

Junckers UnoBAT 62+ Sports Floor System

D 1.0 General Information

D 1.2 Batten Sports Information

D 8.2 Specifier's Information

D 8.2.1 Laying Instruction

Fig. 1

Components

1 - Boards

- Junckers 22 mm boards for sports floors.

Wood species/grades:
Beech, SylvaKet, Maple and Ash /
Champion, Premium and Club
Surfaces → **B 2.0**

Thickness x Breadth x Length:
22 x 129 x 3700 mm

2 - Nails

- 2.2 x 45 mm machine J-nails

3 – Unobat 62+ batten system

- Battens 25.5 x 60 x 3600 mm, with 12 mm resilient elements pre-mounted in a recess at the underside of the battens.
- Batten distance:
c/c 336.4 mm (336)
c/c 411.1 mm (411)
- Loose J-Lock elements clipped-on to the resilient elements.

4 – Packings

- By c/c 336.4 : 7.5 pcs./m²
- By c/c 411.1 : 6.5 pcs./m²
- Plywood
- Plastic wedges

5 - Moisture barrier

- Min. 0.20 mm PE membrane.

6 - Distance to wall

- 1.5 mm per running metre across width and 1 mm per running metre along length of the floor, but both min. 30 mm.
Is also required at fixed points, e.g. columns.

Fig. 3

General description of floor system

The Junckers UnoBAT 62+ Sports Floor System is based on 22 mm solid boards nailed to a resilient subfloor of one layer of battens - prefabricated. The floor system is an area elastic type of sports floor with high shock absorbency and elasticity suitable in multi-purpose sports hall as well as for Squash.

The construction height is 62 mm without packing.

The sports floor system fully conforms to EN 14904:A4.

Please note that full documentation of a floor system comprises the data in D 1.0, D 1.2 D 8.2 and D 8.2.1. → Fig. 1

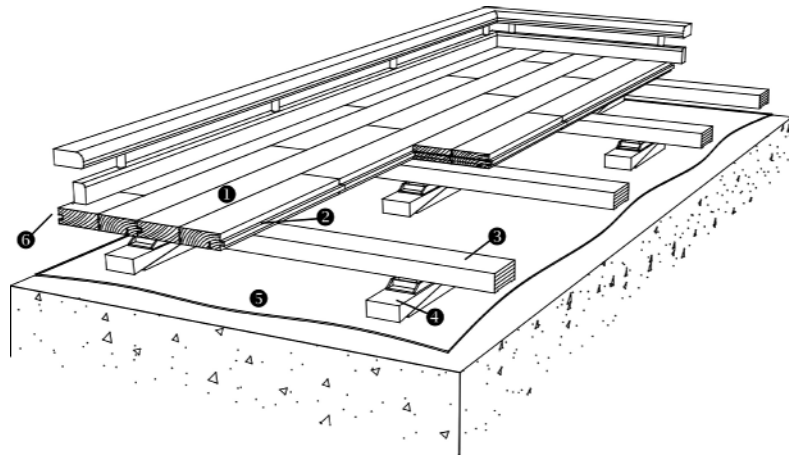


Fig. 3

System specification

22 mm solid boards nailed to a substructure of prefabricated battens. Manufactured as a single layer structure of 25.5 x 60 mm veneered battens with 12 mm resilient elements pre-mounted in a recess at the underside of the batten at the packing points. Before laying out the battens, the enclosed J-Lock elements are clipped-on to the resilient elements.

Batten distance, 336 or 411 mm, is determined depending on the expected sports functional characteristics and/or strength.

If the floor is used for basketball or retractable seatings are to be installed in the sports hall, battens with c/c 336 mm shall always be used.

To avoid deflection of the floor along the walls, special battens, used as starters, are included in the system.

The system is levelled up on a firm subfloor → **Packing type**.

Boards

The boards are nailed to the battens according to a fixed **10-board rule**. The boards are laid in a continuous pattern with well-defined distribution of board header joints from row to row of 4 x the batten distance, i.e. 1345.6 mm with c/c 336.4 mm, or 2 x the batten spacing, i.e. 822.2 mm with c/c 411.1 mm. In that way that all board header joints are supported.

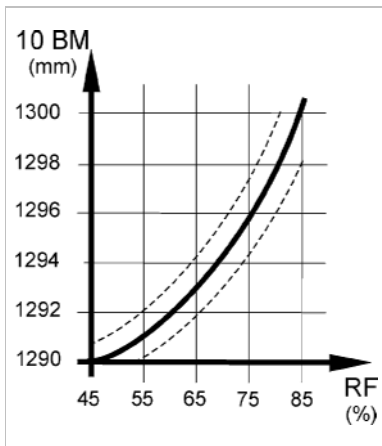


Fig. 4

Point load-bearing strength

The UnoBAT 62+ Sports Floor System is tested and approved for below mentioned maximum point loads, in relation to load area and batten distance:

c/c 336 mm:
 Diameter, 25 mm: 4,5 kN (= 450 kg)
 100x100 mm: 6,0 kN (= 600 kg)

c/c 411 mm:
 Diameter, 25 mm: 4,0 kN (= 400 kg)
 100x100 mm: 5,5 kN (= 550 kg)

Fig. 5

10-board rule

The 10-board rule indicates the measurement across 10 boards when laid and is primarily based on the expected max. relative humidity of the building when in use.
 → D 1.2 - 10-board rule

Fig. 4 illustrates the 10-board measurement in relation to the relative air humidity. E.g. will an expected relative humidity of max. 65% RH normally give a 10-board measurement of approx. 1294 mm. The limit of the 10-board measurement, which also depends upon the floor size, is in fig. 4 shown as dotted lines.

The measurement is achieved by inserting temporary spacers between the boards during the installation process.

In case of doubt please contact Junckers Technical Service.

Rigidity and load-bearing strength

The UnoBAT 62+ Sports Floor System is designed to ensure good technical properties in relation to the expected loads in connection with sports activities.

Figure 5 shows the maximum point load-bearing strength at certain load areas and batten distances (336 and 411 mm).

Table 1 shows the UnoBAT 62+ Sports Floor System in relation to the load classes in ENV 1991-2-1:1995, where the load-bearing strength requirements are complied with and the floor has an acceptable rigidity. The floor system's rigidity in relation to wheel loads is also shown. For further definition of load classes and types,

→ D 1.0 - Stiffness and load bearing strength of floors.

Table of loadings	ENV :1995		Other loads		Explanation of symbols
	Area load	Point load	Wheel load (solid)	Wheel load (air)	
Loading types					● Loadings conforming to the requirements of ENV 1991-2-1:1995 and deflection criterion ◆ Deflection on wheel load is complied with D 1.0 - table 2
Loading category					
C4 Areas with possible physical activities	● ¹				Remarks 1) Point load area min. 200 x 200 mm
C5 Areas susceptible to overcrowding	●		◆		

Table 1

Packing type

Packing for the substructure must be of dimensionally-stable material, e.g. plywood. Alternatively plastic wedges may be used - alone or in combination with the above materials. Fine adjustment with up to 3 layers of bitumen-based felt, equivalent to a layer thickness of max. 5 mm. The packing is attached to the substructure with nails which may not be in contact with the concrete. The substructure is laid before mounting of packing and is then levelled up to 2 mm on a 1.5 m straight edge (UK: 3 mm under a 2 m straight edge).

Moisture insulation

A moisture barrier is always installed on all concrete sub floors, min. 0.20 mm PE membrane, directly on the concrete. Before the floor is laid the residual entrained moisture in the concrete must be in balance with the expected maximum humidity in the building, e.g. 65% RH (UK 75% acc. To BS 8201). → D 1.2 - Moisture protection

Heat insulation

→ D 1.2 - Thermal insulation and pipes in the subfloor

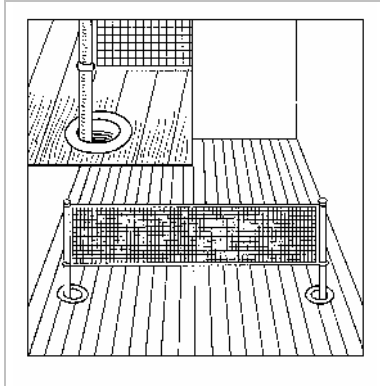


Fig. 6

Bushings

Bushings must be mounted so that both vertical and horizontal movement of the floor is unimpeded. The internal diameter of the flange must exceed that of the pipe, i.e. the external diameter of the net pole, by minimum 40 mm. At the outermost zones of the floor all flanges are mounted excentrically towards the centre of the floor in relation to the bush fittings in the concrete, so that the floor can expand freely. → Fig. 6

Place extra support battens and wooden blocks at net poles, pipes, etc. (including packing if lower battens are not supported). Support battens must be resilient.

Consumption of materials

Net consumption for 1000 m² UnoBat 62+ batten system

Batten distance c/c 336

Boards:	1000 m ² + approx. 2 %
Machine J-nails, 2.2 x 45 mm:	25000 pcs.
UnoBat 62+ batten system:	3000 mm.
Loose J-Lock elements:	7500 pcs.
Loose J-Lock shock pads:	100 pcs.
Loose tongues:	67 pcs.
Moisture barrier:	
min. 0.20 mm PE membrane:	1100 m ² incl. overlap

Batten distance c/c 411

Boards:	1000 m ² + approx. 2 %
Machine J-nails, 2.2 x 45 mm:	20000 pcs.
UnoBat 62+ batten system:	2500 mm.
Loose J-Lock elements:	6500 pcs.
Loose J-Lock shock pads:	100 pcs.
Loose tongues:	67 pcs.
Moisture barrier:	
min. 0.20 mm PE membrane:	1100 m ² incl. overlap