PSS 21H-4D14 B4

WorkCenter for I/A Series® Systems

The WorkCenter for I/A Series® systems is a customized workspace with a versatile design that is ideal for serving as a command center and monitoring station for industrial applications.

FEATURES

The WorkCenter for I/A Series® systems offers the following features:

- A custom-built, comfortable workspace for monitoring and controlling a process
- Offered in 48 and 72 inch (121 and 183 cm) configurations, the steel frame support cores are designed for rigorous, multi-shift process monitoring
- The ability to flexibly connect WorkCenter bays directly in a linear configuration or with an optional 30° wedge for a curved WorkCenter configuration
- Optional adjustable arms mount LCDs in compact clusters for an ergonomical work environment with a small footprint
- Plenty of storage for a variety of free standing or 19-inch rack mounted customer-supplied and I/A Series equipment such as workstations, Ethernet switches, and control switches
- State-of-the-art cable management capabilities, including integrated, high-capacity raceways and numerous access points to the console's interior for an infinite number of horizontal and vertical cable pathways through the console to data and power sources.

OVERVIEW

The WorkCenter for I/A Series systems is made up of modular furniture designed for industrial use that can be custom configured to provide flexible mounting arrangements of I/A Series system components. Components can be mixed and matched until you have created a user-friendly workplace that is tailored to the unique requirements of the operators and equipment controlling your process.

The WorkCenter is designed to use flat-panel display technology, and is ideal for multi-screen monitoring of real-time process interactions. Refer to PSS 21H-4D10 B4 for LCD descriptions and specifications.

With the WorkCenter, you can organize and mount I/A Series system equipment, including workstations, Ethernet switches, mouse, trackball, printer, annunciator and alphanumeric keyboards, 1x8 mounting structures, DIN-rail mountable equipment, and Redundant Control Network Interface (RCNI) modules. You can also mount other free-standing or 19-inch rack mounted customer-supplied equipment.

COMPONENTS

The configurable units of the WorkCenter can be combined and arranged to meet the operational needs of small to large scale plant environments. The basic WorkCenter unit comprises a core, a worksurface, two large equipment storage “dockers”, back walls for mounting multiple flat-panel displays, and finishing trim. Optionally, the basic unit can be configured with a small desktop storage unit and other accessories. Individual WorkCenter bays can be joined in a linear configuration or joined by a 30° wedge piece to create a custom concave configuration.

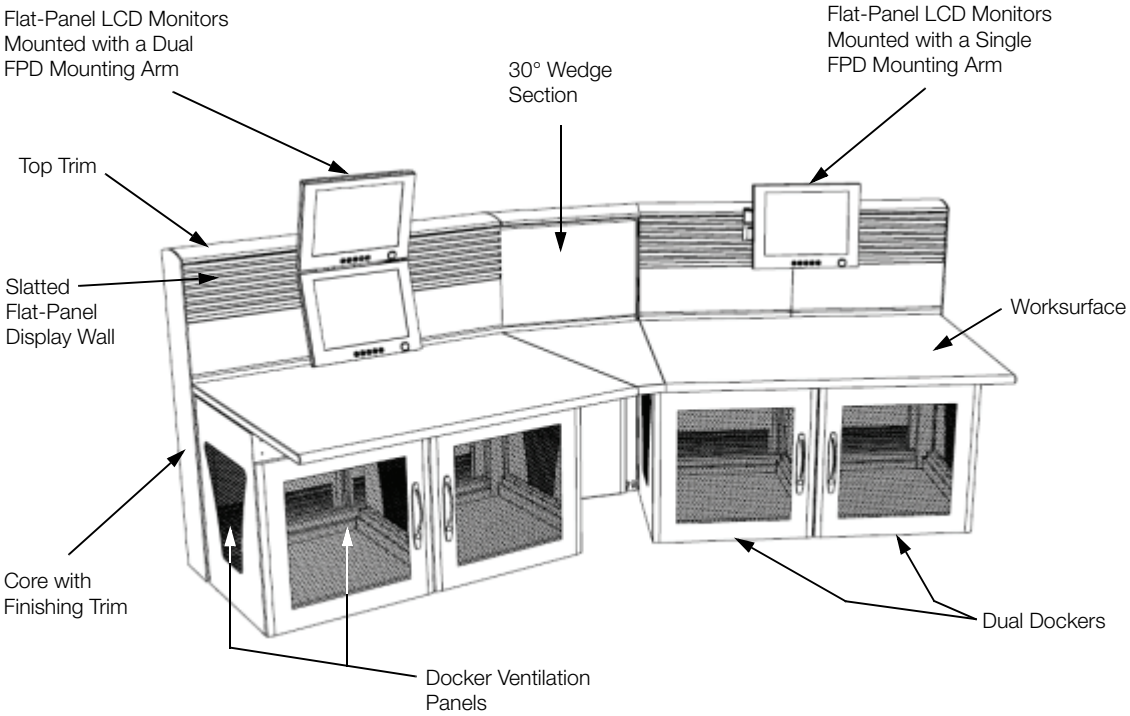


Figure 1. WorkCenter Components

The Core

The basic unit of the WorkCenter bay, the core, is a heavy-duty steel frame that provides the structural foundation of the WorkCenter bay (see Figure 2). The core consumes only 6 inches (15 cm) of floor space, and has a superior safety-tested design that supports heavy loads of equipment – each core is rated up to 300 lbs (136 kg).

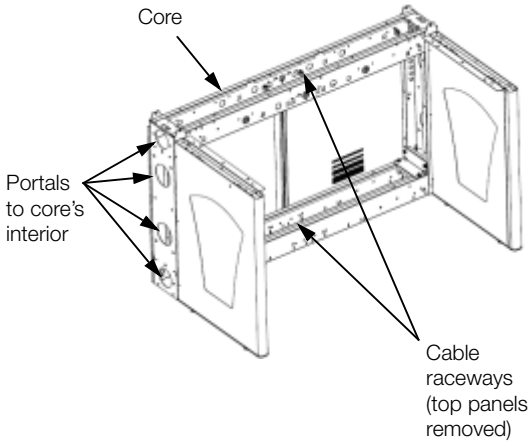


Figure 2. The WorkCenter Core

The core efficiently routes all cabling and power solutions, and is easy to maintain and service. Every core contains two fully welded integrated raceways, one at the top of the core and one at the bottom, for equipment cabling and power options. The raceways are located in the 48-inch core, in the 72-inch core, and also in the flat-panel display walls, providing you with unlimited vertical and horizontal cable routing options.

Multiple entry points are provided in the core and its raceways, allowing you to easily access the core's interior for cable management and service. Each raceway is equipped with removable panels for easy access to cables and power sources. The panels can be easily removed by hand; they do not require tools to remove or to reinstall. For additional internal access, each core is permeated with multiple portals that are 3-inch (7.6 cm) and 3.5-inches (8.9 cm) in diameter. The portals on the core's top and bottom serve to route cabling vertically through the flat-panel display (FPD) wall, the core, and the floor; the portals on the core's sides serve to route cabling horizontally through adjacent cores or wedge connectors.

Finishing trim caps the exposed ends of a core configuration and corresponding FPD walls to provide a polished look.

Combinations of linear core units and wedge connectors allow you to create a customized console for mission critical control activities and a personalized and ergonomically designed work space for process operators and engineers. You can easily attach cores to one another for a linear configuration or install 30° wedge connectors between multiple cores to create a custom concave configuration (shown in Figure 14).

Flat-Panel Display Wall

The flat-panel display (FPD) wall is a 16-inch (40.6 cm) high vertical aluminum surface that attaches directly to the top of the base core (see Figure 3). The operator's side of the FPD wall utilizes a slatwall construction for mounting multiple flat-panel displays on special mounting arms. The back side of the wall features removable skins for internal wall access.

FPD walls connect seamlessly to adjacent display walls. A steel trim with integrated ventilation finishes the exposed top portion of the FPD wall. The trim is removable by hand.

Like the core, each FPD wall section contains an integrated raceway for monitor and power cables, and each end of the wall includes portals for internal access to the wall.

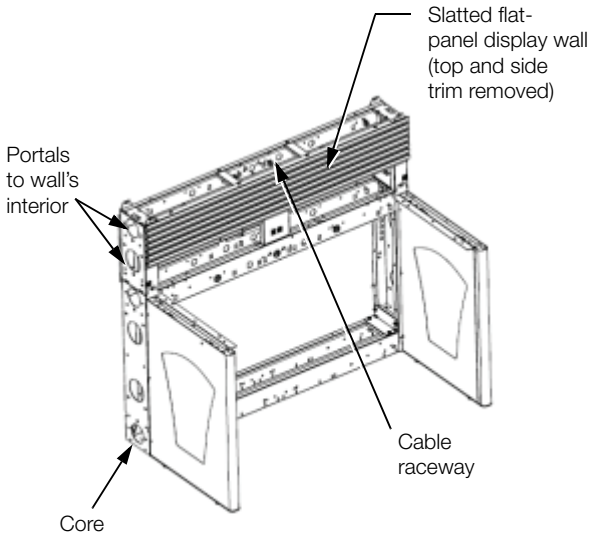


Figure 3. IWorkCenter FPD Wall

The Worksurface

The cantilevered worksurfaces of WorkCenter bays are constructed of 45-lb particleboard with an attractive laminate finish (see Figure 4). Each worksurface attaches directly to a core and is supported by two dockers underneath, which allows the worksurface to withstand heavy equipment loads. Such equipment can include workstations, Ethernet switches, external storage devices, pointing devices, alphanumeric, annunciator, or annunciator/numeric keyboards, and printers.

At 36 inches (91.4 cm) deep and mounted 29 inches (73.7 cm) from the floor, the worksurface allows plenty of room for equipment, a comfortable desk space on which to work, and ample legroom. Each worksurface also supports an optional retractable keyboard holder or an optional retractable keyboard platform with sliding mouse tray to save space and neaten up the work area.

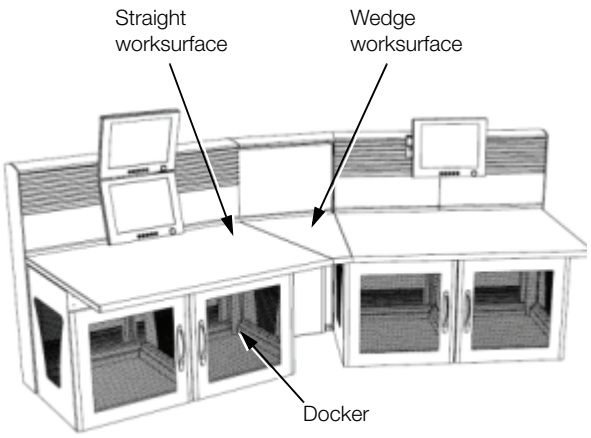


Figure 4. WorkCenter Worksurfaces and Dockers

Dockers

Dockers are well-ventilated storage units that allow secure storage of a wide variety of process equipment (see Figure 4). Each standard WorkCenter bay is equipped with two lockable steel docker units that support the worksurface and house equipment such as:

- Workstations, including Models H92, P92, P81, and P79
- Ethernet switches
- 1x8 mounting structures
- DIN-rail mountable equipment
- Redundant Control Network Interface (RCNI) modules
- Customer-supplied equipment and other 19-inch rack mountable equipment.

Dockers give you a convenient place to store equipment so it is readily accessible, while still allowing ample and comfortable legroom underneath the worksurface.

Each docker includes a 20.2-inch (51.3 cm) deep bottom shelf plus approximately 5 inches of rear cabling space for housing up to two tower-style

processors, such as Model H92, P92, P81, and P79. Processors longer than 20 inches, such as the Model H90, P90, H91, P91, or P82, are not suitable for docker mounting. The docker also accepts 19-inch rack-mounted items, such as Ethernet switches, 1x8 mounting structures for ZCPs, or other equipment with a depth of less than 20 inches.

Desktop Storage Unit

The steel desktop storage unit is directly integrated in the FPD wall to enable easy cable and wire storage and to free up desk space (see Figure 5). With two front mounting rails, this space is designed to mount 19-inch rack mountable customer-supplied equipment. The desktop storage unit offers 6U (10.75 inches) of vertical panel space (19-inch EIA compatible front rails) and accepts user equipment that does not exceed 15 inches in depth.

Figure 5. Modular Rackmount

The unit can be mounted on the left or right side of the 48-inch WorkCenter bay, or the left, middle, or right side of the 72-inch WorkCenter bay.

Adjustable Mounting Arms

Using optional fully adjustable mounting arms that attach directly to the FPD wall, you can securely mount flat-panel displays anywhere along the slatted wall. The mounting arms have multiple adjustment points that allow you to comfortably and ergonomically position displays to suit your process.

For example, you can create a parabolic shaped multi-screen viewing environment using adjustable display arms. Because the WorkCenter is designed for continuous process monitoring, displays can be easily repositioned between shift changes.

Mounting arms are optionally available in two models (see Figure 6). The single model supports one LCD and the dual model supports two LCDs positioned one on top of the other. The single and dual arm models provide vertical adjustment options, side-to-side rotation (for parabolic viewing), vertical and horizontal monitor tilt, and 360° portrait/landscape positioning. These models also provide telescoping extension of up to 20 inches.

Like the cores and FPD walls, the arms are also designed for complete cable management. The arms route the concealed monitor cables to the FPD wall, and from there, the cables can be routed horizontally through the raceways or vertically through the core to the workstation and a power source.

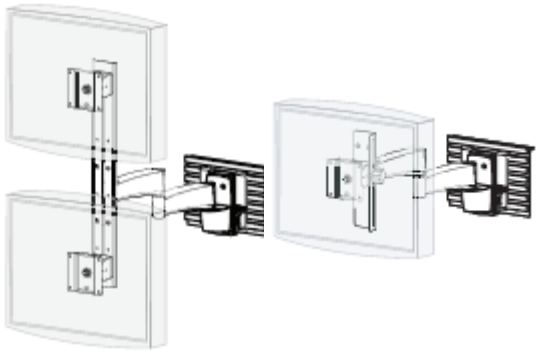


Figure 6. The WorkCenter Mounting Arms

Wedge

Multiple WorkCenter bays can be connected in a linear fashion or with a 30° wedge to create comfortable curved WorkCenters with an architecture best suited for your process's operations.

These wedges also provide an area for customer-installed auxiliary pieces of equipment, such as plant phones and radios.

Wedges are not designed for use as end pieces; they are used to connect adjacent WorkCenter bays. To transition between a bay with an FPD wall and a bay without an FPD wall, the wedge is also available without a back wall.

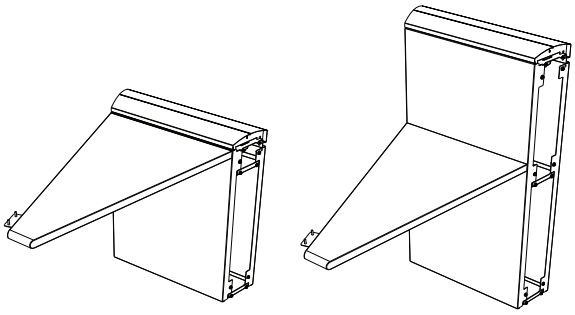


Figure 7. The WorkCenter 30° Wedge Section, with and without a Back Wall

CONFIGURATIONS

The following subsections illustrate typical configuration and options of the WorkCenter components.

As your operator console needs change or grow, the console can be enhanced by adding additional bays and wedges to store additional process equipment necessary for a plant renovation or upgrade. Building customized consoles to support your changing plant will improve productivity and allow you to keep continuously current with constantly changing technology.

48-Inch WorkCenter Configurations

The first configuration option (Figure 8) comprises a single 48-inch bay with dual dockers and without a flat-panel display wall.

Figure 8. Single 48-Inch WorkCenter Bay, Option 1

The second configuration option (Figure 9) comprises a single 48-inch bay with dual dockers and a flat-panel display wall. The illustration shows two flat-panel displays mounted on an adjustable dual FPD mounting arm.

Figure 9. Single 48-Inch WorkCenter Bay, Option 2

72-Inch WorkCenter Configurations

The first 72-inch configuration (Figure 10) comprises a single 72-inch WorkCenter bay with dual dockers and no flat-panel display wall.

Figure 10. Single 72-Inch WorkCenter Bay, Option 1

The second 72-inch configuration (Figure 11) comprises a single 72-inch WorkCenter bay supported by dual dockers beneath the worksurface and a flat-panel display wall.

Figure 11. Single 72-Inch WorkCenter Bay, Option 2

Sample Configurations

The sample console configuration in Figure 12 shows a single 72-inch WorkCenter bay with dual dockers beneath the worksurface, a flat-panel display wall, and the optional desktop storage unit installed in the left side of the WorkCenter bay.

Figure 12. Sample Console Configuration: Single 72-Inch WorkCenter Bay with Desktop Storage Unit

The sample configuration in Figure 13 comprises two 48-inch WorkCenter bays connected with a 30° wedge. Each bay is supported by two dockers beneath the worksurface and each has a flat-panel display wall. The illustration shows three flat-panel displays: a dual mounting arm supporting two displays on the left bay and a single arm supporting another display on the right bay.

Figure 14 shows an example configuration comprising two 72-inch bays joined by a 30° wedge. Each bay is supported by dual dockers and each bay has a flat-panel display wall.

Figure 13. Sample WorkCenter Configuration: Two 48-Inch WorkCenter Bays and a 30° Wedge

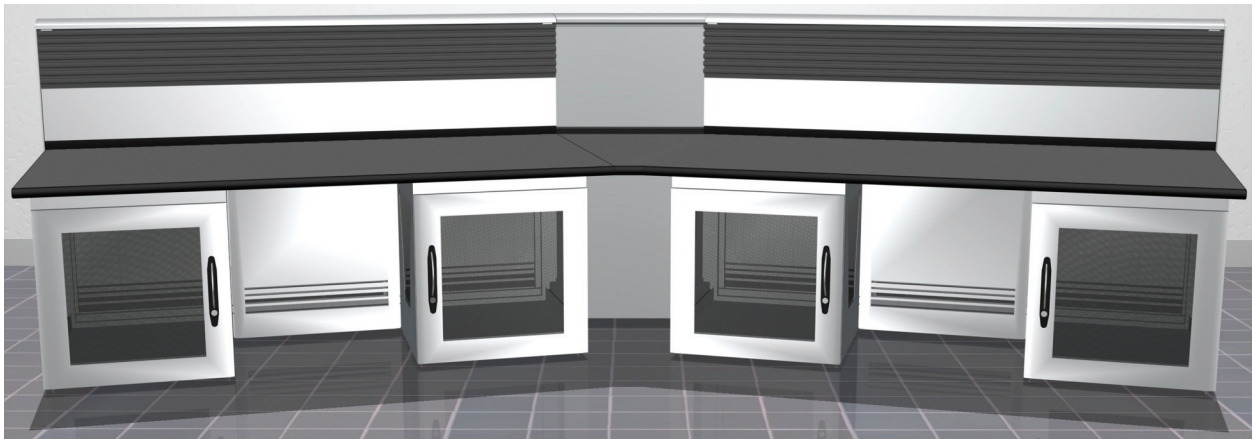


Figure 14. Sample WorkCenter Configuration: Two 72-Inch WorkCenter Bays and a 30° Wedge

ADDITIONAL CONFIGURATION OPTIONS

Following are additional options you can specify for each WorkCenter bay:

- Desktop storage units (one per 48-inch or 72-inch bay)
- Keyboard holders or keyboard platforms with sliding mouse trays (up to two per 48-inch bay or three per 72-inch bay)
- Single or dual FPD mounting arms (up to two per 48-inch bay, up to three per 72-inch bay)
- Primary and secondary power distribution to accommodate worldwide voltage selections
- 120 V ac convenience outlet
- Without a flat-panel display mounting wall.

EQUIPMENT ORGANIZATION

Supported equipment for workstations (such as touchscreen, mouse, keyboards, and trackball) apply as described in PSS-21H-4D1 B3.

Display Options

Each 48-inch WorkCenter bay can accommodate two display mounting arms to mount a total of up to four monitors; the 72-inch WorkCenter bays can accommodate three display mounting arms for a total of up to six monitors. If so desired, flat-panel displays can also be placed on the tabletop.

To mount on the arms, monitors must be designed with either 75 mm or 100 mm Video Electronics Standard Association (VESA®) Flat Panel Monitor Physical Mounting Interface (FPMPMI™) standard for hole mounting patterns. Monitors from Invensys meet these standards.

Flat-panel displays are purchased separately from Invensys or with an I/A Series workstation. In addition, monitors may support serial or USB touchscreen capability, depending on the workstation with which the monitor is used.

Workstations

You can mount the H92, P92, P81, and P79 workstations on the worksurface or in the dockers provided beneath the worksurface. The mini-tower style (H92, P92, and P81) workstations can be mounted side-by-side in the docker.

Input Devices and Keyboards

The worksurface can easily accommodate a mouse or trackball, an alphanumeric keyboard, and an annunciator or annunciator/numeric keyboard.

In addition, you can configure each WorkCenter bay with retractable keyboard holders to store keyboards underneath the worksurface or keyboard platforms with sliding mouse trays to store keyboards and mice underneath the worksurface. Both the keyboard holder and platform are fully extendable so you can easily access the keyboard and/or mouse when needed. You can configure up to two keyboard holders or keyboard platforms with sliding mouse trays per 48-inch bay or three per 72-inch bay.

GCIO

GCIO modules, purchased separately, are required for annunciator or annunciator/numeric keyboards and serial touchscreens(1). The modules can be placed on the worksurface or on a docker's shelf, or they can be mounted on 19-inch rails in the dockers under the worksurface.

RCNIs

The Redundant Control Network Interface (RCNI) module is a network interface between an I/A Series workstation and the Ethernet switches used in a control network. The RCNI module can be mounted on the worksurface, or, using an optional mounting adapter, on a DIN rail.

(1) USB touchscreens do not require a GCIO module.

1x8 Mounting Structure

1x8 mounting structures, which can be used to mount ZCP270s and other Z-Modules, can be mounted in the 19-inch racks of standard WorkCenter dockers.

DIN Rail

Customer-supplied DIN rail can be installed in the docker to mount DIN-rail mountable equipment, such as 200 Series Fieldbus Modules (FBMs) and their associated termination assemblies in the dockers.

Printers

Work surfaces can accommodate several printers.

ENVIRONMENTAL SPECIFICATIONS(1)

Operating Temperature
0 to 40° C (32 to 104° F)

Storage Temperature
-40 to +70° C (-40 to 158° F)

Vibration
0.1 g, 50 to 200 Hz

Relative Humidity
5 to 95% (noncondensing)

Location
Is suitable for use in ordinary locations and is designed to meet ordinary safety standards for fire and shock hazards.

Contamination Class
Class G1 (Mild) as defined in ISA Standard S71.04

(1) For WorkCenter only. Refer to the appropriate Product Specification Sheets (PSSs) for incorporated equipment specifications.

PHYSICAL SPECIFICATIONS

Mass(2)

48-INCH BAY WITH NO FPD WALL
330 lb (150 kg) (empty)

48-INCH BAY WITH FPD WALL
374 lb (170 kg) (empty)

48-INCH BAY WITH FPD WALL AND RACK-MOUNT STORAGE UNIT
388 lb (176 kg) (empty)

72-INCH BAY WITH NO FPD WALL
412 lb (187 kg) (empty)

72-INCH BAY WITH FPD WALL
475 lb (215 kg) (empty)

72-INCH BAY WITH FPD WALL AND RACK-MOUNT STORAGE UNIT
490 lb (222 kg) (empty)

Mounting
Floor

Maximum Weight Capacities

SINGLE FPD MOUNTING ARM
25 lb (11.3 kg) maximum per monitor

DUAL FPD MOUNTING ARM
25 lb (11.3 kg) maximum per monitor

FPD WALL
150 lb (68 kg) maximum

Color

CORE
Titanium with epoxy powder coat

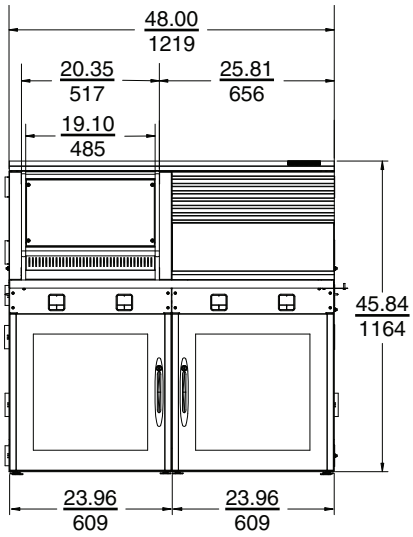
DOCKER
Titanium with epoxy powder coat

FLAT-PANEL DISPLAY WALL
Black annodized aluminum

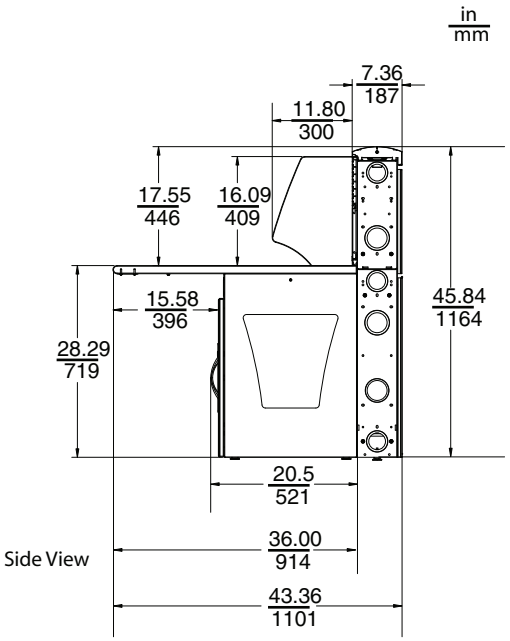
WORKSURFACE
Lodestone

(2) Mass includes configurations and shipping palette.

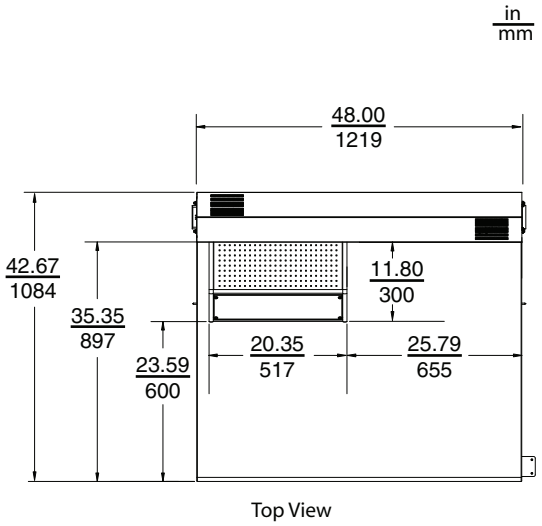
48-INCH WORKCENTER BAY – WITH FPD WALL AND DESKTOP STORAGE UNIT



Front View

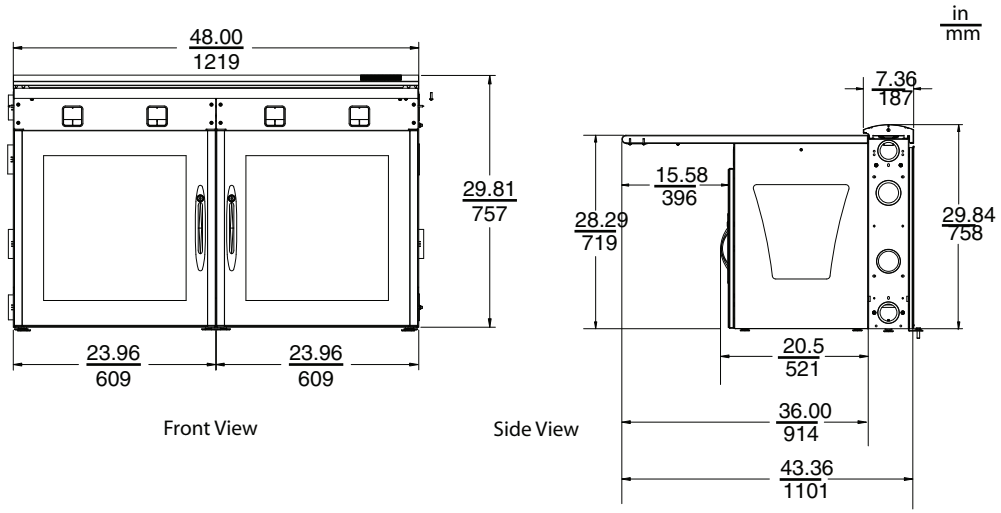


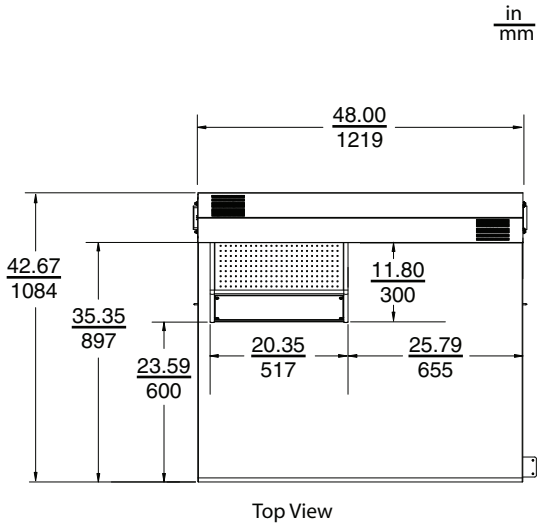
Side View



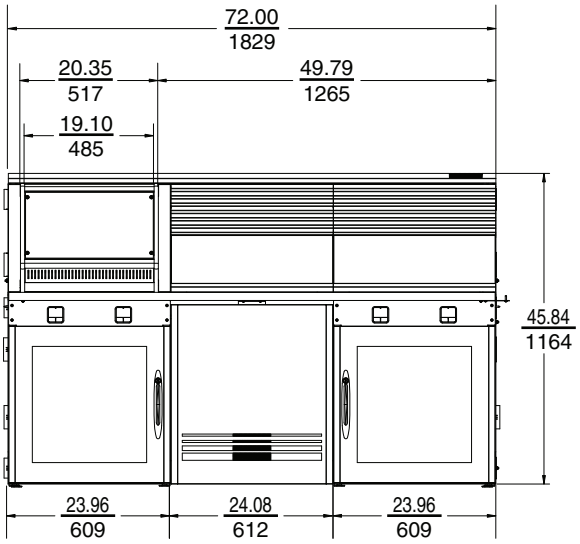
Top View

48-INCH WORKCENTER BAY – WITHOUT FPD WALL OR DESKTOP STORAGE UNIT

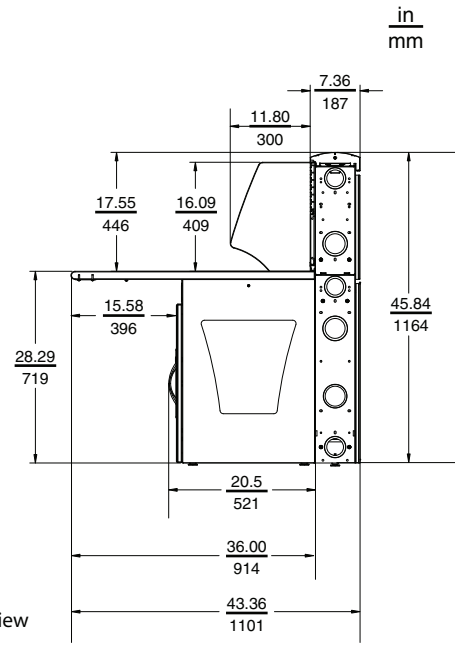




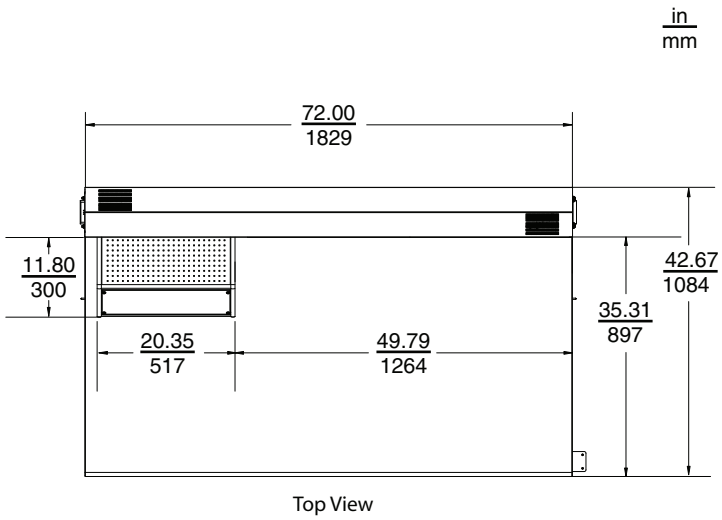
72-INCH WORKCENTER BAY – WITH FPD WALL AND DESKTOP STORAGE UNIT



Front View

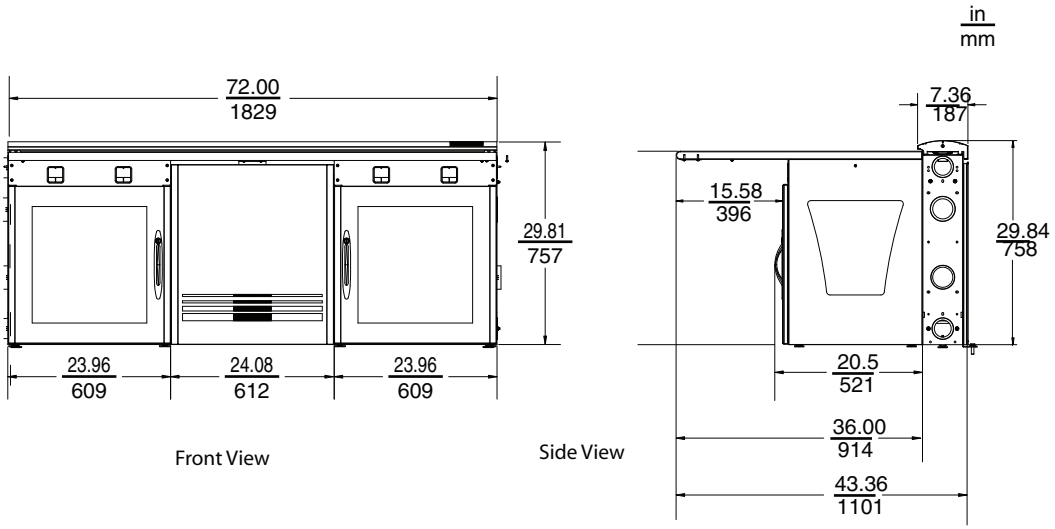


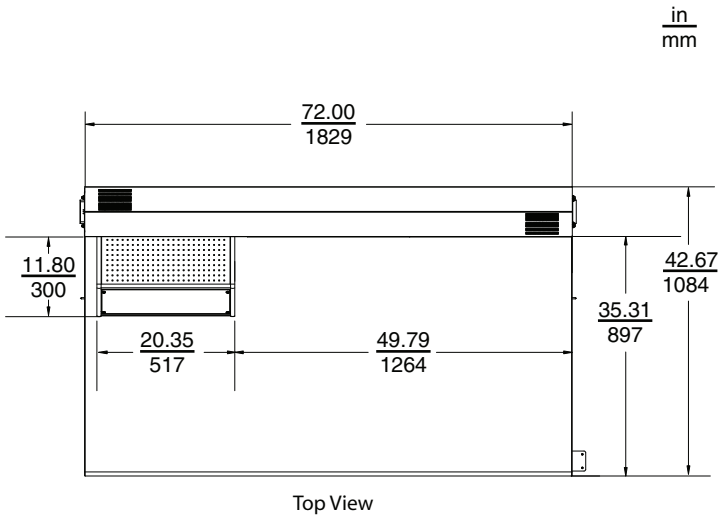
Side View



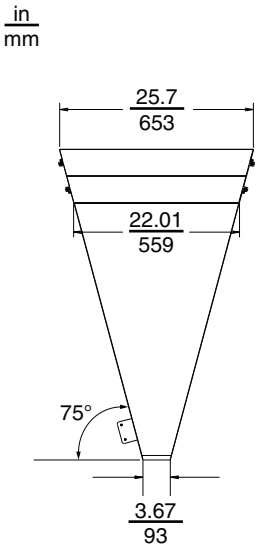
Top View

72-INCH WORKCENTER BAY – WITHOUT FPD WALL OR DESKTOP STORAGE UNIT



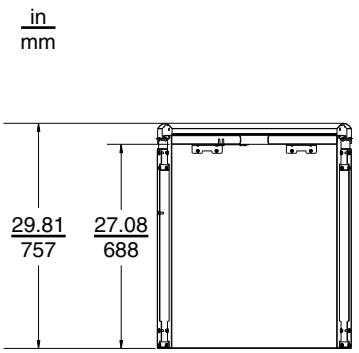


30 DEGREE WEDGE SECTION DIMENSIONS – TOP VIEW

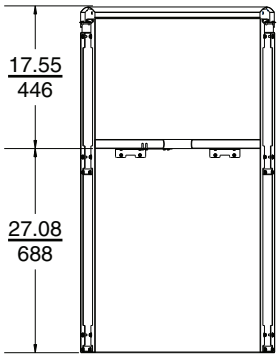


With or Without Back Wall

30 DEGREE WEDGE SECTION DIMENSIONS – FRONT VIEW

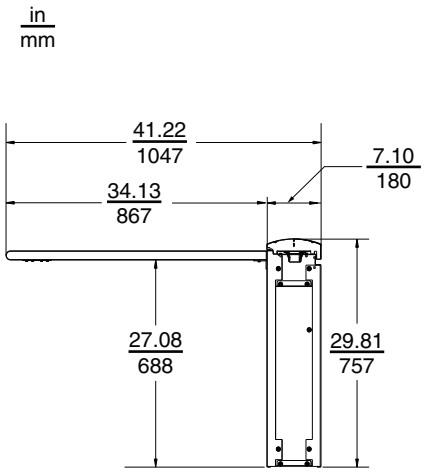


Without Back Wall

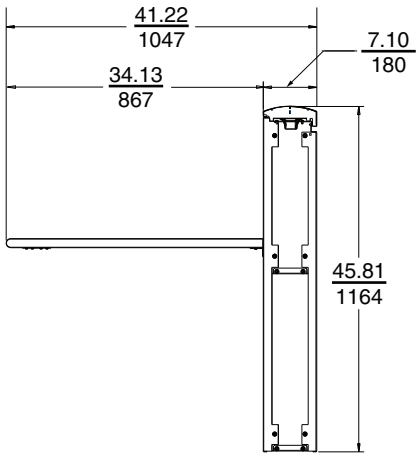


With Back Wall

30 DEGREE WEDGE SECTION DIMENSIONS – SIDE VIEW



Without Back Wall



With Back Wall

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