Technical Data
Pallet Rack

Pallet rack
Racking stanchions and crossmembers
1 The racking stanchions made from special profiles are punched in a 50 x 50 mm pattern. Each 2 racking stanchions have their framework profiles bolted to an upright. Different profiles and material thicknesses are used depending on the shelf loads.

2 The crossmembers with welded on hangers connect the racking uprights and form a racking bay. The crossmembers are secured against lifting out by a securing pin.

Floor fixing
3 The racking stanchions are securely fixed to the floor with a staybolt. The version used depends on the racking height and the grade of the concrete.

Distance pieces
4 These connect two rows of racking at a specified distance and ensure greater stability. For racking systems with a sprinkler system the distance pieces are used for fixing the piping.
Fitting facilitated
Example: A new hanger joint for our heavy duty racking guarantees
easier fitting and improved statics. The uprights themselves represent
a bolted system, whose height and depth can be extended or
modified with the construction kit system.

Loading figures – prerequisites

Crossmembers
- The stated shelf load is taken to be uniformly distributed
  over the whole crossmember pair or shelf base.
- The permissible centre sag is max. L/200 of the
crossmember length.
- The stated shelf load only applies in conjunction with our
  heavy duty racking.

Uprights
- The rack must not be stressed by impact loads.
- The stated permissible loadings apply for at least
  4 racking bays per row.
- To ensure adequate longitudinal stability at least 2 crossmember
  pairs must be hooked in for each racking bay.
- Racking must be set up on adequately dimensioned concrete
  (min. concrete grade to DIN 1045 (7.88) B25).
- The levelness of the floor, regardless of whether this is an unfinished
  or finished floor, must comply with DIN 18202, Part 5.
- Racking uprights are to be firmly dowelled to the concrete floor.
- When planning and setting up heavy duty racking the instructions
  in ZH 1/428 and in our Operating and Assembly Instructions
  must always be complied with and adhered to.
  Please request the Operating and Assembly Instructions.
- Assembly and set up only by authorised assembly personnel.
- When determining the permissible loading figures for the
  racking bay the greatest shelf height is to be taken in each case.
- For racking with fewer than 4 racking bays the bay loading is to be
  reduced in accordance with the following directive:
  3 bays = 0.88 x bay loading
  2 bays = 0.77 x bay loading
  1 bay = 0.66 x bay loading

Base plates
- The uprights are anchored to the floor through the base plates. The
  appropriate base is used depending on the application
  and load.
- Accurately fitting shims level up the racking installation.

Crossmember profiles for shelf loads up to 5,000 kg

<table>
<thead>
<tr>
<th>Crossmember Profile</th>
<th>Max. Load</th>
</tr>
</thead>
<tbody>
<tr>
<td>ITGI 90 x 50</td>
<td>15,000 kg</td>
</tr>
<tr>
<td>ITGI 100 x 50</td>
<td>18,000 kg</td>
</tr>
<tr>
<td>ITGI 120 x 80</td>
<td>24,000 kg</td>
</tr>
<tr>
<td>ITGI 130 x 50</td>
<td>30,000 kg</td>
</tr>
<tr>
<td>ITGI 150 x 50</td>
<td>36,000 kg</td>
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</tbody>
</table>

Upright profiles for different bay loads

<table>
<thead>
<tr>
<th>Upright Profile</th>
<th>Max. Bay Load</th>
</tr>
</thead>
<tbody>
<tr>
<td>CI 70 x 80</td>
<td>15,000 kg</td>
</tr>
<tr>
<td>CI 85 x 80</td>
<td>18,000 kg</td>
</tr>
<tr>
<td>CI 100 x 80</td>
<td>24,000 kg</td>
</tr>
</tbody>
</table>

Base plates

<table>
<thead>
<tr>
<th>Base Plate</th>
<th>Dimensions</th>
</tr>
</thead>
<tbody>
<tr>
<td>CI 70 x 80</td>
<td>140 x 90</td>
</tr>
<tr>
<td>CI 85 x 80</td>
<td>160 x 120</td>
</tr>
<tr>
<td>CI 100 x 80</td>
<td>160 x 120</td>
</tr>
</tbody>
</table>
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