

**DIVISION 12 00 00      FURNISHINGS**  
**SECTION 12 93 00      SITE FURNISHINGS**  
**SECTION 12 93 43      SITE SEATING AND TABLES**  
**SECTION 12 93 43.13    SITE SEATING**  
**VECTOR SEATING SYSTEM**

**Part 1 General**

01. Summary

A. Section Includes:

1. 2 foot, Jatoba hardwood slats, standalone, no seat backs
2. 2 foot, Jatoba hardwood slats, standalone, one seat back
3. 2 foot, Jatoba hardwood slats, one end leg, one intermediate leg, no seat backs
4. 2 foot, Jatoba hardwood slats, one intermediate leg, no seat backs
5. 2 foot, Jatoba hardwood slats, one end leg, no seat backs
6. 2 foot, aluminum slats, standalone, no seat backs
7. 2 foot, aluminum slats, standalone, one seat back
8. 2 foot, aluminum slats, one intermediate leg, one end leg, no seat backs
9. 2 foot, aluminum slats, one intermediate leg, no seat backs
10. 2 foot, aluminum slats, one end leg, no seat backs
11. 4 foot, Jatoba hardwood slats, standalone, no seat backs
12. 4 foot, Jatoba hardwood slats, standalone, two seat backs
13. 4 foot, Jatoba hardwood slats, one end leg, one intermediate leg, no seat backs
14. 4 foot, Jatoba hardwood slats, one intermediate leg, no seat backs
15. 4 foot, Jatoba hardwood slats, one end leg, no seat backs
16. 4 foot, aluminum slats, standalone, no seat backs
17. 4 foot, aluminum slats, standalone, two seat backs
18. 4 foot, aluminum slats, one intermediate leg, one end leg, no seat backs
19. 4 foot, aluminum slats, one intermediate leg, no seat backs
20. 4 foot, aluminum slats, one end leg, no seat backs
21. 6 foot, Jatoba hardwood slats, standalone, no seat backs
22. 6 foot, Jatoba hardwood slats, standalone, three seat backs
23. 6 foot, Jatoba hardwood slats, one end leg, one intermediate leg, no seat backs
24. 6 foot, Jatoba hardwood slats, one intermediate leg, no seat backs
25. 6 foot, Jatoba hardwood slats, one end leg, no seat backs
26. 6 foot, aluminum slats, standalone, no seat backs
27. 6 foot, aluminum slats, standalone, three seat backs
28. 6 foot, aluminum slats, one intermediate leg, one end leg, no seat backs
29. 6 foot, aluminum slats, one intermediate leg, no seat backs
30. 6 foot, aluminum slats, one end leg, no seat backs
31. 8 foot, Jatoba hardwood slats, standalone, no seat backs
32. 8 foot, Jatoba hardwood slats, standalone, four seat backs
33. 8 foot, Jatoba hardwood slats, one end leg, one intermediate leg, no seat backs
34. 8 foot, Jatoba hardwood slats, one intermediate leg, no seat backs

35. 8 foot, Jatoba hardwood slats, one end leg, no seat backs
36. 8 foot, aluminum slats, standalone, no seat backs
37. 8 foot, aluminum slats, standalone, four seat backs
38. 8 foot, aluminum slats, one intermediate leg, one end leg, no seat backs
39. 8 foot, aluminum slats, one intermediate leg, no seat backs
40. 8 foot, aluminum slats, one end leg, no seat backs
41. Custom wall-top mount, Jatoba hardwood slats, no seat backs
42. Custom wall-top mount, Jatoba hardwood slats, with seat backs
43. Custom wall-top mount, aluminum slats, no seat backs
44. Custom wall-top mount, aluminum slats, with seat backs
45. 120° A, Jatoba hardwood slats, one end leg, no seat backs
46. 120° A, Jatoba hardwood slats, one intermediate leg, no seat backs
47. 120° A, aluminum slats, one end leg, no seat backs
48. 120° A, aluminum slats, one intermediate leg, no seat backs
49. 120° B, Jatoba hardwood slats, one end leg, no seat backs
50. 120° B, Jatoba hardwood slats, one intermediate leg, no seat backs
51. 120° B, aluminum slats, one end leg, no seat backs
52. 120° B, aluminum slats, one intermediate leg, no seat backs
53. Tri-hub, 120° A, Jatoba hardwood slats, three end legs, no seat backs
54. Tri-hub, 120° A, aluminum slats, three end legs, no seat backs
55. Tri-hub, 120° B, Jatoba hardwood slats, three end legs, no seat backs
56. Tri-hub, 120° B, aluminum slats, three end legs, no seat backs
57. Cross, Jatoba hardwood slats, four end legs, no seat backs
58. Cross, aluminum slats, four end legs, no seat backs
59. Oblique, Jatoba hardwood slats, four end legs, no seat backs
60. Oblique, aluminum slats, four end legs, no seat backs
61. Planter, 14 gallon, stainless steel side panels, standalone
62. Planter, 14 gallon, VividGlass side panels, standalone
63. Planter, 14 gallon, stainless steel side panels, one end leg, one intermediate leg
64. Planter, 14 gallon, VividGlass side panels, one end leg, one intermediate leg
65. Planter, 14 gallon, stainless steel side panels, two intermediate legs
66. Planter, 14 gallon, VividGlass side panels, two intermediate legs

01. Submittals

A. Provide submittals in accordance with Section 01 33 00 – Submittal Procedures.

B. Product data:

1. Manufacturer's standard product literature.
2. Shop drawings.
3. Installation instructions.
4. Maintenance instructions.

C. Submit powdercoat finish samples for approval.

02. Quality Assurance

A. Manufacturer Qualifications:

1. Minimum 15 years experience in the manufacture of site seating.
2. Forest Stewardship Council (FSC) Certified Supplier. Provide manufacturer's FSC certification number.
3. Provide reference list of at least ten major transportation authorities, municipalities, universities, or other high-use public environments currently using site seating fabricated by the manufacturer.

03. Delivery, Storage and Handling

- A. Handle products in accordance with manufacturer's instructions.
- B. Store products in manufacturer's original packaging until ready for installation.
- C. Protect products from impacts and abrasion during storage.

04. Warranty

- A. Provide manufacturer's standard warranty:
  1. Warranty terms: one year from date of invoice against defects in materials and workmanship.

**Part 2 Products**

01. Manufacturer

A. Basis-of-design product: provide backed and/or backless benches based on the product named:

1. Vector Seating System by Forms+Surfaces.

2. Manufacturer Contact:

Forms+Surfaces  
30 Pine Street  
Pittsburgh, PA 15223  
phone: 800-451-0410  
fax: 412-781-7840  
email: sales@forms-surfaces.com  
website: www.forms-surfaces.com

B. Benches

1. Materials:

- a. Bench frame: aluminum.
- b. Bench slats (Choose one below):
  - 1) FSC 100% Jatoba hardwood (FSC License Code: FSC-C004453).
  - 2) Extruded aluminum.
- c. Intermediate and end seat dividers: cast aluminum (Optional)
- d. Seat backs: aluminum (Optional)
- e. Side panels (Optional)
  - 1) Stainless steel
  - 2) VividGlass

2. Finishes

- a. Bench frame: polyester powdercoat (Select one option below):
  - 1) Standard Texture from Forms+Surfaces Powdercoat Chart.

- 2) Premium Texture from Forms+Surfaces Powdercoat Chart.
- 3) Custom RAL powdercoat color.
- b. Bench slats: (Choose one below):
  - 1) Wood: Penofin® hardwood formula “Transparent Natural.”
  - 2) Aluminum: Polyester powdercoat (Select one option below):
    - 1. Standard Texture from Forms+Surfaces Powdercoat Chart.
    - 2. Premium Texture from Forms+Surfaces Powdercoat Chart.
    - 3. Custom RAL powdercoat color.
- c. Seat dividers: (Optional)
  - 1) Polyester powdercoat to match bench frame.
- d. Seat backs: (Optional)
  - 1) Polyester powdercoat to match bench frame.
- e. Side Panels: (Optional)
  - 1) Polyester powdercoat (Select one option below):
    - 1. Standard Texture from F+S Powdercoat Chart
    - 2. Standard Gloss from F+S Powdercoat Chart
    - 3. Other color as specified.
  
  - 2) Stainless steel finish (Choose one below):
    - 1. Diamond, stainless steel.
    - 2. Sandstone, stainless steel.
    - 3. Satin, stainless steel.
  - 3) Stainless steel perforation (Choose one below):
    - 1. Code
    - 2. Data
    - 3. Rainfall
    - 4. Gust
  - 4) VividGlass patterns (Choose one below):
    - 1. Briar pattern in Mint
    - 2. Briar pattern in White
    - 3. Thicket pattern in Olive
    - 3. Thicket pattern in White
    - 3. Current pattern (horizontal) in White
    - 4. Current pattern (vertical) in Spring
- f. LED Accent Lighting (Choose one below):
  - 1) 3000K
  - 2) 4000K
- 3. Dimensions (Choose model below):
  - a. 2 foot, standalone, no seat back

- 1) Overall dimensions: 25.7" long, 16.9" deep, 17.5" high.
- b. 2 foot, standalone, one seat back
  - 1) Overall dimensions: 25.7" long, 16.9" deep, 29.5" high
- c. 2 foot, one end leg, one intermediate leg, no seat back
  - 1) Overall dimensions: 25.7" long, 16.9" deep, 17.5" high
- d. 2 foot, one intermediate leg, no seat back
  - 1) Overall dimensions: 23.4" long, 16.9" deep, 17.5" high
- e. 2 foot, one end leg, no seat back
  - 1) Overall dimensions: 23.4" long, 16.9" deep, 17.5" high
- f. 4 foot, standalone, no seat backs
  - 1) Overall dimensions: 49.1" long, 16.9" deep, 17.5" high
- g. 4 foot, standalone, two seat backs
  - 1) Overall dimensions: 49.1" long, 16.9" deep, 29.5" high
- h. 4 foot, one end leg, one intermediate leg, no seat backs
  - 1) Overall dimensions: 49.1" long, 16.9" deep, 17.5" high
- i. 4 foot, one intermediate leg, no seat backs
  - 1) Overall dimensions: 46.8" long, 16.9" deep, 17.5" high
- j. 4 foot, one end leg, no seat backs
  - 1) Overall dimensions: 46.8" long, 16.9" deep, 17.5" high
- k. 6 foot, standalone, no seat backs
  - 1) Overall dimensions: 72.5" long, 16.9" deep, 17.5" high
- l. 6 foot, standalone, three seat backs
  - 1) Overall dimensions: 72.5" long, 16.9" deep, 29.5" high
- m. 6 foot, one end leg, one intermediate leg, no seat backs
  - 1) Overall dimensions: 72.5" long, 16.9" deep, 17.5" high
- n. 6 foot, one intermediate leg, no seat backs
  - 1) Overall dimensions: 70.3" long, 16.9" deep, 17.5" high
- o. 6 foot, one end leg, no seat backs
  - 1) Overall dimensions: 70.3" long, 16.9" deep, 17.5" high
- p. 8 foot, standalone, no seat backs
  - 1) Overall dimensions: 95.9" long, 16.9" deep, 17.5" high
- q. 8 foot, standalone, four seat backs
  - 1) Overall dimensions: 95.9" long, 16.9" deep, 29.5" high
- r. 8 foot, one end leg, one intermediate leg, no seat backs
  - 1) Overall dimensions: 95.9" long, 16.9" deep, 17.5" high
- s. 8 foot, one intermediate leg, no seat backs
  - 1) Overall dimensions: 93.7" long, 16.9" deep, 17.5" high
- t. 8 foot, one end leg, no seat backs
  - 1) Overall dimensions: 93.7" long, 16.9" deep, 17.5" high
- u. Custom wall-top mount bench: varies based on installation.
- v. 120° A, one end leg, no seat backs
  - 1) Overall dimensions: 43.2" long, 16.9" deep, 17.5" high
- w. 120° A, one intermediate leg, no seat backs

- 1) Overall dimensions: 43.2" long, 16.9" deep, 17.5" high
  - x. 120° B, one end leg, no seat backs
    - 1) Overall dimensions: 43.2" long, 16.9" deep, 17.5" high
  - y. 120° B, one intermediate leg, no seat backs
    - 1) Overall dimensions: 43.2" long, 16.9" deep, 17.5" high
  - z. Tri-hub, 120° A, three end legs, no seat backs
    - 1) Overall dimensions: 64.5" long, 66" deep, 17.5" high
  - aa. Tri-hub, 120° B, three end legs, no seat backs
    - 1) Overall dimensions: 64.5" long, 66" deep, 17.5" high
  - ab. Cross, four end legs, no seat backs
    - 1) Overall dimensions: 72.5" long, 63.7" deep, 17.5" high
  - ac. Oblique, four end legs, no seat backs
    - 1) Overall dimensions: 95.9" long, 91.5" deep, 17.5" high
  - ad. Planter, 14 gallon, standalone
    - 1) Overall dimensions: 25.7" long, 16.9" deep, 17.5" high
  - ae. Planter, 14 gallon, one end leg, one intermediate leg
    - 1) Overall dimensions: 25.7" long, 16.9" deep, 17.5" high
  - af. Planter, 14 gallon, two intermediate legs
    - 1) Overall dimensions: 25.7" long, 16.9" deep, 17.5" high
4. Mounting (Choose one below):
- a. Freestanding.
  - b. Surface mount. Provide threaded anchors and stainless steel mounting screws. Required for benches with seat backs.
  - c. Custom wall-top. Provide mounting hardware based on installation.

### **Part 3 Execution**

#### 01. Examination

- A. Verify that substrates are stable and capable of supporting the weight of items covered under this section.
- B. Verify that substrates have been adequately prepared to securely anchor those items that will be surface mounted.

#### 02. Installation

- A. Install according to the manufacturer's installation instructions.
- B. Install in conformance to applicable ADA guidelines and End User's established Accessibility policies.

**END OF SECTION**