ULTRAPAC II
4 AT A TIME

Installation
466361F0501US
February 2005 • US$250

BESSER World Headquarters
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Phone (989) 354-4111
## ULTRAPAC II
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SAFETY BULLETIN

This notice is issued to advise you that some previously accepted shop practices may not be keeping up with changing Federal and State Safety and Health Standards. Your current shop practices may not emphasize the need for proper precautions to insure safe operation and use of machines, tools, automatic loaders and allied equipment and/or warn against the use of certain solvents or other cleaning substances that are now considered unsafe or prohibited by law. Since many of your shop practices may not reflect current safety practices and procedures, particularly with regard to the safe operation of equipment, it is important that you review your practices to ensure compliance with Federal and State Safety and Health Standards.

IMPORTANT

The operation of any machine or power-operated device can be extremely hazardous unless proper safety precautions are strictly observed. Observe the following safety precautions:

- Always be sure proper guarding is in place for all pinch, catch, shear, crush and nip points.
- Always make sure that all personnel are clear of the equipment before starting it.
- Always be sure the equipment is properly grounded.
- Always turn the main electrical panel off and lock it out in accordance with published lockout/tag-out procedures prior to making adjustments, repairs, and maintenance.
- Always wear appropriate protective equipment like safety glasses, safety shoes, hearing protection and hard hats.
- Always keep chemical and flammable material away from electrical or operating equipment.
- Always maintain a safe work area that is free from slipping and tripping hazards.
- Always be sure appropriate safety devices are used when providing maintenance and repairs to all equipment.
- Never exceed the rated capacity of a machine or tool.
- Never modify machinery in any way without prior written approval of the Besser Engineering Department.
- Never operate equipment unless proper maintenance has been regularly performed.
- Never operate any equipment if unusual or excessive noise or vibration occurs.
- Never operate any equipment while any part of the body is in the proximity of potentially hazardous areas.
- Never use any toxic flammable substance as a solvent cleaner.
- Never allow the operation or repair of equipment by untrained personnel.
- Never climb or stand on equipment when it is operational.

It is important that you review Federal and State Safety and Health Standards on a continual basis. All shop supervisors, maintenance personnel, machine operators, tool operators, and any other person involved in the setup, operation, maintenance, repair or adjustment of Besser-built equipment should read and understand this bulletin and Federal and State Safety and Health Standards on which this bulletin is based.
# SAFETY SIGNS

<table>
<thead>
<tr>
<th>Sign</th>
<th>Description</th>
<th>Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>All Panels</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>Mixer</td>
<td>4</td>
</tr>
<tr>
<td>3</td>
<td>Concrete Products Machine</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Depalleter</td>
<td>2</td>
</tr>
<tr>
<td>4</td>
<td>Mixer</td>
<td>2</td>
</tr>
<tr>
<td>5</td>
<td>Skiploader</td>
<td>4</td>
</tr>
<tr>
<td>6</td>
<td>Skiploader/Mixer Platforms</td>
<td>8</td>
</tr>
<tr>
<td>7</td>
<td>Skiploader/Mixer Platforms</td>
<td>8</td>
</tr>
<tr>
<td>8</td>
<td>Vertical: Pallet Transport System</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Horizontal: LSC-40A/LSC-100</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>Pallet Transport System</td>
<td>4</td>
</tr>
<tr>
<td>9</td>
<td>Besser-Matic</td>
<td>4</td>
</tr>
<tr>
<td>10</td>
<td>Besser-Matic</td>
<td>4</td>
</tr>
<tr>
<td>11</td>
<td>Skiploader</td>
<td>4</td>
</tr>
<tr>
<td>12</td>
<td>All Panels</td>
<td>1</td>
</tr>
<tr>
<td>13</td>
<td>Overhead Block Transfer</td>
<td>4</td>
</tr>
<tr>
<td>14</td>
<td>Block Pusher</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Pallet Transfer System</td>
<td>4</td>
</tr>
<tr>
<td>15</td>
<td>Concrete Products Machine</td>
<td>2</td>
</tr>
<tr>
<td>16</td>
<td>Conveyors</td>
<td>12</td>
</tr>
<tr>
<td>17</td>
<td>Cuber</td>
<td>8</td>
</tr>
<tr>
<td>18</td>
<td>Cuber</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Block Turnovers</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Slat Conveyors</td>
<td>2</td>
</tr>
</tbody>
</table>

To order safety decals, contact your local Besser representative or the Besser Central Order Department.

Thank you!
High voltage.
Follow lockout procedure before servicing panel or machine.

Mixer blade hazard.
Close front panel and stay clear during operation.
Follow lockout procedure before servicing.

Crush hazards.
Stay clear of machine.
Follow lockout procedure before servicing.

Nip points.
Stay clear. Follow lockout procedure before servicing.

Crush hazard.
Stay clear. Follow lockout procedure before servicing.

Fall hazard.
Stay clear.

Large: 113236F0409
High Voltage
Width 4 1/2 inch
Height 9 5/8 inch
Small: 113236F0204
High Voltage
Width 2 inch
Height 4 1/8 inch

113237F0410
Mixer Blade Hazard
Width 4 1/2 inch
Height 10 1/4 inch

Vertical: 113240F0307
Crush Hazard
Width 3 1/2 inch
Height 7 1/2 inch
Horizontal: 113239F0604
Crush Hazard
Width 6 5/8 inch
Height 4 inch

114692F1006
Nip Points
Width 5 3/4 inch
Height 9 1/2 inch

114688F0906
Crush Hazard
Width 6 1/4 inch
Height 9 1/2 inch

114689F0804
Fall Hazard
Width 4 1/2 inch
Height 7 3/4 inch
WARNING

MUCHO CUIDADO

Falling objects. Hard hat area.

114690F0805
Falling Objects
Width 4 3/4 inch
Height 8 inch

DANGER

PELIGRO

Crush hazard. Stay clear of car and crawler. Follow lockout procedure before servicing.

Vertical: 113244F0410
Crush Hazard
Width 4 1/2 inch
Height 10 inch

Horizontal: 113245F1005
Crush Hazard
Width 10 inch
Height 5 3/4 inch

SUGGESTED LOCKOUT PROCEDURE
1. Announce lockout to other employees.
2. Turn power off at main panel.
3. Lockout power in off position.
4. Put key in pocket.
5. Clear machine of all personnel.
6. Test lockout by hitting run button.
7. Block, chain or release stored energy sources.
8. Clear machine of personnel before restarting machine.

113243F0410
Falling Objects
Width 4 1/2 inch
Height 10 inch

114691F1006
Shear and Fall Hazards
Width 5 3/4 inch
Height 9 3/4 inch

113249F0410
Safety Instructions Decal – Suggested Lockout Procedure
Width 4 inch
Height 10 inch
```markdown
### Crush Hazard
- **Width:** 10 inch
- **Height:** 5 3/4 inch

### Crush Hazard
- **Width:** 10 inch
- **Height:** 6 inch

### Crush and Pinch Points
- **Width:** 6 5/8 inch
- **Height:** 4 inch

### Nip Hazard
- **Width:** 7 inch
- **Height:** 4 1/2 inch

### Crush Hazard
- **Width:** 10 inch
- **Height:** 6 inch

### Crush and Pinch Hazard
- **Width:** 10 inch
- **Height:** 6 inch
```
ULTRAPAC II
SPECIFICATIONS

TOTAL WEIGHT: 54,000 Lbs [24494 Kg]

AIR LINE FITTING DIMENSIONS: 3/4” [19mm] I.D.

MINIMUM AIR PRESSURE: 80 psi [5.5 bars]

NOISE RATING: 102 to 114 DBA

MACHINE SPEED: up to 9 cycles / minute

PRODUCTION CAPACITY: up to 2160 blocks / hour

MINIMUM PRODUCT SIZE REQUIREMENT: 2” high [51mm]

MAXIMUM PRODUCT SIZE REQUIREMENT: 12” high [304.8mm]

PALLET REQUIREMENTS:

<table>
<thead>
<tr>
<th>WIDTH</th>
<th>DEPTH</th>
<th>THICK.</th>
<th>X</th>
<th>Y</th>
<th>PALLET NO.</th>
</tr>
</thead>
<tbody>
<tr>
<td>38.5” [978mm]</td>
<td>18.5” [470mm]</td>
<td>.375” [9.5mm]</td>
<td>37.5” [953mm]</td>
<td>17.625” [448mm]</td>
<td>453876</td>
</tr>
<tr>
<td>38.5” [978mm]</td>
<td>20.5” [521mm]</td>
<td>.375” [9.5mm]</td>
<td>37.5” [953mm]</td>
<td>19.500” [495mm]</td>
<td>463455</td>
</tr>
<tr>
<td>38.5” [978mm]</td>
<td>26.0” [9.5mm]</td>
<td>.375” [9.5mm]</td>
<td>37.5” [953mm]</td>
<td>25.000” [635mm]</td>
<td>446635</td>
</tr>
</tbody>
</table>

THICKNESS TOLERANCE: -0.010” [0.25mm] / +0.030” [0.76mm]

Table A PALLET REQUIREMENTS

WIDTH & DEPTH = Actual size of steel pallet.
XMAX & YMAX = Maximum production area of steel pallet.
## ULTRAPAC II ELECTRICAL DATA

<table>
<thead>
<tr>
<th>Plant Power Supply (Volts)</th>
<th>Total Horsepower (HP)</th>
<th>Total Kilowatts (Kw)</th>
<th>Control Panel Transformer (Volt-Amps)</th>
<th>Branch Circuit Distribution Switch (Amps)</th>
<th>Branch Circuit Fuse FRS-R (Amps)</th>
<th>Branch Circuit Feeder THHN</th>
<th>Branch Circuit Feeder Conduit</th>
<th>Short Circuit Interrupting Capacity (AIC)</th>
</tr>
</thead>
<tbody>
<tr>
<td>220V-240V 50 Hz</td>
<td>66.625</td>
<td>49.8</td>
<td>2000</td>
<td>400</td>
<td>250</td>
<td>2.50 AWG 250MM²</td>
<td>2.0 IN. 51MM</td>
<td>200,000</td>
</tr>
<tr>
<td>220V-240V 60 Hz</td>
<td>64.125</td>
<td>47.9</td>
<td>2000</td>
<td>400</td>
<td>250</td>
<td>2.50 AWG 250MM²</td>
<td>2.0 IN. 51MM</td>
<td>200,000</td>
</tr>
<tr>
<td>380V 50 Hz</td>
<td>66.625</td>
<td>49.8</td>
<td>2000</td>
<td>200</td>
<td>175</td>
<td>2.0 AWG 67MM²</td>
<td>1.5 IN. 38MM</td>
<td>200,000</td>
</tr>
<tr>
<td>415V 50 Hz</td>
<td>66.625</td>
<td>49.8</td>
<td>2000</td>
<td>200</td>
<td>175</td>
<td>2.0 AWG 67MM²</td>
<td>1.5 IN. 38MM</td>
<td>200,000</td>
</tr>
<tr>
<td>440V-480V 50 Hz</td>
<td>66.625</td>
<td>49.8</td>
<td>2000</td>
<td>200</td>
<td>125</td>
<td>1 AWG 42.4MM²</td>
<td>1.25 IN. 32MM</td>
<td>200,000</td>
</tr>
<tr>
<td>440V-480V 60 Hz</td>
<td>64.125</td>
<td>47.9</td>
<td>2000</td>
<td>200</td>
<td>125</td>
<td>1 AWG 42.4MM²</td>
<td>1.25 IN. 32MM</td>
<td>200,000</td>
</tr>
<tr>
<td>575V 60 Hz</td>
<td>64.125</td>
<td>47.9</td>
<td>2000</td>
<td>100</td>
<td>100</td>
<td>3 AWG 26.7MM²</td>
<td>1.0 IN. 25MM</td>
<td>200,000</td>
</tr>
</tbody>
</table>

### Table B  ULTRAPAC II ELECTRICAL DATA

Please consult the table above to find the appropriate electrical data for your ULTRAPAC II. First, find your corresponding plant power supply in the first left column. You will then find the corresponding electrical data on the same row than your power plant supply.

**EX:** Your power plant supply is 460V at 60 Hz. According to the table, you will then get these values:

**PLANT POWER SUPPLY:**
460 Volts - 60 Hertz

**TOTAL HORSEPOWER:**
64.125

**TOTAL KILOWATTS:**
47.9

**CONTROL PANEL TRANSFORMER:**
2000 volt-amps

**BRANCH CIRCUIT DISTRIBUTION SWITCH:**
200 amp

**BRANCH CIRCUIT FUSE RECOMMENDED (FRS-R):**
125 amp

**BRANCH CIRCUIT FEEDER RECOMMENDED (THHN):**
1 AWG (42.4mm²)

**BRANCH CIRCUIT FEEDER CONDUIT RECOMMENDED:**
1.25 in.(32mm)

**SHORT CIRCUIT INTERRUPTING CAPACITY:**
200,000 AIC
ULTRAPAC II ELECTRICAL COMPONENTS

<table>
<thead>
<tr>
<th>DEVICE</th>
<th>HORSEPOWER</th>
<th>KILOWATTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAIN DRIVE</td>
<td>25</td>
<td>18.7</td>
</tr>
<tr>
<td>VIBRATOR-RIGHT</td>
<td>10</td>
<td>7.5</td>
</tr>
<tr>
<td>VIBRATOR-LEFT</td>
<td>10</td>
<td>7.5</td>
</tr>
<tr>
<td>AGITATOR</td>
<td>5</td>
<td>3.7</td>
</tr>
<tr>
<td>BLOCK MOVING BARS</td>
<td>5</td>
<td>3.7</td>
</tr>
<tr>
<td>BLOCK MOVING SPEED</td>
<td>0.125</td>
<td>0.1</td>
</tr>
<tr>
<td>HEAD VIBRATOR (RIGHT SIDE)</td>
<td>2.0</td>
<td>1.5</td>
</tr>
<tr>
<td>HEAD VIBRATOR (LEFT SIDE)</td>
<td>2.0</td>
<td>1.5</td>
</tr>
<tr>
<td>CLAM SHELL POWER UNIT</td>
<td>5.0 [7.5]</td>
<td>3.7 [5.6]</td>
</tr>
<tr>
<td>TOTAL:</td>
<td>64.125 [66.625]</td>
<td>47.9 [49.8]</td>
</tr>
</tbody>
</table>

NOTE: Numbers in parenthesis refer to a power plant supply of 50 Hz instead of 60 Hz.

Table C ELECTRICAL COMPONENTS

SUMMARY OF ACOUSTICS

<table>
<thead>
<tr>
<th>Files #</th>
<th>+ MEM #</th>
<th>Freq.</th>
<th>Condition</th>
<th>Distance</th>
<th>Overall</th>
<th>&lt;550Hz</th>
<th>&gt;550Hz</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>C A</td>
<td>C A</td>
<td>C A</td>
</tr>
<tr>
<td>1.</td>
<td>+</td>
<td>1/21</td>
<td>5 kHz</td>
<td>Start of cycle</td>
<td>0.5m</td>
<td>112</td>
<td>111</td>
</tr>
<tr>
<td>2.</td>
<td>+</td>
<td>2/22</td>
<td>5 kHz</td>
<td>End of cycle</td>
<td>0.5m</td>
<td>116</td>
<td>114</td>
</tr>
<tr>
<td>3.</td>
<td>+</td>
<td>3/30</td>
<td>5 kHz</td>
<td>Start of cycle</td>
<td>0.5m</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>+</td>
<td>4/41</td>
<td>1 kHz</td>
<td>End of cycle</td>
<td>0.5m</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>+</td>
<td>5/51</td>
<td>5 kHz</td>
<td>Start of cycle</td>
<td>1.0m</td>
<td>111</td>
<td>108</td>
</tr>
<tr>
<td>6.</td>
<td>+</td>
<td>6/61</td>
<td>5 kHz</td>
<td>End of cycle</td>
<td>1.0m</td>
<td>114</td>
<td>111</td>
</tr>
<tr>
<td>7.</td>
<td>+</td>
<td>7/71</td>
<td>1 kHz</td>
<td>Start of cycle</td>
<td>1.0m</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8.</td>
<td>+</td>
<td>8/81</td>
<td>1 kHz</td>
<td>End of cycle</td>
<td>1.0m</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9.</td>
<td>+</td>
<td>9/91</td>
<td>5 kHz</td>
<td>Start of cycle</td>
<td>2.0m</td>
<td>110</td>
<td>106</td>
</tr>
<tr>
<td>10.</td>
<td>+</td>
<td>10/101</td>
<td>5 kHz</td>
<td>End of cycle</td>
<td>2.0m</td>
<td>110</td>
<td>109</td>
</tr>
<tr>
<td>11.</td>
<td>+</td>
<td>11/111</td>
<td>1 kHz</td>
<td>Start of cycle</td>
<td>2.0m</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12.</td>
<td>+</td>
<td>12/121</td>
<td>1 kHz</td>
<td>End of cycle</td>
<td>2.0m</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13.</td>
<td>+</td>
<td>13/131</td>
<td>5 kHz</td>
<td>Start of cycle</td>
<td>0.5m</td>
<td>113</td>
<td>112</td>
</tr>
<tr>
<td>14.</td>
<td>+</td>
<td>14/141</td>
<td>5 kHz</td>
<td>End of cycle</td>
<td>0.5m</td>
<td>110</td>
<td>108</td>
</tr>
<tr>
<td>15.</td>
<td>+</td>
<td>15/151</td>
<td>1 kHz</td>
<td>Start of cycle</td>
<td>0.5m</td>
<td></td>
<td></td>
</tr>
<tr>
<td>16.</td>
<td>+</td>
<td>16/161</td>
<td>1 kHz</td>
<td>End of cycle</td>
<td>0.5m</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table D SUMMARY OF ACOUSTIC
OVERALL DIMENSIONS:

11' - 5 1/2" [3493mm]

12' - 1" [3683mm]

15' - 5 1/2" [4712mm] (18 1/2" D model)
16' - 3 3/4" [4972mm] (26" D model)
PREPARATION

The ULTRAPAC II stands on a base plate that is fixed on beams. Those beams are fortified in a concrete slab and this platform must be placed in the floor. Use this section with the Foundation drawing and the Installation drawing to prepare the location and to install the ULTRAPAC II. This section is not a replacement of the two drawings listed above; it is presented here for complementary information.

PREPARING THE LOCATION OF THE ULTRAPAC II

1. The framework should be prepared according to specifications presented in figure 1.1, 1.2 and 1.3.

2. The 13' x 14' [3962mm x 4267mm] framework must be surrounded by a 3/4" [19mm] thick strip of rigid type insulating board around ULTRAPAC II concrete base to isolate vibration.

3. The length, width and thickness of the foundation specified in figures 1.1 and 1.2 represent minimum dimensions. The ULTRAPAC II foundation can be increased in length, width or thickness to accommodate existing soil conditions.

NOTE: The concrete foundation dimensions should never be less than the dimensions specified.

Figure 1.1  SIDE ELEVATION
4. Cut the I-beams to proper length (see table 1.3).

5. Weld the I-beams together.

**NOTE:** 3/4" [19mm] reinforced steel bars should be welded to the I-beams going in various directions to give added support and anchorage to the machine. It should be sufficient to maintain beams in place while concrete is being poured.

6. Place the beams at the desired height. For recommended beam size relative to the desired distance between the base plate and the floor, consult table 1.3 below.

**IMPORTANT:** The centerline of the machine is not the same as the center of the concrete slab. The centerline of the block machine is offset to one side of the foundation (see figure 1.2).

7. Place concrete to make base. We recommend a minimum 4000 psi (275 bar) concrete.

---

<table>
<thead>
<tr>
<th>DISTANCE FROM FLOOR TO BOTTOM OF BASE PLATE</th>
<th>HEIGHT OF BEAM IN CONCRETE DIMENSION (B) INCHES &amp; [mm]</th>
<th>WIDTH OF BEAM DIMENSION (C) INCHES &amp; [mm]</th>
<th>SIZE AND WEIGHT OF BEAM RECOMMENDED INCHES &amp; LBS/FT</th>
<th>SIZE AND WEIGHT OF BEAM IN CONCRETE mm &amp; Kg/m</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 [25]</td>
<td>11 [279]</td>
<td>5 [127]</td>
<td>S12 @ 31.8 #/FT</td>
<td>S305 @ 47.3 Kg/m</td>
</tr>
<tr>
<td>2 [51]</td>
<td>10 [254]</td>
<td>5 [127]</td>
<td>S12 @ 31.8 #/FT</td>
<td>S305 @ 47.3 Kg/m</td>
</tr>
<tr>
<td>3 [76]</td>
<td>9 [229]</td>
<td>5 [127]</td>
<td>S12 @ 31.8 #/FT</td>
<td>S305 @ 47.3 Kg/m</td>
</tr>
<tr>
<td>4 [102]</td>
<td>8 [203]</td>
<td>5 [127]</td>
<td>S12 @ 31.8 #/FT</td>
<td>S305 @ 47.3 Kg/m</td>
</tr>
<tr>
<td>5 [127]</td>
<td>10 [254]</td>
<td>5.5 [140]</td>
<td>S15 @ 42.9 #/FT</td>
<td>S381 @ 63.8 Kg/m</td>
</tr>
<tr>
<td>6 [152]</td>
<td>9 [229]</td>
<td>5.5 [140]</td>
<td>S15 @ 42.9 #/FT</td>
<td>S381 @ 63.8 Kg/m</td>
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<tr>
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<td>S15 @ 42.9 #/FT</td>
<td>S381 @ 63.8 Kg/m</td>
</tr>
<tr>
<td>8 [203]</td>
<td>10 [254]</td>
<td>6 [152]</td>
<td>S18 @ 54.7 #/FT</td>
<td>S457 @ 81.4 Kg/m</td>
</tr>
<tr>
<td>9 [229]</td>
<td>9 [229]</td>
<td>6 [152]</td>
<td>S18 @ 54.7 #/FT</td>
<td>S457 @ 81.4 Kg/m</td>
</tr>
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<td>10 [254]</td>
<td>8 [203]</td>
<td>6 [152]</td>
<td>S18 @ 54.7 #/FT</td>
<td>S457 @ 81.4 Kg/m</td>
</tr>
</tbody>
</table>

*Table 1.3*

**NOTE:** Dimension “A”=1” [25mm] for use with standard Bessermatic equipment. Any installation different from 1” [25mm] is a special.

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*Figure 1.2*  FRONT ELEVATION.
8. The electrical panel can be installed on any side of the machine but is usually installed on the opposite side of unloader (see figure 1.4). It can also be installed in any location to accommodate specific plant layout.

NOTE: To comply with articles 110-9 and 110-10 of the national electrical code, American customers shall supply a branch circuit protective device to feed this control. The protective device shall have a short circuit interrupting rating of no less than the available short circuit current. Failure to do so could result in a rupture of the protective device while attempting to clear a fault. Besser Company recommends the use of protective devices with interrupting ratings of no less than 200,000 AMPS RMS symmetrical. See the electrical data chart on drawing #439096 for recommended protection. [As for customers outside the US, please check with your country's electrical codes and make sure you comply with all laws concerning electrical devices.]

9. A conduit for electrical panel can be installed as shown on figure 1.4.

10. A conduit for the resocoder must also be installed as shown on figure 1.4.

11. The Graphic Control Station has to be connected to the electrical panel. Run conduit from electrical panel to display control station. The conduit wire length cannot be greater than 45 linear feet [13.7 meters]. The location is shown on the plant layout drawing.

Figure 1.3 3-D VIEW
NOTE: Refer to table 1.3 for "C" value.

Figure 1.4  TOP VIEW
12. Once the frame is properly located and leveled, pour concrete inside within 1" [25.4mm] of top of I-beam to allow for machine grouting. Do not pour the concrete up to the top of the beams. This also includes the area of concrete between the I-beams. Refer to figure 1.3.

NOTE: The top of the I-beams needs to be level (within 1/64" [0.4mm]) around the elevation given on the installation prints. For optimum equipment performance, these steel frames need to be level and at the proper elevation.
MACHINE HANDLING

The figure below shows where the machine should be hooked for handling.

**WARNING:** The Ultrapac is very heavy! Inappropriate handling of this piece of equipment could lead to serious injuries! Always use professional riggers.

*Figure 1.5  MACHINE HANDLING*
Figure 1.6  TYPICAL ULTRAPAC II INSTALLATION
TO INSTALL AN ULTRAPAC II:

1. Establish center lines for machine.

NOTE: The centerline of the machine is not the same as the center of the concrete slab. The centerline of the block machine is offset to one side of the foundation as shown in figure 1.2.

2. Clean area inside support steel and top of steel.

3. Make sure a 3/4” [19mm] strip of insulation has been placed between the machine foundation and the plant floor to isolate the vibration to the machine foundation (figure 1.3).

4. Place machine on support steel and align with center lines.

5. Level machine using machined area next to side plates to within 1/32” [0.8mm]. Use 6” [152mm] shim every foot [305mm]. Check machine vertical level on both slide shafts (must be plumb both ways). Refer to figures 1.7 and 1.8.

6. Weld machine to steel with 5/8” [16mm] skip weld. Make sure machine stays aligned with center line during welding. Weld over the shims. Refer to figure 1.7 and 1.8.

7. Non-shrink grout should be placed inside the I-beams once the block machine has been placed and test run (figure 1.9). 6 1/4 cu.ft. (1.9 m3) of grout is necessary for every inch below the base.

8. Make air connections. (Refer to figure 1.10 on page 18)
   a. 50 SCFM at 80 psi [5.5 bars] on the left side of machine for air compaction (optional).
   b. 10 SCFM at 80 psi [5.5 bars] on the left side of machine for other machine components.
   c. 10 SCFM at 80 psi [5.5 bars] on left or right side of machine for Smartpac option.

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**Figure 1.7** RIGHT SIDE ELEVATION
Figure 1.8  FRONT ELEVATION
Figure 1.9  POUR NON-SHRINK GROUT INSIDE. FILL-UP TO TOP OF MACHINE BASE PLATE
Figure 1.10  AIR SUPPLY CONNECTIONS

CONNECT AIR SUPPLY.
60 SCFM AT 80 PSI [5.5 bars]
50 SCFM AT 80 PSI [5.5 bars] if equipped with air compaction
10 SCFM AT PSI [5.5 bars] if equipped with Smartpac
9. Install hydraulic power unit. Refer to sheet #2 of the foundation drawing and make hydraulic line connections (figure 1.11 & 1.12).

10. Fill hydraulic power unit. The hydraulic power unit capacity is 10 gallons [38 liters]. Use Shell Tellus 46 or equivalent. In order to fill the tank, power unit must be available to operate the different hydraulic movement. Fill the system as follows:
   a. Fill tank.
   b. Check pump rotation, as shown in figure 1.12, by pushing starter in panel.
   c. Manually operate controls to fill the tank.
      • Inner frame raises and lowers;
      • Clam gate (optional) opens and closes;
      • Hopper raises and lowers (optional);
   d. Fill tank again and repeat until the full 10 gallon [38 liters] capacity is reached.

Figure 1.11 HYDRAULIC LINE CONNECTIONS

Figure 1.12 THE HYDRAULIC POWER UNIT
11. Check direction of rotation of vibrating shafts. The left side motor should be wired so it turns clockwise and the right side motor turns counterclockwise when viewed from front of machine (see figure 1.13).

*Figure 1.13  VIBRATING SHAFT ROTATION.*