

Loading table, Slit Grating

Calculations in accordance with Eurocode.

Slit Grating of steel and aluminium

The table shows max. load kN/panel. Deflection 1/200 of the span width (max. 10 mm)

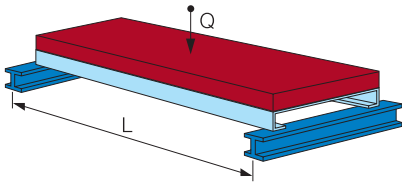
Q = Uniformly distributed load (kN/panel)

P = Point load on the centre with expansion 200 mm in longitudinal direction and entire width of panel (kN/panel)

The steel values of the table are based on (σ permitted) 190 N/mm². Safety factor to tensile yield limit 1.5. Aluminium grade AlMg3 H22.

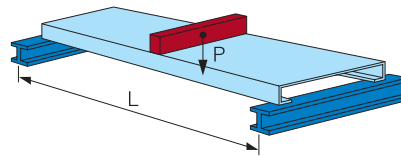
Distributed load

Q = Uniformly distributed load (kN/panel)



Line load

P = Linear load allowed for (kN/panel)



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| Grating height | Materials | Load | Span width mm | | | | | | | | | | | | |
|----------------|------------|------|---------------|------|------|------|-----|------|------|------|------|------|------|------|------|
| | | | 500 | 600 | 700 | 800 | 900 | 1000 | 1200 | 1400 | 1600 | 1800 | 2000 | 2200 | 2400 |
| 40 | Steel 2 mm | Q | 6,8 | 5,6 | 4,8 | 4,2 | 3,7 | 3,3 | 2,7 | 2,0 | 1,6 | 1,3 | 1,0 | 0,8 | |
| | | P | 3,4 | 2,8 | 2,4 | 2,1 | 1,9 | 1,7 | 1,4 | 1,2 | 1,0 | 0,8 | 0,7 | 0,5 | |
| 40 | Alu. 3 mm | Q | 5,0 | 4,2 | 3,6 | 3,1 | 2,5 | 2,0 | 1,4 | 1,0 | 0,8 | 0,6 | | | |
| | | P | 3,1 | 2,5 | 2,1 | 1,8 | 1,6 | 1,3 | 0,9 | 0,7 | | | | | |
| 70 | Steel 2 mm | Q | 16,8 | 14,0 | 12,0 | 10,5 | 9,3 | 8,4 | 6,9 | 5,9 | 5,2 | 4,5 | 4,0 | 3,4 | 2,6 |
| | | P | 8,4 | 7,0 | 6,0 | 5,3 | 4,7 | 4,2 | 3,5 | 3,0 | 2,6 | 2,3 | 2,0 | 1,8 | 1,5 |
| 70 | Alu. 3 mm | Q | 12,8 | 10,7 | 9,1 | 8,0 | 7,1 | 6,4 | 5,3 | 4,5 | 3,4 | 2,7 | 2,2 | 1,7 | 1,3 |
| | | P | 8,0 | 6,4 | 5,3 | 4,6 | 4,0 | 3,6 | 2,9 | 2,5 | 2,1 | 1,7 | 1,4 | 1,1 | 0,8 |

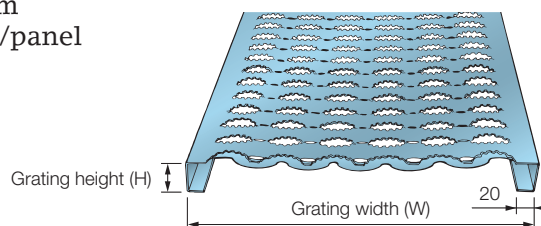
Formula for conversion to kN/m²

$$\frac{1000^2 \times \text{Uniformly distributed load}}{\text{Grating width} \times \text{Span width}} = \text{kN/m}^2$$

Exampel

Grating height 40 mm
 Span width 800 mm
 Grating width 250 mm
 Load as per table 4.2 kN/panel

$$\frac{1000^2 \times 4.2}{250 \times 800} = 21 \text{ kN/m}^2$$



| Grating width W x H | Weight kg/lin-m | |
|------------------------|-----------------|------|
| | Steel untreated | Alu. |
| 130x40 | 3.4 | 1.7 |
| 190x40 | 3.9 | 2.1 |
| 250x40 | 4.7 | 2.6 |
| 310x40 | 5.4 | 3.0 |
| 370x40 | 6.3 | 3.5 |
| 430x40 | 6.8 | |
| 500x40 | 8.0 | |
| 130x70 | 4.4 | 2.1 |
| 190x70 | 4.9 | 2.6 |
| 250x70 | 5.7 | 3.0 |
| 310x70 | 6.4 | 3.5 |
| 370x70 | 7.3 | |
| 430x70 | 9.0 | |