

### **Basic Module** (either 11.4m or 6m)

Two fabricated box girders of same length and type (double connections, single connection or zero connection) either 11.4m or 6.0m, fully painted and ready for assembly with spacers, plankings and supports, two guard rails, nuts and bolts, plus connecting pins and anchorage pads.

### **Additional Girder**

One fabricated box girder (either 11.4m or 6m) with spacers, plankings and supports plus connecting pins, to be placed alongside a Basic Module to create an additional lane of traffic.

### **Lateral Side Walk** (either 11.4m or 6m)

Optional - can be placed on either side or both sides of the traffic lane(s).

### **Pedestrian Module**

One single fabricated box girder (either 11.4m or 6m) fitted with two pedestrian side walk (11.4 or 6m), plus connecting pins if need, lateral supports and anchorage pads.

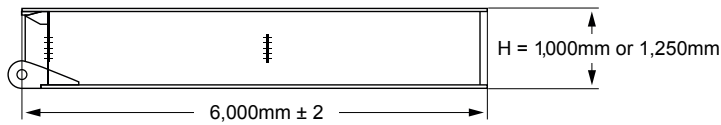
### **Code**

- RD = Road Application (road girders are 1.0m or 1.25m high)
- RL = Rail Application (rail application girders are always 1.25m high)
- BM = Basic Module (see definition above)
- ADG = Additional Girder (see definition above)
- ZC = Zero Connection
- SC = Single Connection
- DC = Double Connection
- PD = Pedestrian
- PD SW = Pedestrian Side Walk
- PDM = Pedestrian Module (see definition above)

## Box Girder

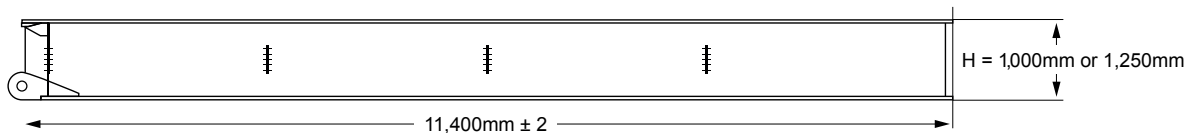
### Single connection box girder

RD BM 600 SC



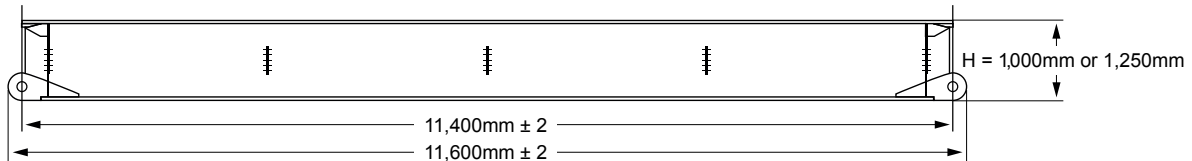
### Single connection box girder

RD BM 114 SC



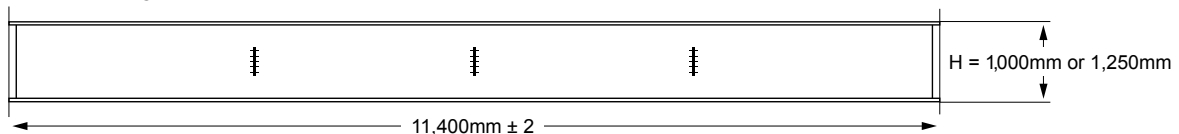
### Double connection box girder

RD BM 114 DC



### Zero connection box girder

RD BM 114 ZC



## Definitions

There are two lengths of box girders, 6.0m and 11.4m. The length of the girders is measured from the center line of the axle to the end of the girder as shown on the diagrams.

**The 6.0m girder is only available with one single connection.**

**There are 3 types of "11.4m" box girders:**

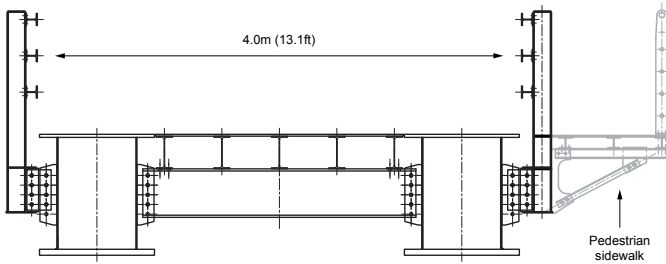
- Double Connection girder (code RD BM 114 DC)
- Single Connection girder (code RD BM 114 SC)
- Zero Connection girder no connection (code RD BM 114 ZC)

**There are 3 heights of box girders:**

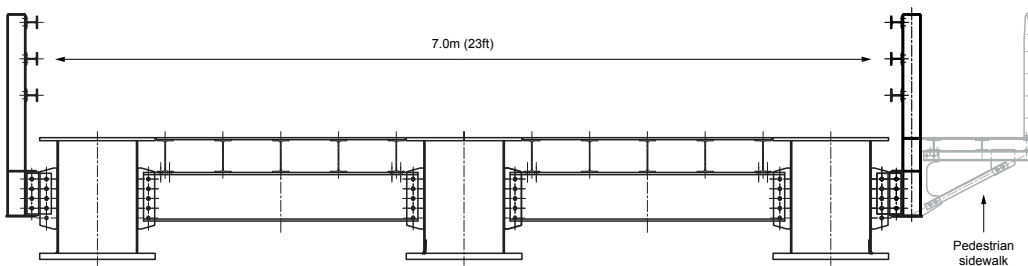
- 1.00m
- 1.25m
- 1.60m – contact us for technical information.

## Configuration

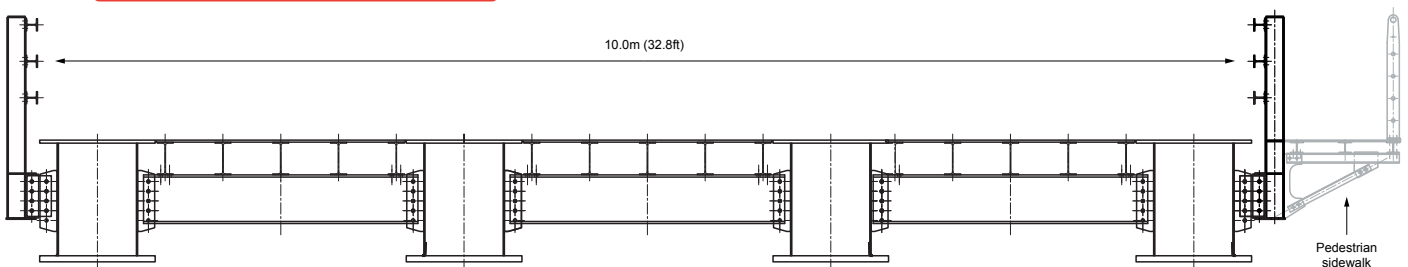
### Single lane road & sidewalk



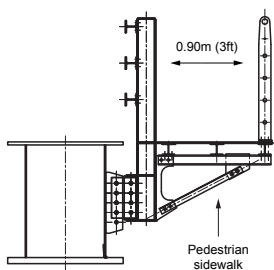
### Double lane road & sidewalk



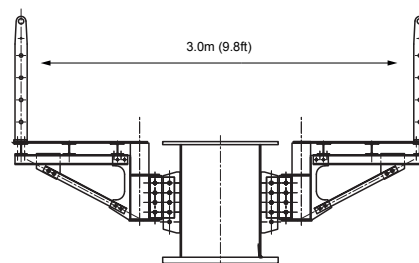
### Triple lane road & sidewalk



### Sidewalk



### Pedestrian & cycle module



## Weights

Examples of component weights:

- Standard Box Girder H 1.0m L 11.4m\*: 10,500kg (23,128lbs)
- Standard Box Girder H 1.0m L 6.0m: 5,500kg (12,115lbs)
- Standard Box Girder H 1.25m L 11.4m\*: 11,000kg (24,230lbs)
- Standard Box Girder H 1.25m L 6.0m: 5,800kg (12,775lbs)
- Complete Module Single Lane H 1.0m L 11.4m\*: 29,000kg (63,877lbs)
- Complete Module Single Lane H 1.0m L 6.0m: 15,500kg (34,141lbs)
- Complete Module Single Lane H 1.25m L 11.4m\*: 30,100kg (66,300 lbs)
- Complete Module Single Lane H 1.25m L 6.0m: 16,200kg (35,682 lbs)
- Planking – central decking: 2,500kg, (5,070 lbs)
- Lateral Pedestrian Pathway: 800kg per linear meter (147lbs/ft)

**NOTE:** Complete Module: two box girders fully painted, spacers, plankings and central decking, two guard rails, nuts and bolts and connecting pin.

\* Double connections for 11.4m girders or modules, single connection for 6.0m girders or modules.

## Australian road loading compliance to AS 5100.2

GHD Pty Ltd, 180 Lonsdale Street Melbourne VIC 3000) have checked calculations to indicate Unibridge® compliance to the Design Loads AS 5100.2 Supplement 1 (2007) prepared by Standards Australia in collaboration with Austroads and Australian Railway Association Inc. GHD has submitted an extensive survey covering all the aspects of the Unibridge® concept. A summary of their conclusions is detailed below.

### Cross sectional configurations & load rating coefficients for Australian road loadings

#### 1m high girder

	T44			SM1600			HLP320		
	2 Modules 22m Span	2½ Modules 28m Span	3 Modules 33.4m Span	2 Modules 22m Span	2½ Modules 28m Span	3 Modules 33.4m Span	2 Modules 22m Span	2½ Modules 28m Span	3 Modules 33.4m Span
Single lane with sidewalk	1	1	1	1	1*	0.82*	1*	0.86*	0.57*
Single lane without sidewalk	1	1	1	1	1*	0.90*	1*	0.90*	0.62*
Double lane with sidewalk	1	1	1*	1	0.96*	0.67*	1	0.98*	0.75*
Double lane without sidewalk	1	1	1*	1	1*	0.72*	1	1*	0.81*

#### 1.25m high girder

	T44			SM1600			HLP320		
	2 Modules 22m Span	2½ Modules 28m Span	3 Modules 33.4m Span	2 Modules 22m Span	2½ Modules 28m Span	3 Modules 33.4m Span	2 Modules 22m Span	2½ Modules 28m Span	3 Modules 33.4m Span
Single lane with sidewalk	1	1	1	1	1	1*	1	1	0.76*
Single lane without sidewalk	1	1	1	1	1	1*	1	1	0.82*
Double lane with sidewalk	1	1	1	1	1	0.90*	1	1	1*
Double lane without sidewalk	1	1	1	1	1	0.95*	1	1	1*

\* Deflection limits exceeded

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