

Specifications for HARO Sports floor Munich 35

PART 1 - GENERAL

1.01 DESCRIPTION

A. Related work specified under other sections.

B. CONCRETE SUBFLOORS

a) Depression: Slab depression is minimum 84mm

b) Tolerances: The general contractor shall furnish and install the concrete subfloor depressing the slab sufficiently to accommodate the floor system. The slab should be level within following tolerances according to DIN 18032, part II and DIN 18202:1997-04, figure 3:

- 3mm (1/8'') in a radius of 1 meter (3' 3'')
- 9mm (3/8'') in a radius of 4 meter (13' 1'')
- 12mm (1/2'') in a radius of 10 meter (39' 4'')
- 15mm (5/8'') in a radius of 15 meter (49' 2'')

For USA: Concrete tolerance 1/8" in radius of 10'

Differing spots shall be ground level, and low spots filled in with approved levelling compound by the general contractor

- c) Waterproof: On or below grade concrete sub-floors are generally acceptable if an effective moisture barrier is installed. Concrete subfloors on or below grade shall be adequately waterproofed beneath the slab and at the perimeter walls and on earth side of below grade walls by general contractor using suitable type membrane.
- d) Moisture content of sub-floor: Concrete subfloors must not contain more than 2,5% moisture content (appropriate test method). Moisture content of wooden subfloors should be between 6-10%.
- e) The subfloor must be clean.

1.02 QUALITY ASSURANCE

A. Floor System Manufacturer Qualifications

1. Manufacturer shall be an established firm experienced in field and have been in business under the same corporate name for a minimum of ten (10) years.
2. Manufacturer must meet qualifications of ISO 9001 and 14001.
3. Manufacturer shall submit a list of projects where the specified flooring has been installed.
4. Offered sports floors must be FIBA approved
5. Sportsfloor should be under permanent supervision of RAL and be marked with the RAL certificate RAL-GZ 942

B. Performance Qualifications of Flooring System

1. Floor system must exceed the requirements of DIN V 18032-2 Part II, as set out below.
 - a. Shock Absorption: shall be minimum of 53%.
 - b. Ball Return: shall be a minimum of 90%.

- c. Deflection: shall be minimum of 2.3mm.
- d. Area of Deflection: shall be maximum of 15%.
- e. Friction: Range 0.4 - 0.6 per DIN Test Method.
- f. Rolling Load: 1500 Newton Load without damage

1.0.3 BIDDER MUST PROVIDE EVIDENCE OF ANY DEVIATION from these specifications including detailed drawings and statements itemising, where products deviate from or exceed these specifications. This data shall be provided with bid.

1.0.4 SUBMITTALS

- a) The Bidder must include the attached Supplemental Pricing Sheet containing detailed costs in an itemised format. Final Purchase Price shall include all freight to Site, Taxes and Duty. It is intended that a final price be submitted.
- b) The Bidder must describe any potential problems, which may impact the delivery date.
- c) Manufacturer shall provide written evidence of previous installations of this floor currently in use. Installation shall have taken place within the past ten (10) years. This information shall be submitted with this bid. The Bidder must include a minimum of five (5) references for comparable systems and installation efforts successfully performed by the Bidder within the last 18 months.
- d) Each Bidder is required to provide the following information in the amounts requested. Bidders who fail to provide any of the submittals requested will not be given consideration.

Submit three (3) copies of the Bid Form/Quotation Sheet.

Submit three (3) copies of manufacturer's descriptive literature and manufacturer's fabrication specifications.

Submit three (3) copies of manufacturer's warranty if different from the Vendor's Warranty as required in the Terms and Conditions.

1.0.5 DELIVERY, STORAGE AND HANDLING

A. Delivery of Materials

Materials shall not be delivered, stored or installed until all painting and plastering work has been completed, and all overhead mechanical work like lighting, backstops, scoreboards are installed. A room temperature of 18-22 degrees Celsius (64 to 72 degrees Fahrenheit) and a relative humidity of 45-55 % are to be maintained.

- B. Materials shall not be stored at the installation location if the moisture content of the concrete slab differs from paragraph 1.0.1.d. „Moisture content of sub-floor“.

1.0.6 JOB SITE CONDITIONS

Before installing a floor, inspect the job site thoroughly. Carefully inspect the outside surroundings for improper drainage and predictable or obvious sources of moisture. Be sure that, as a minimum, any concrete subfloor is at least 50-60 days old before installing a wood floor over it and the requirements of 1.0.1. B “CONCRETE SUBFLOORS” are met.

1.0.7 GUARANTEE

Hamberger Industries GmbH, of Rosenheim, Germany, warrants the model Munich materials to be free from manufacturing defects for a period of 2 years.

The Warranty does not cover problems caused in whole or in part by accident, circumstances beyond control, neglect, negligence, ordinary wear and tear, abuse, use for which the material is not designed, faulty construction of the building, settlement of the building walls, failure of other contractors to

adhere to specifications, separation of the concrete slab, mechanical failure, excessive dryness, or excessive moisture from humidity, spillage, migration through the slab or walls, or any other source (the excluded conditions).

This warranty is in lieu of all other warranties whether oral, written, expressed, implied or statutory, including but not limiting any warranty of merchantability or fitness for a particular purpose, and of any other obligation on the part of Hamberger Industries GmbH.

Any and all representations, promises, warranties, or statement by the installer or by any other party that differ in any manner from the terms of this written warranty shall be at no force or effect.

Part 2 Products

A. Moisture barrier

- 1.) 6-mil polyethylene or
- 2.) PVC-Foil, 0,5 mm or
- 3.) Bituminous coating V60S4, 4mm thick

B. HARO Sports Floor Model Munich 35

HARO Double swing beam,
HARO Counterfloor module and
HARO Load distribution panels
- surface elastic
- ventilated

Assembly and construction

1.1 ELASTIC CONSTRUCTION

- Module-unit HARO double swing beam consisting of:
 - Plywood pads BFU 100; thickness: 9 mm
 - Lower beam 4000 x 60 x 21 mm
 - Intermediate webs consisting of plywood and Regupol pads made of EPDM granules and PUR binder; thickness: 9 mm
 - Upper beam 4000 x 60 x 15 mm
- HARO Counterfloor-Module
Measurements: 4000 x 96 x 15 mm
The counter-floor-module is staggered in the jointing area and nailed crosswise onto the module unit double swing beam.
- Polyethylene foil 0,03 mm thick
- HARO load distribution panels
Dimensions: 2500 x 1250 x 12 mm
HARO special OSB-boards, screwed onto the counterfloor.

Total Construction height: 81 mm

- ### 1.2 RIGID CONSTRUCTION in equipment and adjoining rooms. Floor sleepers will be installed instead of double swing beam, otherwise (see Pos. 1.1)

Total Construction height: 81 mm

2 ADDITIONAL MATERIAL

2.1 BASE BOARDS

Base boards with ventilation slits at the front should to be placed along the wall and cover the 15mm expansion gap between the floor and the wall and joint toward the floor. The base boards have an integrated rubber lip on the bottom as protection against entering cleaning water.

Wood-type: _____

2.2 FLOOR PLATES

Floor plates with lid, consisting of round metal frame and lid. The lid should have an all-round sealing and is locked with suction lifter. The lid is mounted flush with the sport floor.

_____	Clear opening 110 mm
_____	Clear opening 160 mm
_____	Clear opening 200 mm
_____	Clear opening 285 mm
_____	Clear opening 335 mm

Part 3-Execution

3.01 Inspection

- A. Inspect concrete subfloors for proper tolerances and dryness, and report any discrepancies to the general contractor in writing.
- B. All work required to put the concrete subfloors in acceptable condition shall be the responsibility of the general contractor.
- C. Subfloor shall be swept clean by the general contractor prior to flooring installers arriving at the jobsite

3.02 Installation

- A. Follow all manufacturers installation instructions carefully.
- B. Install moisture barrier over concrete slab per manufacturers instructions.
- C. Install double swing beams lengthways in the facility leaving a 40 mm gap at the width and a 60mm gap at the length of the hall.
- D. Nail counterfloor onto the double swing beams with 2.2 x 32 mm T-Nails.
- E. Lay poly film over counterfloor.
- F. Screw load distribution boards onto the counterfloor leaving a gap of 15 mm to the wall. Maintain an offset to the adjoining boards of min. 5 counterfloor boards.

- G. Fill all holes and joints with filling compound.
- H. Glue synthetic flooring on load distribution board.
- I. Paint game lines as per architect's plans.
- J. Install perimeter base as per manufacturers requirements.
- K. Clean up jobsite and put all waste in general contractor's dumpster.

3.0.3 Maintenance

1. BASIC CLEANING

Treat the coating with our special Wax Remover diluted in water. Pick up the loosened dirt before it starts to dry and then wipe the floor with a damp cloth well wrung out in clear water. Should foam develop, add some of our de-foamer to this solution.

2. GENERAL CARE

For initial treatment after installation and after every basic cleaning, apply our special Sports Floor Care evenly with cleaning machine, mop or cloth. Proportion in the mixture: 1 litre Special Floor Care to 10-15 litres of Water. The sports floor can be walked on again after about 20 min.

Attention: Only use our Sports Floor Care in mixture with water!

3. ROUTINE CLEANING

Wipe the floor with our special sports floor care, using a damp mop or cleaning machine. This thoroughly cleans and at the same time cares for the coating.

4. HARO BASE BOARDS WITH VENTILATION SLITS

Ventilation slits must be open permanently to provide proper ventilation of the sub-floor. Chewing gum, cigarette ends, paper etc. should be removed from time to time, and dust and dirt should be vacuumed away.

PLEASE NOTE!!:

Wood is a natural product. HARO Sports Floor should NOT be flooded with water, since this may cause the load distribution boards to swell and thus damage the floor. It is therefore essential to be careful when cleaning and maintaining the floor and to economise with water and water-based products.