

**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+ Bike Rack parks bikes vertically, to reduce handlebar interference. 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 or double-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](http://www.sportworks.com); 425-483-7000; [salesandsupport@sportworks.com](mailto:salesandsupport@sportworks.com)

**Part 1 General**

1.01 Summary

- A. The Sportworks Vertical+ Bike Rack parks bicycles in a vertical, free-hanging position. User can lock both front wheel and frame along the u-lock compatible bike loop. Optional cable can be used to secure the rear tire for maximum security

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 Vertical+ single and/or double-sided bike racks.

2.02 Materials

- B. Rack support loops: 1.0" x 1.0" x .060" Square Tubing (mild steel)
- C. Rack cross-members: 1.25" Schedule 40 Pipe (mild steel)
- D. Rack towers: 2.5" x 2.5" x .083" Square Tubing (mild steel)
- E. Rack mounting rails: 5.35" x 1.25" Custom Extrusion (aluminum)
- F. 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)
- C. Aluminum: Clear anodize (Per MIL-A-8625, Type II, Class 1 (non-dyed) with a minimum thickness of 0.7 MILS)

2.04 Dimensions

VERTICAL+ FLOOR MOUNT SINGLE-SIDED RACK DIMENSIONS				
BIKE SPACING	BIKE CAPACITY	L	W	H
13	2	34.8	34	84
13	3	47.8	34	84
13	4	60.8	34	84
13	5	73.8	34	84
13	6	86.8	34	84
13	7	99.8	34	84
13	8	112.8	34	84
13	9	125.8	34	84
16	2	40.8	34	84
16	3	56.8	34	84
16	4	72.8	34	84
16	5	88.8	34	84
16	6	104.8	34	84
16	7	120.8	34	84
17	2	42.8	34	84
17	3	59.8	34	84
17	4	76.8	34	84
17	5	93.8	34	84
17	6	110.8	34	84
17	7	127.8	34	84
18	2	44.8	34	84
18	3	62.8	34	84
18	4	80.8	34	84
18	5	98.8	34	84
18	6	110.8	34	84
18	7	134.8	34	84

VERTICAL+ FLOOR MOUNT DOUBLE-SIDED RACK DIMENSIONS				
BIKE SPACING	BIKE CAPACITY	L	W	H
13	4	34.8	56	84
13	6	47.8	56	84
13	8	60.8	56	84
13	10	73.8	56	84
13	12	86.8	56	84

13	14	99.8	56	84
13	16	112.8	56	84
13	18	125.8	56	84
16	4	40.8	56	84
16	6	56.8	56	84
16	8	72.8	56	84
16	10	88.8	56	84
16	12	104.8	56	84
16	14	120.8	56	84
17	4	42.8	56	84
17	6	59.8	56	84
17	8	76.8	56	84
17	10	93.8	56	84
17	12	110.8	56	84
17	14	127.8	56	84
18	4	44.8	56	84
18	6	62.8	56	84
18	8	80.8	56	84
18	10	98.8	56	84
18	12	110.8	56	84
18	14	134.8	56	84

## 2.05 Mounting

### A. Surface Anchor/Mounting Options (all require ½” anchors)

- i. Concrete wedge anchors
- ii. Concrete wedge anchors with tamper resistant nuts
- iii. Concrete drive spikes

## 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. Cross-members also support bikes by providing a rigid interface for both tires
- iii. Towers: provide a vertical structure for all cross-members to be rigidly attached at their ends via bolted pinch joints
- iv. Mounting rails: allow towers to be bolted to at their base. The mounting rails can then be bolted to the floor or left free-standing (double-sided racks only)

### 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 and to adjust spacing of a fully assembled rack
- v. Rack will mitigate handlebar interference by orienting bikes vertically with a 12” vertical stagger of adjacent bikes
- vi. Double-sided racks will have the ability to free-stand without the need for floor anchors

### 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. Cross-members will provide front and rear tire support for bikes thereby eliminating 'swing-through' and the potential for bike damage
  - iii. Rack cross-members will sag less than 3/8" mid span, when each bicycle support element of a 14 bike double-sided rack is loaded with 38 pounds

## Part 3 Execution

### 3.01 Installation

#### A. Surface Mount:

- i. Install 2 fasteners per tower mounting rail as designated in manufacturer specifications
- ii. Install bicycle rack in accordance with APBP (Association of Pedestrian and Bicycle Professionals) recommendations for location and spacing

B. The installer is responsible for ensuring the mounting surface and installation method are adequate to safely secure the bicycle rack