



H. Clausen

LYFTMAN

TAWI Light Over Head Cranes and Jib Arms

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TAWI

Agenda

- Product Design
- LR Calculator
- Web generator
- Summary

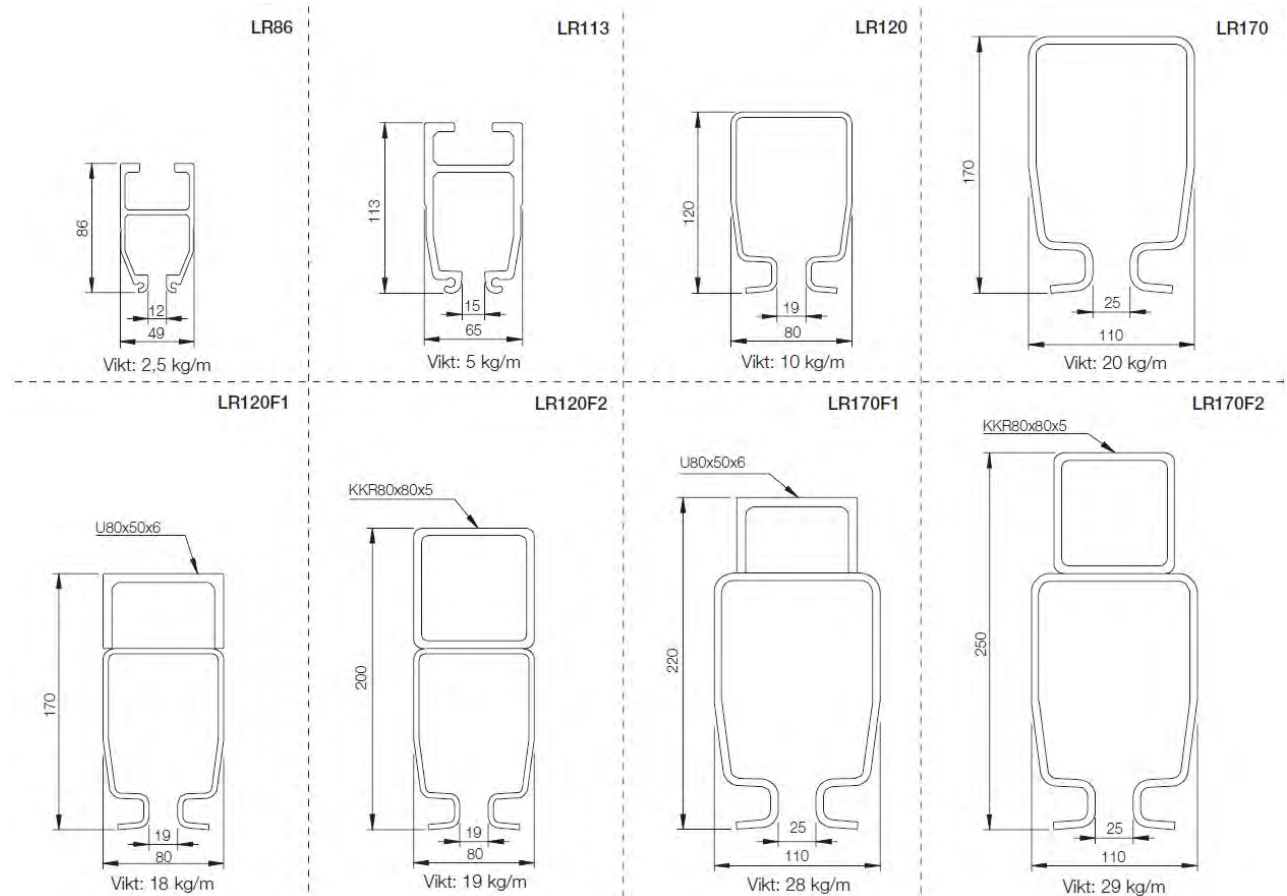
Product Design Track system

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Profiles, max length

- Aluminium
 - 6500 mm

- Steel
 - 8000 mm



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Floor or ceiling mounted



- Suspended from ceiling/rafters
- Suspended from portals
- Suspended from short or long gallows



- Aluminum for light loads
 - Steel for heavy loads
-
- Steel is cheaper but heavier

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Floor or ceiling mounted



Short gallow



Long gallow

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Track system

- Single bridge
- Twin bridge



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Track system

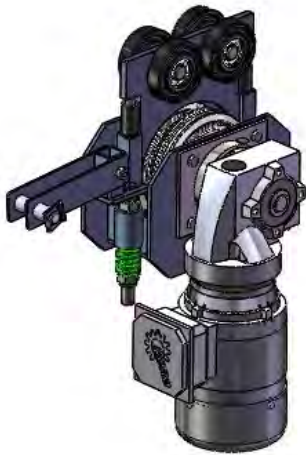
- Three stringed



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Track system

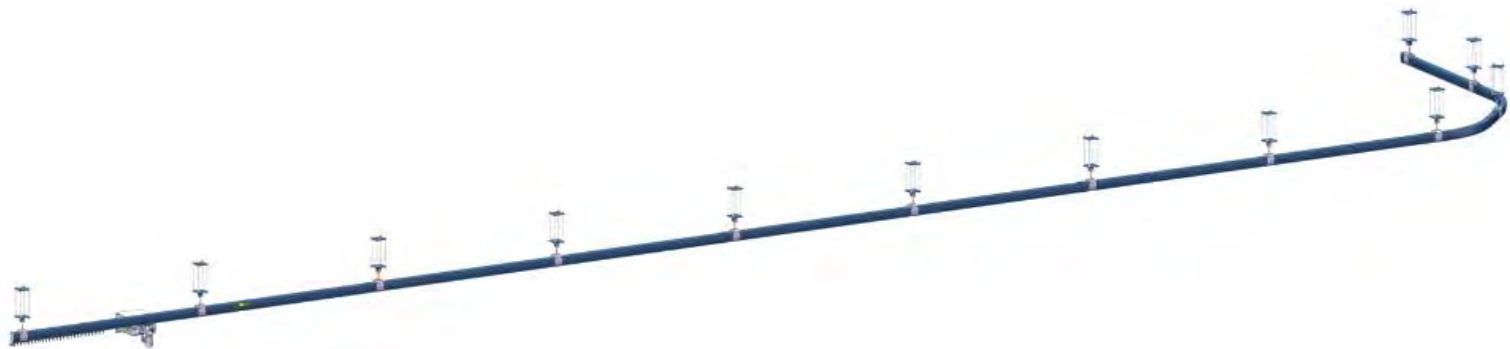
- Telescopic bridge
- Low built as option
- Hand pushed or with drive.
Radio controlled or with cable



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Track system

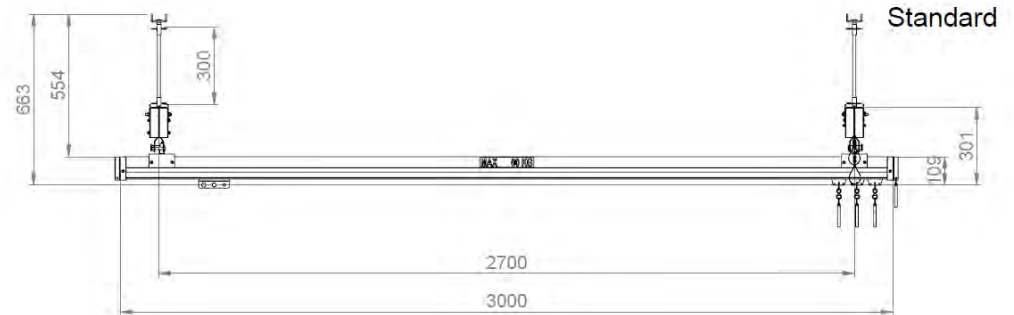
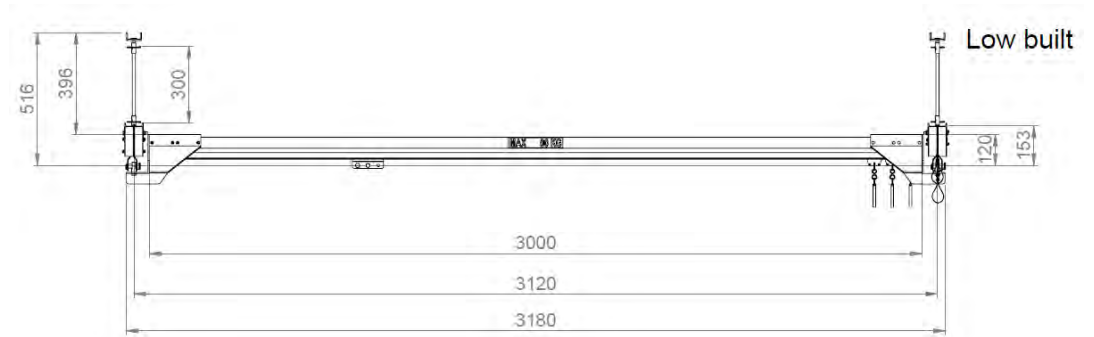
- Monorail
- Curved monorails



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Low built track system

Track profile	LR86
Suspension	Beam suspension, short (Beam width 70-14...
Low-built system	No
Floor mounted constructio...	No
Trolley for runway	Trolley (LR86)
Cable trolley	Hose trolley LR86



(can be done in LR calculator but drawing
can not be made in drawing generator)

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Suspension types



Beam suspension
Adjustable 70-140 mm



Beam suspension
140-300 mm
Specify width when
order!

- Threaded rod lengths:
 - 100 mm
 - 300 mm
 - 600 mm
 - 1000 mm

NOTE!

≥1000 mm → down link with square profiles



Ceiling suspension



U-suspension

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Special design suspensions

- TAWI provides custom made suspensions for your need.



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Product Design

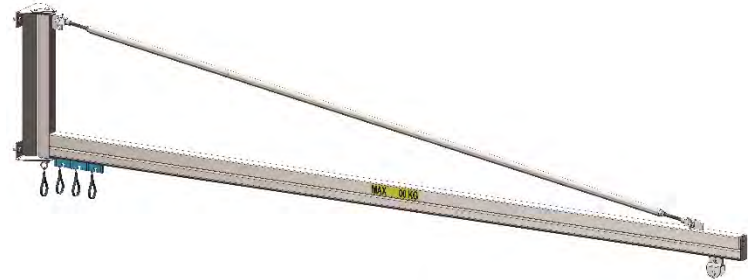
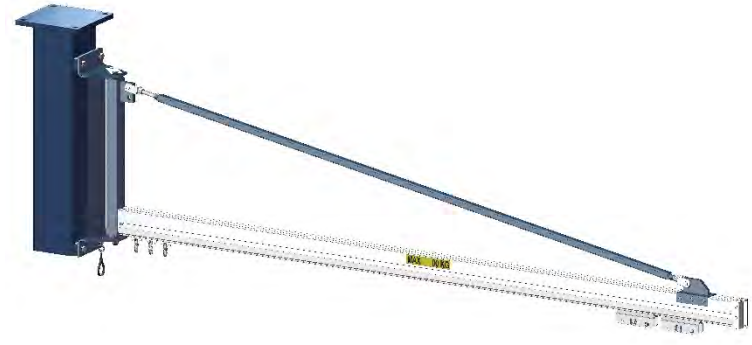
Jib Cranes

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Jib cranes

Standard design

- Standard LRAV
- Stainless steel LRAV-SS



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Jib cranes

Underbraced

- Under braced steel LRSV-U
- Stainless steel LRAV-U-SS



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Jib cranes

Low built

- Low built LRAV-L



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Jib cranes

Articulating

- Articulating jib crane, AJC
- Stainless articulating jib crane, AJC-SS



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Special design examples

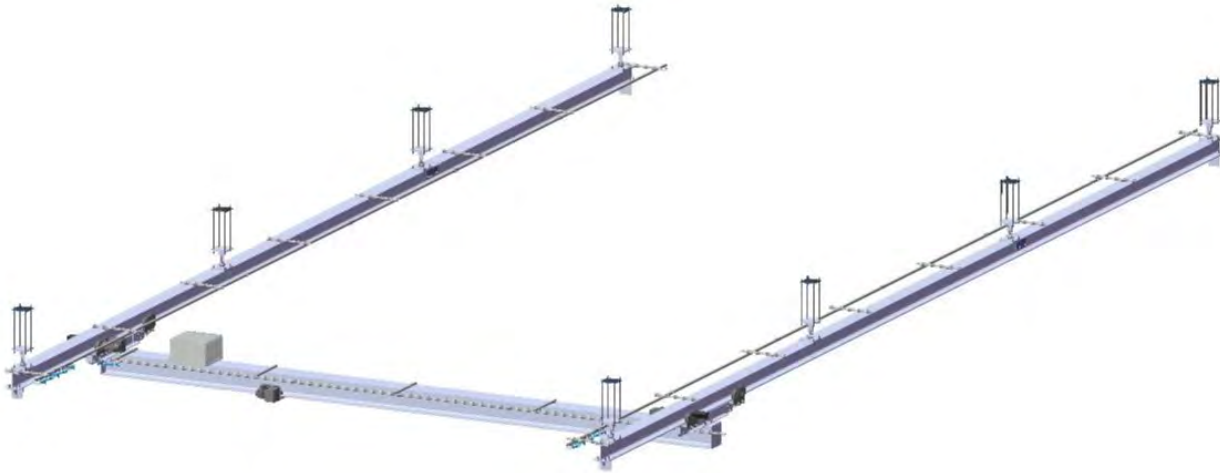
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Complex steel structures



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Extra heavy



10m wide, 3000kg

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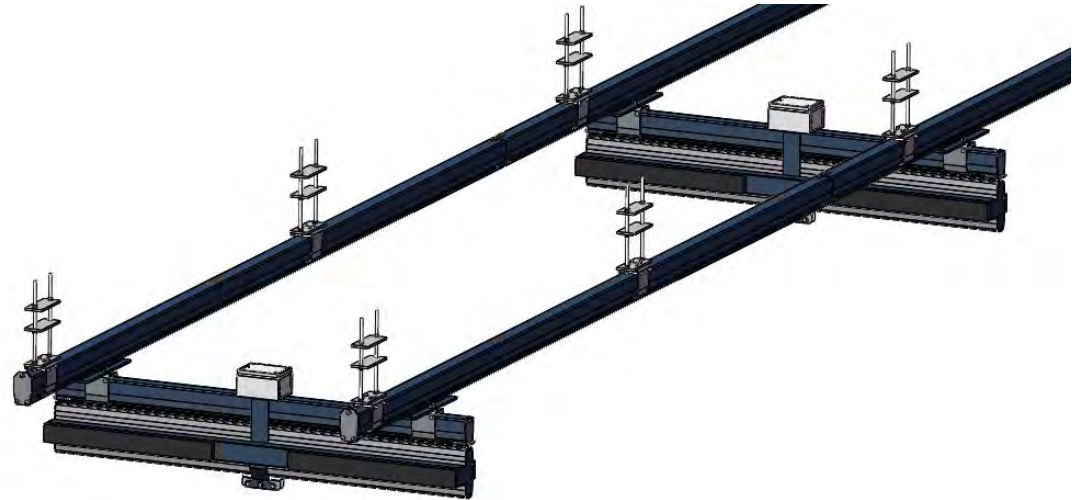


2x 250kg

Special design



Gantry crane, 1000kg



Double telescopic

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Important things to remember when ordering a track system

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Tool weights

Tool weights can vary a lot.

Specify clearly what capacity the track system is going to be designed for. Not only how much you will lift.

MRC=WLL + tool weight

MRC= Max rated capacity

WLL = working load limit



VacyEasylift 5 -50 kg

VacuCobra 5 – 50 kg

TAWIGrip 30 – 180 kg

ViperHoist 22 kg

GP hoist 18 – 64 kg

DMK hoist 25 – 105 kg

MRC= Max rated capacity

WLL = Working load limit

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Effective working length/area

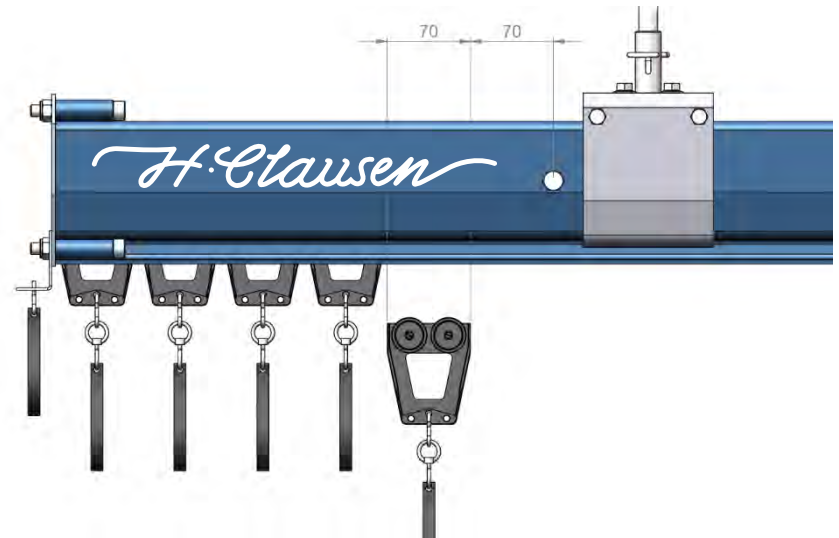
Space for cable trolleys is easily forgotten

- Trolley width 70 mm
- Space required = ([no. of trolleys] +1) x 70 mm
- Overhang max. 300 mm (excl. trolley space)

Example:

$$(5 + 1) \times 70 = 420 \text{ mm}$$

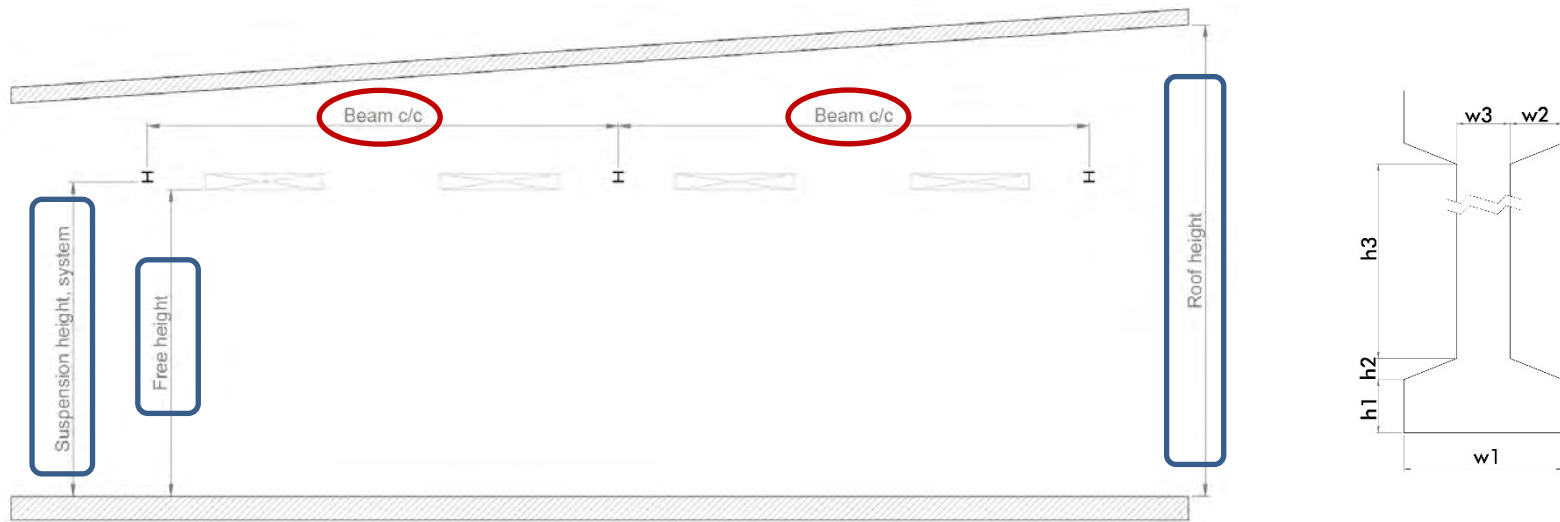
Overhang = max. 720 mm



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Important parameters

- **Load** (product and tool)
- **Suspension distances** ○
- Different heights □
- (Rafter dimensions)



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Necessary information to TAWI

- Track length
- Bridge length
- Suspension type
 - Rod length (100. 300. 600 or 1000 mm)
 - Type (beam 70-140 mm, 140-300 mm, ceiling or U)
- Specific suspension distances (optional)
- MRC
- Feed trolleys (hose or cable)

When asking for special design quote. Fill in Lyftman handling analysis form, always attach a sketch.

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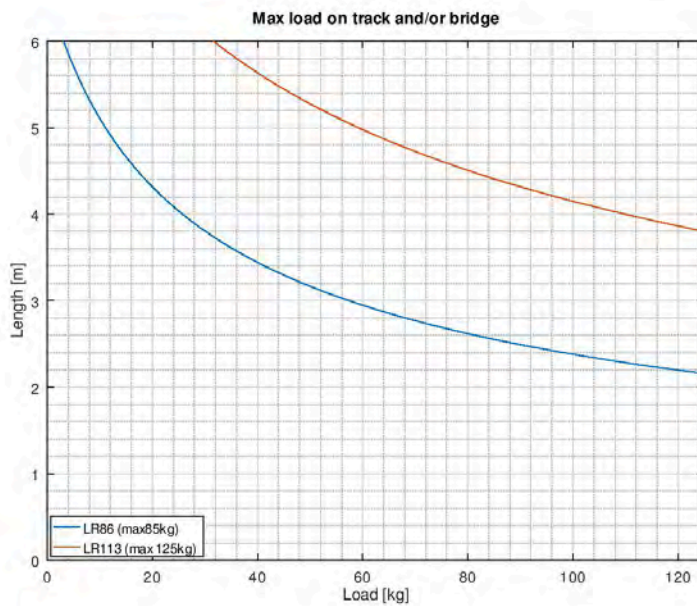
LR Calculator

Software to calculate price. Not a design tool.

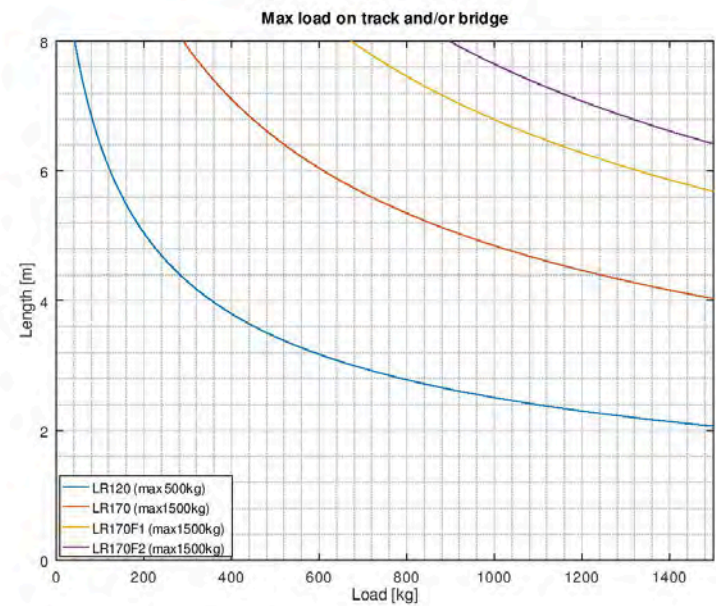
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Load chart

Aluminum LR86/LR113



Steel LR120/LR170



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Project guide

Enter the weight of the load being lifted, the transport distance of the load and a working area width if applicable. (This information is stored, and may be changed later on in the application)

NOTE:
The total lift weight may not exceed 1500 kg, Total transport distance may not exceed 50 m, and the working area width may not exceed 8 m.

Title

Total lifting weight [kg]

Length [mm]

Width [mm]

Desired CC-distance between s

Point of suspension (for VacuEa

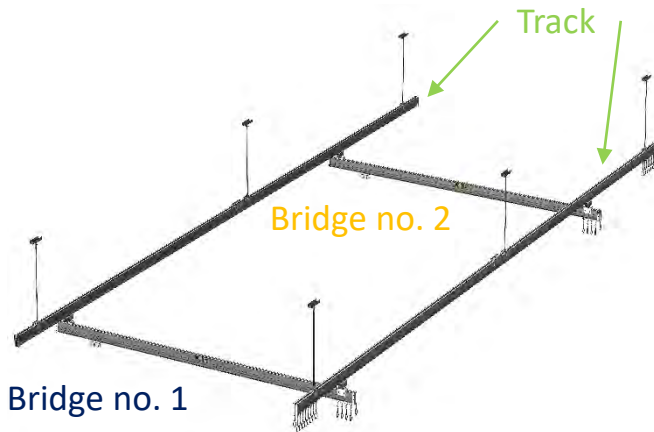
Lift module

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Design parameters



Name	Value
Lift system	Crane system
Lifting Capacity (SWL)	50 kg
Point of suspension (for V...	0 mm
Length of runway	8000 mm
Bridge width	4000 mm
Max CC-distance	0 mm
Number of bridges	1
Bridge A	
Twin bridge system	No
Lifting Capacity (SWL)	50 kg
Lift module	
Lift module weight	10 kg
Bridge profile	LR113
Trolley for liftmodule	Trolley (LR113)
Cable trolley Crane A	Hose trolley LR113
Bridge B	
Twin bridge system	No
Lifting Capacity (SWL)	0 kg
Lift module	
Lift module weight	0 kg
Bridge profile	LR86
Trolley for liftmodule	Trolley (LR86)
Cable trolley Crane B	Hose trolley LR86
Track profile	LR86
Suspension	Beam suspension, short (Beam width 70-14...
Low-built system	No
Floor mounted constructio...	No
Trolley for runway	Trolley (LR86)
Cable trolley	Hose trolley LR86

1. Information from the beginning

2. Bridge no. 1

2.1 Bridge no. 2

3. Track options

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Support

Save both LRP-file (1) and Excel-file (2)

The Excel-file (un-edited) can be used on the web generator

1.

2.

Specification

Name	Value
Bridge A	
Twin bridge system	No
Lifting Capacity (SWL)	50 kg
Lift module	
Lift module weight	10 kg
Bridge profile	LR113
Trolley for liftmodule	Trolley (LR113)
Cable trolley Crane A	Hose trolley LR113
Bridge B	
Twin bridge system	No
Lifting Capacity (SWL)	0 kg
Lift module	
Lift module weight	0 kg
Bridge profile	LR86
Trolley for liftmodule	Trolley (LR86)
Cable trolley Crane B	Hose trolley LR86
Track profile	LR113
Suspension	Beam suspension, adjust. rod (100 mm) ...
Low-built system	No
Floor mounted constructio...	No
Trolley for runway	Trolley (LR113)
Cable trolley	Hose trolley LR113

Track lengths and suspension distances

Name	Length	Position in runway
Tracks		
Track 1	4000 mm	0 mm (4000 mm)
Track 2	4000 mm	4000 mm (0 mm)
Suspensions		
Suspension 3	4000 mm	7800 mm (200 mm)
Suspension 2	3600 mm	3800 mm (4200 mm)
Suspension 1	200 mm	200 mm (7800 mm)

Quotation lifting system

Part #	Description	No.	Price	TOTAL
30400	LR113 Track L=4m (Cut distance L= 4000 mm)	4	3 328.00 kr	13 312.00 kr
33100	Joint (LR113)	2	236.00 kr	472.00 kr
33300	End piece (LR113)	6	192.00 kr	1 152.00 kr
31700-100	Beam suspension, adjust. rod (100 mm) (Beam...	6	760.00 kr	4 560.00 kr
34200	Trolley stop (LR113)	3	14.00 kr	42.00 kr
34150	Hose trolley LR113	9	126.00 kr	1 134.00 kr
34700	Cable clamp (LR113)	2	61.00 kr	122.00 kr
32100	Trolley (LR113) For runway tracks	2	534.00 kr	1 068.00 kr
30400	LR113 Track L=4m (Cut distance L=4000 mm)	1	3 328.00 kr	3 328.00 kr
35100	Bridge suspension (LR113)	2	572.00 kr	1 144.00 kr
32100	Trolley (LR113) For lifting equipment	1	534.00 kr	534.00 kr
46110	Load sign	2	28.00 kr	56.00 kr

Total price: 26 924.00 kr

Close

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LR Calculator Limitations

- Multiple stringed track system
- More than two bridges
- Max. load 1000 kg

LR Calculator - summary

1. Have all information from the customer
2. Fill in the required information by the program
3. Use the load chart to control.
4. Save the file in both Excel and LR file

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Web generator

<https://www.tawi.com/drawing-generator/>

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Traverse Sketches

Välj fil Ingen fil har valts



TAWI

www.TAWI.se

TEL 0300 185 00 / 00 446 48 50 KUNGSBACKA/TÄBY

INFO@TAWI.SE

We recommended Google Chrome as browser

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Web generator

- Quotation mode
- Drawing mode

Print To PDF • Quotation • Schematic

TAWI

Date: 2017-09-5
Quotation number: LM1069 45188

TAWI AB

Salesman:

Phone number:

Email address:

Responsible engineer:

Customer

Contact:

Company:

Phone number:

Email address:

Track system

Track lengths: 8000 mm

Bridge length: 4000 mm

Suspension type: Ceiling suspension, 100mm

Amount of suspensions: 6

Safe working load (kg):

Static load (kN): 0.55 kN

Price

Gross price: 16369.00 kr

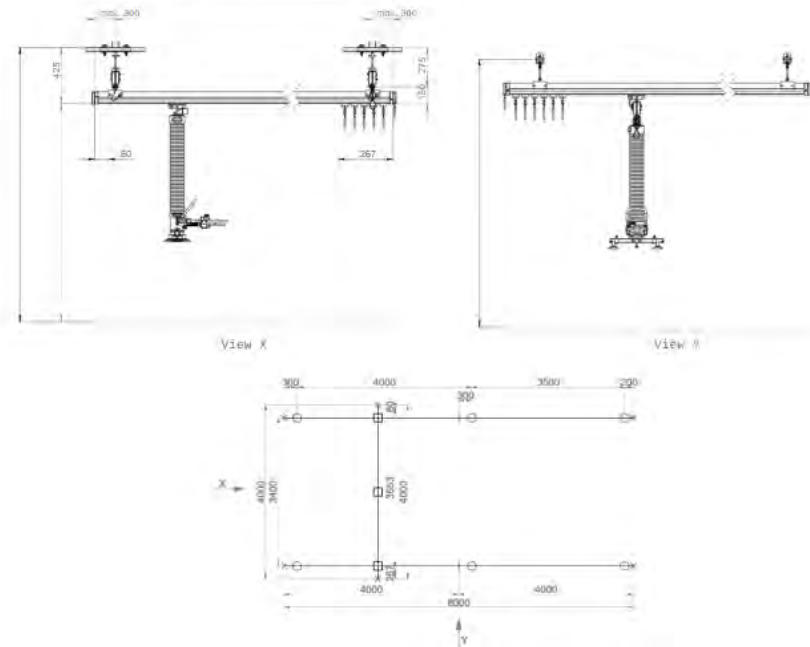
Discount (%):

Net price:

Drawing

Edit height of system

Suspension height(mm):



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Web generator Limitations

- Do not work for:
 - Monorail
 - Twin bridge
 - Low built
 - Boogie trolleys
 - Portals

Summary

- Max profile lengths
 - Aluminum 6500 mm
 - Steel 8000 mm
- Threaded rods max. 1000 mm, longer = down links
- Beam suspension $W \geq 300$ mm = special
- Max. overhang 300 mm (excl. trolley space)
- Specify Max rated capacity = working load + tool weight

H. Clausen

H. Clausen

Contact info

H. Clausen AS
Gaupevein 21
1914 YTRE ENEBAKK
salg@h-clausen.no
+47 649 23 730