



# BALANCED PERFORMANCE SYSTEM (BPS)

The BPS floor system is one of the most advanced systems available. The system has been designed to meet the current (2001) DIN 18032-Part II performance requirements, and still provide the longevity for which wooden flooring systems have been heralded.

By its design, the BPS system gives each user guaranteed performance results, while providing maximum dimensional stability through its time tested double layer plywood design. By utilizing the (2001)DIN 18032 Part II performance requirements, the BPS system performance is unmatched, uniformity is unquestioned, and safety is unrivaled, making this system the right and only choice!

## PART 1-GENERAL

### 1.1 DESCRIPTION

- A. This document specifies a wood strip aerobic and gymnasium floor system consisting, in general, of wood subflooring, maple flooring, vapor retarder, sanding, sealers, finishes, game lines and wall base.
- B. The general contractor shall provide a concrete slab, smooth troweled and level to a tolerance of 1/8" (3mm) in 10'0" (3m) radius, subject to the approval of the wood flooring contractor. LABOR AND MATERIALS NECESSARY TO POUR THE CONCRETE SLAB IN ACCEPTABLE CONDITION (HIGH AREAS GROUND DOWN AND LOW AREAS FILLED WITH APPROVED LEVELING COMPOUNDS) SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR.
  1. Concrete slab depression to be used with 7/16" (11mm) BPS pads shall be:
    - a. 2" (51mm) for 25/32" (20mm) thick flooring.
    - b. 2 1/4" (57mm) for 33/32" (26mm) thick flooring.
  2. OPTION: Concrete slab depression to be used with 1/4" (6mm) foam shall be:
    - a. 1 13/16" (46mm) for 25/32" (20mm) thick flooring.
    - b. 2 1/16" (52mm) for 33/32" (26mm) thick flooring.
  3. Concrete subfloors shall have an adequate vapor retarder beneath and at the perimeter of the slab.

### 1.2 QUALITY ASSURANCE

- A. Supplier Qualifications
  1. Supplier of wood flooring shall be Horner Flooring Company.
- B. Installer Qualifications
  1. Flooring Contractor shall be a firm experienced in maple flooring systems.
- C. Flooring shall be stored on the premises a minimum of seven (7) days before installation commences, or as required for acclimation. Final determination as to acclimation will be made by the flooring contractor.
- D. All flooring bundles or cartons should be broken and loosely piled to acclimate the flooring to moisture conditions in the building.

### 1.3 WORKING CONDITIONS

- A. The floor system shall not be delivered or installed until all masonry, plastering, tile work and overhead mechanical trades are completed and building is enclosed and weathertight.
- B. Permanent heat, light and ventilation shall be installed and operative during and after installation, maintaining a temperature range of 55° F (13° C) to 75° F (24° C) and a relative humidity range of 35% to 50%.

### 1.4 WARRANTY

- A. Horner Flooring Company hereby warrants the BALANCED PERFORMANCE SYSTEM flooring materials to be free from manufacturing defects for a period of one year from the date of substantial completion.

## PART 2-PRODUCTS

### 2.1 MATERIALS

- A. Flooring shall be Horner 25/32" (20mm) or 33/32" (26mm) thick x 2 1/4" (57mm) or 1 1/2" (38mm) wide First, Second and Better, Third and Better or Third Grade, continuous tongue and groove and end-matched MFMA Northern Hard Maple, grade marked and stamped as manufactured by Horner Flooring Company.  
OPTION: Horner Long Life™ flooring if so specified.
- B. Vapor retarder shall be 6 mil polyethylene.
- C. Subfloor shall be 4' x 8' x 3/8" (122cm x 244cm x 10mm) rated sheathing, exposure 1, plywood; bottom sheet shall be padded with 7/16" (11mm) Horner BPS (SAFE™) pad by manufacturer.  
OPTION: Rawl type (R-II) restraint if so specified.  
OPTION: Pads can be replaced with 1/4" (6mm) closed cell polyethylene foam. Note: This option is not DIN Certified.
- D. Fasteners
  1. Flooring fasteners shall be 1 1/2" (38mm) barbed cleat or 15-gauge (1.8mm) coated staples.

OPTION: If Horner Long Life™ is specified, use 1 1/2" (38mm) 15-gauge (1.8mm) staples only.

2. Subflooring fasteners shall be 3/4" (19mm) cleats or staples.
- E. Wall base shall be 3" x 4" (76mm x 102mm) Vent Cove heavy duty molded vented vinyl base with premolded outside corners as supplied by Horner Flooring Company. Specify color: black or brown.
- F. Finish material shall be as specified by architect selected from the latest listing provided by the MFMA, and shall be applied according to manufacturer's instructions.

## **PART 3-EXECUTION**

### **3.1 INSPECTION**

- A. Inspect concrete slab for proper tolerance and dryness and report any discrepancies to the general contractor for correction.
- B. The concrete slab shall be cleaned of all debris so flooring contractor will have adequate access to work surface.
- C. All work required to put the concrete slab in an acceptable condition shall be the responsibility of the general contractor.

### **3.2 INSTALLATION**

- A. Cover concrete with 6 mil polyethylene, sealing and lapping joints a minimum of 4" (102mm).
- B. Install padded bottom layer of plywood at a 45° angle across the long dimension of the finished floor, leaving a 1" (25mm) space along the 8' (244cm) side and a 2" (51mm) space at the ends of each sheet and installed in a running bond pattern.

OPTION: Drill for R-II restraint installation if so specified.

  1. If 1/4" (6mm) closed cell polyethylene foam option is utilized, install foam before installing bottom layer of plywood, substituting unpadded plywood for padded plywood.
- C. Install top layer of plywood in a running bond pattern perpendicular (90°) to the bottom layer leaving a 1" (25mm) space along the 8' (244cm) side and a 2" (51mm) space at the ends of each sheet and installed in a running bond pattern.
- D. If so specified, install Horner's BPS hold downs according to manufacturer's instruction.
- E. Install flooring parallel to the long dimension of the room by power nailing or stapling 10"-12" (254mm–305mm) o.c.
  1. Space joints between flooring strips to allow for intermediate expansion, as designated by the installer and in accordance with humidity conditions in the region.
  2. Provide 2" (51mm) expansion voids at the perimeter and at all vertical obstructions.

### **3.3 FLOOR SANDING**

- A. Machine sand with coarse, medium and fine paper to a smooth, even and uniform surface.
- B. Remove sanding dust from entire surface by tack or vacuum.
- C. Refer to MFMA sanding and finishing guide for procedures.

### **3.4 FINISHING**

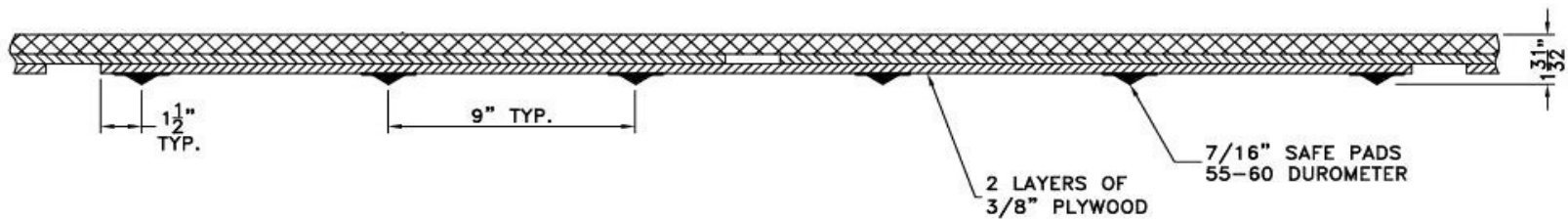
- A. Inspect entire area of floor to insure that surface is acceptable for finishing, completely free from sanding dust and perfectly clean.
- B. Apply seal and finish per manufacturer's instructions.
  1. Apply two (2) coats of seal and two (2) coats of finish.
- C. Buff and clean floor between each coat.
- D. Paint game lines as shown on drawings, between seal and first coat of finish.
- E. Game line paint shall be compatible with finish.

### **3.5 BASE INSTALLATION**

- A. Install Vent Cove base, mitering inside corners and anchoring to walls with base cement or screws and anchors.
- B. Use premolded outside corners and mitered inside corners.

### **3.6 MAINTENANCE**

- A. Upon completion of floor installation, it is the owners, attendants or individuals in charge that are responsible for the up keep of the building are to see that the care and maintenance instructions of the Horner or MFMA Care Card are followed.



BALANCED PERFORMANCE SYSTEM – SIDE VIEW

Slab Depression		
Flooring	25/32" (20mm)	33/32" (26mm)
7/16" pads (11mm)	2" (51mm)	2 1/4" (57mm)
1/4" foam (11mm)	1 13/16" (46mm)	2 1/16" (52mm)

HORNER FLOORING COMPANY  
 DOLLAR BAY, MICHIGAN  
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