

**3 ROPES RAIL**

**2230C**

**1. Attachment principle:**

The ropes rail is fixed in the building part (breeze-block, concrete, made of metal structures, laminated timber wood...) with 2 fixing systems located at the ends rail.

Nota: **if the fixing support is concrete**, it must have a **thickness of  $\geq 100$  mm**.

**2. Loads applied to the support frame during use:**

**Specific requirement for the background (section 5.2.4 in standard NF S52-400) :**

« Stresses applied to attachment point should be estimated by calculation according to standard NF EN 913, specific standards and specifications of each equipment (weight, attachment points, type of fixation, etc.), of its use and handling.

For climbing ropes rail, absorbing load transmitted by each rope is vertically 200daN and horizontally 90daN ».

- The ropes rail classified above is fixed by 2 attachments located at his ends and have got 3 climbing ropes.
- The total weight of the ropes rail is 45 kg. To calculate the stresses we choose a 1.5 factor of safety, so a total load of 67.5 daN.

The vertical and horizontal stresses (in daN) applied to each attachment point are the following:

**Fixation 1 :**

V : 244 daN  
H : 95 daN

**Fixation 2 :**

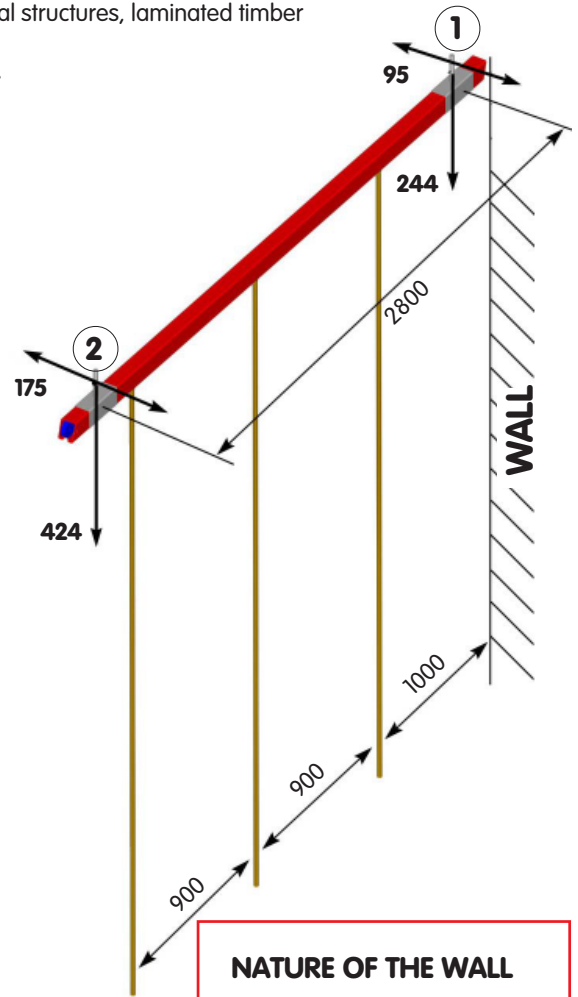
V : 424 daN  
H : 175 daN

The dimensions only define the load application location

**3. Positioning, usage, and maintenance:**

Refer to the gymnasium layout drawings and diagram below.

**Warning :** this apparatus needs a free area, without elements which could block its installation or its safety use (i.e. : lights, pipes, heating ...)  
(see drawing ACC or DET).



**4. Design of structures:**

**Specific requirement for the background (section 6 in standard NF S52-400):**

"The background should be appropriate for receiving attachment points and absorbing loads transmitted by sports equipment. Attachment points should not adversely affect the background soundness (watertightness, solidity, etc.).

Only the owner and/or contractor for the background is entitled to allow the attachment points to be fixed and tests to be carried out according to their type and the loads transmitted.

The owner and/or contractor shall entrust the design, sizing and fixing of the following to a professionally qualified body (carpenter, architect, building contractor, design office, etc.):

- attachment point supports;
- foundation blocks;
- possible additional stiffeners for the supporting structure.

The sports equipment manufacturer shall provide the background owner and/or contractor with the following: the loads and stresses of attachment points taken by the background as regards strength values, types and specifications of the proposed attachments.

It is up to the contractor to make the background appropriate for the attachment points in accordance with their locations and the loads provided by the sports equipment manufacturer".

**NATURE OF THE SUPPORT:**

**Material:**

**Covering:**  YES  NO

**Covering type:**

**Covering thickness (mm):**

**Owner and/or contractor attachment authorized:**

**Date:**

**Name:**

**Post:**

**Stamp:**

**Signature:**

The equipment will be installed by our technicians when this document is returned, duly signed, to our offices.