

Dynamic loads based on a 54m high single mast machine.
Single mast climber with 750kgs SWL & 3 x Men. Dynamic loading per base = 78.40kN.

Project :	Mastclimber Base Reaction Report
Element :	HMP Manchester
Job No. :	MA7320MW
Doc No. :	002
Checked	15.03.22

Loading

Self Weight of the Mastclimber :- Requires Input

Double Stacked Mast Climber =	Type of Mast = Canopy/ Roof =	Single No	
Component	Weight (kg)	Quantity	Total Weight (Total N°)
1.5m Mast =	78.00	36	2808.00
1.5m Deck =	97.00	4	388.00
0.8m Deck =	73.00	2	146.00
1.5m Fence =	11.00	8	88.00
0.8m Fence =	6.00	4	24.00
End Fence =	26.00	2	52.00
Canopy/ Roof =	0.00	0	0.00
Skid =	190.00	2	380.00
Drive (incl gate) =	610.00	1	610.00
Payload (Q) =	750.00	1	750.00
Operative =	85.00	3	255.00
Boards =	15.50	20	310.00
Payload Percentage Per Mast =	100%		
Counterbalance weight =			kg

3m internal =	120.00	3	360.00
Monorail SWL =	1000.00	1	1000.00
Winch + Cable =	100.00	1	100.00

Total Weight = 7271.00 kg
Moving Parts = 4823.00 kg
15% Dynamic Effect = 723.45 kg
Dynamic effect calculated from BS EN 1495:1997 +A2:2009 cl.5.1.2.4

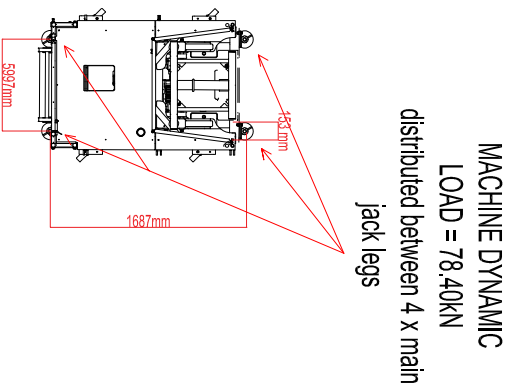
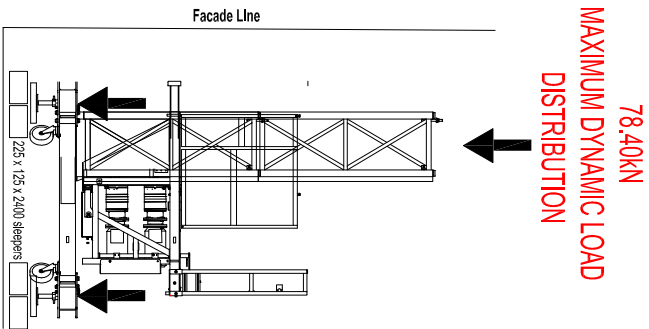
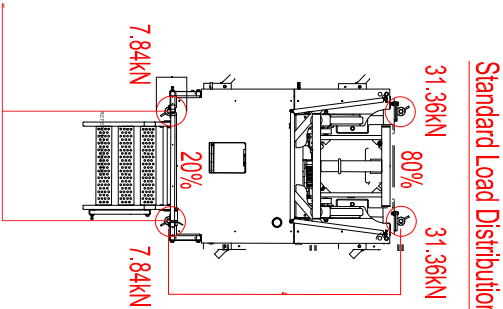
Total Load = 7994.45 kg
= 78.40 kN

Total Length of Platform (L) = 7.60 m
Height of Mast = 54.00 m

Base Load = 7994.45 kg
= 78.40 kN

Total load to front supports (80%) = 62.72 kN
31.36 kN 31.36 kN

7.84 kN 7.84 kN
Total load to rear supports (20%) = 15.68 kN



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NOTES									
CONSTRUCTION PROPOSAL									
MATERIAL LIST									
NO	QTY	DESCRIPTION	L	W					
Dynamic loads									
Strangeways									
Prison									
DATE	DESCRIPTION	BY	CHKD						
REVISIONS									
CUSTOMER									
Horizon									
Dynamic loads									
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