**Steel BEEEM**

**250 depth x 250 width & 250 depth x 125 width**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Span | Uniformly Distributed Load | Centre Point Load | 2 Point Loads | 3 Point Loads |
|  | **Loading** | **Deflection** | **Loading** | **Deflection** | **Loading** | **Deflection** | **Loading** | **Deflection** |
| (m) | **(kg/m)** | **(mm)** | **(kg)** | **(mm)** | **(kg)** | **(mm)** | **(kg)** | **(mm)** |
| 2.0 | 4923 | 3.0 - (VB) | 4617 | 2.2 – (VB) | 2752 | 2.3 – (VB) | 2273 | 1.9 – (VB) |
| 2.5 | 3547 | 5.2 - (VB) | 3975 | 3.7 – (VB) | 2752 | 4.4 – (VB) | 2273 | 3.6 – (VB) |
| 3.0 | 2640 | 8.0 - (VB) | 3486 | 5.7 – (VB) | 2304 | 6.4 – (VB) | 1835 | 5.1 – (VB) |
| 3.5 | 2028 | 11.4 - (VB) | 3109 | 8.0 – (VB) | 1988 | 8.7 – (VB) | 1825 | 8.0 – (B) |
| 4.0 | 1600 | 15.4 – (B) | 2803 | 10.8 – (VB) | 1988 | 13.0 – (VB) | 1539 | 10.1 – (VB) |
| 4.5 | 1264 | 19.5 – (B) | 2559 | 14.0 – (VB) | 1743 | 16.3 – (VB) | 1417 | 13.3 – (B) |
| 5.0 | 1019 | 24.1 – (B) | 2344 | 17.6 – (VB) | 1549 | 1.9 – (VB) | 1284 | 16.4 – (B) |
| 5.5 | 846 | 29.1 – (B) | 2171 | 21.7 – (VB) | 1549 | 26.5 – (VB) | 1162 | 19.8 – (B) |
| 6.0 | 714 | 34.8 – (B) | 2018 | 26.2 – (VB) | 1406 | 31.0 – (VB) | 1070 | 23.6 – (B) |
| 6.5 | 601 | 40.7 – (B) | 1886 | 31.2 – (VB) | 1406 | 35.9 – (VB) | 989 | 27.7 – (B) |
| 7.0 | 520 | 46.9 – (D) | 1763 | 36.4 – (VB) | 1274 | 44.9 – (VB) | 917 | 32.1 – (B) |
| 7.5 | 418 | 49.7 – (D) | 1682 | 42.2 – (VB) | 1152 | 50.0 – (VB) | 856 | 36.9 – (B) |
| 8.0 | 347 | 53.4 – (D) | 1570 | 48.4 – (VB) | 1019 | 53.3 – (VB) | 800 | 42.0 – (B) |

Notes

Loads given are unfactored loadings.

Limiting effect - (B) yielding of flanges, (VB) Vierendeel bending (stresses around the BEEEM openings), (D) deflection limited by span divided by 150.

2 and 3 point loads given are individual loads i.e. 4m span beam with a 2point loading of 1988kg means the beam will support a total of 3976kg