



# Wilsonstak<sup>®</sup>

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library bookstacks  
general specifications

# Wilsonstak

## ■ Scope

This specification covers delivery and installation of Steel Bookstack Shelving of the bracket type only. Unit heights, depths and accessories shall be as indicated on the plans and/or Schedule of Equipment.

## ■ Materials and Workmanship

Only the finest materials and quality of workmanship will be acceptable. Sheet metal is to be cold rolled, Class I steel. Gauge thicknesses are U.S. standard with the following minimum requirements:

1. Upright Columns of welded frame: 16 gauge
2. Top and Bottom Spreaders of welded frame: 16 gauge
3. Shelves (including Base Shelf): 18 gauge
4. Shelf End Brackets: 16 gauge

All shelving shall be carefully adjusted to the floor and leveled. Wall shelving shall be attached to the walls at the most inconspicuous locations.

## ■ Type of Bookstack

Steel Bookstacks shall be cantilever construction design with individual welded frame assemblies as manufactured by Borroughs Corporation, Kalamazoo, Michigan, or approved equal. Starter and adder combinations or welded frame every other unit are not acceptable. Commercial or case-type shelving will not be considered. The modular construction shall be such that all components of a bookstack section may be removed from any range without in any way disturbing the adjacent units, so that any range may be divided for the purpose of rearrangement without the necessity of procuring additional components. Any bracing which prevents insertion of oversize material (past the center line) on any base or adjustable shelf is not acceptable.

Individual standard (catalog) components to be as follows:

### **BOOKSTACK FRAMES AND SHELVES:**

#### **WELDED FRAME**

Upright columns shall be formed of not less than **16 gauge** steel into channel shape with no less than 1/2" stiffening flanges measuring 2" in the web and 1-1/4" at front and rear surfaces. Uprights are to be perforated with a series of 3/16" x 5/8" slots spaced 1" on vertical centers and located within 9/32" from web or outside of upright. Every fifth and sixth slot shall be perforated differently to ease visual leveling of adjustable shelves and accessories.

Top spreader will consist of not less than **16 gauge** tubular steel shape measuring at least 1" x 2-1/2" in cross section. The spreader is to be wire welded to uprights at concealed locations.

Bottom spreader will consist of not less than **16 gauge** steel channel shape measuring at least 1" x 1-3/4" in cross section. The outer ends will receive weld nuts pre-drilled to receive adjustable floor leveler glides. The spreader is to be wire welded to uprights with open portion of channel positioned upward. Bottom spreader will be equipped with two adjustable floor leveling glides and two neoprene floor caps to provide leveling, and prevent "walking" of stack units. Carpet pins are available upon request.

#### **CLOSED BASE SUPPORT BRACKET**

Bracket shall be formed of not less than **16 gauge** steel and shall be designed to fit snugly in and around welded frame upright, and allow adjustability of frame while brackets remain flush to floor.

Brackets shall have a 90° flange along bottom edge which will rest on floor covering. Top and front edge of bracket is to be flanged outward approximately 1/4" and profile shall match that of adjustable shelf end bracket. Bracket shall have a cup impression to prevent overlapping when units are joined. Each impression will have a hole through it to allow the joining of brackets with a fastener contained within the impression to prevent book damage. Brackets are configured for single face and double face applications.

#### **BASE SHELVES**

All base shelves shall be formed of not less than **18 gauge** steel into one piece construction, designed to fit snugly into base brackets without need of hardware fasteners. Front height of base shelf shall be 3" and formed as an integral part of shelf. Base shelves, when properly installed, will provide a flush face along base unit.

##### **- Closed Base Shelf:**

Constructed of one piece and designed to fit snugly around upright columns. Sides of shelf shall have stiffening flanges formed downward to engage base brackets. Double face closed base shelves will be of one piece for both faces with an unobstructed surface between each face.

##### **- Integral Back Base Shelf:**

Designed of a single piece construction incorporating shelf and back. Back is formed 90° upward from shelf base and 1-1/4" high. Top edge of shelf back is formed and configured to accept Borroughs' patented sliding book supports. Side of shelf shall have stiffening flanges formed downward to engage in base brackets.

##### **- Divider Base Shelf:**

Constructed of a one piece shelf and back, with back formed 90° to shelf and 5" high. Shelf is slotted on 1" centers to accept flat type dividers. Side of shelf shall have stiffening flanges formed downward to engage in base brackets.

#### **SHELF END BRACKET**

Shelf end brackets shall be designed with a 15° sloped front edge and shall be formed of not less than **16 gauge** steel and all but the rear edge is to be flanged outward approximately 1/4", matching the configuration of the base brackets. Rear edge shall have two (2) crimped hooks at top and a positioning tab at bottom for engaging slots in frame uprights. Two grips are formed into end brackets for securing shelf side flanges. A geometric cup impression matching the base bracket profile is incorporated to prevent bracket overlapping when units are shelved. Bracket shall extend at least 6" above the shelf surface.

## **ADJUSTABLE SHELVES**

All shelves shall support book loads of 50 lbs. per square foot without deflection in excess of 3/16". Adjustable shelves shall be formed of not less than **18 gauge** steel. Nominal depth of shelf shall be 1" greater than actual dimension measured from front of shelf to frame upright.

### **- Adjustable Standard Shelf:**

Adjustable shelves shall be formed with front and rear 3/4" high box-formed edges, and capable of receiving wire book supports, hook on book supports, and snap-on label holders. Side of shelf to have flanges turned downward at 90° for locking into end bracket grips. Adjustable shelves shall have a minimum clearance between end brackets of 35-3/8".

### **- Adjustable Integral Back Shelf:**

Adjustable integral back shelves are designed incorporating shelf and back in one piece. Back is formed 90° to shelf and 1-1/4" high. Top edge of shelf back is formed and configured to accept Borroughs' patented sliding divider book supports. Front edge of shelf is box formed 3/4" high, and capable of receiving hook on book supports and snap-on label holders. Side of shelf to be flanged downward at 90° for locking in end bracket grips. Adjustable integral back shelves shall have a minimum clearance between end brackets of 35-3/8".

### **- Adjustable Divider Shelf:**

Adjustable divider shelves are constructed with the shelf and back formed of one continuous piece. Front edge of shelf is box formed 3/4" high, and capable of receiving snap-on label holders. Shelf back is formed at 90° from shelf and 5" high. Divider shelf is slotted on 1" centers to accept flat type dividers. Side of shelf to be flanged downward at 90° for locking in end bracket grips. Adjustable divider shelves shall have a minimum clearance between end brackets of 35-5/8".

## **FRAME ACCESSORIES:**

### **TRANSVERSE TOP STRUT**

Transverse top struts shall provide bracing between bookstack sections on a ratio of one length for every three units of double faced bookstack sections 78" high or higher, non-freestanding units, or units with open bases. Channel shall be of **18 gauge** steel measuring at least 1" x 1-3/4" x 96", and formed into a channel tapered at one end.

### **UPRIGHT FILLER CHANNEL**

Upright filler channels shall be formed of not less than **24 gauge** steel. Channels will measure 1" x 1-3/16" in cross section, and fit between bottom and top rails of frame uprights, providing a finished appearance to inside of uprights.

### **WALL HUNG COLUMN STRIP**

Wall hung columns are designed to accept all adjustable shelving components and accessories. Wall hung columns are formed in a single piece "U" shaped channel 13/16" x 2" in cross section, and of **16 gauge** steel. Columns are designed to be mounted to a structural surface, and are equipped with a minimum of three (3) 5/16" recessed holes for attachment to structural surface. The 2" face of each column is punched with two rows of 3/16" x 5/8" slots spaced 1" on vertical centers and located from the center line of column 9/32".

## **TRIANGULAR REINFORCING GUSSET**

Triangular reinforcing gussets are designed to give additional support when units are mounted on mobile carriage bases or when additional stabilization is required for seismic conditions. Gussets are designed of one piece construction, and formed of not less than **16 gauge** steel. Gussets are 36" high, with a 1-1/2" return flange along bottom edge. Base depth of gusset matches base brackets.

## **SHELF ACCESSORIES:**

### **SHELF DIVIDER**

Dividers are designed for use on all divider type shelves. Dividers are stamped of not less than **18 gauge** steel, and have the same profile as base brackets and end brackets. Dividers are of one piece design with a hook and position tab formed into bottom edge of divider to match slots in divider shelves, and an additional hook on back edge that engages slot in back of divider shelves creating a rigid partition in shelf. Dividers are 6" high and 10" high, divider depth shall vary according to shelf depth.

### **SLIDING BOOK SUPPORTS**

Sliding book support shall be formed of an injection molded engineering plastic slider block with an attached chrome-plated 3/16" steel wire form 6" high, and 7" or 9" deep. The slider block snaps onto rail of integral back shelf, sliding support backstop or sliding support centerstop, and is easily moved when force is applied near the rail but is self-locking against book backs.

### **- Wire Book Support:**

Wire book supports are 6" high and shall be made from one continuous 3/16" steel wire, formed with a "W" shape, 6" high, with top ends formed at 90°, and chrome-plated. Wire book supports are designed in two depths, and are used on the underside of shelf above, locking into the shelf box edge front and back, as well as steel canopy tops.

### **- Steel Findable Book Support:**

Findable book supports of 6" or 9" height as specified shall be designed of not less than **18 gauge** steel and formed to match shelf end bracket profile, and include non-skid composition cork on base. Book supports are designed to be unattached and used on the surface of shelves. Paint to match shelving color.

### **ADJUSTABLE SHELF BACKSTOPS:**

Adjustable shelf backstops shall be made of **18 gauge** steel and 3-1/32" high with return stiffening flanges and hooks for engaging upright column slots. Backstops are designed to be self-hanging and independent of shelves and/or brackets, so the shelves can be raised or lowered without disturbing backstop. Backstops may be used in same slots as shelf brackets.

### **- Sliding Support Backstops:**

Sliding support backstops shall be made of **18 gauge** steel and 3-7/64" high with a top hem formed and configured to accept Borroughs' patented sliding book support. Bottom of backstop shall have a return stiffening flange and ends shall have hooks for engaging slots in frame uprights. Backstops are self-hanging and independent of shelves and/or brackets and are designed for single sided entry.

#### *- Sliding Support Centerstops:*

Sliding support centerstops shall be extruded aluminum in the shape of a "U" channel. The channel sides are configured to act as rails for back-to-back sliding book supports on double entry bases. Centerstop is 1-1/4" high and is used on closed base shelves only. Centerstop is designed to fit snugly between opening in upright channels and flush to base shelf surface.

## **ACCESSORIES**

### **STEEL END PANEL**

Steel end panels shall extend full width and height of unit. End panels shall consist of one piece **18 gauge** steel and formed into flush profile with 1-1/2" square edge and exposed return flange of not less than 3". Top and bottom of each end panel shall be tightly closed with top and bottom fillers welded in place. Centers of double faced panels shall be equipped with full height channels for attaching to frame uprights and to deaden sound and eliminate "oil canning". Steel end panels are available in smooth or patterned steel.

### **SOLID STEEL BACK**

Solid steel backs shall be **22 gauge**, and designed so one piece completely fills the space between the upright channels from the base shelf to the top of the unit. Backs are provided with upright fillers for installation of backs and to help diminish light penetration through the unit.

### **FABRIC BACK PANEL**

Fabric back panels shall provide both a tackable surface and acoustical barrier. Fabric back panels shall be of one piece construction, and completely fill area between frame uprights, and top and bottom spreader.

### **STEEL CANOPY TOP**

Steel canopy tops shall be formed of **18 gauge** steel. The canopy top shall have a minimum 1-1/2" front edge box formed that shall extend the full width of the unit. Tops will have a full width inner angle welded to under side of top to allow the use of wire book supports on top shelves of units, and for added strength. Tops shall extend the full width and depth of the unit base. Each end of canopy top will have a side angle welded to the top for attaching to canopy top brackets. Canopy tops are supported by and furnished with **14 gauge** brackets designed to engage with the frame slots.

### **CANOPY BRACKET FOR WOOD TOP**

Canopy top brackets for wood tops consist of two pieces: a canopy top bracket of **14 gauge** steel, and an 8" canopy side angle of **20 gauge** steel. Canopy top brackets are stamped of a single piece with one hook and one positioning tab along back edge to engage in frame slots. Canopy top brackets are 3" x 6-7/8" and configured such that they provide little obstruction from unit to unit in ranges. Canopy side angles are 6-5/16" long with each side of angle formed at 90° and 1-1/16" wide. One flange has ovals matching canopy bracket and the other flange has two (2) 1/4" diameter holes for attachment to laminated or wood tops. Canopy brackets for wood tops are complete with hardware.

## **HIGH PRESSURE LAMINATE CANOPY TOPS**

HPL (High Pressure Laminate) canopy tops or counter tops shall be continuous tops with high pressure laminate as selected on top and edges, over particle board core. Tops shall have balancing sheet adhered to underside. Tops, when spliced, will have hidden splice joints. Tops are supported by "canopy top brackets for wood tops" at a ratio of one pair per unit per side.

### **HIGH PRESSURE LAMINATE END PANEL**

HPL (High Pressure Laminated) end panels shall extend full width and height of unit. The laminate shall fully cover the particle board core. Thickness as specified.

### **CORNER FILLER**

Corner fillers provide a closed area where two single face units along the wall are placed at right angles to each other. Corner fillers shall be constructed of not less than **18 gauge** steel. Fillers consist of two panels and a tightly fitting top. Fillers are constructed the same height as abutting frames, and depth must **not** be less than actual dimension of bases. Corner fillers are attached to abutting frame uprights. When hinged periodical shelves are at the intersection of two units, add 2" to nominal base depth for corner filler to prevent interference of hinged shelf with components on abutting frames. Corner fillers may be ordered in custom sizes to fill space. Contact factory for application assistance.

### **INTERMEDIATE WALL FILLER**

Intermediate wall fillers provide a closed area when double entry units are to be installed perpendicular to single entry units along a wall, or when an obstruction along a wall requires a cosmetic and harmonious concealing. Intermediate fillers shall be constructed of not less than **18 gauge** steel. Fillers consist of two side panels, a front panel and a tight fitting top. Fillers are constructed the same height as frames, and depth must **not** be less than actual depth of adjoining bases. Intermediate fillers are attached to abutting frame uprights. When hinged periodical units are present, add 2" to filler in depth at side where periodical units are located to prevent interference with components on abutting frames. Intermediate fillers may be customized to fit specified applications. Contact factory for application assistance.

### **FIXED PERIODICAL SHELF**

Shelves shall be equipped with adjustable alternating display and storage shelves. Storage shelves shall be 12" deep, **18 gauge** steel; on inverted brackets, **14 gauge** steel. Display shelves of **18 gauge** steel shall have 11" actual heights with a 1" flange at the bottom and equipped with brackets of **16 gauge** steel to effect a slope of approximately 30° from vertical.

### **HINGED PERIODICAL SHELF**

Shelves shall consist of sloping display shelf hinged to storage shelf and base shelf brackets. Display shelves shall have 14" actual height and be hinged in such a manner as to provide a clear storage height of 8". Lower edge of display shelf shall have flange and turned up lip to provide a 1-3/8" clearance behind lip. Display shelves shall be supplied with rubber tips at top and bottom corners for sound deadening, and shall stand without holding when in open position. Display and storage shelves to be of **18 gauge** steel. Pivots and shelf brackets to be of **16 gauge** steel.

### ***SLIDING REFERENCE SHELF***

Shelves, made of **18 gauge** steel, shall be attached to the underside of book shelves where specified and shall extend the same depth as shelf above when fully extended. They shall operate on ball bearing extension slides. Shelves shall be single entry only, as double acting shelves prevent simultaneous use on both sides of a freestanding range.

### ***SHELF LABEL HOLDER***

Shelf label holders shall be made from clear butyrate plastic, and allow usage of cards 5/8" x 5". Label holder will be 3/4" x 5" and configured to snap over any adjustable shelf with a front edge box formed 3/4" high.

### ***CARD HOLDER***

Card holders shall be plated steel of size to hold 3" x 5" cards. Two (2) shall be required for each exposed double faced end panel. Locate card holders as directed by architect and/or owner.

## **■ FINISH**

All parts are thoroughly cleaned, neutralized, given a slight etch for good adhesion and an adherent phosphate coating. The powder coat finish of selected color is electrostatically applied and baked at appropriate temperatures. Finish must withstand ASTM Impact Resistance test, Conical Mandrel Bend test, and other rigid powder coat paint specifications. For more complete information, please refer to our Paint Application/Paint Film Performance General Specifications.

## **■ COLOR**

Color to be selected from manufacturer's standard colors, but not necessarily limited thereto. Indicate additional cost for special match color.

## **■ WARRANTY**

Manufacturer shall extend the original purchaser, from the date of purchase, a five-year limited warranty against manufacturing defects in material and workmanship.

## Why Borroughs?

Because we know how important your storage system is to you and your organization. That's why we produce Wilsonstak® library shelving. Our shelving is value-engineered to provide strength, durability, flexibility and cost effective storage solutions. Shelving that will maximize your space utilization and needs today and tomorrow.

But Borroughs is more than shelving. During our 70+ years, we've also earned a reputation for outstanding service and responsive on-time delivery that we continue to work hard to maintain. Borroughs people are experienced and knowledgeable in storage planning and design. They have ideas and solutions to help your shelving system to continue to contribute to the efficiency of your company as it grows and changes.

You can count on the combination of Borroughs people and products to create the perfect storage solutions for your needs.



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June 2008  
Form No. 680-007-05

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