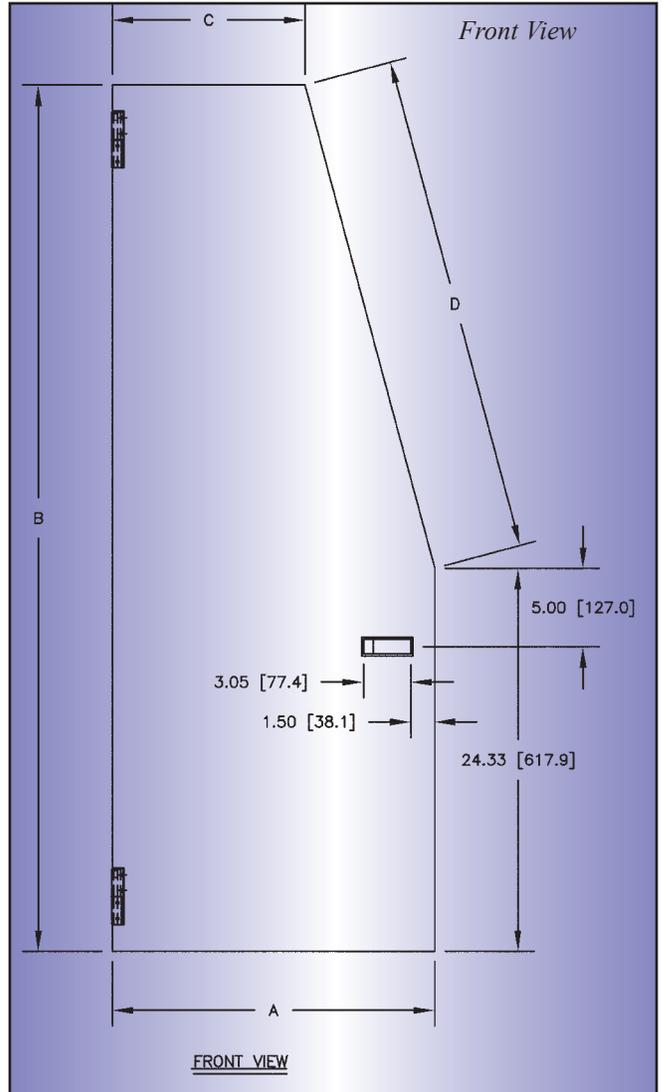
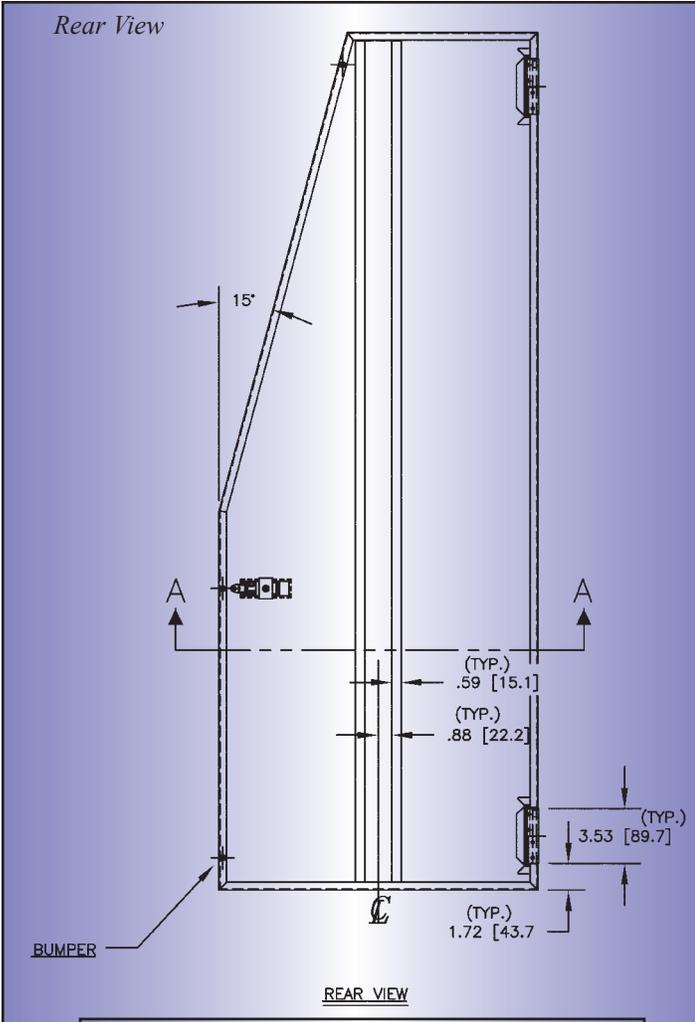
For 15° Slope Front Vertical Rack Frame



Left Hand Part No.	Right Hand Part No.	A	B	C	D	Frame Side Panels Will Fit These Angular Frames
313-407-010	319-407-010	20.44 (519.1)	48.22 (1224.8)	14.03 (356.4)	24.75 (628.7)	183-121-021 & 183-121-051
313-414-010	319-414-010	25.44 (646.1)	48.22 (1224.8)	19.03 (483.4)	24.75 (628.7)	183-121-031 & 183-121-061
313-506-010	319-506-010	20.44 (519.1)	54.98 (1396.6)	12.22 (310.4)	31.75 (806.5)	183-128-021 & 183-128-051
313-513-010	319-513-010	25.44 (646.1)	54.98 (1396.6)	17.22 (437.4)	31.75 (806.5)	183-128-031 & 183-128-061
313-605-010	319-605-010	20.44 (519.1)	61.75 (1568.5)	10.41 (264.3)	38.75 (984.3)	183-135-021 & 183-135-051
313-612-010	319-612-010	25.44 (646.1)	61.75 (1568.5)	15.41 (391.3)	38.75 (984.3)	183-135-031 & 183-135-061

# Latch Fastened and Hinged Side Panel

For 15° Slope Front Vertical Rack Frame

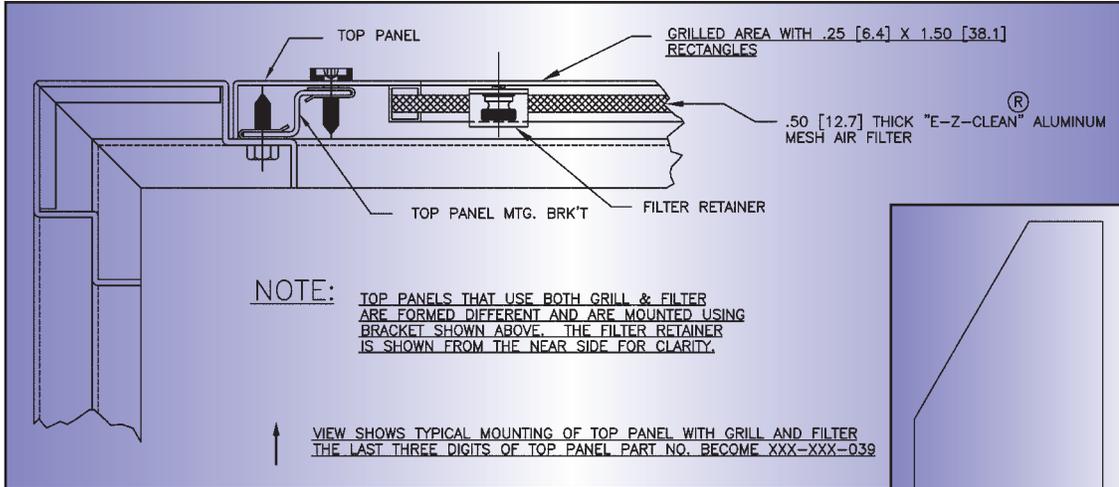


Left Hand Part No.	Right Hand Part No.	A	B	C	D	Frame Side Panels Will Fit These Angular Frames
453-407-010	459-407-010	20.44 (519.1)	48.22 (1224.8)	14.03 (356.4)	24.75 (628.7)	183-121-021 & 183-121-051
453-414-010	459-414-010	25.44 (646.1)	48.22 (1224.8)	19.03 (483.4)	24.75 (628.7)	183-121-031 & 183-121-061
453-506-010	459-506-010	20.44 (519.1)	54.98 (1396.6)	12.22 (310.4)	31.75 (806.5)	183-128-021 & 183-128-051
453-513-010	459-513-010	25.44 (646.1)	54.98 (1396.6)	17.22 (437.4)	31.75 (806.5)	183-128-031 & 183-128-061
453-605-010	459-605-010	20.44 (519.1)	61.75 (1568.5)	10.41 (264.3)	38.75 (984.3)	183-135-021 & 183-135-051
453-612-010	459-612-010	25.44 (646.1)	61.75 (1568.5)	15.41 (391.3)	38.75 (984.3)	183-135-031 & 183-135-061

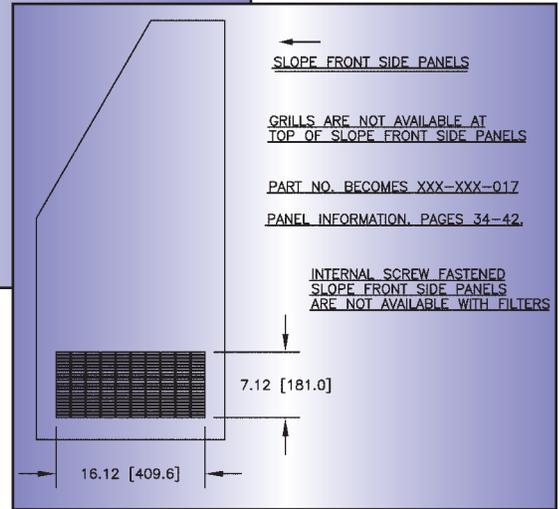


# Grill and Filter Details

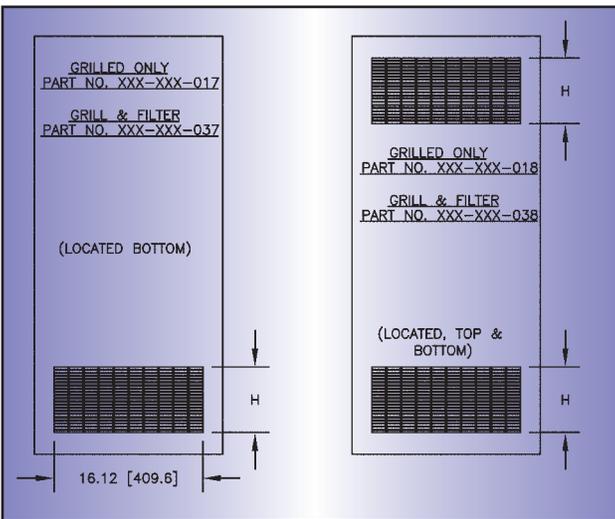
For Top, Front, Side, Rear Panels and Doors



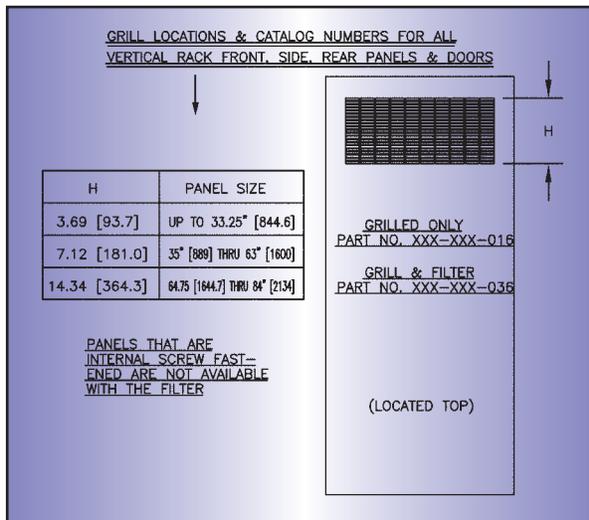
Top Panel with Grill and Filter



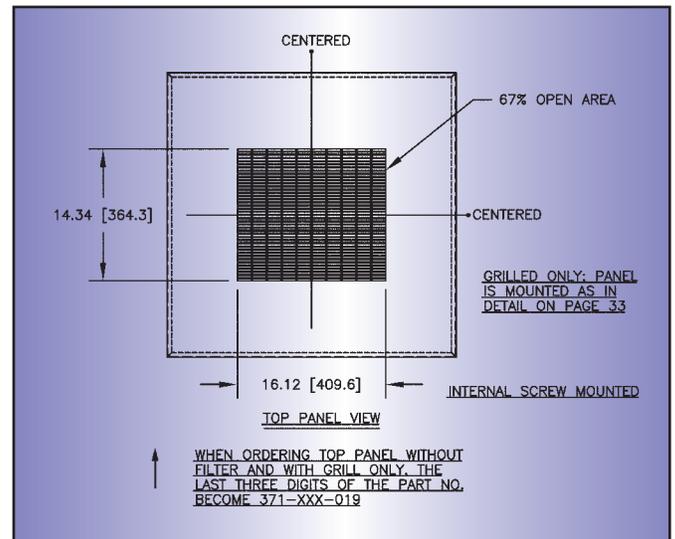
Slope Front Side Panels



Grill at Top and at top and bottom



Top Grill

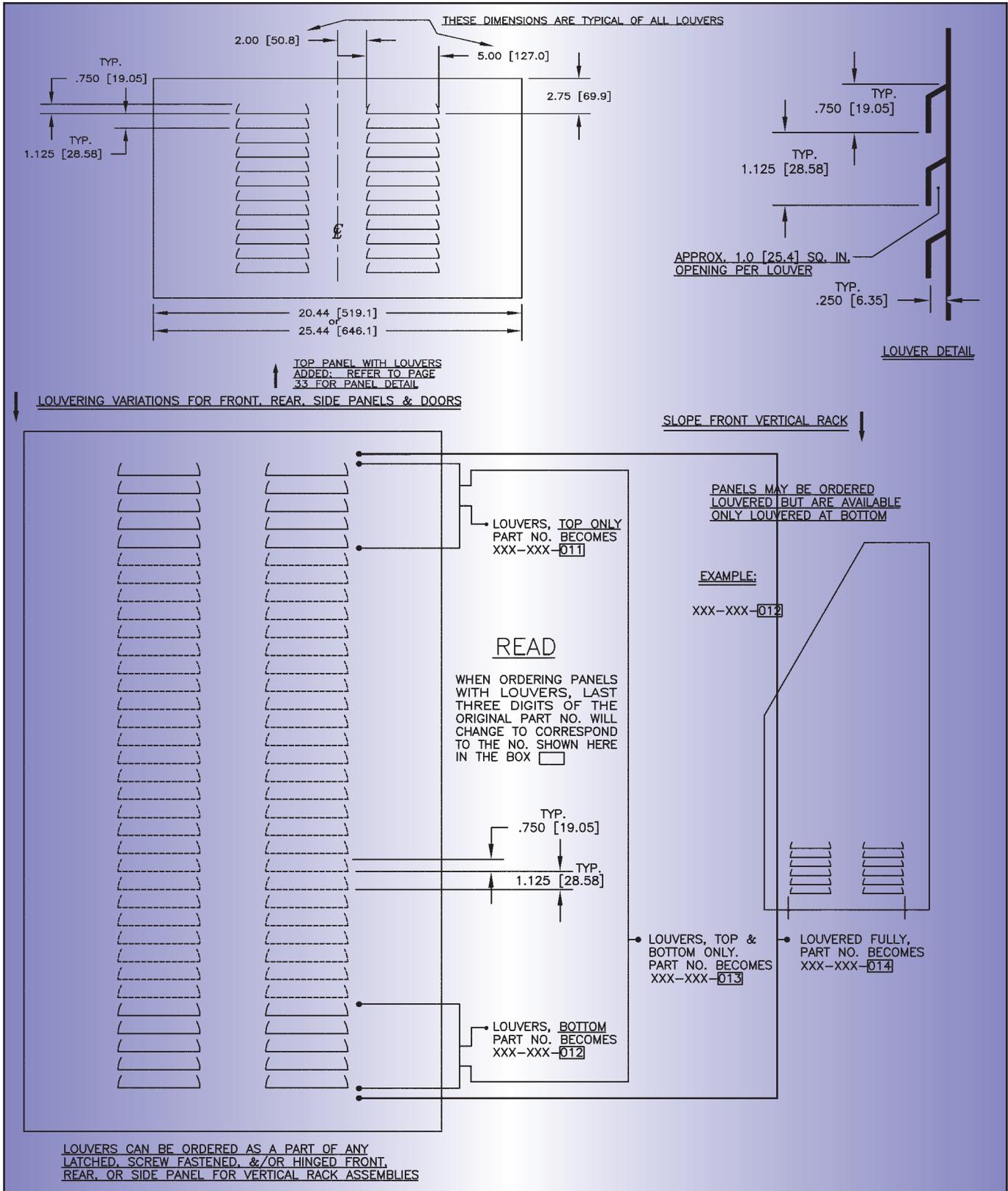


Top Panel View

H	Panel Size
3.69 (93.7)	Up To 33.25" (844.6)
7.12 (181.0)	35" (889) Thru 63" (1600)
14.34 (364.3)	64.75" (1644.7) Thru 84" (2134)

# Louvers Details

## For Front, Rear, Side and Door Panels





# Shielded Enclosures from Equipto Electronics

Complex electronic systems often have an unwelcome side effect: electro-magnetic and radio frequency interference (EMI/RFI). More than just a nuisance, EMI/RFI can interfere with the operation of critical communication, computer and command and control systems.

As new equipment reaches higher and higher levels of performance and complexity, EMI/RFI can become a larger problem. Packaging these types of electronic systems can be a difficult and expensive design problem. Equipto Electronics has many years of experience in the design and production of shielded enclosures meeting requirements from commercial through military levels of performance.

Equipto Electronics offers a wide variety of standard shielded enclosures in many sizes. Since our shielded enclosures are based on our proven Heavy Duty frame design, a wide variety of accessories and options are available.

## **Shielded Enclosures-What's important?**

### **Shielding Performance**

Shielding performance is measured by attenuation. Attenuation is the difference in signal strength between the inside and the outside of the enclosure and is measured in decibels (dB). Attenuation characteristics of an enclosure will vary at various frequencies. Mil. Std. 285 is the most commonly used test method for developing the shielding effectiveness profile of an enclosure. In order to accurately specify a shielded enclosure, there are two basic questions that must be answered:

#### ***How much attenuation is needed?***

That is, by how much do you need to reduce the signal strength as it passes through the enclosure?

#### ***Which frequencies are problems?***

In order to assure effective shielding performance, the problem frequencies should be known. Just because an enclosure has EMI gaskets doesn't mean that it will shield the particular frequencies that cause you problems. Shielding performance varies widely from design to design and an enclosure manufacturer who has experience in this area can help you "fine tune" your enclosure choice to provide the most effective shielding at the most reasonable cost. Typical enclosure performance profiles are based on testing to Mil. Std. 285, which gives results for frequencies from 10K Hz to 10GHz. Other testing may be necessary for applications outside this frequency range.

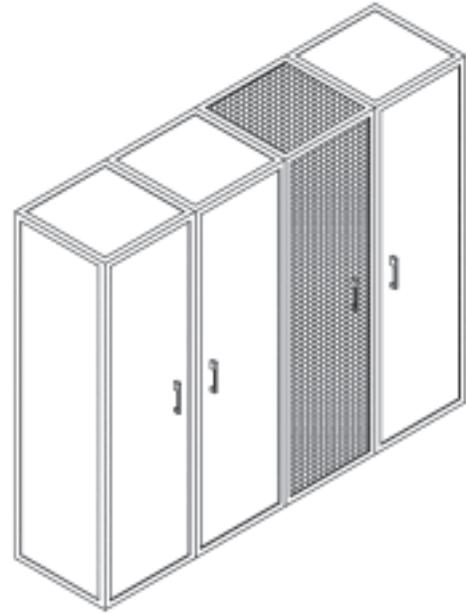


*EMI/RFI Cabinet Systems*

# Shielded Enclosures from Equipto Electronics

## Product Features

- ▶ Constructed of 14-gauge multi-formed channel frame sides for greater load carrying capacity
- ▶ Double ledge, double plane corner construction
- ▶ Recessed ledge for mounting doors eliminates sag and shipping damage
- ▶ EMI shielded windows available by consulting factory
- ▶ Vertically adjustable or completely removable panel mounting angle support channels
- ▶ Optional cooling fans or blowers
- ▶ Available in 19", 24" and 30" panel widths and 17", 24", 29" and 36" overall depths
- ▶ The vertical panel space ranges from 21" to 84" with ten available heights



*Mixed assembly with Standard and EMI/RFI Cabinets*

Mixing standard and EMI/RFI cabinets provides installation flexibility by enabling sensitive electronic or emission-prone systems to be co-located with non-shielded systems utilizing one cabinet design with no modifications.



*EMI/RFI door and cabinet*

Frames, Panels and Doors are constructed of magnetic stainless steel material which is of the 400 Series. This allows a higher degree of low-frequency shielding over non-magnetic materials like aluminum, plastic and zinc. The high shielding effectiveness of metal materials with corrosion and oxide-free interfaces and galvanic compatibility with the beryllium copper and silver coated gasketing.



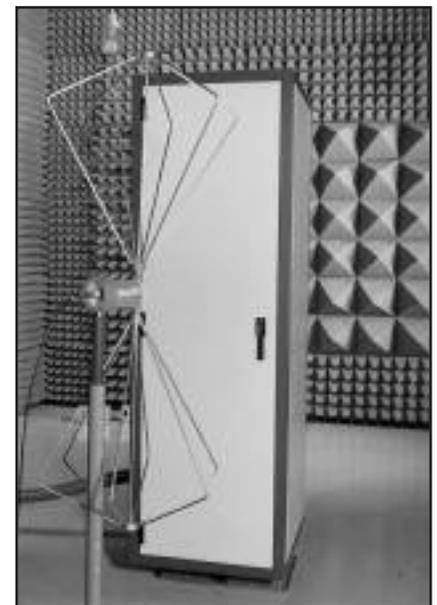
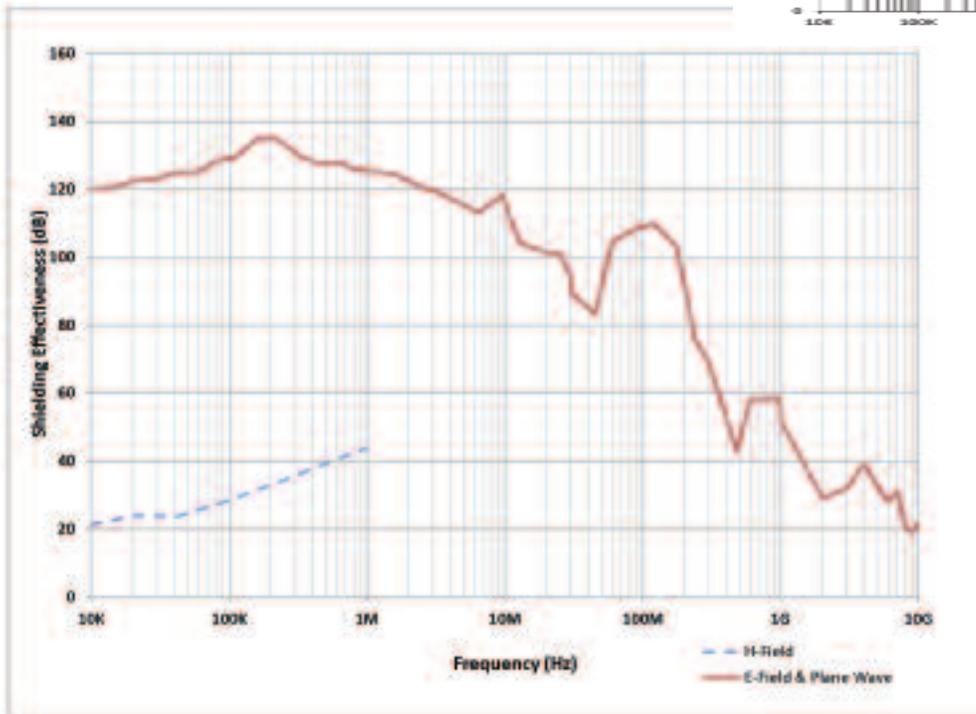
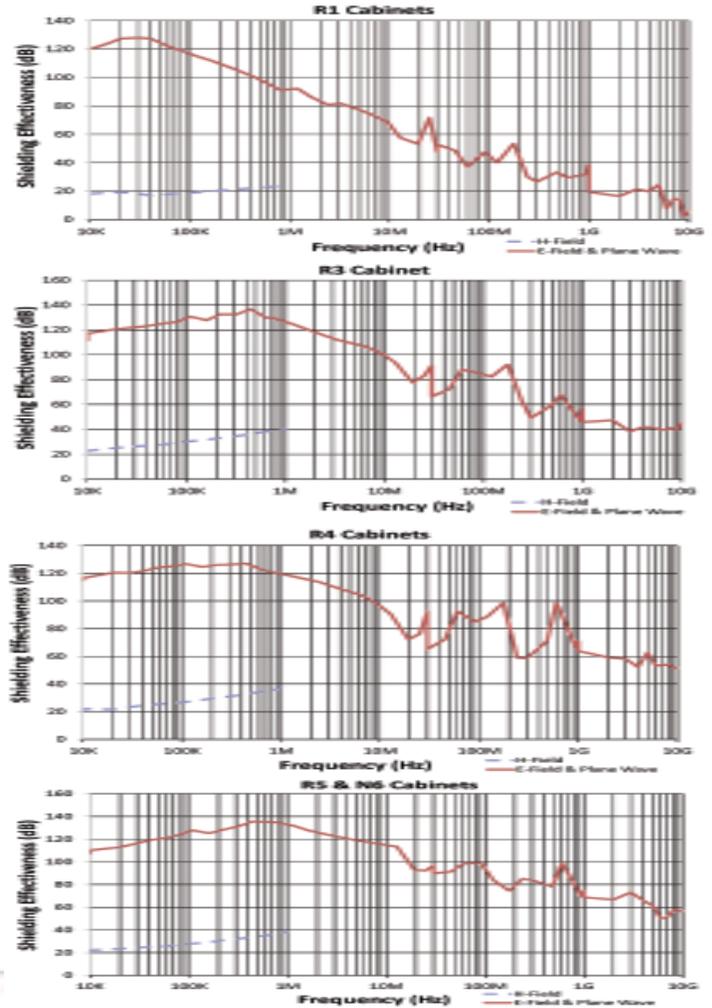
*Double Ledge, Double Plane  
Corner construction*



# EMI/RFI Shielding Performance Tests

Equipto Electronics offers enclosures that allow a choice between five different levels of demonstrated shielding performance. By comparing the performance of various configurations, you can select the enclosure that fits your specific performance requirements.

- ▶ **Standard Heavy Duty** – Utilizes the inherent shielding capabilities of the standard, non-gasketed Heavy Duty cabinet.
- ▶ **R1** – cabinet utilizes 400 series stainless steel. Add gaskets to the R1 version to fit your requirements.
- ▶ **FCC** – Uses the cold-rolled steel Heavy Duty cabinet as a basis, adds tin babbitt metallizing and silver braid foam gaskets to provide shielding for many commercial applications.
- ▶ **R3** – A 400 series stainless steel cabinet with full beryllium copper gaskets for most military, TEMPEST and RFI requirements.
- ▶ **R4** – Uses 400 series stainless steel cabinet with full gaskets designed for shock and vibration applications.
- ▶ **R5** – A 400 series stainless steel cabinet with a combination of 2 gasket types to block mid and high frequency levels for military and TEMPEST applications. This is also effective against various levels of EMP intrusion.



## How to Order EMI/RFI or FCC Cabinets and Enclosure Systems

1. Select a frame size and style (Vertical Rack or Sloped Front).
2. Select method of closure for sides, bottom, top, rear and front.
3. Select style of closure (such as plain, honeycomb grill, etc.).
4. Select accessories (such as casters, drawers, dollies, etc.).

### The Frame

Consult Equipto catalog Heavy Duty Modular Electronic Enclosures section for size selection of frame, doors and panels required. When you have selected your frame, for EMI/RFI replace the first 3 digits with **R1V**, **R3V**, **R4V** or **R5V** and for FCC change the first 3 digits to FC. For slope frames replace the 'V' portion of the RFQ prefix with an 'S'. In all cases you may still use the frame options shown on page A4 by adding the frame option choice after the RFI or FCC digit changes.

### The Panels and Doors

Once you have selected your frame, all six openings must be filled with doors and panels. Select your doors and panels from parts numbers listed in Section A of this catalog.

Add the following Prefix / Suffix as required:

Panels - prefix of **R** for EMI/RFI prefix of **FC** for FCC

Doors - prefix of **RS** for EMI/RFI prefix of **FC** for FCC

(the S of the above prefix replaces the '0' in the door P/N)

Doors, Top Panels, Bottom Panels and Side Panels for **R4** or **R5** racks need a suffix of -45 as well

### Grilled Openings

Grilled openings for air flow in panels and doors are available with brass honeycomb EMI/RFI filters. Honeycomb core is combined with beryllium copper gasket in contact with the stainless steel doors and panels to give a good electrical seal, while being galvanically compatible. To order a grill and honeycomb filter in a top or bottom panel, use suffix style **R39**. For doors and panel grill options, see table below.

Panel Type	Grill and EMI Filters	Double Filters Air and EMI
Top Only	R36	D36
Bottom Only	R37	D37
Top and Bottom	R38	D38

### Input / Output Panels

Input/Output Panels fit into the frame recess, flush with the frame surface, below a short door or rear panel. I/O panels may be customized for particular cutouts and connectors and delivered to order. For ordering plain I/O panels for customer rework, see chart.

\* Add frame prefix as panel suffix to insure correct gasketing configuration. Example: For R3 shielding - R402-107-010-R3

Visit our web site at [www.equiptoelec.com](http://www.equiptoelec.com) for the latest technical data or a price quote

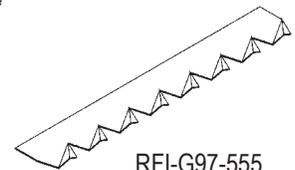
## Gaskets

When gasketed cabinets are ordered, the factory will supply and install all necessary gasketing. For field installation, additional or replacement gasketing order gasketing shown below and specify lineal feet required.

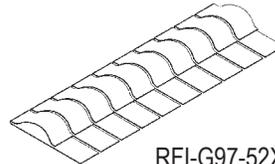
Nickel/copper covered nylon, specify lineal feet.



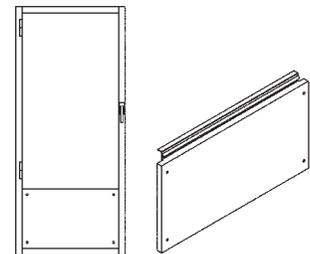
RFI-G97-SSG  
Sold in 7' lengths



RFI-G97-555  
For use between frames in multiple frame joining furnished in 24" lengths



RFI-G97-52X  
For all frame openings furnished in 16" lengths



Plain I / O Panels For EMI / RFI Shielding		
Panel Height "H" Dim.	Panel Width=19"	Panel Width=24"
7"	R402-107-010*	R402-207-010*
8 3/4"	R402-108-010*	R402-208-010*
10 1/2"	R402-110-010*	R402-210-010*
12 1/4"	R402-112-010*	R402-212-010*
14"	R402-114-010*	R402-214-010*
15 3/4"	R402-115-010*	R402-215-010*
17 1/2"	R402-117-010*	R402-217-010*
19 1/4"	R402-119-010*	R402-219-010*
21"	R402-121-010*	R402-221-010*

Plain I/O Panels For FCC Shielding		
Panel Height "H" Dim.	Panel Width=19"	Panel Width=24"
7"	FC402-107-010	FC402-207-010
8 3/4"	FC402-108-010	FC402-208-010
10 1/2"	FC402-110-010	FC402-210-010
12 1/4"	FC402-112-010	FC402-212-010
14"	FC402-114-010	FC402-214-010
15 3/4"	FC402-115-010	FC402-215-010
17 1/2"	FC402-117-010	FC402-217-010
19 1/4"	FC402-119-010	FC402-219-010
21"	FC402-121-010	FC402-221-010

For other I/O applications such as through top or bottom of cabinet, see page A118



# EMI/RFI Performance

## Long-term Performance

Long-term performance should be a major factor in your enclosure selection. An enclosure that develops leaks over time may become apparent only after other system problems develop from stray signals. Investing in an enclosure that has been designed for long-term performance will result in fewer problems in the future. Three significant factors affect the long-term performance of a shielded enclosure:

- ▶ **Enclosure Design** – The basic design of the sheet metal components should contribute to shielding performance. Equipto Electronics’ Heavy Duty enclosures serve as the basis for our shielded enclosures and provide a significant level of shielding, even without gaskets, due to the double ledge, double plane construction of the frame, flush side panels and door design. The inherent design characteristics of the Heavy Duty frame allow it to be adapted easily to additional gasket and door configurations and its strength makes it adaptable to other dynamic performance requirements.
- ▶ **Materials Compatibility** – Because shielded enclosures must be electrically conductive to operate effectively, using dissimilar materials can cause corrosion and loss of shielding performance. The corrosion is an electro-chemical reaction between the two dissimilar metals which significantly impairs the electrical conductivity between the two metals and is a cause of leaks that develop over a period of time. The easiest way to control galvanic corrosion is to specify enclosures that use materials that are as galvanically similar as possible. Materials used in Equipto Electronics shielded enclosures have been carefully specified to provide the best possible compatibility and durability. Plated frames and panels are not used, due to susceptibility to damage in the manufacturing or the system building process as well as compatibility issues.
- ▶ **Gasket Durability** – In addition to frame design and frame material compatibility gasket materials must be carefully specified. Since the gasket is a critical component in assuring electrical conductivity between removable panels and doors, its profile is also critical.
  - ▶ **Materials** – are they galvanically compatible? The gasket/enclosure electrical conductivity must be maintained in order for the enclosure to provide sustained acceptable attenuation. Equipto Electronics has taken special care to utilize materials that are galvanically compatible and specified for long-term use. While all dissimilar materials will have some corrosive effect on each other, materials used in our EMI/RFI cabinets produce the least amount of deterioration of any readily available group of materials.

## Metals Compatibility

To avoid galvanic action between metals that contact each other, refer to the chart below. Each group overlaps, making it possible to use materials from adjacent groups safely.

### Group 1 (Metal Groupings)

Gold ▶ Platinum ▶ Gold/Platinum Alloys ▶ Rhodium ▶ Graphite  
Palladium ▶ Silver ▶ Silver Alloys ▶ Titanium

### Group 2 (Metal Groupings)

Rhodium ▶ Graphite ▶ Palladium ▶ Silver ▶ Silver Alloys  
Titanium ▶ Nickel ▶ Monel ▶ Cobalt ▶ Nickel and Cobalt Alloys  
Nickel Copper Alloys ▶ AISI 300 Series Steels ▶ A286 Steel

### Group 3 (Metal Groupings)

Titanium ▶ Nickel ▶ Monel ▶ Cobalt ▶ Nickel and Cobalt Alloys  
Nickel Copper Alloys ▶ Copper ▶ Bronze ▶ Brass ▶ Copper  
Alloys ▶ Beryllium Copper ▶ Silver Solder ▶ Commercial Yellow  
Brass and Bronze ▶ Leaded Brass and Bronze ▶ Naval Brass  
400 Series Stainless Steel ▶ Chromium Plate ▶ Tungsten  
Molybdenum

### Group 4 (Metal Groupings)

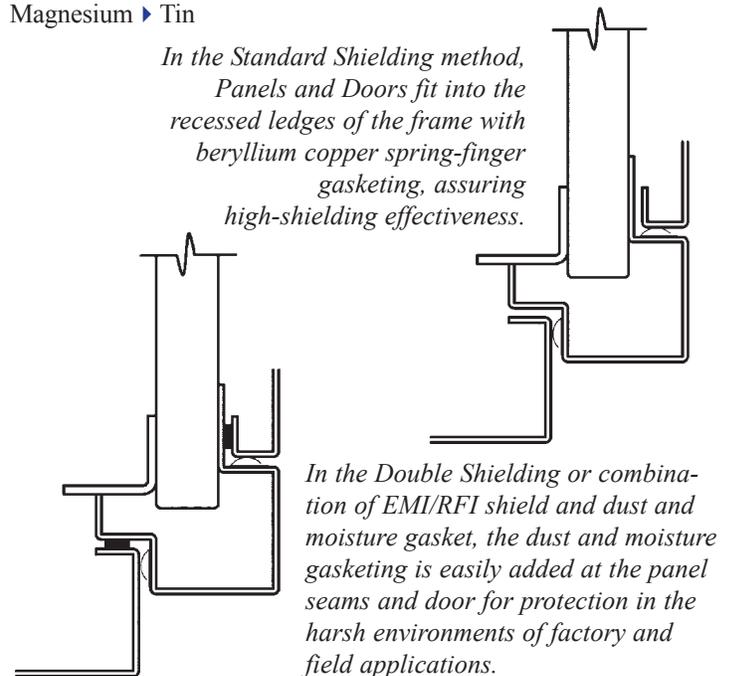
Leaded Brass and Bronze ▶ Naval Brass ▶ Steels AISI, 431, 440,  
410, 416, 420, AM 355, PH hardened ▶ Chromium Plate  
Tungsten ▶ Molybdenum ▶ Tin-Indium ▶ Tin Lead Solder ▶ Lead  
Aluminum 2000/7000 Series ▶ Alloy and Carbon Steel

### Group 5 (Metal Groupings)

Chromium Plate ▶ Tungsten ▶ Molybdenum ▶ Steels AISI, 410,  
416, 420, Alloy and Carbon ▶ Tin-Indium ▶ Tin Lead Solder  
Lead ▶ Aluminum ▶ All Aluminum Alloys ▶ Cadmium ▶ Zinc  
Galvanized Steel ▶ Beryllium ▶ Zinc Base Castings

### Group 6 (Metal Groupings)

Magnesium ▶ Tin



- ▶ **Compression Set** – Compression set affects shielding performance because gaskets that have taken a “set” do not properly flex to effectively seal around irregularities on the sealing surfaces. Equipto Electronics uses finger stock gaskets in a “wiping” action that minimizes the effect of compression set. Where foam is used as a base gasket material, compression is controlled by hardware design that allows proper contact, but prevents damage from over compression.
- ▶ **Physical Gasket Interface w/enclosure** – The gasket / enclosure interface is critical to long-term performance. The design of the enclosure and the choice of gaskets must consider the proper compression required for the gasket design. Various gasket profiles are used to achieve the best possible interface with the enclosure components. Equipto Electronics utilizes multiple hinges and latch points on doors and multiple compression points on panels in order to provide a balanced pressure on the gasket material. R-3 and R-5 enclosures utilize special door latches to provide proper gasket compression and minimize closing force.



Beryllium copper spring-finger gasketing assures high shielding integrity without requiring adjustment to compensate for a compression set. When double gasketing is required, nickel/copper coated gasketing is added in the compression flange of the frame.



Sag-Proof Doors

Because of the double ledge construction of all Equipto Electronics Enclosure frames, all doors are mounted extended from the frame surface and recessed within the protective perimeter of the frame itself. All doors are mounted with heavy duty, separable, extruded aluminum hinges having a 1/4” stainless steel pin and a nylon anti-friction bearing. This minimizes damage in shipping and allows mounting of equipment directly on doors where required. Doors are easily removable and Extended Doors allow room for protruding buttons and handles.



Door Latch

New leak-proof hinges and a triple camming, high pressure, one hand, easy operation, latching system prevent loss of shielding effectiveness. “Black Epoxy Finish”



# EMI/RFI Performance

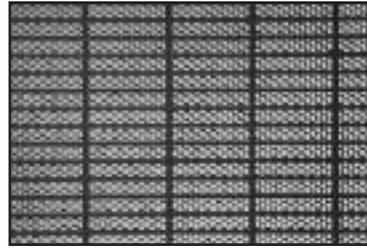
## Other Performance Concerns

Shielded enclosures may be expected to perform additional functions in the protection of equipment. Some of these may be:

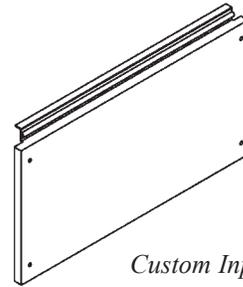
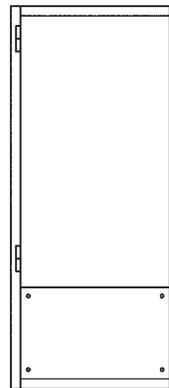
- ▶ **Seismic, shock and vibration requirements** – If your requirements include EMI/RFI shielding as well as dynamic performance requirements, Equipto Electronics shielded enclosures can do the job for you. Our ability to combine high levels of shielding with tough motion requirements gives you additional flexibility in enclosure selection. A properly specified enclosure can meet many different performance requirements. Our unique Heavy Duty frame design allows you to meet a variety of shielding and vibration requirements using enclosures with nearly identical appearance. We regularly work with these tough performance requirements, as well as high level shielding demands:
  - ▶▶ Seismic Zone 4, NEBS GR 63 compliance, the most severe earthquake requirements
  - ▶▶ Nuclear power plant specifications
  - ▶▶ Mil-Spec 810 – rough terrain
  - ▶▶ Mil-Spec 901 – shipboard vibration
- ▶ **Thermal Management** – Shielding requirements can complicate already tough thermal management challenges. Our experience with both shielding and thermal management can help you achieve the required balances.
- ▶ **Cable Entry and Exit** – There are many options available for getting power and signal cables into your shielded enclosure. Custom I/O panels and compartments assure shielding integrity.
- ▶ **Equipment Visibility** – Shielded windows are available to allow visibility into the enclosure, but still maintain shielding effectiveness. The type of material used for the window and the method of its containment in the window or panel will be especially important to the integrity of the enclosure.
- ▶ **Weight Carrying Capacity** – Will the frame stand up to your weight loads without flexing? A frame that flexes will compromise gasket / enclosure interfaces and shielding performance. Equipto Electronics Heavy Duty frames are designed to support a static weight load of 3500 pounds.



Shielded Window



Honeycomb EMI/RFI filter



Custom Input/Output Panel

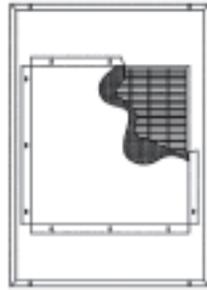
## Real World Practicality

- ▶ **Value** – Because Equipto Electronics offers a wide variety of shielded enclosures, you don't have to buy more performance than you need, but are still assured of an enclosure that will deliver long-term performance.
- ▶ **Accessories** – Our large assortment of accessories for the Heavy Duty cabinet make your installation easier and neater.
- ▶ **Engineering Support** – Don't see exactly what you want? Our broad base of knowledge and experience can help you work through your particular application challenges. Our willingness to modify or develop custom designs to meet your particular requirements will make your job easier and faster. Drawings and electronic file exchange can speed the development process and assure accuracy.

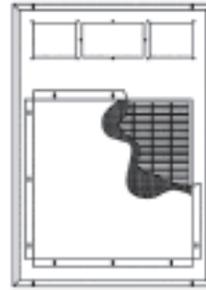
# Top and Bottom Panel Options for EMI/RFI Frames



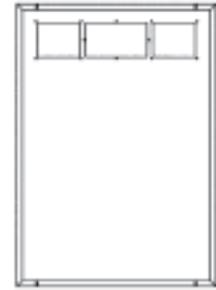
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Plain



Suffix (-R39)  
Grill and Honeycomb

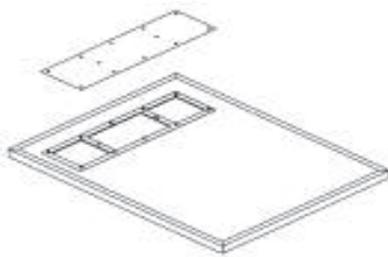


Suffix (-RBE)  
Grill, Honeycomb, and I/O Cutouts\*



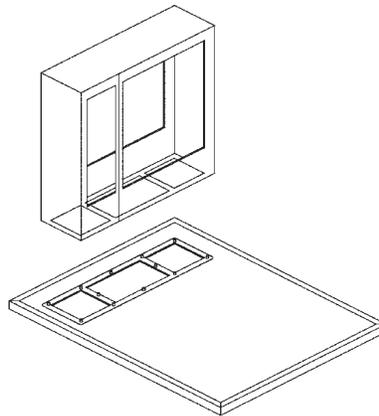
Suffix (-RIO)  
I/O Cutouts\*

\* See below for methods to cover I/O Openings



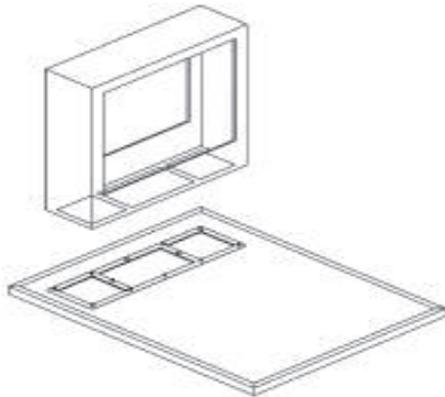
### Flat Cover Plate

19" P.O. RBE-100-003  
24" P.O. RBE-200-003



### Divided Compartment

Panel Hght.	19" P.O.	24" P.O.
7"	RBE-107-002	RBE-207-002
10 1/2"	RBE-110-002	RBE-210-002
14"	RBE-114-002	RBE-214-002
17 1/2"	RBE-117-002	RBE-217-002
21"	RBE-121-002	RBE-221-002



### Single Compartment

Panel Hght.	19" P.O.	24" P.O.
7"	RBE-107-001	RBE-207-001
10 1/2"	RBE-110-001	RBE-210-001
14"	RBE-114-001	RBE-214-001
17 1/2"	RBE-117-001	RBE-217-001
21"	RBE-121-001	RBE-221-001

### Input and Output Panels

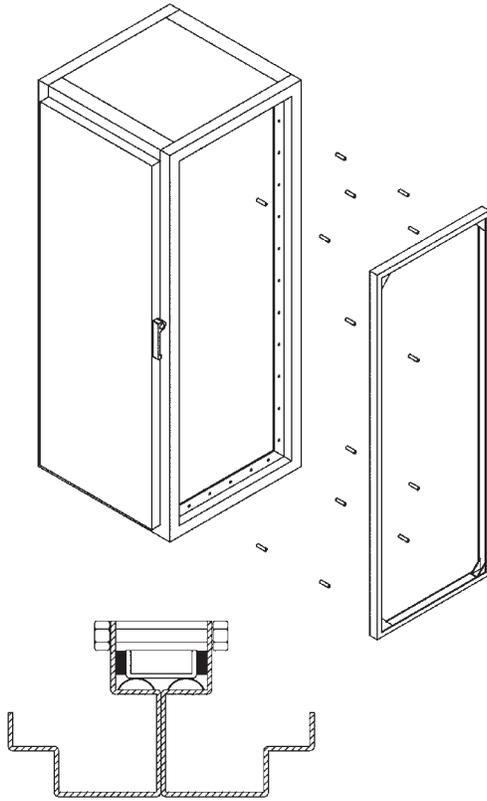
- ▶ All Fully Shielded
- ▶ Compartments have front and rear removable panels for cable connections, Storage of EMI Power Filters and Access
- ▶ Double compartments offer separation of power and communication cables. Also accommodate power EMI filters
- ▶ All Panels can be customized punched to fit your connectors

### Panels to Cover Compartment Openings Two Required Per Compartment

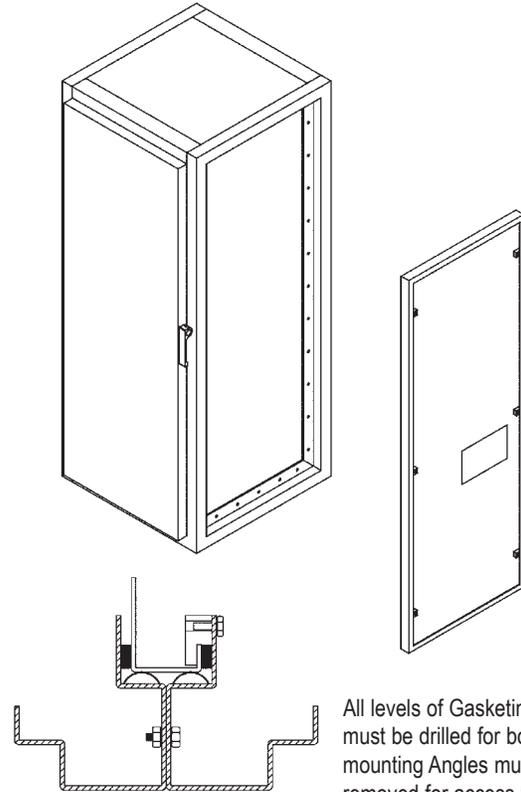
Panel Height	Compartment Width				
	5"	12"	17"	18"	23"
7"	RBP-005-007	RBP-012-007	RBP-017-007	RBP-018-007	RBP-023-007
10 1/2"	RBP-005-010	RBP-012-010	RBP-017-010	RBP-018-010	RBP-023-010
14"	RBP-005-014	RBP-012-014	RBP-017-014	RBP-018-014	RBP-023-014
17 1/2"	RBP-005-017	RBP-012-017	RBP-017-017	RBP-018-017	RBP-023-017
21"	RBP-005-021	RBP-012-021	RBP-017-021	RBP-018-021	RBP-023-021



# Methods of Joining Multiple Bay EMI/RFI Shielded Cabinets



Joining Frame Open Between Bays



Divider Panel Closed Between Bays

All levels of Gasketing frames must be drilled for bolting. Panel mounting Angles must be removed for access to bolts.

Vertical Rack RFI Joining Frame Kit Part No.				
Panel Space	Cabinet Depth			
	17 1/16"	24 1/16"	29 1/16"	36 1/16"
21"	RJK-V21-017	RJK-V21-024	RJK-V21-029	RJK-V21-036
28"	RJK-V28-017	RJK-V28-024	RJK-V28-029	RJK-V28-036
35"	RJK-V35-017	RJK-V35-024	RJK-V35-029	RJK-V35-036
42"	RJK-V42-017	RJK-V42-024	RJK-V42-029	RJK-V42-036
49"	RJK-V49-017	RJK-V49-024	RJK-V49-029	RJK-V49-036
56"	RJK-V56-017	RJK-V56-024	RJK-V56-029	RJK-V56-036
63"	RJK-V63-017	RJK-V63-024	RJK-V63-029	RJK-V63-036
70"	RJK-V70-017	RJK-V70-024	RJK-V70-029	RJK-V70-036
77"	RJK-V77-017	RJK-V77-024	RJK-V77-029	RJK-V77-036
84"	RJK-V84-017	RJK-V84-024	RJK-V84-029	RJK-V84-036

Vertical Rack RFI Divider Frame Kit Part No.				
Panel Space	Cabinet Depth			
	17 1/16"	24 1/16"	29 1/16"	36 1/16"
21"	RDP-V21-017	RDP-V21-024	RDP-V21-029	RDP-V21-036
28"	RDP-V28-017	RDP-V28-024	RDP-V28-029	RDP-V28-036
35"	RDP-V35-017	RDP-V35-024	RDP-V35-029	RDP-V35-036
42"	RDP-V42-017	RDP-V42-024	RDP-V42-029	RDP-V42-036
49"	RDP-V49-017	RDP-V49-024	RDP-V49-029	RDP-V49-036
56"	RDP-V56-017	RDP-V56-024	RDP-V56-029	RDP-V56-036
63"	RDP-V63-017	RDP-V63-024	RDP-V63-029	RDP-V63-036
70"	RDP-V70-017	RDP-V70-024	RDP-V70-029	RDP-V70-036
77"	RDP-V77-017	RDP-V77-024	RDP-V77-029	RDP-V77-036
84"	RDP-V84-017	RDP-V84-024	RDP-V84-029	RDP-V84-036

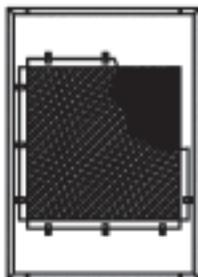
15B & 30B Sloped Front Console RFI Joining Frame Kit Part				
Hgt. Of Sloped Opening	15B Slope		30B Slope	
	Cabinet Depth			
	24 1/16"	29 1/16"	24 1/16"	29 1/16"
14"	N/A	N/A	RJK-S14-324	RJK-S14-329
17 1/2"	N/A	N/A	RJK-S17-324	RJK-S17-329
21"	RJK-S21-124	RJK-S21-129	RJK-S21-324	RJK-S21-329
28"	RJK-S28-124	RJK-S28-129	RJK-S28-324	RJK-S28-329
35"	RJK-S35-124	RJK-S35-129	RJK-S35-324	RJK-S35-329

15B & 30B Sloped Front Console RFI Divider Frame Kit Part				
Hgt. Of Sloped Opening	15B Slope		30B Slope	
	Cabinet Depth			
	24 1/16"	29 1/16"	24 1/16"	29 1/16"
14"	N/A	N/A	RDP-S14-324	RDP-S14-329
17 1/2"	N/A	N/A	RDP-S17-324	RDP-S17-329
21"	RDP-S21-124	RDP-S21-129	RDP-S21-324	RDP-S21-329
28"	RDP-S28-124	RDP-S28-129	RDP-S28-324	RDP-S28-329
35"	RDP-S35-124	RDP-S35-129	RDP-S35-324	RDP-S35-329

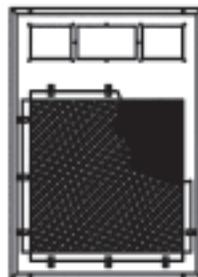
# Top and Bottom Panel Options for FCC Frames



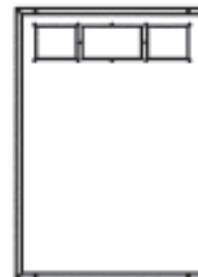
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Suffix (-F39)  
Grill and Filter

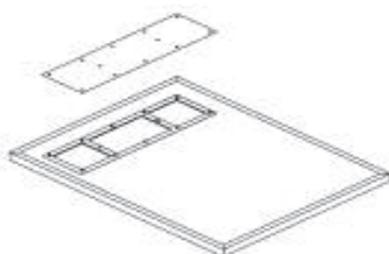


Suffix (-FBE)  
Grill, Filter, and I/O Cutouts\*

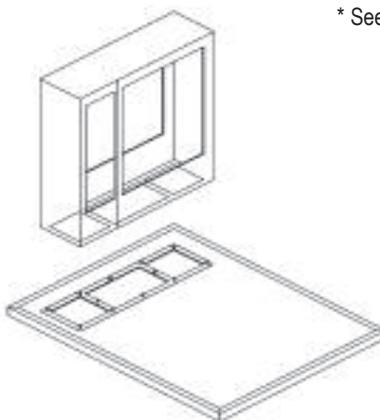


Suffix (-FIO)  
I/O Cutouts\*

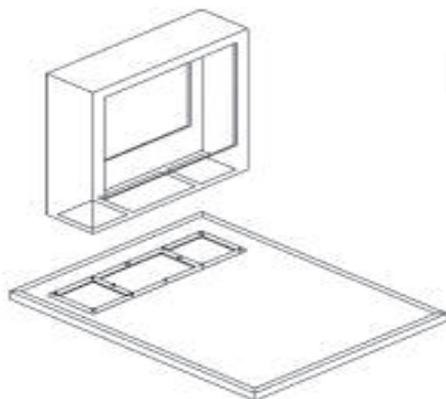
\* See below for methods to cover I/O Openings



**Flat Cover Plate**  
19" P.O. RBE-100-003  
24" P.O. RBE-200-003



Divided Compartment		
Panel Hght.	19" P.O.	24" P.O.
7"	RBE-107-002	RBE-207-002
10 1/2"	RBE-110-002	RBE-210-002
14"	RBE-114-002	RBE-214-002
17 1/2"	RBE-117-002	RBE-217-002
21"	RBE-121-002	RBE-221-002



Single Compartment		
Panel Hght.	19" P.O.	24" P.O.
7"	RBE-107-001	RBE-207-001
10 1/2"	RBE-110-001	RBE-210-001
14"	RBE-114-001	RBE-214-001
17 1/2"	RBE-117-001	RBE-217-001
21"	RBE-121-001	RBE-221-001

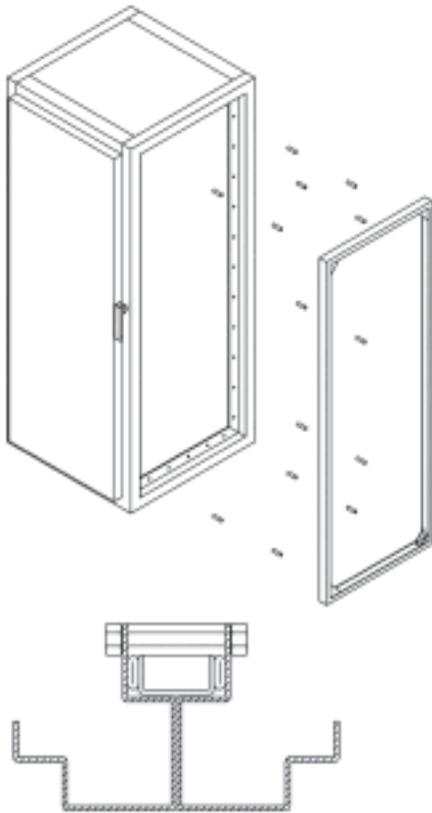
Panels to Cover Compartment Openings Two Required Per Compartment					
Panel Height	Compartment Width				
	5"	12"	17"	18"	23"
7"	RBP-005-007	RBP-012-007	RBP-017-007	RBP-018-007	RBP-023-007
10 1/2"	RBP-005-010	RBP-012-010	RBP-017-010	RBP-018-010	RBP-023-010
14"	RBP-005-014	RBP-012-014	RBP-017-014	RBP-018-014	RBP-023-014
17 1/2"	RBP-005-017	RBP-012-017	RBP-017-017	RBP-018-017	RBP-023-017
21"	RBP-005-021	RBP-012-021	RBP-017-021	RBP-018-021	RBP-023-021

## Input and Output Panels

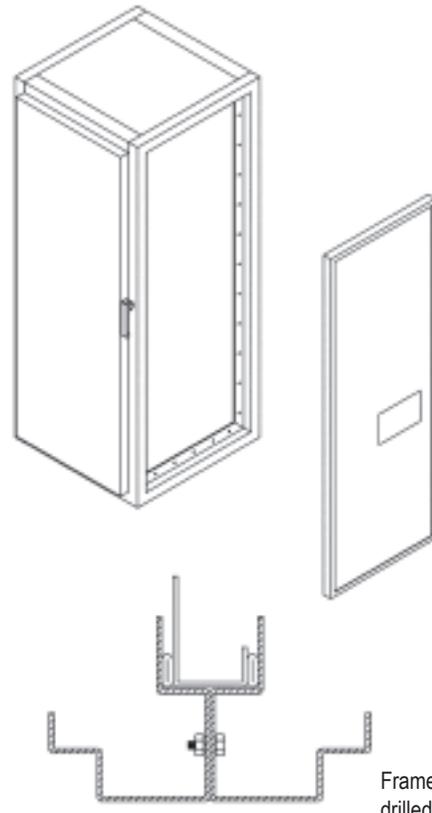
- ▶ All Fully Shielded
- ▶ Compartments have front and rear removable panels for cable connections, Storage of EMI Power Filters and Access
- ▶ Double compartments offer separation of power and communication cables. Also accommodate power EMI filters
- ▶ All Panels can be customized punched to fit your connectors



# Methods of Joining Multiple Bay FCC Shielded Cabinets



*Joining Frame Open Between Bays*



Frames must be drilled for joining

*Divider Panel Closed Between Bays*

Vertical Rack RFI Joining Frame Kit Part No.				
Panel Space	Cabinet Depth			
	17 1/16"	24 1/16"	29 1/16"	36 1/16"
21"	FJK-V21-017	FJK-V21-024	FJK-V21-029	FJK-V21-036
28"	FJK-V28-017	FJK-V28-024	FJK-V28-029	FJK-V28-036
35"	FJK-V35-017	FJK-V35-024	FJK-V35-029	FJK-V35-036
42"	FJK-V42-017	FJK-V42-024	FJK-V42-029	FJK-V42-036
49"	FJK-V49-017	FJK-V49-024	FJK-V49-029	FJK-V49-036
56"	FJK-V56-017	FJK-V56-024	FJK-V56-029	FJK-V56-036
63"	FJK-V63-017	FJK-V63-024	FJK-V63-029	FJK-V63-036
70"	FJK-V70-017	FJK-V70-024	FJK-V70-029	FJK-V70-036
77"	FJK-V77-017	FJK-V77-024	FJK-V77-029	FJK-V77-036
84"	FJK-V84-017	FJK-V84-024	FJK-V84-029	FJK-V84-036

Vertical Rack RFI Divider Frame Kit Part No.				
Panel Space	Cabinet Depth			
	17 1/16"	24 1/16"	29 1/16"	36 1/16"
21"	FDP-V21-017	FDP-V21-024	FDP-V21-029	FDP-V21-036
28"	FDP-V28-017	FDP-V28-024	FDP-V28-029	FDP-V28-036
35"	FDP-V35-017	FDP-V35-024	FDP-V35-029	FDP-V35-036
42"	FDP-V42-017	FDP-V42-024	FDP-V42-029	FDP-V42-036
49"	FDP-V49-017	FDP-V49-024	FDP-V49-029	FDP-V49-036
56"	FDP-V56-017	FDP-V56-024	FDP-V56-029	FDP-V56-036
63"	FDP-V63-017	FDP-V63-024	FDP-V63-029	FDP-V63-036
70"	FDP-V70-017	FDP-V70-024	FDP-V70-029	FDP-V70-036
77"	FDP-V77-017	FDP-V77-024	FDP-V77-029	FDP-V77-036
84"	FDP-V84-017	FDP-V84-024	FDP-V84-029	FDP-V84-036

15B & 30B Sloped Front Console RFI Joining Frame Kit Part				
Hgt. Of Sloped Opening	15B Slope		30B Slope	
	Cabinet Depth			
	24 1/16"	29 1/16"	24 1/16"	29 1/16"
14"	N/A	N/A	FJK-S14-324	FJK-S14-329
17 1/2"	N/A	N/A	FJK-S17-324	FJK-S17-329
21"	FJK-S21-124	FJK-S21-129	FJK-S21-324	FJK-S21-329
28"	FJK-S28-124	FJK-S28-129	FJK-S28-324	FJK-S28-329
35"	FJK-S35-124	FJK-S35-129	FJK-S35-324	FJK-S35-329

15B & 30B Sloped Front Console RFI Divider Frame Kit Part				
Hgt. Of Sloped Opening	15B Slope		30B Slope	
	Cabinet Depth			
	24 1/16"	29 1/16"	24 1/16"	29 1/16"
14"	N/A	N/A	FDP-S14-324	FDP-S14-329
17 1/2"	N/A	N/A	FDP-S17-324	FDP-S17-329
21"	FDP-S21-124	FDP-S21-129	FDP-S21-324	FDP-S21-329
28"	FDP-S28-124	FDP-S28-129	FDP-S28-324	FDP-S28-329
35"	FDP-S35-124	FDP-S35-129	FDP-S35-324	FDP-S35-329