

# SYSTEMS FURNITURE SPECIFICATIONS:

## General Information:

- Contracted furniture vendor will be responsible to field measure the space to verify building dimensions before the order is placed.
- Electrical and communications wiring will be coming from the ceiling, please provide all necessary component parts for this type of installation.
- Must provide 4-circuit power within furniture system.
- Data/Comm jacks are to be installed above the worksurface, please provide all necessary components for this type of installation.
- Electrical raceways are to be installed in the base of the panel.

## Panel System Specifications:

### 1.0 Warranty and Testing

- Lifetime warranty that product is free from defects in materials and workmanship.
- Panels meet or exceed the ANSI/BIFMA X5.6-2003 Panel System tests.
- Panel wiring meets or exceeds UL 183 Manufactured Wiring Systems tests.
- Panels are designed for installation in compliance with the National Electric Code (NFPA 70).
- Standard panel fabrics meet or exceed UL 723 Surface Burning Characteristic of Building Materials tests.
- Standard panel fabrics meet or exceed UL 1286 Standard for Safety of Office Furnishings tests
- Panels meet the following minimum acoustic ratings per ASTM C423-02a and E795-00:
  - Panel with Performance Tackable Acoustic Skins – NRC: .65, STC: 16
  - Panel with Tackable Acoustic Skins – NRC: .55, STC: 7

### 2.0 Environmental

- Requires SCS IndoorAdvantage™ Gold Certified for indoor air quality.
- Requires non-dedicated frame to make it easy to disassemble and recycle panel components.

### 3.0 Features and Construction:

- 3" thick non-dedicated, open core steel frame.
- Allows for 90 degree and 120 degree planning.
- Panel frame is constructed on-site using vertical junctions and horizontal frames (ordered separately).
  - Vertical junctions
    - Heights: Please see typical scale drawing: heights may vary up to 1". THE HEIGHT OF EACH PANEL MUST BE STATED ON THE DETAILED PARTS LIST
    - Slotted steel channels in junction allow for worksurface supports and overhead storage at 1" increments.
    - Lay-in cable routing is accommodated in the base area and in the top cap. Horizontal cable routing is also accommodated with other openings in the junctions.
    - Leveling glides adjust up to 2".
    - Adjacent panel frames share junctions, thus keeping costs down.

## Panel System Specifications (continued):

- Horizontal frame packages
  - Widths: Please see typical scale drawing: width may vary up to 1". THE WIDTH OF EACH PANELS MUST BE STATED ON THE DETAILED PARTS LIST
  - 16 ga. (.059") steel rectangular tube construction
  - Quick lock cam assembly (no fasteners).
- Panel stacking capabilities
  - 12" and 24" load-bearing stackers.
  - Can work on any base panel.
  - With stackers, panel can reach a maximum height of 90".
  - Can stack up to 2 tiers, with the first tier being load bearing.
- Requires cable trays to allow for additional support of cables above the worksurface.
- Requires off-modular connectors to allow fin panels to be attached to a spine wall in 1" increments without defacing the spine wall.
- Floor anchor brackets allow panel to be secured to the floor to prevent movement esp. in seismic zones.
- Trims
  - Horizontal trims (top caps and junction caps) can be specified as either oval or square profile.
  - Top caps are steel and attach to the panel with spring steel clips (no tools required).
  - Change-of-Height vertical trims are available in standard 1-1/8"W slim profile and optional cable-routing 2-1/4"W profile. Cable-routing trim allows lay-in cable routing in change-of-height conditions.
  - Steel base covers feature integral hooks and install without tools to the vertical junctions.
  - Base covers are steel and feature knockouts for both power and communication terminations. A filler is available for closing unused openings.
  - Junction top caps are plastic and have either molded-in alignment features or come with snap-in aligners to insure proper alignment with adjacent top caps.
- Skins:
  - Requires:
    - Tackable acoustical skins (full-height or segmented)
    - Glass window segments
  - Offer both monolithic and segmented options.
  - Are removable and can be repositioned (not dedicated to one position). Steel, wood, laminate, tackable and technology skins are mounted with spring steel attachment clips (no tools needed).
  - Non-progressive: any skin in the panel configuration can be removed without disrupting any of the other skins.
  - Allows for skin segmentation every 12".
  - Allows for any combination of available skin heights and materials.
  - Glass windows are single pane and with safety glass, plastic is not acceptable.
  - Fabric skins can be field cut for receptacle/communication outlet openings.
  - Tackable acoustical skins feature an 8 lb/cu ft. dense fiberglass core.
  - Skins include a light seal feature to prevent light from transferring from one side of the panel to the other.
- Overhead storage can also be up-mounted.
- Power and Data
  - Lay-in cable routing is accommodated in the base area, the top of every panel, and through horizontal and vertical openings.
  - Power can be accessed in the base or every 12" vertically.
  - Wiring schematic required:

- -3+1, 8-wire, 4-circuit
- Same modular power kit can be in any location on the panel.
- Requires open frame construction allows user to look and store excess cable in the frame for additional future workstations.
- Power is UL rated.
- Power components are color-coded and keyed for safety.
- Power distribution is not interrupted when stackers are added to the frame.
- Cables that run through the frame are protected by the frame's steel construction and do not interfere with the ability to hang components.

**Panel System Specifications (continued):**

- Each side of the panel has access to every circuit distributed within the panel.
- Power and communication is field-installed with the ability to add or move power and cable within any panel after installation.
- The use of power receptacles at any location other than the base shall not restrict the number of available receptacles in the panel base.
- All panels are installed with provisions in place to protect the cabling from system component damage. If the power and cabling is to be placed in front of the slotted channel, manufacturer's metal protector shields must be supplied and put into place to cover and protect at least 12" of power and cabling passageway.
- Base power-ins accommodate floor interface.
- Utility poles accommodate ceiling interface. Hardwired connection to the building's power can be made in the junction box included.
- Power and cable routing/access in base panels is not disturbed when stacking elements are added including cables at the top of the base panel.
- Cable routing locations maintain the minimum bend radius required for fiber optic cable.
- Cabling termination doesn't utilize any of the power access locations within the panel base.
- Can accommodate a consolidation location for multiple data interfaces.

**4.0 Surface Materials**

- Fabric-Covered Skins – Grade 2.
- Panel trim – Grade 2 paint
- Glass Window – tempered safety glass

**Storage Components Specifications:**

***WARRANTY***

- Lifetime warranty that product shall be free from defects in materials and workmanship (includes shipping, parts and labor for the repair or replacement of defective items).

▶ ***TESTING***

- Must meet or exceed X5.9 Storage Unit Tests

▶ ***MATERIALS CHEMISTRY***

- Shall be constructed free of environmentally hazardous materials such as PVC, CFC, solvent-based adhesives, heavy metals (chrome, lead and mercury) and benzene.

- Must be constructed free of environmentally hazardous processes such as those that produce VOC's and deplete ozone
  - Paint must be VOC-free powder coat type.
  - Water-based stains and topcoats must be available for specifying a wood finish.

► **RECYCLED CONTENT AND RECYCLABILITY**

- Fixed models (steel drawer outerheads) shall be constructed of up to 28% recycled content
  - 22% post consumer content
  - 6% pre consumer content.
- Mobile models (steel drawer outerheads) shall be constructed of up to 27% recycled content
  - 22% post consumer content
  - 5% pre consumer content.
  - Fixed models must be up to 100% recyclable at end of life.
  - Mobile models must be up to 96% recycled at the end of life.

► **CABINET**

- Exterior dimensions shall be:
  - Depth: 22-5/8"D or 28-5/8"D (add 7/8" for proud front models)
  - Widths: 15"W
  - Fixed model heights: 27"H
- Shall have strong 22 ga. (.030") steel unibody construction with welded 20 ga. (.036") steel rear horizontal braces and 16 ga. (.059") vertical steel upright braces (2 per side) to minimize racking and misalignment.
- Back must be finished to allow file to be used in the open plan without wrapping with panels.

**Storage Components Specifications Continued:**

- Several pre-assembled tops must be available for mobile models:
  - Standard 20 ga. (.036") steel top with 1"H flanged edges, welded in the corners, with a 20 ga. steel reinforcing channel for support of top loads.
  - Laminate-covered 1-1/8" thick particleboard top with plastic edge banding.
  - Wood veneer-covered 1-1/8" thick particleboard top with plastic or wood veneer edge banding.
  - Cushion top with an optional self-storing, extendable handle shall be available for ease of transport.
- Base must be 3"H and must be integral to the cabinet.
- Leveling glides on each corner shall adjust for uneven floors with 7/8" range.
- Factory- or field-installed, front-removable locks shall simplify field changes. Available keyed random, consecutive, specific or master-keyed. One lock shall lock all drawers. An individual drawer locking model must also be available.
- Lock mechanism shall engage both sides of the case to prevent surreptitious entry into the locked drawers.

► **DRAWERS**

- Interior dimensions:
  - 12"H File Drawers
    - Depth: 18-1/4"H or 24-1/4"H
    - Widths: 12-1/16"W
    - Height: 9-3/8"H
  - 6"H Box Drawers
    - Depth: 18-23/32"H or 24-23/32"H
    - Widths: 12-3/4"W
    - Height: 4-7/32"H
- Drawer front must be available in both painted steel and wood veneer finishes.
- Steel drawer fronts must be 22 ga. (.030") steel and shall feature a flush front with full-width integral pull or proud front with a choice of at least four applied pulls.
- Drawer fronts shall be removable and replaceable in the field. This is less costly than buying a replacement drawer or new file.
- Drawer fronts feature a 22 ga. (.030") steel innerhead on the inside to provide a finished appearance and to shield the interior of the drawer from the lock mechanism. Pulls must be standard cabinet dimensions to allow for interchangeability with off-the-shelf pulls (aka "Customer's Own Pulls" or "COP").
- Drawer body must be 20 ga. (.036") formed steel with a top hem for strength and stiffness.
- Progressive, heavy-duty steel suspensions shall allow for complete, full depth access to drawer contents.
- Drawer suspensions shall feature precision steel ball bearings for durable, smooth and quiet operation.
- Must have rubber bumpers cushion drawer opening and closing for quiet operation.
- Must have safety interlock to prevent tipping. Only one drawer can be opened at a time.
- Each 6"H box drawer must be provided with one removable divider

#### **Storage Components Specifications Continued:**

- Each 12"H file drawer must be provided with one removable hanging folder bar for accommodating side-to-side filing of letter-, A4 international-, and legal-size hanging folders.
- One removable pencil tray must be provided with each box drawer pedestal.
- Clear plastic label holders which fit inside the integral pull or over the top edge of proud front drawer fronts must be available.
- ▶ **OPTIONAL FEATURES**
- User-adjustable rails for accommodation of front-to-back filing must be available as a field installed option for drawers.

- User-adjustable dividers for accommodation of side-to-side filing in 2" increments must be available as a field installed option for drawers.
- Anchor brackets must be available for securing the files to the floor for local code compliance.
- Individual drawer locks must be available on file/file models. These models must also feature a security shield above each drawer to prevent unauthorized access to other drawers.
- Extended adjustable leveling glides to replace standard glides must be available for leveling the unit beyond the 7/8" range for uneven floor applications.
- A field-installable conversion kit must be available to provide for 28"H freestanding applications. Kit must include a top and counterweight. The top prevents unauthorized access to the contents of the cabinet when the cabinet is not physically attached beneath a worksurface.

► **STORAGE TOWERS**

- OVERALL DIMENSIONS 24x24x52-54
- MUST BE CLOSED TOWER WITH SIDE WARDROBE
- MUST BE AVAILABLE ON LEFT OR RIGHT SIDE OF TOWER
- MUST HAVE LOCKING DRAWER AND LOCKING COAT LOCKER

**Worksurface Specifications:**

► **WARRANTY**

- Lifetime warranty that product shall be free from defects in materials and workmanship (includes shipping, parts and labor for the repair or replacement of defective items).

Note: Complete warranty coverage is available online or upon request.

► **TESTING**

- Desks and Tables must meet or exceed the ANSI/BIFMA X5.5-1998 Desk/Table Product Tests.
- Worksurface edge profile, on edges designed to come into contact with users' wrists, must comply with ISO 9241-5 (1998) Section 5.4.4, ANSI/HFES-100 (2008) section 8.3.1.4, BIFMA G1 (2002) Section 9, and CSA-Z412 (2000) section 7.5.12.
- Standard high-pressure laminates must meet or exceed NEMA LD3-2005 High-Pressure Decorative Laminate standards.
- When applied according to published application guidelines, panel-mounted or freestanding worksurfaces must not sag more than 1/240 of the total worksurface

length when subjected to a load of 200 pounds distributed via a rigid 18" x 36" board located flush to the front edge of the worksurface at its apparent weakest point.

- When applied according to published application guidelines, panel-mounted or freestanding worksurfaces must sustain no structural damage when subjected to the impact of a 225 pound weight bag, 16" in diameter, dropped from a height of 2" onto the worksurface, with the edge of the weight bag located 1" in from the front edge of the worksurface at its apparent weakest point.

▶ **RECYCLED CONTENT AND RECYCLABILITY**

- Desk supports shall be made up of at least 30% recycled content.
- Certified tackboard fabrics must contain up to 100% recycled content.
- Packaging waste must be minimized by palletizing like worksurfaces.
- Packaging materials shall contain 15% to 35% recycled content.

▶ **CERTIFICATIONS**

- Furniture must be certified to meet the emissions requirements of the California DPH *Standard Practice for the Testing of Volatile Organic Emissions from Various Sources-2004* (CA Section 01350) and ANSI/BIFMA X7.1 *Standard for Formaldehyde and TVOC Emissions of Low-emitting Office Furniture Systems and Seating* using either the open plan or private office exposure scenarios defined in ANSI/BIFMA M7.1 *Standard Test Method for Determining VOC Emissions from Office Furniture Systems, Components, and Seating*. Testing must be conducted in accordance with ANSI/BIFMA M7.1. Certification must be provided by an organization independent of the manufacturer as well as from the testing laboratory, in accordance with the requirements of ISO/IEC Guide 65 *General requirements for bodies operating product certification systems*.

The above requirement is covered by SCS IndoorAdvantage™ Gold Certification for indoor air quality.

**Worksurface Specifications (Continued):**

○ **GENERAL**

○

- Desks and tables must be available in a wide range of sizes and shapes, including both straight and curvilinear shapes, with a variety of storage options, table leg and base styles, etc. available.

▶ **WORKSURFACES**

- Worksurfaces must be available in nominal 24", 30" depths.
- Straight worksurfaces shall be available in 24" to 96" widths.
- Worksurfaces for desks should be available in straight, transition, tapered, corner, extended corner, bullet peninsula, angled peninsula, jetty, bubble jetty, and visitor shapes.
- Worksurfaces must be available in "full depth" sizes that allow the rear edge of the worksurface to be flush with panels in panel-wrapped situations, so that panel-mounted L-corner applications can be created without introducing non-uniform gaps.
- Worksurfaces must also be available in sizes that create at least 1/2" gap at the rear edge for cable management in panel-wrapped applications.

- The same worksurfaces must be usable in desk applications and in panel-mounted applications.
- A selection of corner worksurfaces must be available with an adjustable keyboard shelf.
  - Keyboard shelf must have minimum adjustment range of 6" above and 4-1/2" below the monitor surface.
  - Keyboard shelf models shall be available with
    - Single-arm spring mechanism with continuous adjustment to provide superior knee clearance when compared to double-arm mechanisms.
  - Adjustable keyboards must have a minimum tilt range of 15 degrees up and 10 degrees down.
  - Adjustable keyboard shelf shall feature a minimum 1" gap all around to prevent pinching.
- Transaction worksurfaces shall be available for use as a shelf by workstation standing visitors.
  - Transaction worksurfaces shall include attachment brackets for mounting to the top of a panel.
  - Transaction worksurfaces shall be available sized to fit on a panel that is mounted between two taller panels.
  - Worksurface shall be centered on the supporting panel.
  - Must allow mounting of utility shelf lights beneath.

### **Worksurface Specifications (Continued):**

- Standards Included
  - The minimum radius on worksurface edges designed for a worker to rest the forearm or wrist must be 3mm.
  - Worksurfaces must include pilot holes that ensure proper location and secure attachment of desk supports, storage products, panel-mounted worksurface supports, and legs.
- Options
  - Worksurfaces must include scallops or edge grommets for cable management in panel-wrapped or panel-mounted applications at no additional charge.
  - Worksurfaces must also be available with no scallops.
  - Worksurface wire managers shall be available to convert cable scallops to edge grommets.
  - Grommets shall also be available for cable management.
  - Worksurfaces must be available in either high-pressure laminate or wood veneer.

### **▶ PANEL-MOUNTED WORKSURFACE SUPPORTS**

Supports are ordered separately and installed in the field. All supports must be able to be removed and repositioned later without any permanent damage to panels or skins.

- Cantilevers
  - Shall engage vertical panel slots so that the worksurface can be mounted at 1" increments.
  - The same cantilever must be useable on either 18", 24", or 30" nominal depth worksurfaces, to simplify inventory management and reconfiguration.
  - The same cantilever must be useable on either the left or right end of a single worksurface or in a shared application between two worksurfaces. Cantilever must be able to switch between these three applications without requiring tools or fasteners except for those attaching the cantilever to the worksurface(s). This feature simplifies inventory management and reduces reconfiguration costs.
- Side support brackets
  - Shall engage vertical panel slots so that the worksurface can be mounted at 1" increments.
  - Shall be used to support the end of a worksurface that is wrapped by a matching width panel, or in a rear corner of a corner worksurface.
- Support plate and Tie plates
  - Support plates must be available to connect two worksurfaces and allow one to support the other.
  - Tie plates must be available to provide added strength and alignment between two worksurfaces.
- Reinforcing channel
  - A field installed steel reinforcing channel shall be available for heavily loaded worksurfaces or long spans of unsupported worksurface.
- Center support panels and end panels
  - Shall engage vertical panel slots
  - Must be available for supporting a worksurface at either standard height (28-1/2") or standing height (40-7/8")
  - End supports must be available in nominal 24" and 30" depths.
  - Must be non-handed.
  - Center support panel must be no greater than 11" deep to provide ample knee clearance.
  - Must have at least 3/4" glide adjustment range.

### **Worksurface Specifications (Continued):**

#### **▶ LEGS AND TABLE SUPPORTS**

- Post legs (for worksurfaces and tables)
  - Must be available in nominal 26", 28-1/2", and 40-7/8" worksurface heights.
  - Must be offered with swivel caster or glide (exception: 40-7/8" high is only available with glide).

- Must offer adjustable-height versions which are user-adjustable in no greater than 3/4" increments between 25-1/2" and 31-1/2" worksurface height.
  - Adjustable-height post leg with caster shall feature a locking caster.
  - Must offer double post legs that are visually compatible with standard post legs and are suitable for a shared application between two worksurfaces – available in nominal 28-1/2" and 40-7/8" worksurface heights.
  - All post legs with glides must have at least 3/4" glide adjustment range.
- C-Legs (for worksurfaces and tables)
  - Must be available in nominal 28-1/2" worksurface height.
  - Must have at least 5/8" glide adjustment range.
  - The same leg must be suitable for 24" and 30" nominal depth worksurface applications.
  - The same leg must be suitable for left-hand, right-hand, or shared applications (connecting two worksurfaces).
- Column supports (for panel-mounted and desk applications only)
  - Must offer a column with extended height adjustment range of at least 3 1/8" (total range 28-1/2" to 31-5/8").
  - Must also offer a standard column with glide adjustment range of at least 1-1/2".
  - Round columns must be at least 4" in diameter to provide a sturdy-looking support for peninsula worksurfaces and similar applications.

### **Worksurface Specifications (Continued):**

#### **► DESK SUPPORTS AND MODESTY PANELS**

- Desks shall be no less than 28-1/2" high, in compliance with BIFMA G1-2002 Section 8.3.1.
- Supports must feature adjustable glides for installation on uneven floors. Minimum adjustment range shall be 1 1/2".
- 36"D straight desks must be available with inset supports, storage and modesty panels, providing at least 6" of visitor kneespace along the entire back edge of the desk.
- All desks, returns, bridges and other freestanding worksurfaces shall provide an option for mounting a modesty panel with at least 1 1/2" gap between the modesty panel and the underside of the worksurface, for cable management. A cable tray shall be available to manage cords and to block light from passing through this gap.
- All desks, returns, bridges and other freestanding worksurfaces must be available with no modesty panel, to provide free access to power and data outlets in the building wall or panel at any height below the worksurface. All desk supports and storage products must pass ANSI/BIFMA X5.5-1998 section 12, leg strength test, without modesty panels present.
- End supports
  - Must be available in nominal 24" and 30" depths.

- Must have at least 1-1/2" glide adjustment range.
  - End supports shall be L-shaped in plan view, with the back leg of the "L" matching the width of a pedestal, so that the same width modesty panel can be used in desk shells, single pedestal desks, and double pedestal desks of equivalent width.
  - End supports must be non-handed so the same components can be assembled into left-hand and right-hand desks and returns.
- Peninsula supports
  - Must be available in nominal 24" and 30" widths.
  - Must have at least 1-1/2" glide adjustment range.
  - Peninsula supports shall provide for the attachment of a modesty panel directly below the centerline of the worksurface, spanning the full distance from the peninsula support to the column support.
- Corner supports
  - Corner supports shall support the rear corner of any corner worksurface. They shall also be usable as intermediate supports, providing increased kneespace when corner worksurfaces are attached to adjacent worksurfaces.
  - Corner supports shall include a removable inner cover for vertical cable routing within the support.
  - Must have at least 1-1/2" glide adjustment range.
- Flush Mount brackets
  - Flush mount brackets shall be available to connect a return or bridge worksurface to the front edge of another worksurface, providing support and alignment.
  - Flush mount brackets shall employ a two-plate design so the same bracket package can be used for 24", and 30" nominal depth return and bridge worksurfaces.
- Modesty panels
  - All desks, returns, bridges, and other freestanding worksurfaces must be available with either full-height modesty panels,
  - Half-height modesty panels must be stackable.
- Storage units used as freestanding desk supports
  - Pedestals, lateral files, storage cabinets and bookcases shall be available as a freestanding desk support in place of an end panel or other support in most applications to save the extra cost of additional supports.

### **Monitor arms-**

360° monitor rotation

160° vertical angle range

200° lateral angle range

Steel and die-cast aluminum construction for strength and durability

Pneumatic cylinder supports monitors 5 to 20 lbs.

Powder coat finish

**Pelican Drawer-10" dual purpose drawer, includes file bar**



**Mobile ped:** Mobile Box/File pedestal to fit beneath worksurface. Top is steel with a cushion seat top. Hard casters are front locking. Drawer configuration will be Box/File. Must come with 2 keys.

Fabric grade 3