

Division 12 00 00 FURNISHINGS
Section 12 93 00 SITE FURNISHINGS
Section 12 93 13 BICYCLE RACKS

Basis of Design:

1. Product: Sportworks Vertical+ Bike Rack
2. Description: Sportworks Vertical+ Wall Mount Bike Rack parks bikes vertically, to reduce handlebar interference, while a polyurethane pad mitigates bike scratches. Users can u-lock the front wheel and frame of the bike to a square steel tube which mitigates theft with a pipe cutter. An optional security cable further allows the rear tire to be secured. Rack also allows modular configuration, single-sided parking, daisy chaining of rack units to increase capacity -any horizontal spacing between bikes can be set
3. Quantity: As shown on plan
4. Material: Rack support loops: 1.0" x 1.0" x .060" Square Tubing (mild steel)
5. Manufacturer: Sportworks Northwest; www.sportworks.com; 425-483-7000; salesandsupport@sportworks.com

Part 1 General

1.01 Summary

- A. This section includes specifications for single-sided wall mounted bicycle parking products capable of storing bicycles in a vertical, free-hanging position

1.02 Submittals

- A. Manufacturer technical drawing
 - i. Size, shape, and finish
- B. Installation instructions
- C. Setback requirements

1.03 Quality Assurance

- A. Manufacturer Qualifications:
 - i. Minimum 5 years of bicycle rack manufacturing experience
 - ii. Have manufactured and delivered this style of rack

1.04 Delivery, Storage and Handling

- A. Inspect shipment upon delivery for freight damage and note complaint with carrier
- B. Protect bicycle racks during storage and installation
 - i. Use original packing if possible for storage
 - ii. Protect finish of rack from scratches or damage with careful handling

1.05 Warranty

- A. Provide manufacturer's standard warranty
 - i. Terms of warranty: 1 year from invoice date against defects in materials and/or workmanship

Part 2 Products

2.01 Manufacturer

A. Sportworks manufactured single-sided bike racks, with bike parking capacities ranging from 2 to 9 in a single span, that prescribe the storage of bicycles in a vertical orientation

2.02 Materials

- A. Rack support loops: 1.0" x 1.0" x .060" Square Tubing (mild steel)
- B. Rack cross-members: 1.25" Schedule 40 Pipe (mild steel)
- C. Rack towers: 2.5" x 2.5" x .083" Square Tubing (mild steel)
- D. Wheel hook boot/cover: black Santoprene molded boot with enclosed end

2.03 Finish

- A. Mild steel: TGIC Polyester powder coat (standard)
- B. Mild steel (cross-members only): Hot-dip galvanized (Per ASTM A123, 0.0039" minimum thickness)

2.03 Dimensions

VERTICAL+ WALL MOUNT RACK DIMENSIONS				
BIKE SPACING	BIKE CAPACITY	L	W	H
13	2	34.8	30.7	84
13	3	47.8	30.7	84
13	4	60.8	30.7	84
13	5	73.8	30.7	84
13	6	86.8	30.7	84
13	7	99.8	30.7	84
13	8	112.8	30.7	84
13	9	125.8	30.7	84
16	2	40.8	30.7	84
16	3	56.8	30.7	84
16	4	72.8	30.7	84
16	5	88.8	30.7	84
16	6	104.8	30.7	84
16	7	120.8	30.7	84
17	2	42.8	30.7	84
17	3	59.8	30.7	84
17	4	76.8	30.7	84
17	5	93.8	30.7	84
17	6	110.8	30.7	84
17	7	127.8	30.7	84
18	2	44.8	30.7	84
18	3	62.8	30.7	84
18	4	80.8	30.7	84
18	5	98.8	30.7	84
18	6	116.8	30.7	84
18	7	134.8	30.7	84

2.05 Mounting

- A. Anchor/Mounting Options
 - i. 3/8" Concrete lag screws
 - ii. 1/2" Concrete wedge anchors
 - ii. 1/2" Concrete wedge anchors with tamper resistant nuts

iii. E-Z Lock inserts for mounting to 3/4" thick plywood

2.06 Construction Description and Features

A. General Construction Description:

- i. Support loops: support bikes in a vertical free-hanging position, via an upturned wheel hook.
- ii. Cross-members: provide a horizontal structure for all support loops to be attached to with tensioning clamps
- iii. Towers: provide a vertical structure for all cross-members to be rigidly attached at their ends via bolted pinch joints

B. General Rack Features:

- i. Rack will allow assembly by a single person
- ii. Rack will allow configuration as either single or double-sided
- iii. Rack will allow the addition of any number of cross-members and towers to increase the bike parking capacity of the rack
- iv. Rack will allow the installer the ability to prescribe their desired horizontal spacing of adjacent bikes if desired
- v. Rack will mitigate handlebar interference by orienting bikes vertically with a 12" vertical stagger of adjacent bikes

C. Rack Support Loop Features:

- i. Each support loop will hang one bike by the wheel via a wheel hook covered in a durable and cushioning Santoprene material
- ii. Wheel hooks will be angled upwards in order to reduce the chance of bikes falling off wheel hooks.
- iii. Support loop geometry will mitigate interference with the bicycle frame, chain, crank, pedals, fork, derailleurs and wheels
- iv. Support loops, when installed, will create a truss structure to reduce cross-member droop when fully loaded with bikes
- v. Support loops will allow bike gear (such as, helmets, jackets, gloves, etc.) to be hung for storage and/or drying purposes
- vi. Support loop geometry will allow the bike frame (of the most common commuter type bikes) and one wheel to be locked to the rack with a variety of u-lock styles as small as 8" long x 4" wide (measured between the inside edges of the u)
- vii. Support loops are constructed with square tubing to make cutting with a pipe cutter very difficult thereby increasing security

A. Cross-Member Features:

- i. Cross-members will be 'featureless' so that they can be cut down to a user specified length to better fit the dimensions of a room/space
- ii. Rack cross-members will sag less than 3/16" mid span, when each bicycle support element of a 7 bike single-sided rack is loaded with 38 pounds

Part 3 Execution

3.01 Installation

A. Wall Mount:

- i. Install 2 fasteners per wall mount bracket and 1 fastener per tower as designated in manufacturer assembly instructions
- ii. Install bicycle rack in accordance with APBP (Association of Pedestrian and Bicycle Professionals) recommendations for location and spacing

B. Mounting to Plywood:

Revised 05/28/21

- i. Attached 3/4" thick plywood to wall and install rack using E-Z Lock inserts as designated in manufacturer installation instructions and Plywood Installation Guidelines
- C. The installer is responsible for ensuring the mounting surface and installation method are adequate to safely secure the bicycle rack