SHORING SYSTEMS

Applications

Job proven over a wide range of applications:

• Building construction
• Environment
• Heavy construction
• Renovation
• Transportation
• Infrastructure
• Industrial
20K®
Heavy duty steel shoring system

The most universally used shoring system in the industry.

- Safe capacity of 20,000 lbs/frame* (9,072 kg) or 40,000 lbs (18,144 kg) capacity on a typical shoring tower.
- Frames furnished in 2' (.61 m) and 4' (1.22 m) widths.
- Fast-acting “Slideloks” eliminate the need for wing nuts in attaching braces to frames.
- Available with a full range of accessories.

*Allowable loads developed through the use of test procedures recommended by the Scaffolding, Shoring & Forming Institute, Inc. and a safety factor of 2.5:1. Consult Harsco Infrastructure for load data for specific conditions.

### Frames

<table>
<thead>
<tr>
<th>Frame height</th>
<th>Frame width</th>
</tr>
</thead>
<tbody>
<tr>
<td>ft</td>
<td>m</td>
</tr>
<tr>
<td>203E</td>
<td>3/4</td>
</tr>
<tr>
<td>217E</td>
<td>3/4</td>
</tr>
</tbody>
</table>

### Adjustable legs

202EE screw leg – Used at top and/or bottom of frames. 61/2" (162 mm) minimum height with base plates. 61/2" (162 mm) minimum heights with U-heads, plus 24" (610 mm) screw thread adjustment. (201A base plate shown)

202E screw leg – 12" (305 mm) adjustment.

### Base plate

201P Top plates – Used to support steel W6x12, W8x10 and aluminum stringers. Two-way design permits placement of 4" (102 mm) wide stringers either singly or lapped atop frame leg. Top plates include lock-in clips to secure beams. 7" W x 103/4" L (178 mm x 273 mm)

### Steel stringer

<table>
<thead>
<tr>
<th>Width</th>
<th>Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>ft</td>
<td>m</td>
</tr>
<tr>
<td>201J-8</td>
<td>U-head (210 mm)</td>
</tr>
<tr>
<td>201J-14</td>
<td>U-head (210 mm)</td>
</tr>
</tbody>
</table>

Two-way U-head 201J-2W U-head 33/4" W x 33/4" L (97 mm x 95 mm)

### Aluminum joist (J400)

Aluminum stringer

Lengths are available to satisfy all job conditions. See page 7 for more detail.
20K®
Heavy duty steel shoring system

Extension tubes and adjusting collars

Safe working loads for extension tubes

<table>
<thead>
<tr>
<th>Distance from top of frame leg to top plate</th>
<th>Allowable load unbraced</th>
<th>Allowable load braced two directions</th>
</tr>
</thead>
<tbody>
<tr>
<td>in</td>
<td>mm</td>
<td>lbs.</td>
</tr>
<tr>
<td>up to 24</td>
<td>up to 610</td>
<td>10,000</td>
</tr>
<tr>
<td>25 to 36</td>
<td>635 to 914</td>
<td>8,000</td>
</tr>
<tr>
<td>37 to 48</td>
<td>940 to 1219</td>
<td>7,000</td>
</tr>
<tr>
<td>49 to 60</td>
<td>1245 to 1524</td>
<td>6,000</td>
</tr>
</tbody>
</table>

*No brace necessary.

Braces

### Frames

<table>
<thead>
<tr>
<th>Frame size A</th>
<th>Frame spacing B</th>
</tr>
</thead>
<tbody>
<tr>
<td>20K®</td>
<td>2' .61 m</td>
</tr>
<tr>
<td>3'-6' 1.07 m</td>
<td>06T</td>
</tr>
<tr>
<td>5'-0' 1.52 m</td>
<td>08N</td>
</tr>
<tr>
<td>6'-0' 1.83 m</td>
<td>08N</td>
</tr>
</tbody>
</table>

202J-12
6' long (1.83 m) Extension Tube
202K Adjusting Collar
STEEL POST SHORES

- Easy to handle, easy to erect
- Available in a variety of sizes and allowable loads
- Tube is open at both ends to prevent accumulation of water and rust
- Top plates and base plates are provided with nail holes
- U-heads fit into the top of the tube without removing the plate
- Adjustments are made at standard working height — no stooping or reaching for levers
- Provides additional open floor space. Allows more ‘elbow room’ for simultaneous work
- For approximate height adjustment, open the upper tube and insert pin through hole in slot above adjusting nut

SPW Post Shore Features

- Adjusting holes are 4" (102 mm) apart
- Top plate is 6" x 6" (152 mm x 152 mm)
- Base plate is 6" x 6" (152 mm x 152 mm) with nailer holes
- Check with Harsco Infrastructure for U-head availability

SPW Post Shores

1. Extend shore staff to approximate required height.
2. Insert pin in lowest exposed hole in staff, set in adjacent step of the speed set.
3. Adjust shore to final height by turning the shore nut. Adjustment holes in the shore staffs are spaced four inches apart. The four steps in the speed set are one inch apart, permitting approximate adjustment to within two inches of the required height. Final adjustment requires only four to five turns of the shore nut.
4. To strip, back shore nut off a turn or two, lower pin to bottom step in the speed set and the shore staff is free.

<table>
<thead>
<tr>
<th>SPW02 44.0 lbs (20.0 kg)</th>
<th>SPW03 48.0 lbs (21.8 kg)</th>
<th>SPW04 55.0 lbs (25.0 kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Height Range</strong></td>
<td><strong>Safe Allowable Load lbs</strong></td>
<td><strong>Height Range</strong></td>
</tr>
<tr>
<td>6’2”</td>
<td>9,000 (4,082 kg)</td>
<td>8’2”</td>
</tr>
<tr>
<td>6’6”</td>
<td>9,000 (4,082 kg)</td>
<td>8’6”</td>
</tr>
<tr>
<td>7’0”</td>
<td>9,000 (4,082 kg)</td>
<td>8’9”</td>
</tr>
<tr>
<td>7’6”</td>
<td>8,500 (3,855 kg)</td>
<td>9’0”</td>
</tr>
<tr>
<td>8’0”</td>
<td>8,100 (3,674 kg)</td>
<td>10’0”</td>
</tr>
<tr>
<td>8’6”</td>
<td>7,500 (3,402 kg)</td>
<td>10’6”</td>
</tr>
<tr>
<td>9’0”</td>
<td>7,000 (3,176 kg)</td>
<td>11’0”</td>
</tr>
<tr>
<td>9’6”</td>
<td>6,500 (2,948 kg)</td>
<td>11’6”</td>
</tr>
<tr>
<td>10’0”</td>
<td>6,000 (2,722 kg)</td>
<td>12’0”</td>
</tr>
<tr>
<td>10’6”</td>
<td>5,500 (2,486 kg)</td>
<td>12’6”</td>
</tr>
<tr>
<td>11’1”</td>
<td>5,000 (2,268 kg)</td>
<td>13’0”</td>
</tr>
</tbody>
</table>

*based on factor of safety of 3:1
20KA®
Heavy duty aluminum shoring system

Lightweight aluminum frames for specialized applications

- Safe capacity of up to 20,000 lbs (9072 kg)/frame* or 40,000 lbs (18,144 kg) capacity on a typical shoring tower
- Available in 4’ (1.22 m) wide frames only
- Fully compatible with 20K® shoring accessories

* Allowable loads developed through the use of test procedures recommended by the Scaffolding, Shoring & Forming Institute, Inc. and a safety factor of 2.5:1. Consult Harsco Infrastructure for load data for specific conditions.

Frames

Typical tower components

Compatible 20K accessories

Pivoted diagonal brace
Aluminum Joist and Aluminum Stringer
Spanall® Horizontal Shoring System

INTERFORM® aluminum joist and aluminum stringer
High strength joists and stringers are the low-cost alternative to lumber for stationary shoring applications. Used in combination with the 20K heavy-duty shoring frames, the system is designed to set up faster, with fewer components to rent or buy, and fewer pieces to handle or set, than with conventional methods and materials.

Labor savings are substantial because the aluminum joist and aluminum stringers are lighter, and easier to handle than wood, while offering greater capacity. You can use fewer joists, stringers, ledger beams, and shoring frames to reduce set-up time and speed stripping. These durable joists and stringers can be reused over and over on many projects, helping to eliminate scrap and new material costs.

Aluminum joist
- Wide top flange provides an extremely rigid decking and work surface.
- Wider 3" x 2" nominal nailer makes nailing of deck easier, quicker.

**Capacity:**
250 lbs* per linear foot (372 kg/m) at 10' (3.05 m) spans.

**Joist weight:**
4.5 lbs. per foot (6.7 kg/m) including nailer strip.
*Deflection limited to L/360.

Aluminum stringer

**Capacity:**
520 lbs* (774 kg/m) per linear foot at 10' (3.05 m) spans.

**Stringer weight:**
5.2 lbs. per foot (7.7 kg/m) including nailer strip.
*Deflection limited to L/360.

Note: For specific load data covering your particular job requirement, contact your nearest Harsco Infrastructure Office at www.harsco-i.com

SPANALL® Horizontal shoring system
SPANALL® horizontal shoring beams deliver substantial time and cost savings because of their high load carrying capacity. SPANALL® maximizes the allowable load potential of vertical shoring support systems and keeps the deck wide open for worker access.

**SPANALL 47** — For spans from 4’3” (1.3 m) to 6’10” (2.1 m). For pre-stressed and steel girder bridges, narrow corridors and narrow continuous dropheads. Weight: 28 lb. (13 kg).
- Maximum bending moment: 1,450 ft-lb. (6.45 kN)
- Maximum end reaction: 2,380 lb. (1080 kg)

**SPANALL 610** — For building corridors, dropheads and bridge formwork where medium spans are required. Members adjust from 6’1” (1.8 m) to 10’2” (3.1 m). Weight 49 lb. (22 kg).
- Maximum bending moment: 4,000 ft-lb. (17.79 kN)
- Maximum end reaction: 2,750 lb. (1247 kg)

**SPANALL 814** — Ideal for high-rise construction where low weight is of prime importance. Adjustable for spans from 8’8” (2.6 m) to 14’9” (4.5 m). Weight: 78 lb. (35 kg).
- Maximum bending moment: 6,200 ft-lb. (27.58kN)
- Maximum end reaction: 2,500 lb. (1134 kg)

**SPANALL 1015** — Perfect for multi-story form construction with spans from 9’11” (3.0 m) to 15’5” (4.7 m). Weight: 100 lb. (45 kg).
- Maximum bending moment: 9,100 ft-lb. (40.48 kN)
- Maximum end reaction: 3,300 lb. (1497 kg)

**SPANALL 730** — The standard unit for long-span and heavy-load formwork, with two-section spans from 8’7” (2.6 m) to 19’9” (6.0 m) and three-section spans up to 29’7” (9.0 m). Weight depends on number and type of sections used.
- Maximum bending moment (2 member): 12,200 ft-lb. (54.27 kN)
- Maximum bending moment (3 member): 10,800 ft-lb. (48.04 kN)
- Maximum end reaction: 3,740 lb. (1696 kg)
WARNING

Serious injury may result if you fail to use safe practice in the erecting, dismantling or use of mast climbing work platforms, scaffolding, shoring and/or forming equipment. Erectors, dismantlers and users must be familiar with and follow current laws and regulations, safe practice and the Safety Rules and Instructions. Individuals using this equipment must be instructed in these requirements. Safety Rules and Instructions pertaining to the products shown herein are provided upon sale or rental of equipment. Additional copies or further information shall be provided upon the customer’s request.

It is important to note that current OSHA regulations require the use of guardrail systems and/or fall-protection devices at all working levels, open sides, and at all other openings on platforms and work areas above certain heights, as specified by OSHA. In all cases, where a worker is exposed to a fall hazard in the use of this equipment, guardrail systems, where appropriate, or other personal fall-protection devices, must be utilized. Means of access must be made available by the customer to all locations where people are expected to work. Materials for the provision of such means of access may be job-built by the customer or, at the customer’s option, be obtained through Harsco Infrastructure or other suppliers. Harsco Infrastructure will, at the customer’s request, consult on an alternative means of access.