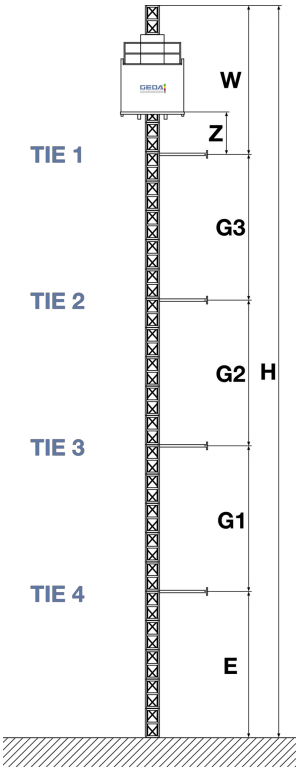
GEDA 1500 Z/ZP

Customer NTP
Project 2711a-10289-XX-01
Person in charge Robert Long (Orbit Hoist Design Ltd)

Disclaimer: The above mentioned person in charge is responsible for the correct application of the calculation program! The basis for calculating the forces is provided by the customer, such as the product, vertical and horizontal anchoring geometries and wind loads. These are listed on this printout report and must be checked against the actual conditions. Observe the valid operating instructions and assembly instructions!

Hoist details

Product type	1500 Z/ZP
Mast type	UNI-MAST
Platform	E
Platform size (external dimensions)	b = 3.00 x l = 1.91 [m]
Load capacity	2000 [kg]
Assembly plank	yes
Ground condition	Concrete



Vertical installation details / mast See drawing

Mast height	H	30.8 [m]
Mast protrusion above highest mast tie	W	2 [m]
Platform edge over mast tie	Z	0.5 [m]
Vertical distance to mast tie 3	G3	6.8 [m]
Vertical distance to mast tie 2	G2	10 [m]
Vertical distance to mast tie 1	G1	7 [m]
Height of the lowest mast tie	E	5 [m]

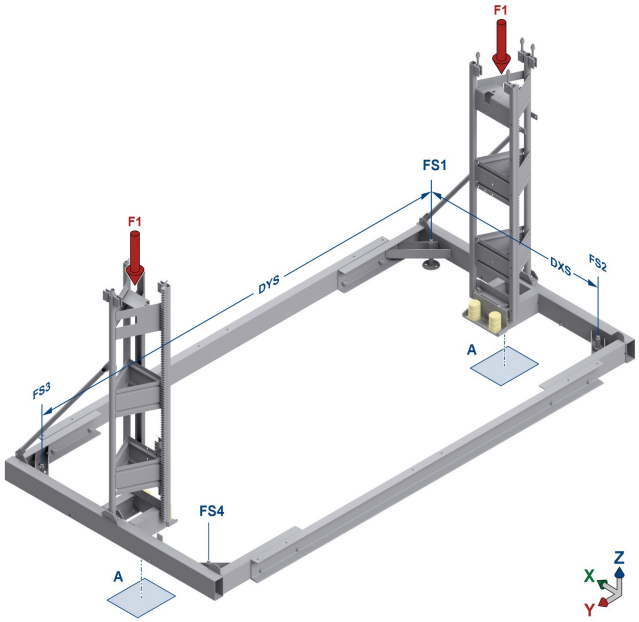
Wind forces According to EN 12159 / EN 12158-1 / EN 16719 or user-defined

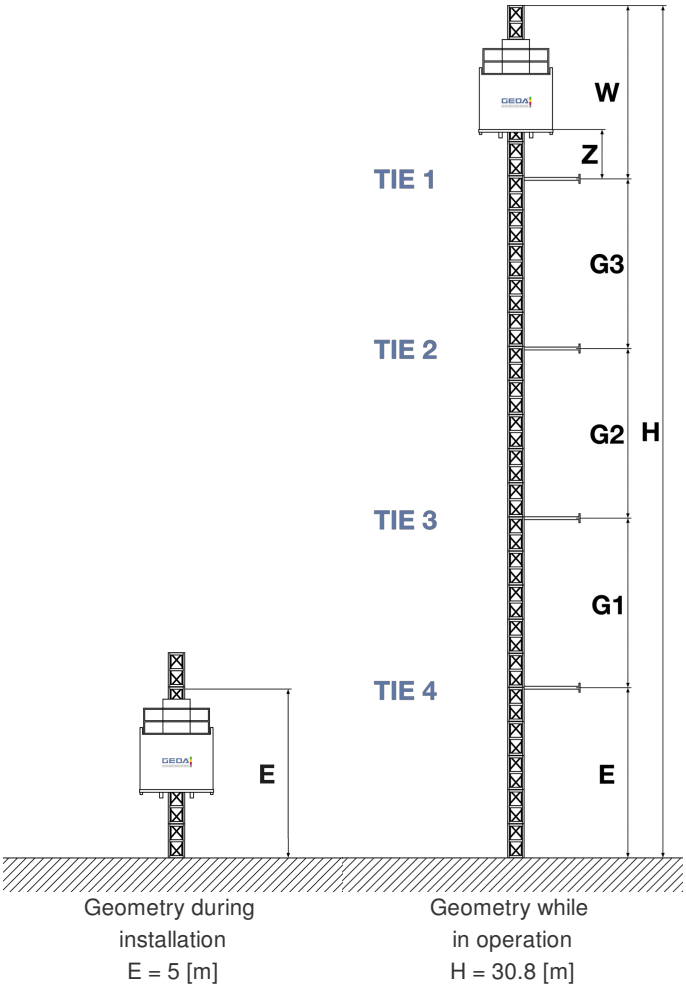
In operation	
Wind speed	20 [m/s]
Wind impact pressure	250 [N/m²]
Installation	
Wind speed	12.5 [m/s]
Wind impact pressure	100 [N/m²]
Out of service according to EN 12159 / EN12158-1 / EN 16719	
EU wind region	D
Wind speed	46.42 [m/s]
Wind impact pressure	1347 [N/m²]
Out of service because of user input	
Wind impact pressure	-

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Forces and momenta at the foot section

Forces F1 need to be absorbed directly under the masts.





Information:

a. All values are shown in [kN], [m] and as absolute values.
b. All loads are (without safety factors) **characteristic** loads. Earthquakes are not taken into account.
c. All forces and moment at the foot section are calculated according EN 12159 / EN 12158-1 / EN 16719.

Geometry of force impact points

Distance in direction X (DXS)	1,54 [m]
Distance in direction Y (DYS)	3,60 [m]

Pressing forces / ground area / compression under the mast

	F1 [kN]	Ground area A	Compression
In operation (Mast height H = 30.8 [m])	31,74	0,25 m²	126,96 kN/m²
During installation E = 5 [m]	13,65	0,25 m²	54,60 kN/m²

Forces and momenta under the base mast

Forces and moments as absolute and maximum	F_X [kN]	F_Y [kN]	F_Z [kN]	M_X [kNm]	M_Y [kNm]	M_Z [kNm]
In operation (Mast height H = 30.8 [m])	3,59	0,80	31,74	1,11	3,88	0,09
During installation E = 5 [m]	1,98	1,12	13,65	1,76	8,36	0,17

Local forces at anchor / spindle of the foot section

Forces as absolute and maximum	FS1 [kN]			FS2 [kN]			FS3 [kN]			FS4 [kN]		
	FS1X	FS1Y	FS1Z	FS2X	FS2Y	FS2Z	FS3X	FS3Y	FS3Z	FS4X	FS4Y	FS4Z
In operation (Mast height H = 30.8 [m])	0,92	2,15	7,94	0,47	1,63	7,94	0,87	2,03	7,94	0,57	1,79	7,94
During installation E = 5 [m]	0,58	1,34	3,41	0,04	0,37	3,41	0,47	1,03	3,41	0,12	0,87	3,41

Note: For the local forces at the anchors / spindles, friction values of the ground material were considered.

Limitation of liability:

Despite observing the highest possible diligence, GEDA shall assume no liability for the completeness and correctness of the calculated anchoring and ground forces that result from use of the GEDA Installation Designer.

The Customer itself shall be responsible for ensuring that the values that it inputs are complete and correct. The Customer shall be solely and exclusively responsible in its use of the GEDA Installation Designer for the parameters that it itself inputs such as mast heights, on-site wind load requirements and circumstances and similar.

The calculations shall be based exclusively on data from GEDA devices, GEDA accessories and GEDA spare parts; all liability is excluded for use with any other manufacturers.

The calculations are not suitable for force majeure such as environmental catastrophes, flooding, earthquakes, storms etc and cannot be utilised for such eventualities.

To that extent GEDA shall only be liable in the case of intent, gross negligence, also by the owner or bodies and by executive employees, in the event of culpable injury to life, limb and health or if defects have been fraudulently concealed or within the framework of a separate guarantee promise. In the event of a culpable infringement of material contractual obligations, GEDA shall also be liable in the event of gross negligence by non-executive employees and in the event of slight negligence, in the latter case, this shall be limited to typical contractual and reasonable foreseeable damage. Further claims are excluded.