



57 South Commerce Way #300, Bethlehem PA 18017  
(610) 443-2282

## Roped Driven TRIO Homelift Layout Drawing Submittal

Customer: \_\_\_\_\_  
Address: \_\_\_\_\_  
Phone: \_\_\_\_\_  
Contact: \_\_\_\_\_

Project Name: \_\_\_\_\_  
Location: \_\_\_\_\_


**The Liftinstituut B.V., an accredited ANSI AECO, has certified the elevator system meets the requirements of the ASME A17.7-2007 / CSA B44.7-07 per certificate no. NA17-0842-1004-026-01 revision no. 2.**

**The DUO Homelift complies with NFPA 70 NEC 2014 / CSA C22.1.**



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© Stiltz Ltd. 2018		TITLE	
Drawn Wagon Wang	Date 07/11/2018	TRIO Homelift Title Page	
 DIMENSIONS IN MM UNLESS OTHERWISE NOTED THIRD ANGLE PROJECTION - AS 1100		A4	Dwg No LAYOUT. 01
			SCALE:
			PAGE 1 OF 12

**GENERAL DATA**

Type:	TRIO Homelift
Capacity:	485 lbs.
Speed:	21.7 ft/min
Maximum travel:	13.12 ft
Car floor area:	11.1 sq ft
Landings:	2
Car entrances:	1 in-line
Operation:	Constant pressure

**LIFT WEIGHT**

Hoist unit (machine room above car):	237.6 lbs.
Car body:	202.4 lbs.
Total empty lift:	440.0 lbs.

**SUSPENSION ROPES**

Manufacturer:	Pfeifer Drako
Type:	Drako 7 x 19 WSC (Mil Spec 83420)
Dimensions:	0.2362 in (6mm)
Min. breaking force:	29,0 kN

**GUIDE RAILS**

Manufacturer:	Stiltz
Type:	Specific Aluminium Alloy (AA 6063) extrusion
Size:	Overall depth 7.165 in, width 3.756 in

**CAR**

Type:	Centrally guided, 1 or 2 entrances
Suspension:	2 ropes, drum
Walls:	Sides have full walls.
Door:	Manual operation swing full height doors.
Floor surface:	In accordance with clause 5.3.1.11
Apron minimum vertical height:	2.362 in
Handrail:	Included as standard

**APPLIED COMPONENTS**

Safety gear; manufacturer; type:	Stiltz, mechanical gripper plates and rods
Car door lock; manufacturer; type:	Stiltz (Kunshan) Limited, ES 20M
UL certificate:	102448987CRT-001

**MACHINE EQUIPMENT**

Manufacturer:	Nord Gear Ltd
Type:	SK9016.1 VL-80S/4 BRE10 HL SR OL/H (Bevel gear unit)
Motor Power:	0.55 kW
Output Speed:	1375 / 15 rpm
Reduction:	02:37.0
Output Torque:	339 Nm
Brake torque; manufacturer:	10 Nm; Precima
Drum; manufacturer:	Shanghai Hanzhou Machinery and Equipment Co., Ltd
Material:	Cast Iron
Diameter:	7.874 in (200mm)
Diverter pulley; manufacturer:	YangZhou Saierda Nylon manufacture Co. Ltd.
Material:	Nylon
Quantity:	2

**ELECTRICAL**

Main power:	220-1-60 HZ - 20 AMP
Signal voltage:	24 VDC
Emergency lowering system:	Battery 12 V - 7 AMP, with emergency lighting
PLC; manufacturer:	Mitsubishi
Type:	AL2-24MR-D
VFD; manufacturer:	Nord
Type:	SK 500E - 750 - 323 - A

**SIGNAL/SAFETY FEATURES**

Landing controls:	Remote transmitters hold-to-run buttons, with back lights
Car controls:	Hold-to-run call buttons, with back lights
On/off and reset switch:	Keyed on car operating panel
Emergency stop:	Push emergency stop switch with alarm siren
Emergency signalling device:	Two way voice communication telephone, to landline
Car indicator lights:	Over-speed, over-load, out-of-balance, bottom-top obstruction
Car Lighting:	LED strip lighting in ceiling and LED puck lighting cab floor
Top of car/machine room:	Load sensitive top plate above lift
Bottom of car:	Obstruction sensor pad at base of lift car

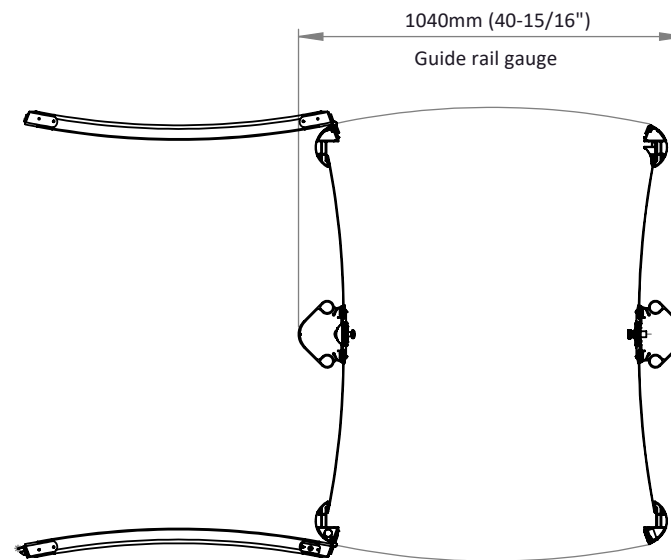
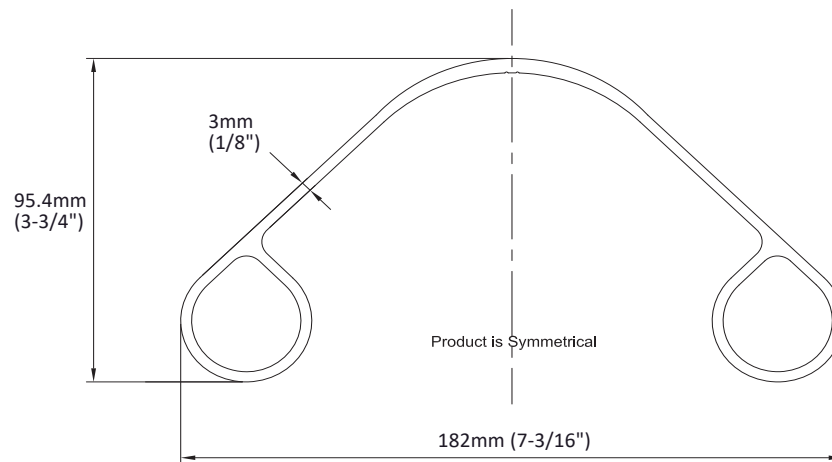
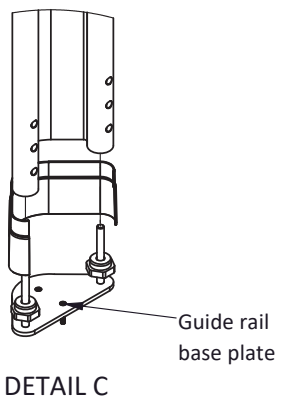
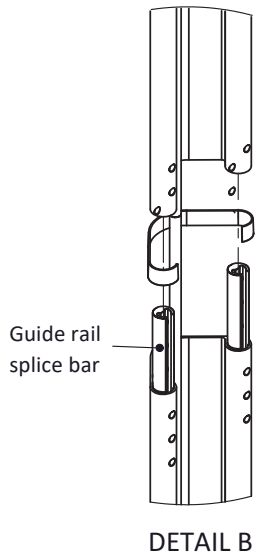
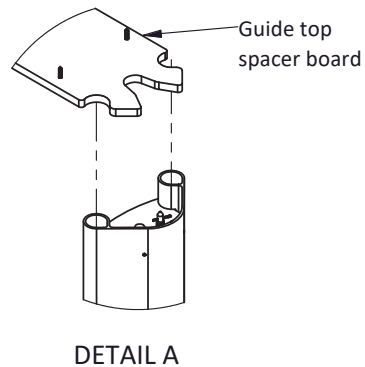
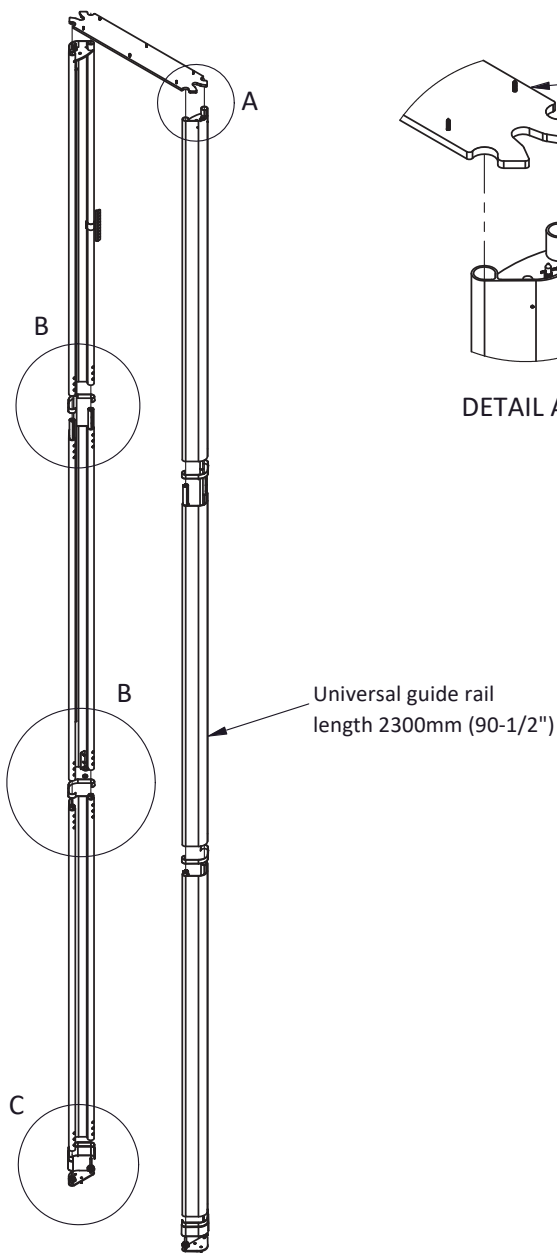
Car door contact;	Kronenberg, PZ 73
UL certificate:	20141104-SA34041
Machine brake; manufacturer;	Precima
UL certificate:	1478630



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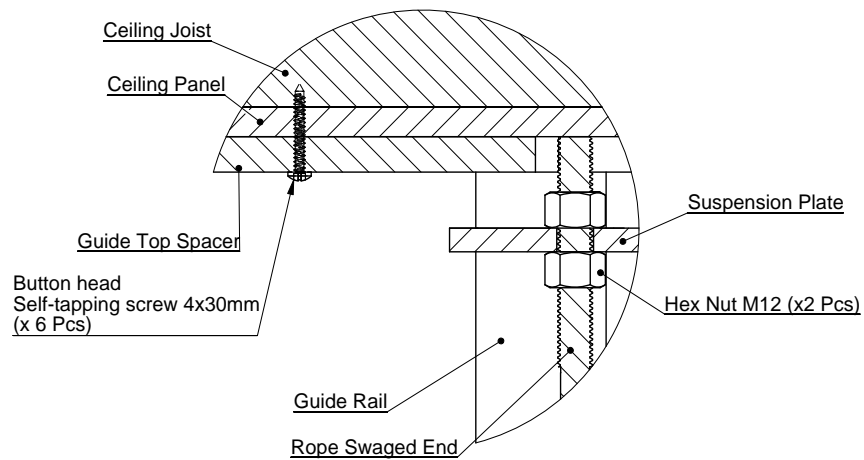
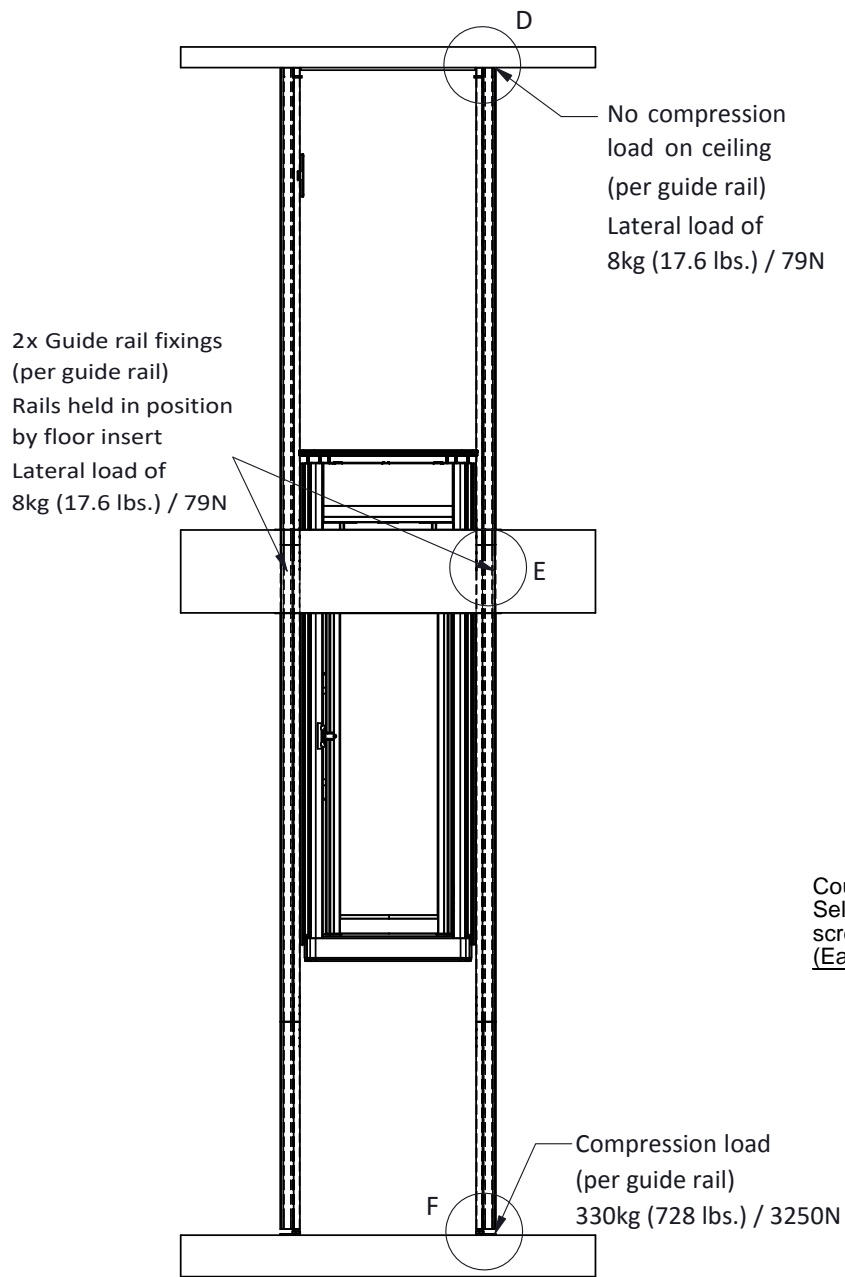
© Stiltz Ltd. 2018	TITLE	
	Specifications	
Drawn Wagon Wang	Date 07/11/2018	A4
Dwg No LAYOUT. 02		
THIRD ANGLE PROJECTION - AS 1100		PAGE 2 OF 12
DIMENSIONS IN MM UNLESS OTHERWISE NOTED		SCALE:



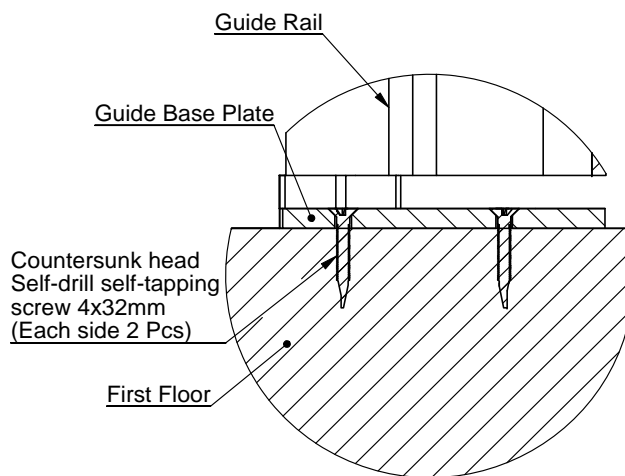
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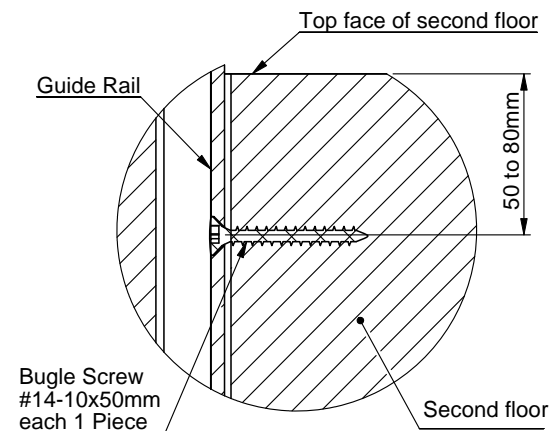
© Stiltz Ltd. 2018		TITLE	
Drawn Wagon Wang Date 07/11/2018		Guide Rail Support System	
 THIRD ANGLE PROJECTION - AS 1100	DIMENSIONS IN MM UNLESS OTHERWISE NOTED		Dwg No <b>LAYOUT. 03</b> SCALE:
	A4	PAGE 3 OF 12	



DETAIL D



DETAIL F



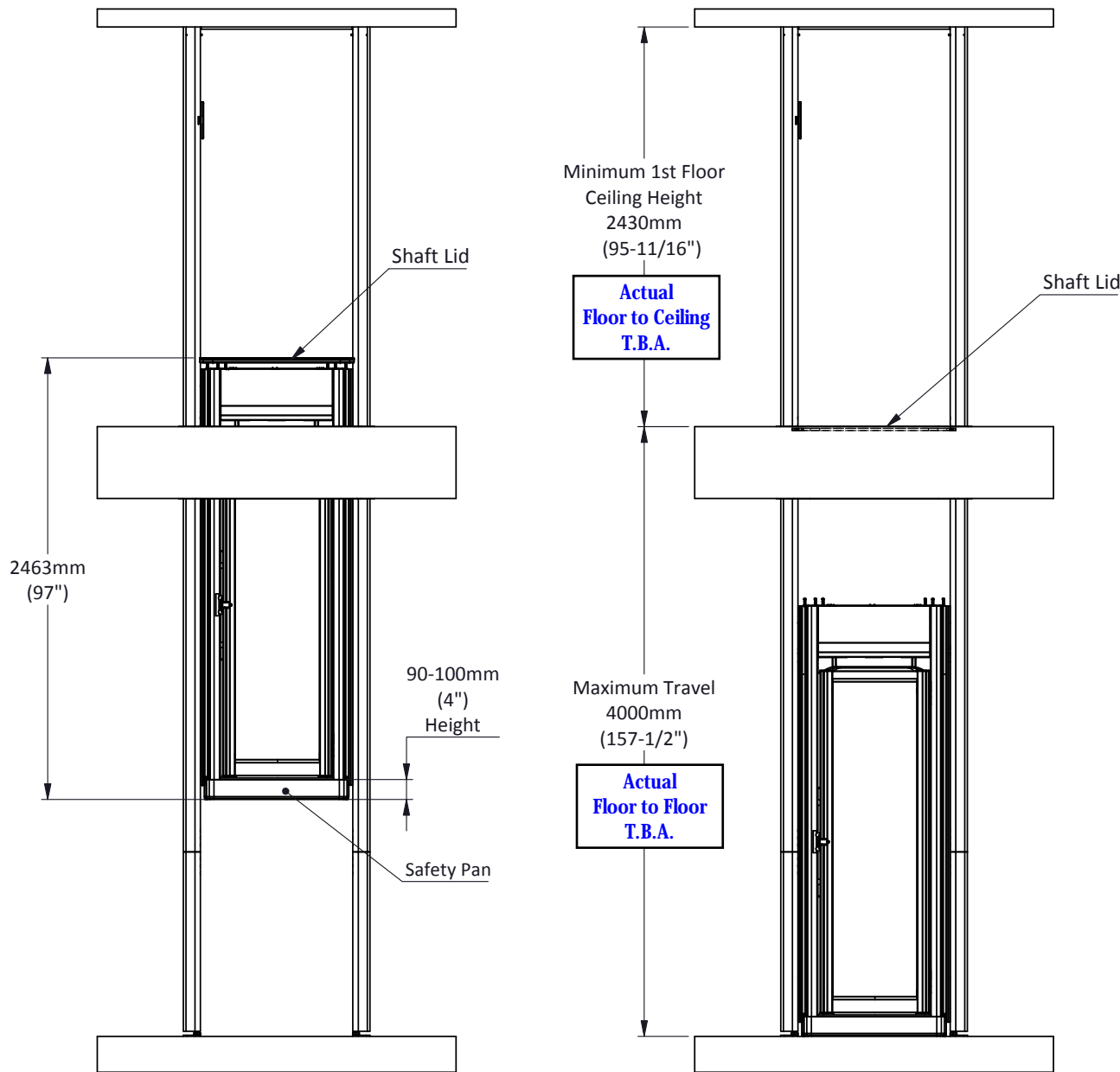
DETAIL E



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© Stiltz Ltd. 2018		TITLE	
Drawn Wagon Wang	Date 07/11/2018	System Loads & Fixings	
THIRD ANGLE PROJECTION - AS 1100		A4	Dwg No LAYOUT. 04
DIMENSIONS IN MM UNLESS OTHERWISE NOTED			PAGE
		SCALE:	4 OF 12



**A17.1.5.3-2013 / CSA B44-13 deviations:**

- (1) 5.3.1.3 – Insufficient car top clearance
- (3) 5.3.1.16.2.j – Top of car

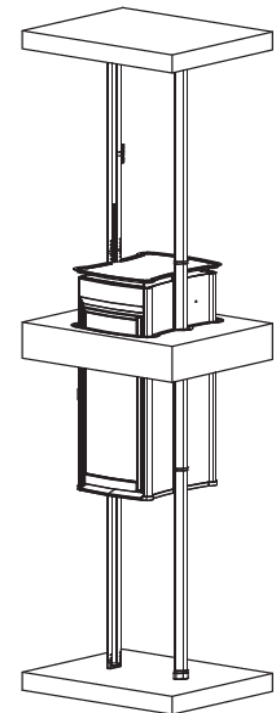
The top of the mechanical hoist enclosure, which is positioned on top of the lift car, is equipped with; (i) a fixed protection panel; (ii) six micro switch limits; (iii) an extreme upper limit switch; and (iv) in most cases the shaft lid.

The fixed protection panel will prevent penetration into the hoist enclosure, but is not designed to be stood on. Signage is installed to inform and remind people not to stand on top of the lift. A micro switch will activate, and stop the lift, if the protection panel is removed. In addition, the shaft lid that protects the second floor opening (from falling hazard) travels on top of, and protects, the car top mounted hoist unit. A wire rope clamp and locking mechanism is fitted to the shaft lid preventing removal.

The main switch to disconnect all power to the hoist, is located just below the protection panel. This allows the hoist to be disabled from about the lift cab, and therefore the lift cannot travel in either direction electrically.


The six micro switches and extreme upper limit switch (absolute final limit) will activate when depressed. So if any top clearance risk occurs, the person/s can depress any one of the six micro switches or extreme upper switch and the lift will stop moving upwards immediately. If the extreme upper limit is activated, the reset button (adjacent to the extreme upper limit) will be depressed to move the lift downwards.

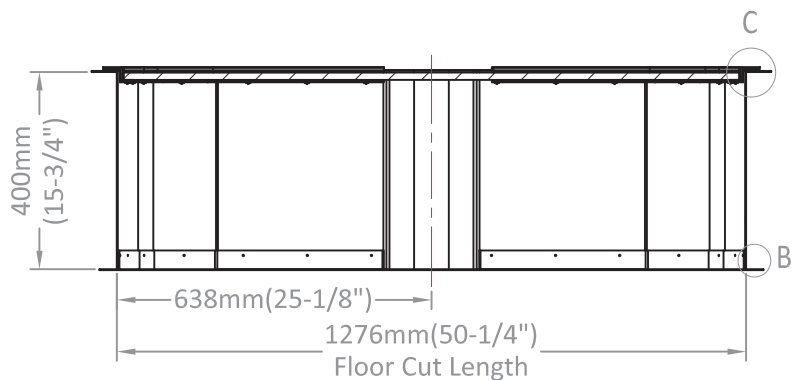
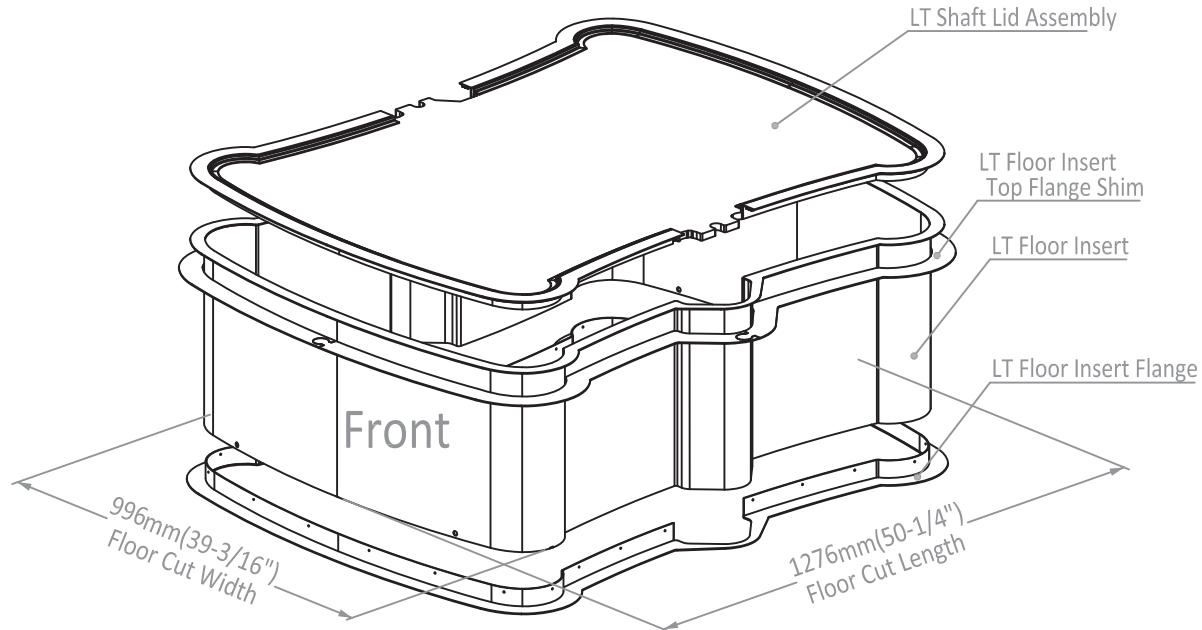
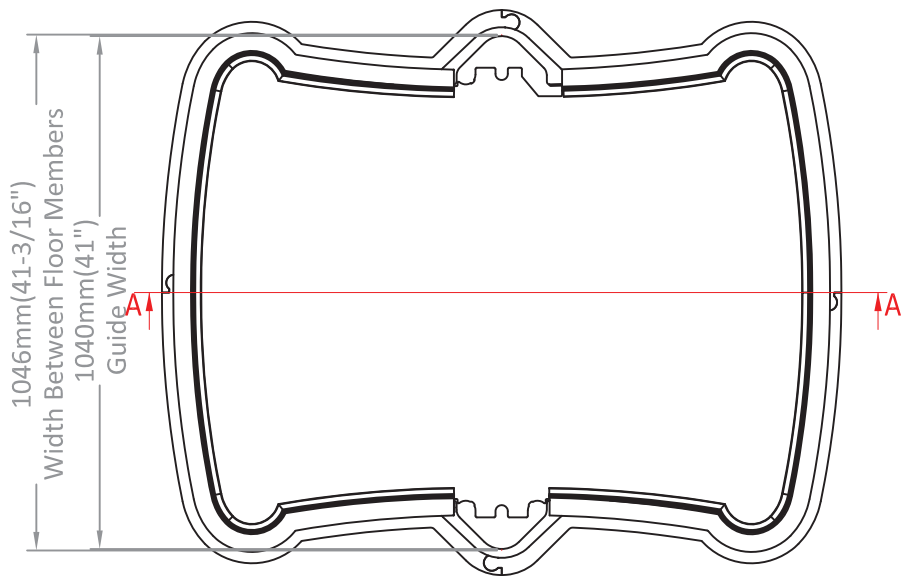
In addition, signage is installed to inform and remind people of the low head height clearance above the lift car.



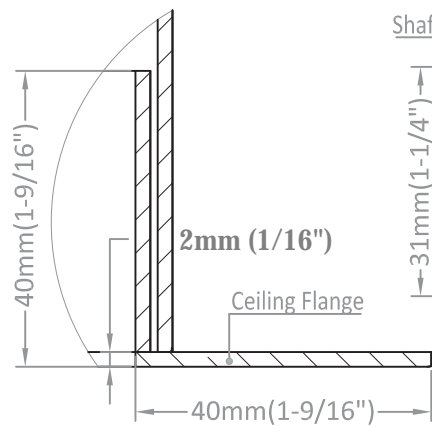
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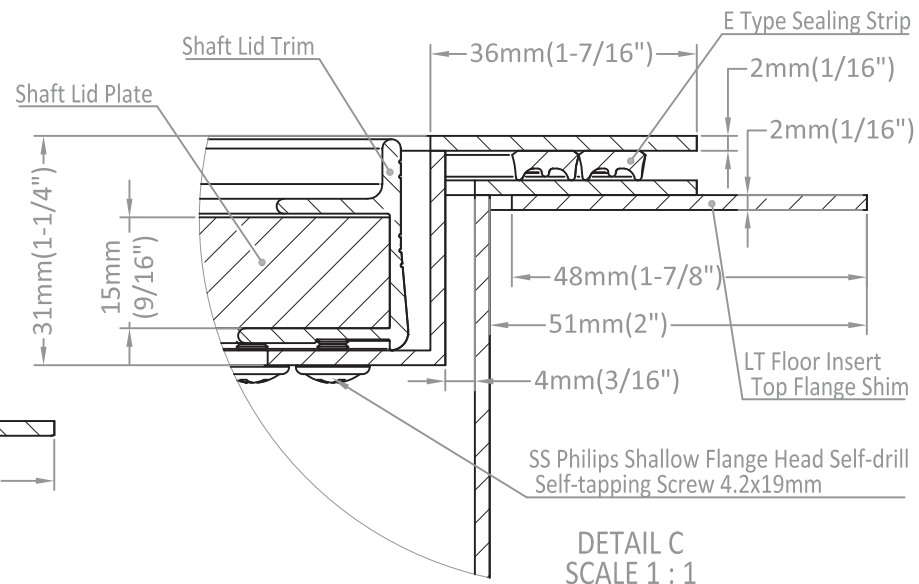
© Stiltz Ltd. 2018		TITLE	
Drawn Wagon Wang	Date 07/11/2018	TRIO Homelift Travel	
 DIMENSIONS IN MM UNLESS OTHERWISE NOTED THIRD ANGLE PROJECTION - AS 1100		A4	Dwg No LAYOUT.05 SCALE:
			PAGE 5 OF 12



SECTION A-A



DETAIL B  
SCALE 1 : 1



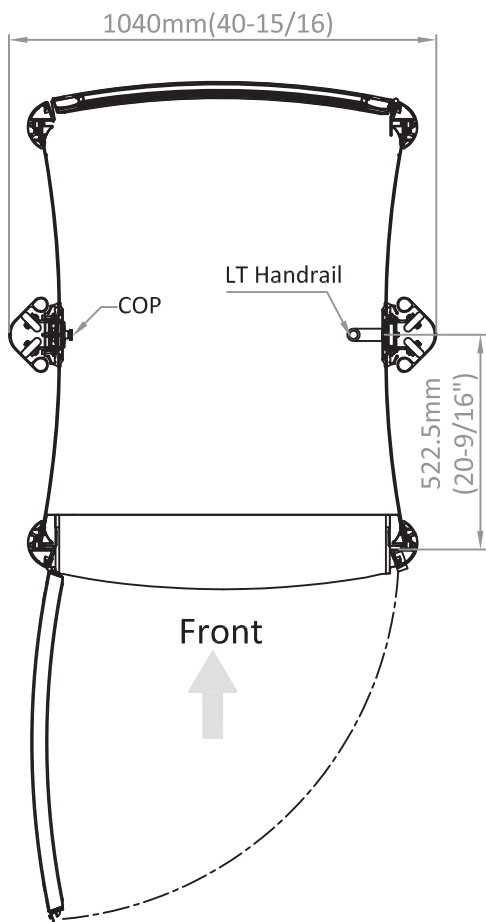
DETAIL C  
SCALE 1 : 1



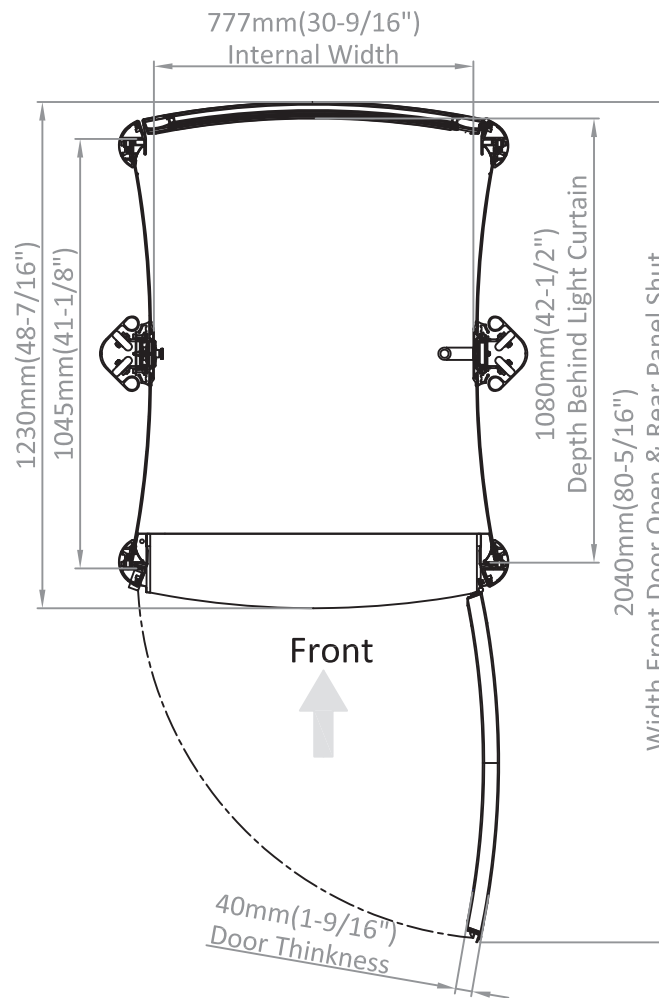
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© Stiltz Ltd. 2018		TITLE Floor Insert & Shaft Lid Assembly	
Drawn Wagon Wang	Date 07/11/2018	A4	Dwg No LAYOUT.06
THIRD ANGLE PROJECTION - AS 1100			SCALE:



RIGHT HAND SWING




LEFT HAND SWING



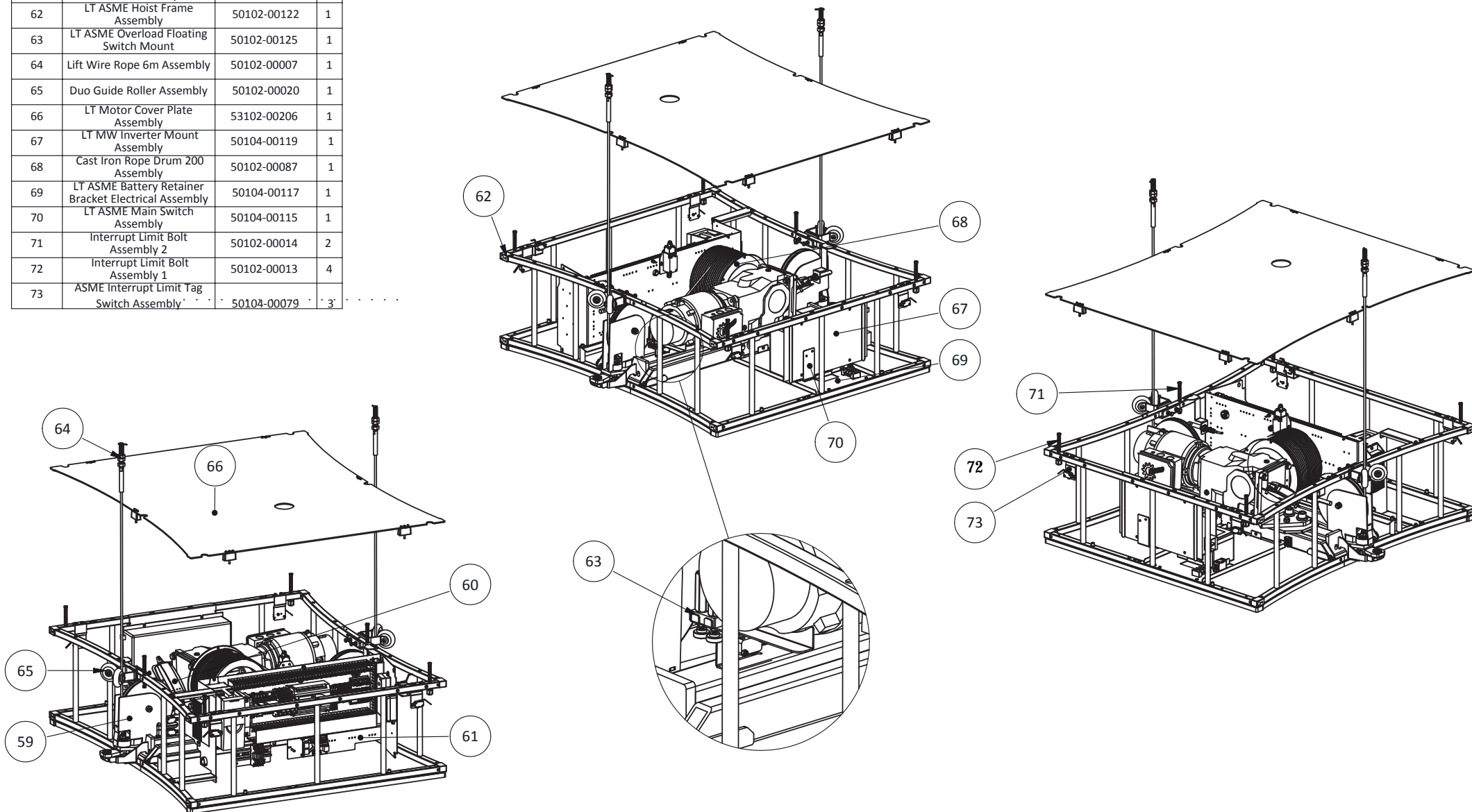
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© Stiltz Ltd. 2018		TITLE	
Drawn Wagon Wang	Date 07/11/2018	Platform Layout & Area	
 DIMENSIONS IN MM UNLESS OTHERWISE NOTED THIRD ANGLE PROJECTION - AS 1100		A4	Dwg No LAYOUT.07
		SCALE:	PAGE 7 OF 12

PRINT MAY BE REDUCED - DO NOT SCALE.

Item #	Part Name	Part No.	Qty
59	Hoist Swivel Rocker Beam AS Assembly	50102-00084	1
60	LT ASME CTEK Battery Charger Assembly	50104-00118	1
61	LT ASME Hoist Electrical Panel Assembly	50103-00014	1
62	LT ASME Hoist Frame Assembly	50102-00122	1
63	LT ASME Overload Floating Switch Mount	50102-00125	1
64	Lift Wire Rope 6m Assembly	50102-00007	1
65	Duo Guide Roller Assembly	50102-00020	1
66	LT Motor Cover Plate Assembly	53102-00206	1
67	LT MW Inverter Mount Assembly	50104-00119	1
68	Cast Iron Rope Drum 200 Assembly	50102-00087	1
69	LT ASME Battery Retainer Bracket Electrical Assembly	50104-00117	1
70	LT ASME Main Switch Assembly	50104-00115	1
71	Interrupt Limit Bolt Assembly 2	50102-00014	2
72	Interrupt Limit Bolt Assembly 1	50102-00013	4
73	ASME Interrupt Limit Tag Switch Assembly	50104-00079	3

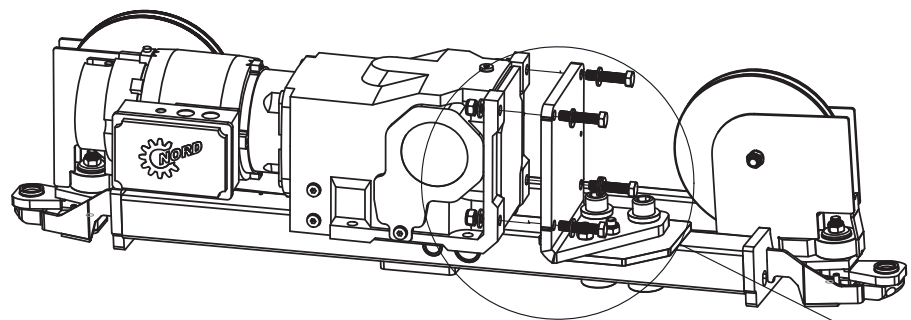


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© Stiltz Ltd. 2018		TITLE	
Drawn Wagon Wang Date 07/11/2018		Top Mounted Machine	
 THIRD ANGLE PROJECTION - AS 1100		DIMENSIONS IN MM UNLESS OTHERWISE NOTED A4 Dwg No LAYOUT.08 SCALE: PAGE 8 OF 12	





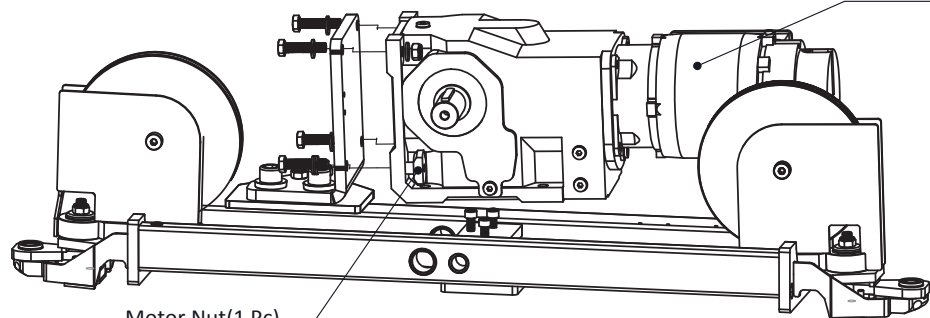
Hexagon Head Bolt M10x45mm(4 Pcs)  
P/N:30101-11058

Nylon Self-locking Nut M10(3 Pcs)  
P/N:30102-10018

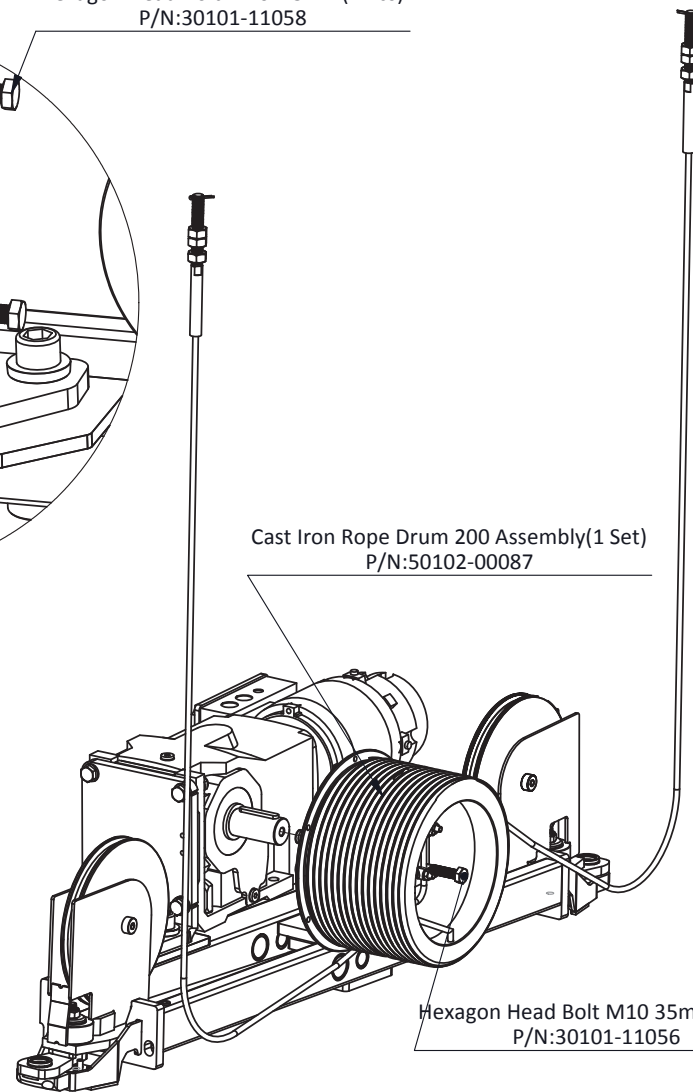
Flat Washer  $\phi$  20  $\phi$  10x2mm(9 Pcs)  
P/N:30103-10006

Nord GearBox Motor 550W N2 AS Assembly  
P/N:50102-00124

Cast Iron Rope Drum 200 Assembly(1 Set)  
P/N:50102-00087



Motor Nut(1 Pc)  
P/N:35111-10017




Hexagon Head Bolt M10 35mm(1 Pc)  
P/N:30101-11056

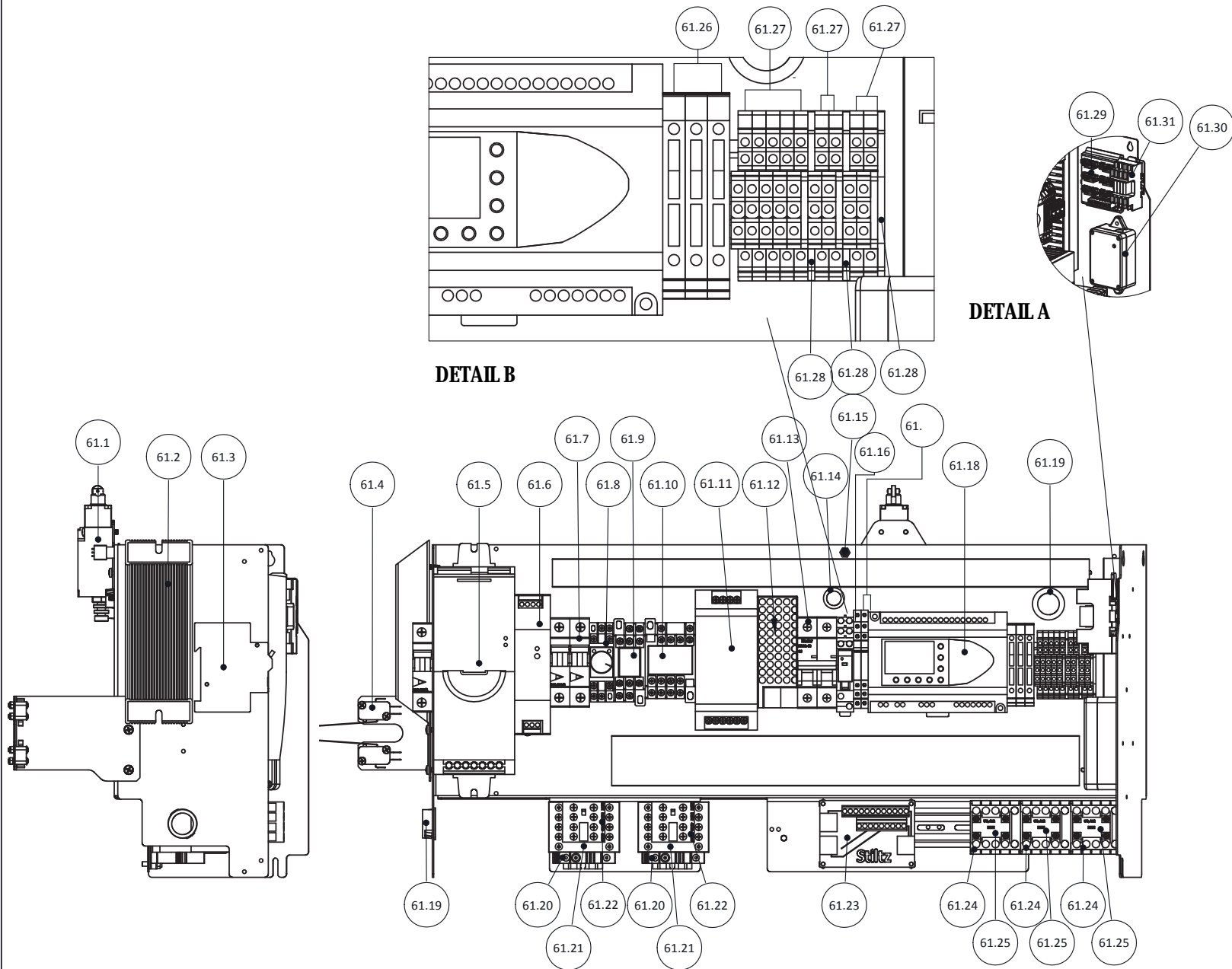


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Drawn Wagon Wang		Date 07/11/2018	
 THIRD ANGLE PROJECTION - AS 1100		DIMENSIONS IN MM UNLESS OTHERWISE NOTED	
A4		Dwg No LAYOUT.09	
SCALE:		PAGE 9 OF 12	

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Item #	Product Name	Part No.	Qty
61.1	Extreme Upper Limit Tag Switch Assembly	50104-00004	1
61.2	Brake Resister N2	10203-00003	1
61.3	Moeller Circuit Breaker C32/1 ML	10101-00004	1
61.4	ASME Balance Limit Bracket Assembly	50104-00078	1
61.5	Frequency Inverter N1	10202-00002	1
61.6	Power Supply 24V	10701-00003	1
61.7	Moeller Circuit Breaker C10/2 ML	10101-00003	1
61.8	Timer Relay	10103-00007	1
61.9	Relay AC220/240V	10103-00005	1
61.10	Relay AC200/220V	10103-00001	1
61.11	Redundancy Unit	10701-00005	1
61.12	DC12 to DC24V Converter	10701-00006	1
61.13	Nader Circuit Breaker	10101-00005	1
61.14	Cable Bush Φ:16 - Black	10908-00003	1
61.15	Limit Override Push Button Apem-2 8632A	10304-00012	1
61.16	Relay DC24V	10103-00003	1
61.17	Mini Relay(With Base)	10103-00012	2
61.18	PLC	10201-00001	1
61.19	Cable Bush Φ:26 - Black	10908-00002	2
61.20	Terminal End Clamp S1	10401-00005	2
61.21	Moeller Contactor	10102-00007	2
61.22	Moeller Contactor Contact	10102-00008	2
61.23	Car Control PCB Assembly	50104-00024	1
61.24	Mitsubishi Contactor(1NC)	10102-00010	3
61.25	Mitsubishi Contactor Contact	10102-00009	3
61.26	Fuse Terminals	10401-00001	3
61.27	Two Level Terminal	10401-00001	9
61.28	Terminal End Plate	10401-00003	3
61.29	Door Lock Link PCB Assembly	50104-00026	1
61.30	Remote Control Receiver Fixed Code Assembly	50104-00071	1
61.31	Relay 24V\24V	10103-00014	1



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 Drawn Wagon Wang Date 07/11/2018  
 DIMENSIONS IN MM UNLESS OTHERWISE NOTED  
 THIRD ANGLE PROJECTION - AS 1100

TITLE  
**Electrical Panel Layout**  
 A4 Dwg No LAYOUT. 10 SCALE: PAGE 10 OF 12

A17.1.5.3-2013 / CSA B44-13 deviation:  
(2) 5.3.1.16.2.i – Manual operation

The electrical safety lowering system is equipped with redundant power supply, so that the lift can disconnect itself from the main power and verify that the safety relay MR is in fact operational and available in the event of a power failure. The lowering system can be used in lieu of a manually operated system and has been confirmed as being suitable by the Liftinstituut. The electrical emergency operation is superior (to mechanical release), it allows any trapped occupant to be released from the LCU (car) in a short amount of time. Rather than time delays to the occupant waiting for elevator personnel to mechanically lower the LCU (car) from outside the lift.

The battery backup system will automatically switch from main power to emergency power, when power is lost. And return to main power when main power is re-established.

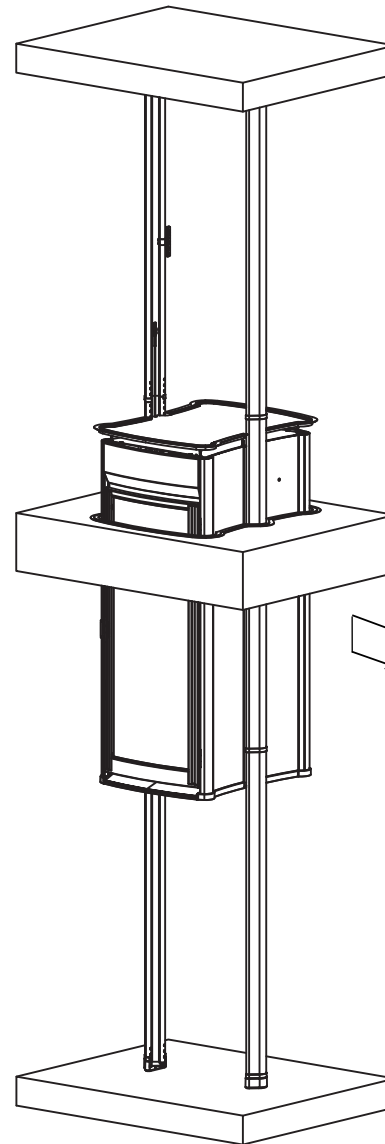
The battery backup system is self-checking and verifies its availability by checking the system two consecutive times between 1 AM and 1:30 AM each Sunday morning.

Vertical position approx.  
150mm (6") below first  
floor ceiling  
Horizontal position no  
more than 100mm (4")  
outside the guide rail gauge

Min. width  
access to  
main line  
disconnect  
762mm (30")

Note min. standing room  
in front of main line  
disconnect 914mm (36")

Min. head  
clearance  
main line  
disconnect  
2000mm  
(78 3/4")



Main line disconnect and  
secondary disconnect  
incl. car lighting and  
emergency lowering  
Plus landline telephone

Car door lock; manufacturer; type:
Stiltz (Kunshan) Limited, ES 20M
Car door contact; manufacturer; type:
Kronenberg, PZ 73

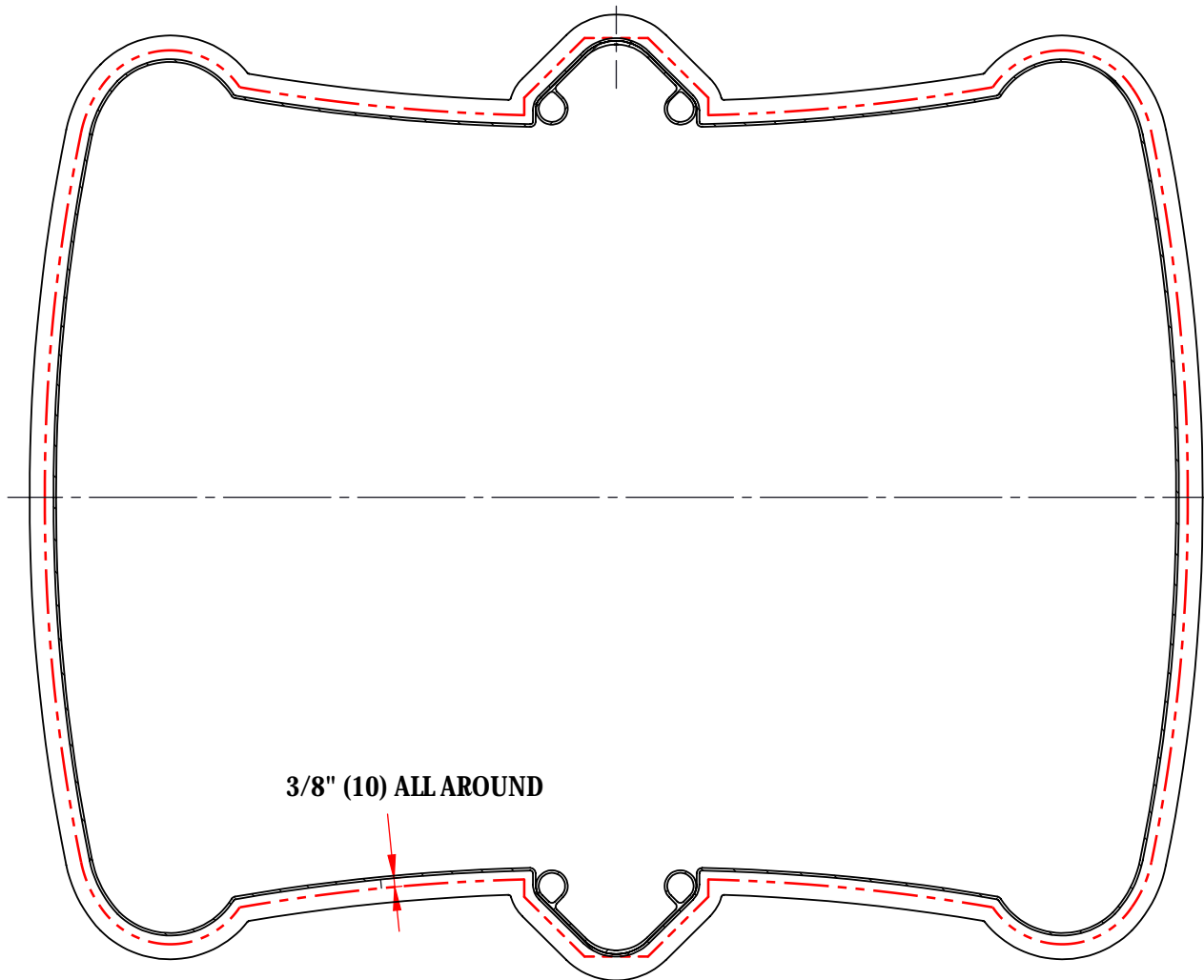
Example main line disconnect  
30 Amp 240-Volt Fusible  
Indoor General-Duty Safety  
Switch  
PROVIDED BY OTHERS



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	Main Line Disconnect	
Drawn Wagon Wang	Date 07/11/2018	A4
DIMENSIONS IN MM UNLESS OTHERWISE NOTED		
THIRD ANGLE PROJECTION - AS 1100		Dwg No LAYOUT. 11
		SCALE:
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Drawn Wagon Wang	Date 07/11/2018	Car to Insert Clearance	
 DIMENSIONS IN MM UNLESS OTHERWISE NOTED THIRD ANGLE PROJECTION - AS 1100		A4	Dwg No LAYOUT. 12
			PAGE 12 OF 12
		SCALE:	