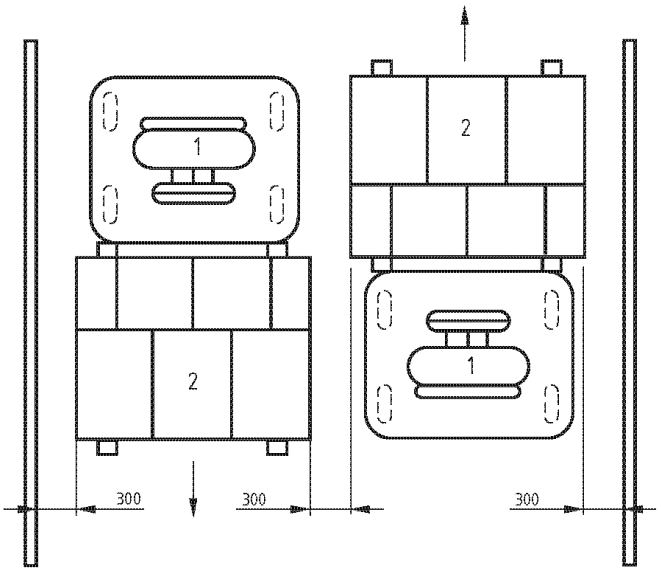
Dimensions in millimetres



Key
1 powered vehicle
2 unit load

Figure 14 — Gangway clearances for a truck two-way system with no pedestrian traffic

6 Very narrow aisle - Class 300

6.1 Floor tolerances

6.1.1 Definition of E, Z and Z_{SLOPE}

E is the elevational difference between adjacent fixed points 3 m apart.

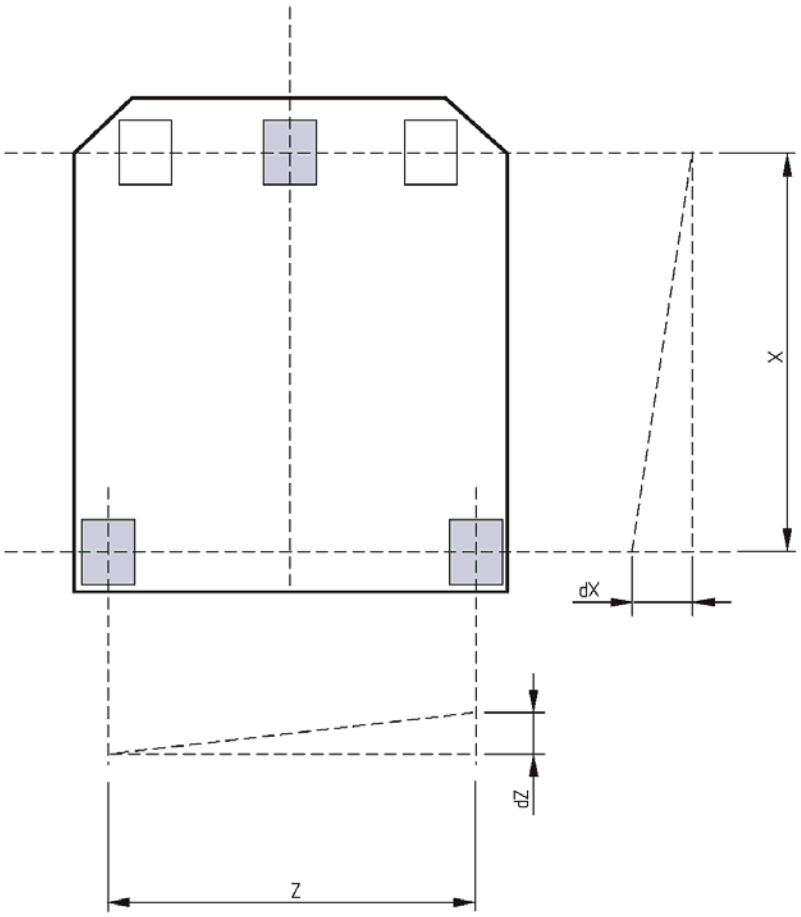
Z is the dimension between the centres of truck front wheels in mm and Z_{SLOPE} is the cross aisle slope between the centres of truck front wheels in mm per m due to tolerances and deformations.

6.1.2 Definition dZ and dX

dZ is the elevational difference between the actual centres of truck front wheels.

dX is the elevational difference between the centre of the front axle and the centre of the rear axle. The axle spacing is assumed to be a virtual dimension of 2 m.

dZ and dX shall be determined as shown in Figure 15.



Key

Z dimension between the centres of truck front wheels in mm

X wheelbase or 2000 mm

Figure 15 — Determination of dZ and dX

The data interval, the minimum measurement interval between readings, shall be less than or equal to 300 mm with additional readings within 50 mm of each side of the joints.

6.1.3 Definition d^2Z and d^2X

d^2Z is the change in dZ over a forward movement of 300 mm along the wheel tracks.

d^2X is the change in dX over a forward movement of 300 mm along the wheel tracks.

d^2Z and d^2X shall be determined as shown in Figure 16 and 17.

Dimensions in millimetres

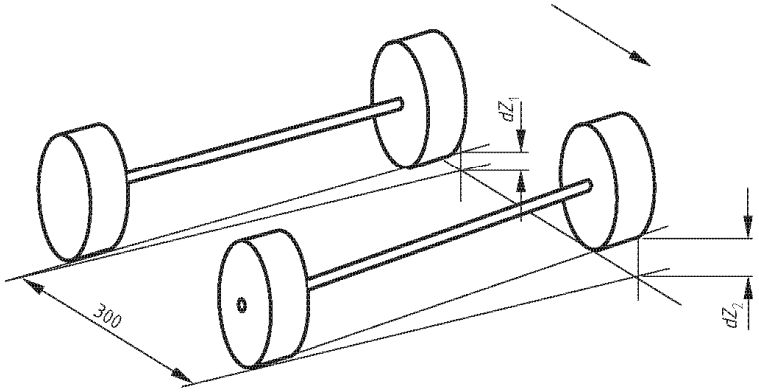


Figure 16 — Determination of $d^2Z = dZ_2 - dZ_1$

Dimensions in millimetres

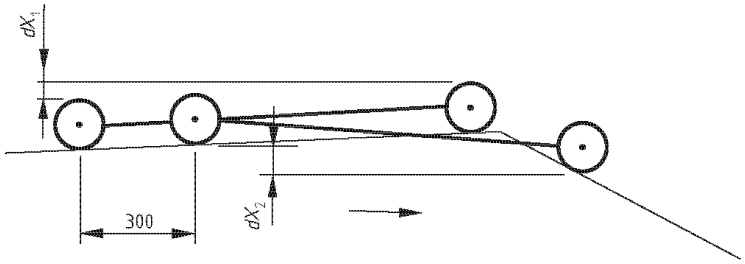


Figure 17 — Determination of $d^2X = dX_2 - dX_1$

6.1.4 Limiting values of properties

For Class 300B overall floor tolerances shall be considered on an individual project basis.

For class 300A the values of properties shall not exceed the values given in Tables 5 and 6a. The values in Table 6b are based on MHE with a wheel base of 2000 mm, for other dimensions the designer may adjust the values on a linear extrapolation basis. The values given in Table 6b or the extrapolated values shall not be exceeded.

Different floor classifications in Tables 6a and 6b may be used for the limiting values specified in the down aisle and the cross aisle directions.

NOTE The values given in Table 6a relate to the safe clearances between the MHE and the racking. The values given in Table 6b relate to the ride quality of the MHE and have a limited effect on the safety clearances between the MHE and the racking.

Table 5 — Classification and limiting values of Z_{SLOPE} and E_{SD}

Classification	Top beam level m	Z_{SLOPE} mm per m	E_{SD} mm
DM 1	Over 13	1,3	3,25
DM 2	8 to 13	2,0	3,25
DM 3	Up to 8	2,5	3,25

Table 6a — Limiting values of dZ and d^2Z

Classification	dZ	d^2Z
calculation	Z x Z_{SLOPE}	dZ x 0,75
DM 1	Z x 1,3	Z x 1,0
DM 2	Z x 2,0	Z x 1,5
DM 3	Z x 2,5	Z x 1,9

Table 6b — Limiting values of dX and d^2X

Classification	dX	d^2X
calculation	2 x 1,1 x Z_{SLOPE}	Fixed values
DM 1	2,9	1,5
DM 2	4,4	2,0
DM 3	5,5	2,5

The floor slab level shall be within ± 15 mm of the datum.

6.2 Installation tolerances

6.2.1 General

The maximum allowable tolerances after erection, with the racks in the unloaded condition, shall be as stated in Tables 7 and 8 and Figure 18

NOTE The installation tolerances, deformations and clearances are also applicable if racking is dismantled and re-erected.