

## ABOUT VDMA

*This standard was developed at the request and with the approval of VNA forklift truck manufacturers, flooring contractors, engineering firms and universities, and is based on years of scientific research. VDMA is the only standard worldwide that controls **all undulations that influence the driving behaviour of the forklift truck**. The undulation of a floor is a combination of both (medium) long and short waviness.*

The short undulations are measured continuously over 50 mm, calculated statistically and expressed as a minimum value (Fx) which represents the driving behaviour of the lift truck. The higher the lift height, the higher this minimum value should be.

The short waves in the floor produce *shocks and vibrations*, and have disadvantages:

- ◆ They cause health problems and cause the driver to slow down.
- ◆ The lifespan of forklift trucks is drastically reduced.
- ◆ The reliability of forklift trucks decreases significantly, leading to numerous stoppages, high maintenance costs and a lot of overtime in operations.

VDMA checks just like DIN 15.185 the (medium) long undulations over 1m, 2m, 3m and 4m.

This undulation is responsible for *fluctuations*, and has the following disadvantages:

- ◆ The driver slows down due to fluctuations, so he needs extra time to do the job.
- ◆ Risk of collision between the forklift and the pallets in the racks.
- ◆ Regular damage to pallets and goods.

VDMA checks the height difference between the two tracks: left and right, taking into account the specific lift height and truck width. The wider the truck and the lower the lift height, the higher the tolerance. The narrower the truck and the higher the lift height, the smaller the tolerance. There is a simple calculation tool for this.

**Benefits: If your floor meets the VDMA, this guarantees you maximum efficiency and maximum profitability.**

- ◆ Minimum number of VNA trucks and drivers required
- ◆ At full speed
- ◆ In maximum safety
- ◆ With a minimum of maintenance costs
- ◆ With maximum availability of your lift trucks
- ◆ And a maximum lifespan for your lift trucks

**This flatness requirement was included in the FEM 10.2.14 / 4.103 - 1 and from September 2021 in the European standard EN 15 620. It is therefore an official European flatness standard which must be met.**