

Design Statement for YOLK Bike Rack

Design Statement Number: 6690-0000
In Respect Of: YOLK 4, 5 and 6 bike racks.
Issued To: Eco-Group NZ Ltd.
Drawing Number: EBR_01_D01_6 (As Edited by Motovated)
EBR_01_07_6_D01
EBR_01_09_6_D01
Referenced Documents: Consultants Advice Notice, no. 6690-0001

As an independent design professional covered by a policy of professional indemnity insurance to a minimum value of \$3,000,000, I believe on reasonable grounds that:

- When bikes are loaded evenly from the centre of the rack, and
- Secured with suitable ties (replaceable items such as ties and tie brackets have not been assessed),

The bike rack has a Working Load Limit (WLL) of:

WLL = 120 kg total

WLL = 30 kg max per bike

Loads in the structure of the bike rack at the WLL comply with NZS3404: Steel Structures Standard for the following maximum accelerations:

Vertical	Longitudinal	Lateral
1.0 g + gravity	1.0 g + gravity	0.9 g + gravity

NZS 5467:1993 (code of practice for light trailers) has been used as a reference for these maximum accelerations, the accelerations listed above meet or exceed the requirements of this standard.

Fatigue in the rack has been assessed to BS7608:2014. Maximum expected number of fatigue cycles and accelerations are shown below. Further information on fatigue can be found in CAN number 6690-0001.

	Vertical		Longitudinal		Lateral	
Acceleration	0.3g	1.0g	0.3g	1.0g	0.3g	1.0g
Maximum number of cycles	34 million	920,000	10 million	200,000	1.3 million	35,000

(Signed).....

Joseph Bain, Senior Safety & Compliance Engineer

Date: 20/6/22

CPEng 248672



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