

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
 FLIGHT BENCH

Part 1 General

01. Summary

A. Section Includes:

1. Backed bench, 6 foot, aluminum frame, extruded aluminum slats.
2. Backed bench, 6 foot, aluminum frame, FSC 100% Cumaru hardwood slats.
3. Backless bench, 6 foot, aluminum frame, extruded aluminum slats.
4. Backless bench, 6 foot, aluminum frame, FSC 100% Cumaru hardwood slats.
5. Backless bench, 6 foot, aluminum frame, TENSL UHPC.
6. Backed bench, 8 foot, aluminum frame, extruded aluminum slats.
7. Backed bench, 8 foot, aluminum frame, FSC 100% Cumaru hardwood slats.
8. Backless bench, 8 foot, aluminum frame, extruded aluminum slats.
9. Backless bench, 8 foot, aluminum frame, FSC 100% Cumaru hardwood slats.
10. Backless bench, 8 foot, aluminum frame, TENSL UHPC.

02. 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.

03. 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.

04. 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.

05. 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 backless benches based on the product named:

1. Flight Bench 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. Seat: (Choose one below):

1) Extruded aluminum slats.

2) FSC 100% Cumaru hardwood.

3) Cast TENSU glass fiber reinforced ultra high performance concrete (UHPC).

1. TENSU Material Performance Characteristics:

a. Compressive Strength: ? 18,275 lbs./in² (126 MPa).

b. Flexural Strength: ? 2,756 lbs./in² (19 MPa).

c. Tensile Strength: 1,160 lbs./in² (8 MPa).

d. Water Absorption: < [measurable limit (kg/m x h0.5)] [3.5%].

b. Bench frame: formed aluminum with invisible welds.

c. Optional armrests: cast aluminum.

2. Finishes

a. Bench seat: (Choose one below):

1) Extruded aluminum slats: polyester powdercoat (Select one option below):

1. Standard Texture from Forms+Surfaces Powdercoat Chart.

2. Custom RAL powdercoat color.

2) Wood slats: Penofin® hardwood formula "Transparent Natural."

3) TENSU UHPC: Natural color with hydrophobic treatment.

b. Bench frame and optional armrests: polyester powdercoat (Select one option below):

1) Standard Texture from Forms+Surfaces Powdercoat Chart.

2) Custom RAL powdercoat color.

3. Dimensions (Choose model below):

a. Backed bench, six foot, surface mount

1) Overall dimensions: 72" long x 20" deep x 30" high.

2) Seat dimensions: 17.8" deep x 18" high.

b. Backless bench, six foot, surface mount

1) Overall dimensions: 72" long x 17.8" deep x 18" high.

- 2) Seat dimensions: 17.8" deep x 18" high.
- c. Backed bench, eight foot, surface mount
 - 1) Overall dimensions: 96" long x 20" deep x 30" high.
 - 2) Seat dimensions: 17.8" deep x 18" high.
- d. Backless bench, eight foot, surface mount
 - 1) Overall dimensions: 96" long x 17.8" deep x 18" high.
 - 2) Seat dimensions: 17.8" deep x 18" high.
- 4. Mounting:
 - a. Surface mount. Provide threaded anchors and stainless steel mounting hardware.

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