

# LASER 4.3-CP

## 3 x Car Stacker

### Spare Parts Manual



Address: 3 Graham Street, Export Park  
South Australia 5950  
Ph: +61 (08) 8234 3611  
Fax: +61 (08) 8234 4322  
Email: [sales@molnarhoists.com.au](mailto:sales@molnarhoists.com.au)  
Web: [www.molnarhoists.com.au](http://www.molnarhoists.com.au)

**Before taking into  
operation check  
system components,  
control, emergency  
stop and safety  
equipment for  
condition, damage  
and correct function!**



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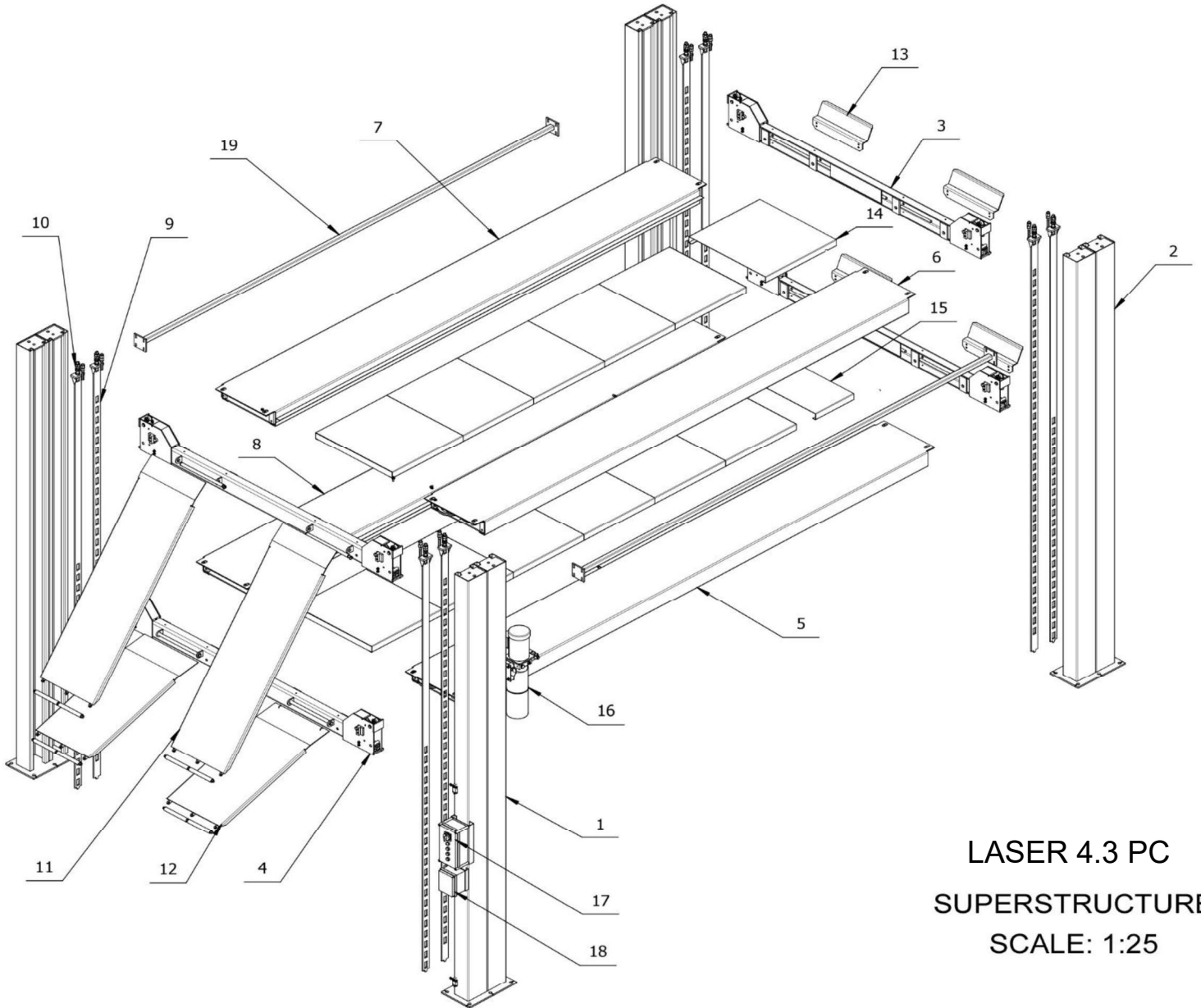
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### 1- Exploded Illustration of Car Stacker



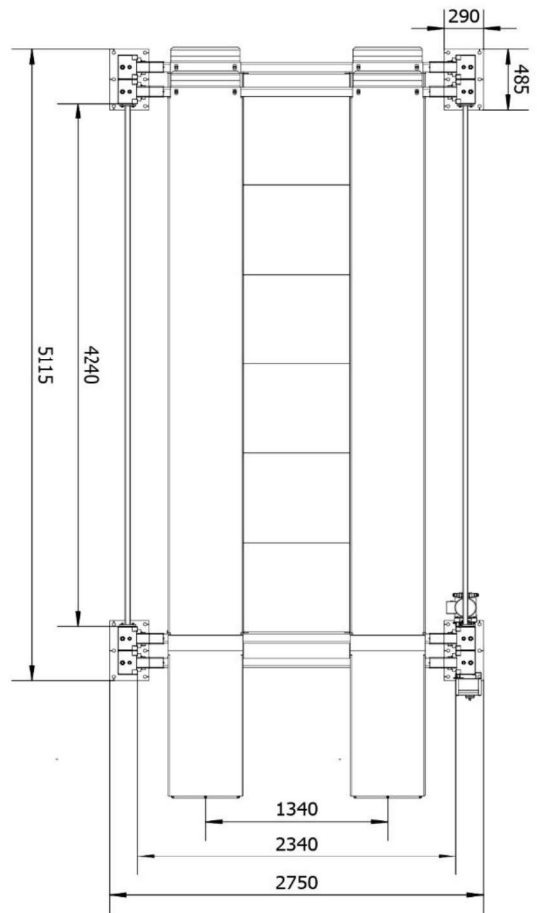
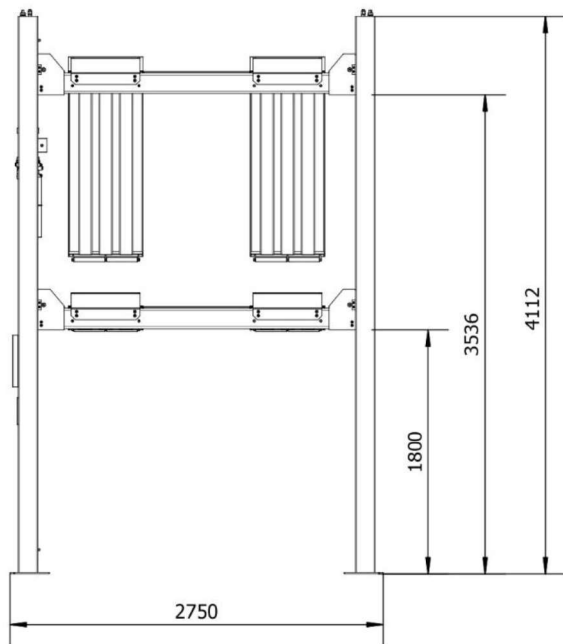
LASER 4.3 PC  
SUPERSTRUCTURE  
SCALE: 1:25

1-1-

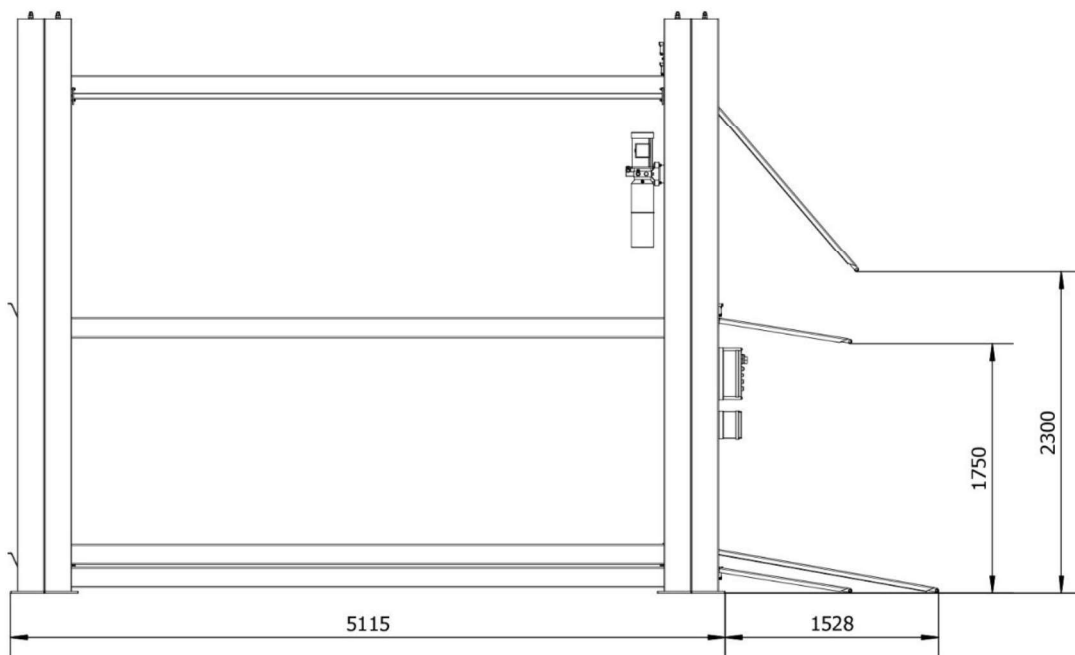
Subject: LASER 4.3-CP Structure	
Drawing No:	Part No:

Item No	Part Number	Designation	Qty	Specification
1	4.3CP-S-1	Control Post Assembly	1	
2	4.3CP-S-2	Non-Control Post Assembly	3	
3	4.3CP-S-3	Front Transverse Beam Assembly	2	
4	4.3CP-S-4	Rear Transverse Beam Assembly	2	
5	4.3CP-S-5	Lower Control Platform Assembly	1	
6	4.3CP-S-6	Upper Control Platform Assembly	1	
7	4.3CP-S-7	Upper Non-control Platform Assembly	1	
8	4.3CP-S-8	Lower Non-control Platform Assembly	1	
9	4.3CP-S-9	Safety Bar 1	4	With 36 Locations
10	4.3CP-S-10	Safety Bar 2	4	With 22 Locations
11	4.3CP-S-11	Extended Run Up Ramp Assembly TP	2	
12	4.3CP-S-12	Run Up Ramp Assembly LP	2	
13	4.3CP-S-13	Wheel Stop	4	
14	4.3CP-S-14	Middle Cover Plate	12	788×724×60t
15	4.3CP-S-15	Adjustment Cover Plate	1	788×390×60t
16	4.3CP-S-16	Power Unit	1	Three Phase
17	4.3CP-OP	Operating Panel	1	Three Phase
18	4.3CP-S-18	Transformer Box	1	Three Phase
19	4.3CP-S-19	Support Bar	2	

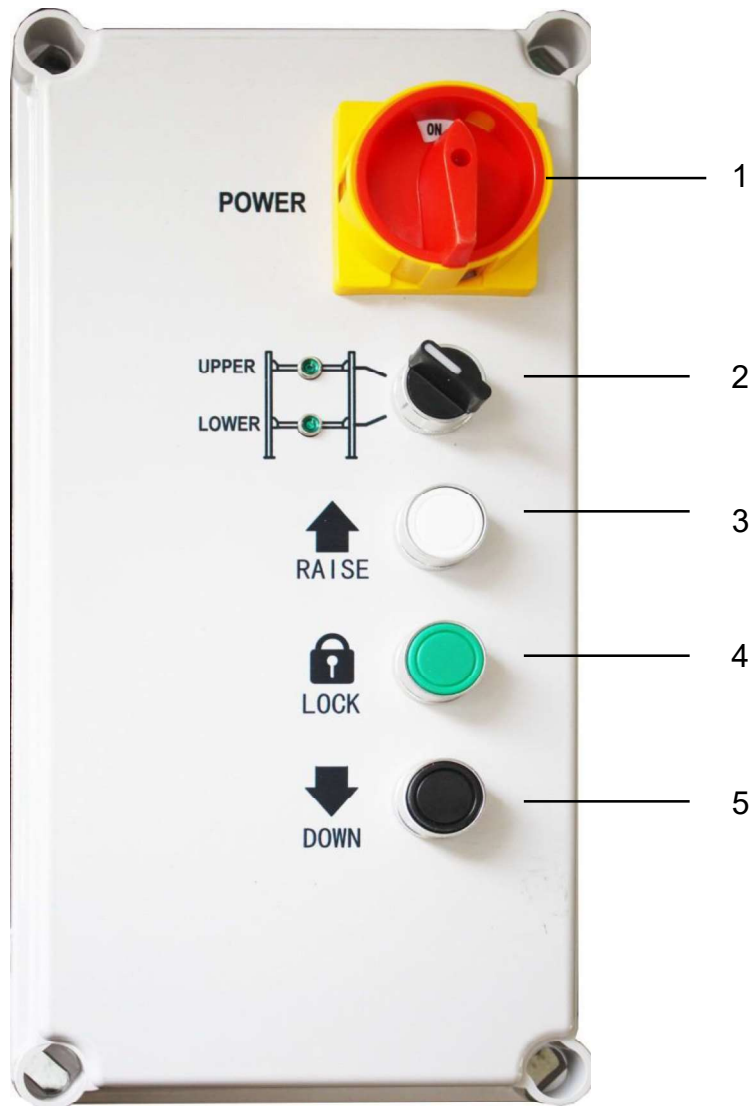
## 2- Layout of Car Stacker



**MASTER 4.3-CP**  
**INSTALLATION DIMENSIONS**  
**SCALE:1:30**  
 Measurements are all in mm

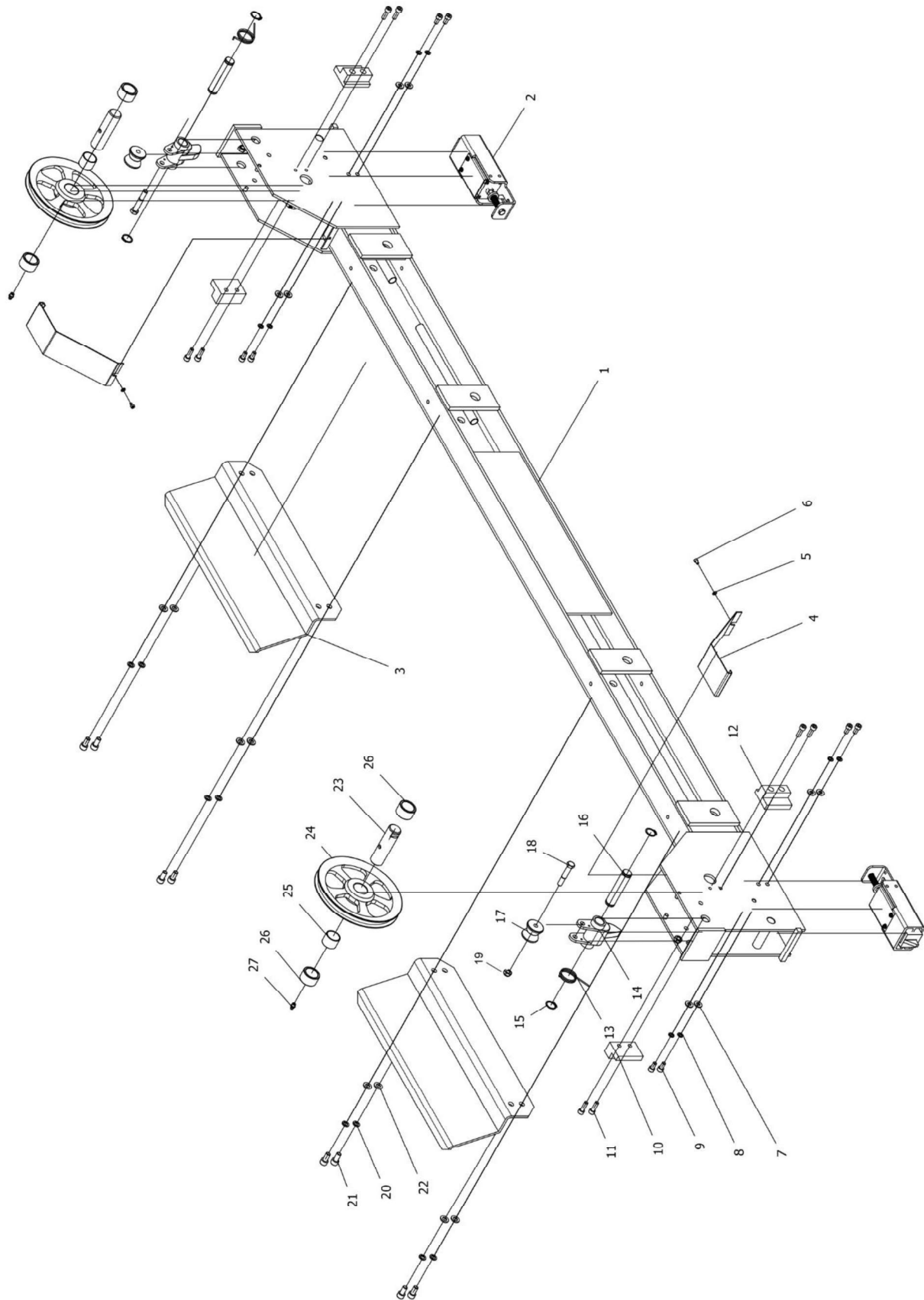


### 3- Operating Panel 4.3CP-OP



Item No	Part Number	Designation	Qty	Specification
1	4.3CP-OP-1	Main Switch	1	
2	4.3CP-OP-2	Selector Switch	1	
3	4.3CP-OP-3	Push Button Up	1	
4	4.3CP-OP-4	Push Button Lock	1	
5	4.3CP-OP-5	Push Button Down	1	

### 4- Exploded Illustration of Front Transverse Beam



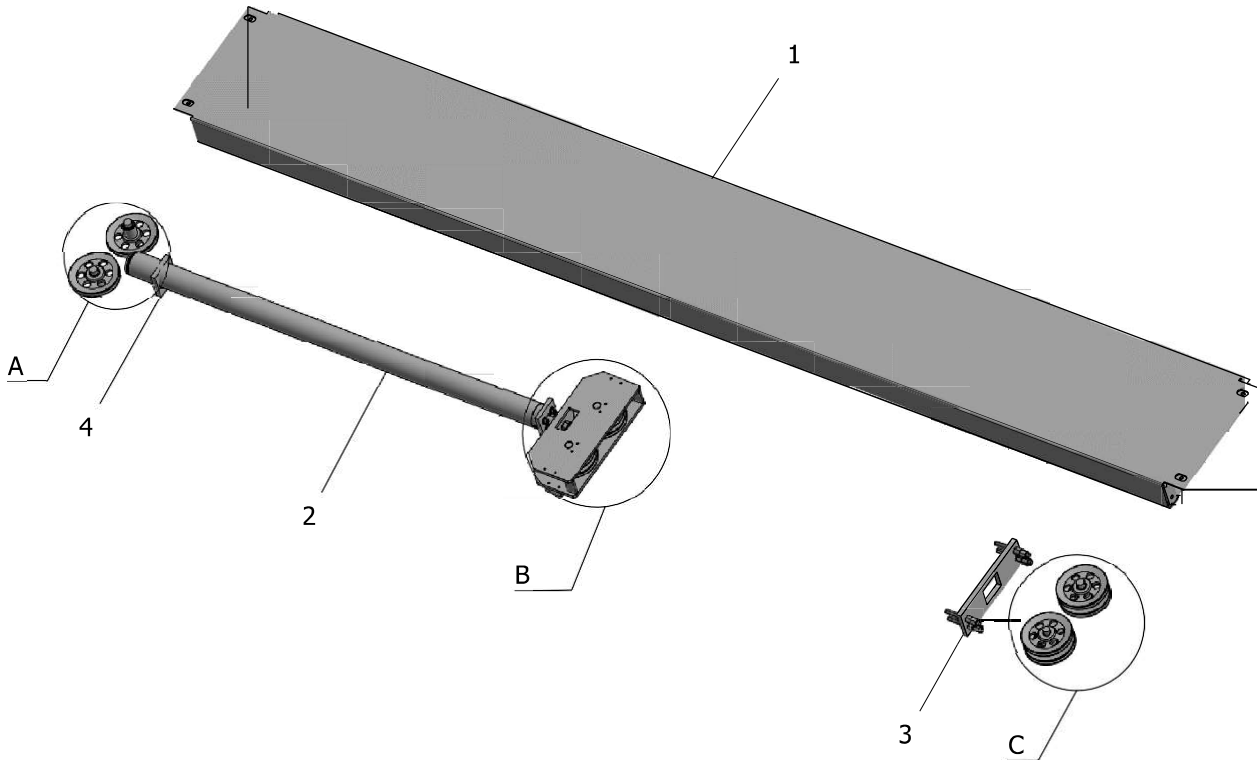


4-1-

Subject: Front Transverse Beam Assembly	
Drawing No:	Part No:

Item No	Part Number	Description	Qty	Specifications
1	4.3CP-T-1	Front Transverse Beam Weldment	1	
2	SM450-T-20-24V	Locking Solenoid	2	
3	4.3CP-S-11	Wheel Stop	2	
4	4.3CP-T-4	Sheave Cover	2	
5	4.3CP-T-5	Plain Washer	2	Φ10x Φ 5.3 x 1mm
6	4.3CP-T-6	Hex Screw With Flat Round Head	2	M5x8L
7	4.3CP-T-7	Plain Washer	8	M5
8	4.3CP-T-8	Spring Washer	8	Φ16x1x2.1mm
9	4.3CP-T-9	Bolt - Hex Socket head	8	M8x16mm
10	4.3CP-T-10	Guide Block 1	2	70x47x30t
11	4.3CP-T-11	Hex Screw With Flat Round Head	8	M8X25
12	4.3CP-T-13	Guide Block 2	2	70x55x30t
13	4.3CP-T-13	Spring For Safety Lock	2	φ35xφ2.5x47L
14	4.3CP-T-14	Safety Lock	2	
15	4.3CP-T-15	Circlip For Shaft	4	φ20.5x1
16	4.3CP-T-16	Roller For Safety Lock	2	φ22x100L
17	4.3CP-T-17	Direction Roller	2	φ40x35L
18	4.3CP-T-18	Bolt	2	M10X60 Not Full Thread
19	4.3CP-T-19	Self Locking Nut	2	M10
20	4.3CP-T-20	Spring Washer	8	φ10.2x2.6
21	4.3CP-T-21	Spring Washer	8	φ10.2x2.6
22	4.3CP-T-22	Plain Washer	8	Φ20xφ11x2
23	4.3CP-T-24	Pulley Shaft For Transverse Beam	2	φ30x107L
24	4.3CP-T-25	Single Pulley	2	φ210xφ34x25t
25	SM450-T-4	DU Bearing 1	2	φ34xφ30x25t
26	4.3CP-T-23	Spacer Bush For Pulley	4	φ40xφ30.4x24L
27	SM450-T-5	Grease Nipple	2	PT1/8XST

### 5- General Assembly of Top Control Platform



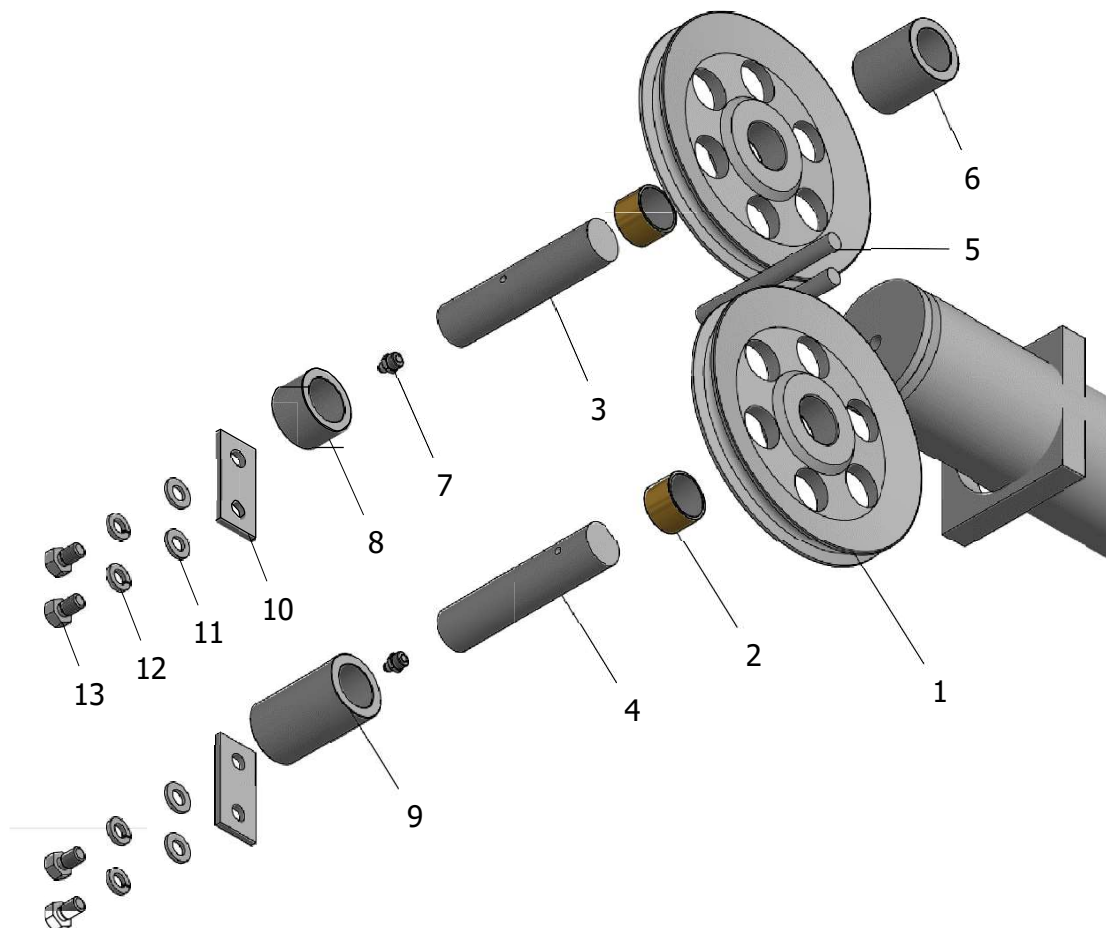
Subject: Top Control Platform	
Drawing No:	Part No:

Item No	Part Number	Description	Qty	Specifications
1	4.3CP-C-1	Control Platform Weldment	1	
2	4.3CP-C-1.1	Hydraulic Cylinder TCP	1	
3	4.3CP-C-3	Cable Retainer Plate	1	

For Details View of A B C, Please Refer to Following Exploded Diagram

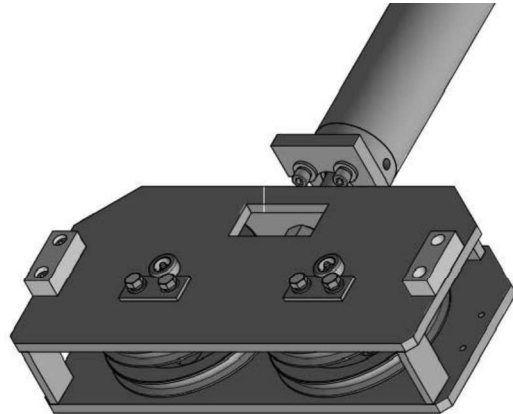
5.1

Subject: Exploded Illustration of Details View A	
Drawing No:	Part No:

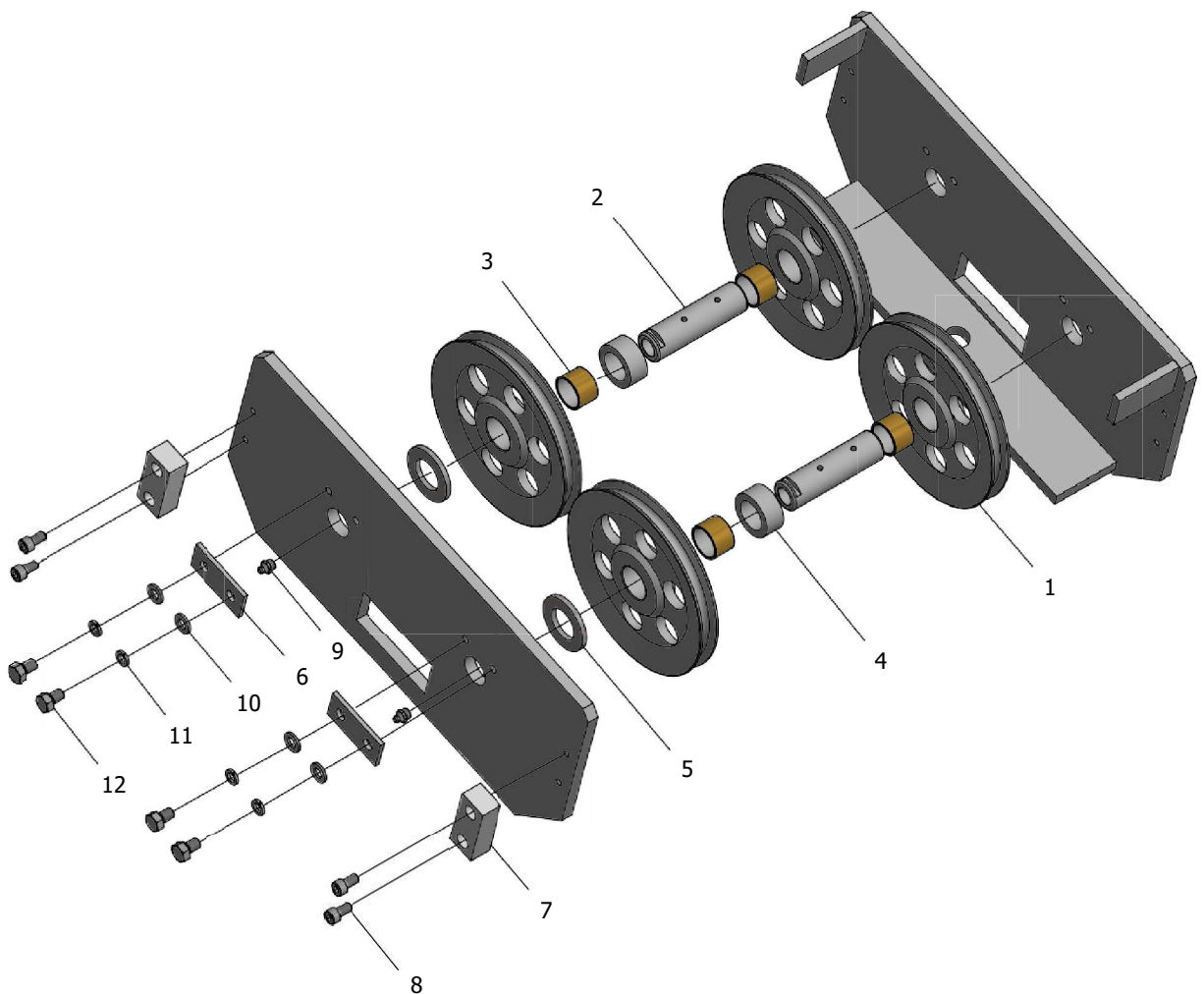


Item No	Part Number	Description	Qty	Specifications
1	4.3CP-TCP-1	Single Pulley	2	φ 190xφ34x20t
2	4.3CP-T-26	DU Bearing 2	2	φ 34xφ30x20t
3	4.3CP-TCP-3	Pulley Shaft	1	A_ φ 30x136L
4	4.3CP-TCP-4	Pulley Shaft	1	B_ φ 30x136L
5	4.3CP-TCP-5	Cable Retainer	2	φ 12x120L
6	4.3CP-TCP-6	Spacer Bush	1	φ 45xφ30.5x52t
7	SM450-T-5	Grease Nipple	2	PT1/8XST
8	4.3CP-TCP-8	Spacer Bush	1	φ 45xφ30.5x28t
9	4.3CP-TCP-9	Spacer Bush	1	φ 45xφ30.5x75t
10	4.3CP-TCP-10	Pulley Shaft Stopper	2	
11	4.3CP-T-20	Plain Washer	4	φ 20xφ11x2
12	4.3CP-T-21	Spring Washer	4	φ 10.2x2.6
13	4.3CP-CPB-12	Hex Head Bolt	4	M10x16 S=16,K=6.4

### 5-2- General Assembly of Control Pulley Box



#### 5-2-1- Exploded Illustration of Control Pulley Box (View B)

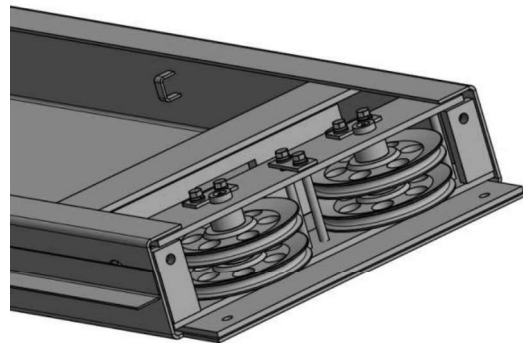


**5-2-2-**

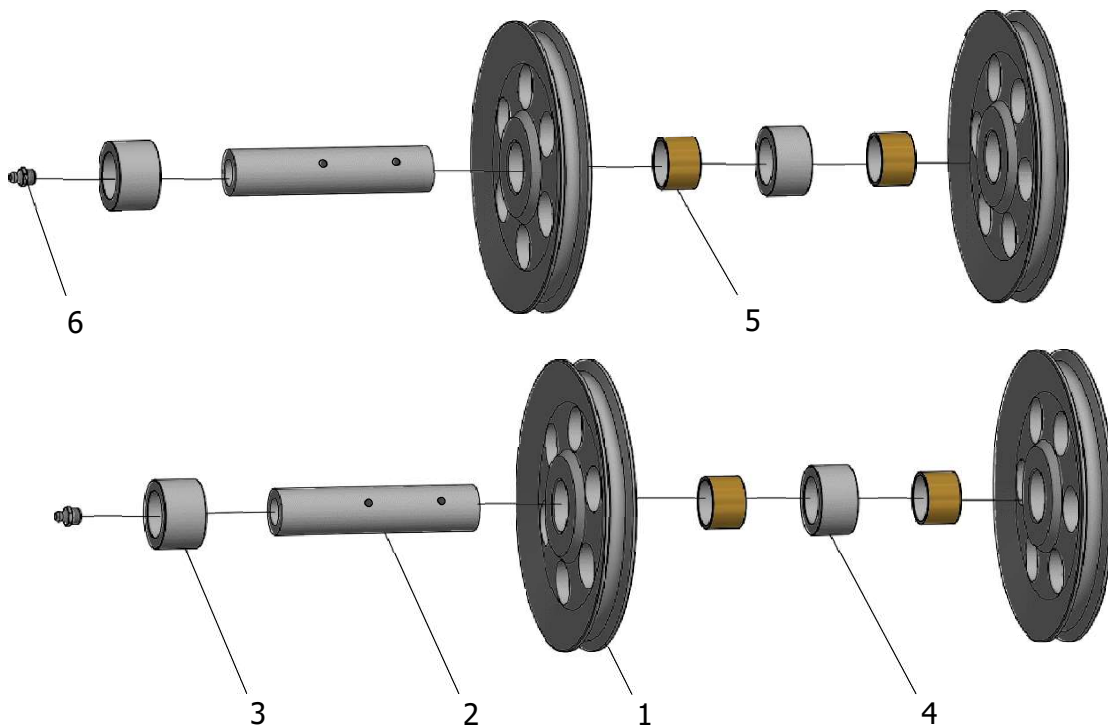
Subject: Exploded Illustration of Control Pulley Box (View B)	
Drawing No:	Part No:

Item No	Part Number	Description	Qty	Specifications
1	4.3CP-CPB-1	Single Pulley	4	φ 190xφ34x20t
2	4.3CP-CPB-2	Control Pulley Shaft	2	φ 30x108L
3	4.3CP-T-26	DU Bearing 2	4	φ 34xφ30x20t
4	4.3CP-CPB-4	Spacer Bush	2	φ 45xφ30.5x20t
5	4.3CP-CPB-5	Plain Washer	2	φ 56xφ33x4
6	4.3CP-CPB-6	Pulley Shaft Stopper	2	
7	4.3CP-CPB-7	Guide Block for Travelling Pulley Block	2	70x30x22
8	4.3CP-CPB-8	Hex Socket Head Screw	2	M8×16
9	SM450-T-5	Grease Nipple	2	PT1/8XST
10	4.3CP-T-20	Plain Washer	4	φ 20xφ11x2
11	4.3CP-T-21	Spring Washer	4	φ 10.2x2.6
12	4.3CP-CPB-12	Hex Head Bolt	4	M10X16 S=16,K=6.4

### 5-3- General Assembly of Twin Pulley Assembly (View C)

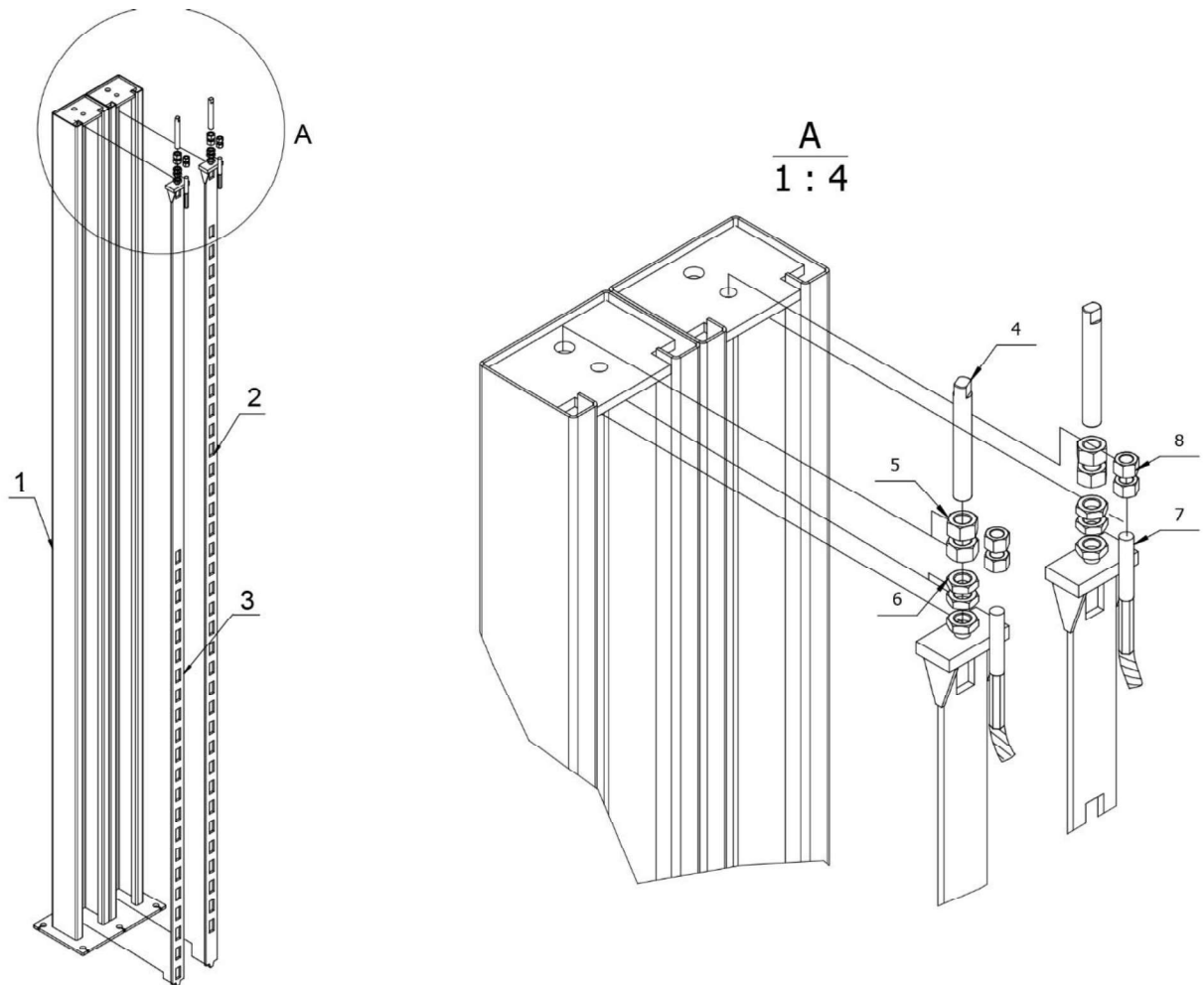


#### 5-3-1-Exploded Illustration of Twin Pulley Assembly



Item No	Part Number	Description	Qty	Specifications
1	4.3CP-TCP-1	Single Pulley	4	φ190xφ34x20t
2	4.3CP-CP-2	Pulley Shaft 2 x Grease Holes	2	C_ φ 30x136L
3	4.3CP-TCP-8	Spacer Bush	2	φ 45xφ30.5x28t
4	4.3CP-CP-4	Spacer Bush	2	φ 45xφ30.5x25t
5	4.3CP-T-26	DU Bearing 2	4	φ 34xφ30x20t
6	SM450-T-5	Grease Nipple	2	PT1/8XST

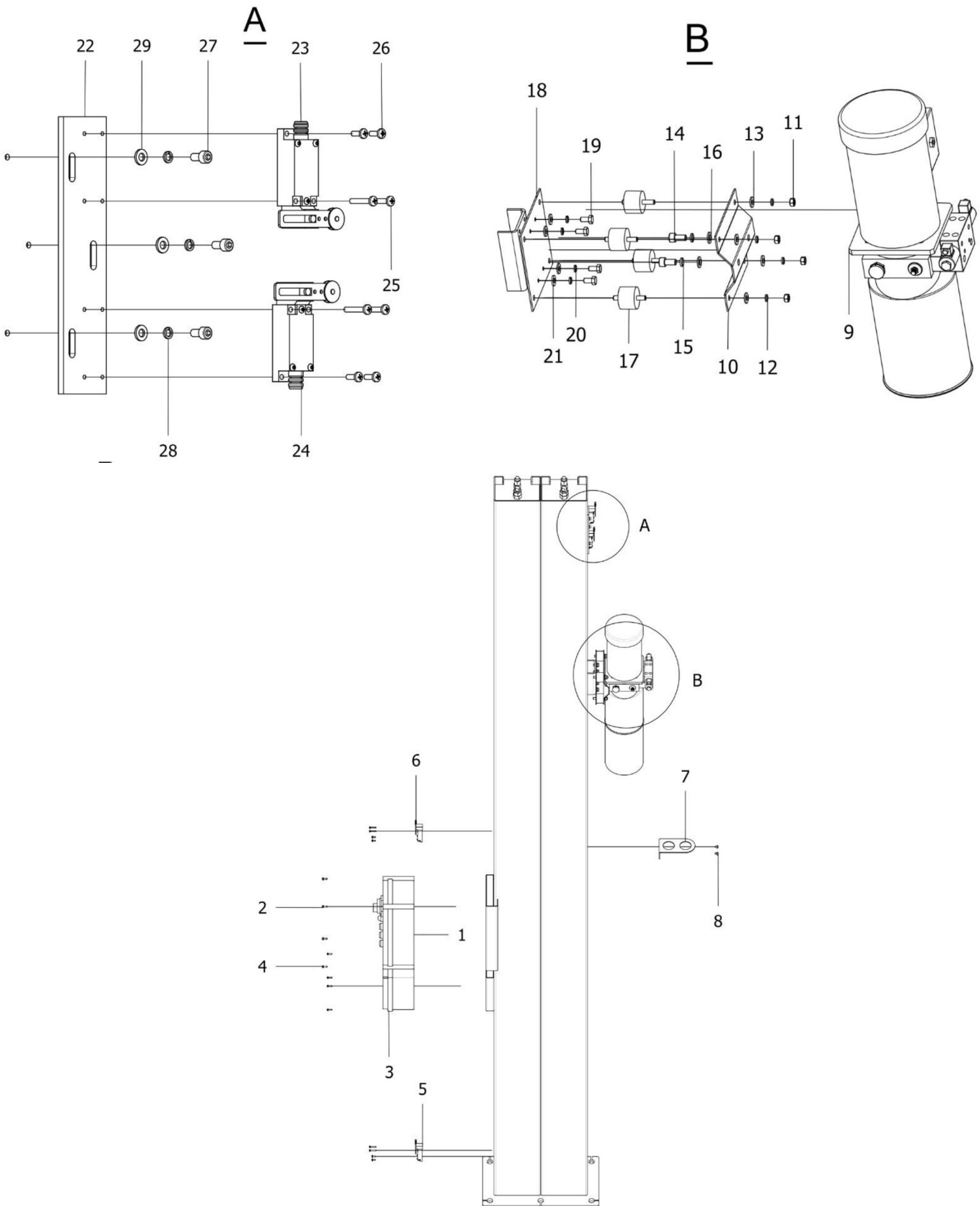
### 6- Non-control Post Assembly



Subject: Exploded Illustration of Non-control Post	
Drawing No:	Part No:

Item No	Part Number	Description	Qty	Specifications
1	4.3CP-P-2	Non-control Post Weldment	1	
2	4.3CP-S-7	Safety Bar 1	1	36 Locking Position
3	4.3CP-S-8	Safety Bar 2	1	22 Locking Position
4	4.3CP-P-4	Full Thread Bolt	2	M20x150L
5	4.3CP-P-5	Hexagon Nut	4	S=30,M=18
6	4.3CP-P-6	Hexagon Nut	6	S=30,M=10
7	4.3CP-P-7	Cable End Bolt	16	M16
8	4.3CP-P-8	Cable End Bolt	4	M16

### 7- Exploded Illustration of Motor Post Assembly



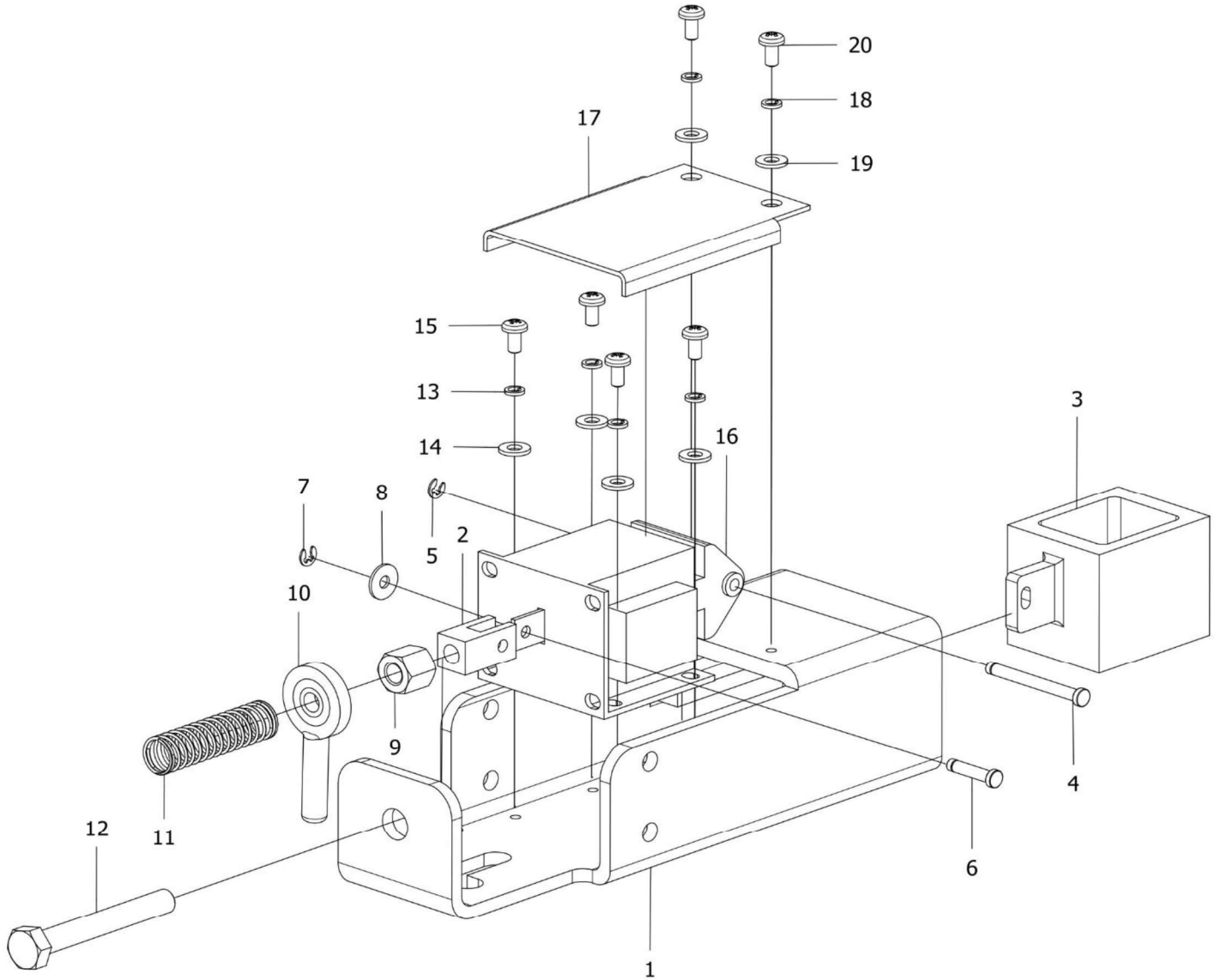


7-1-

Subject: Exploded Illustration of Control Post	
Drawing No:	Part No:

Item No	Part Number	Description	Qty	Specifications
1	4.3CP-MP-1	Control Panel	1	
2	4.3CP-MP-2	Cross head screw	4	M5x15L
3	4.3CP-CP-S-16	Transformer Box	1	
4	4.3CP-MP-4	Cross head screw	4	M4x15L
5	4.3CP-MP-23	Limit Switch #4	1	YBLX-ME8108
6	4.3CP-MP-23	Limit Switch #3	1	YBLX-ME8108
7	4.3CP-MP-7	Bracket for Conduit	1	
8	4.3CP-MP-8	Cross head screw	2	M6x8L
9	4.3CP-S-14	Power Unit	1	YBZ5-F2.1E6H30
10	4.3CP-MP-10	Mounting Bracket	1	
11	4.3CP-MP-11	Hexagon Nut	4	M8
12	4.3CP-MP-12	Spring Washer	4	φ 8
13	4.3CP-MP-13	Plain Washer	4	φ 8
14	4.3CP-T-22	Hex socket head screws	2	M10*20
15	4.3CP-MP-15	Spring Washer	2	φ 10
16	4.3CP-MP-16	Plain Washer	2	φ 10
17	SM245-M-18	Rubber shock absorber	4	
18	4.3CP-MP-18	Mounting Plate	1	
19	4.3CP-MP-19	Hex head full thread bolt	4	M8x15
20	4.3CP-MP-12	Spring Washer	4	φ 8
21	4.3CP-MP-13	Plain Washer	4	φ 8
22	4.3CP-MP-22	Bracket of Limit Switch	1	230×50×6t
23	4.3CP-MP-23	Limit Switch #1	1	YBLX-ME8108
24	4.3CP-MP-23	Limit Switch #2	1	YBLX-ME8108
25	4.3CP-MP-25	Cross head screw	8	M4X25
26	4.3CP-MP-26	Cross head screw	8	M4X12
27	4.3CP-MP-27	Hex socket head screws	3	M6X12
28	4.3CP-MP-28	Spring Washer	3	φ 9.3xφ6.1x1.6t
29	4.3CP-MP-29	Plain Washer	3	φ 12xφ6.6x1.6t

### 8- Exploded Illustration of Lock Housing Assembly



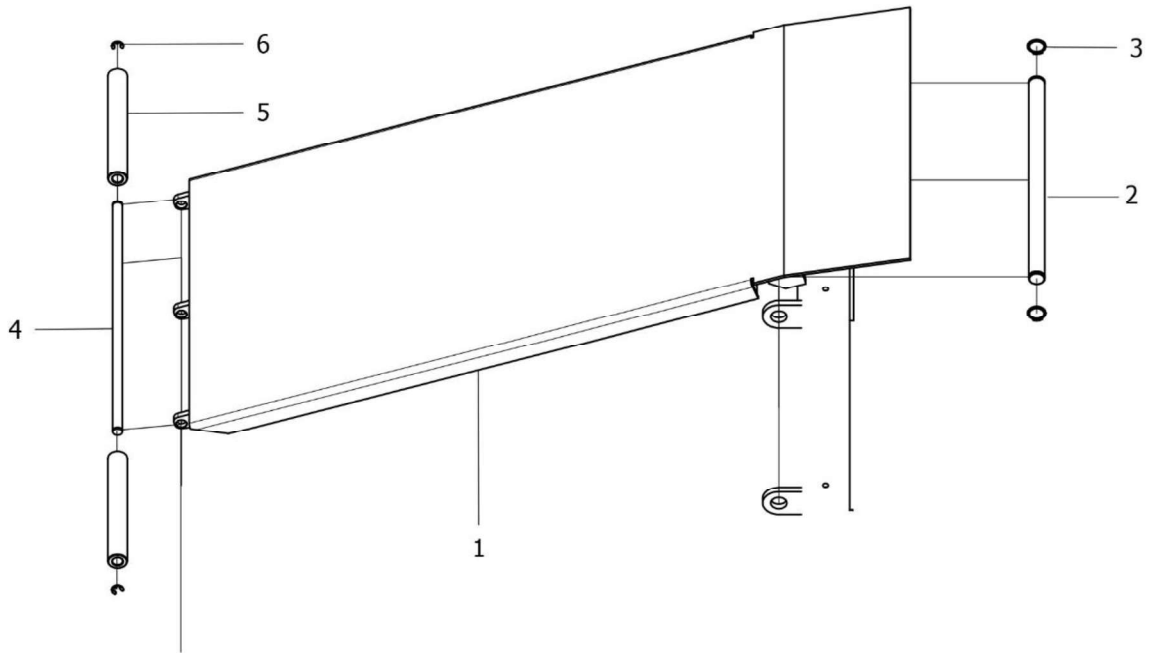
8-1-

Subject: Safety Lock Assembly	
Drawing No:	Part No:

Item No	Part Number	Description	Qty	Specifications
1	SM450-T-20A	Lock Housing	1	
2	4.3CP-SLA-2	Connecting Clevis	1	
3	SM450-T-20B	Square Lock	1	
4	4.3CP-SLA-4	Axis Pin	1	φ 4x41L
5	4.3CP-SLA-5	Split Washer	1	d=3, D=7
6	4.3CP-SLA-6	Axis Pin	1	φ 4x18L
7	4.3CP-SLA-7	Split Washer	1	d=3, D=7
8	4.3CP-SLA-8	Plain Washer	1	φ 9xφ4x0.8
9	4.3CP-SLA-9	Hexagon Nut	1	M8
10	4.3CP-SLA-10	Release Lever	1	
11	4.3CP-SLA-11	Pressure Spring	1	φ 14xφ1.0x47L
12	4.3CP-SLA-12	Hex head bolt	1	M8X65 (S=20)
13	4.3CP-SLA-13	Plain Washer	4	φ 9xφ4x0.8
14	4.3CP-SLA-14	Spring Washer	4	φ 4.1x1.1
15	4.3CP-SLA-15	Cross head screw	4	M4X8
16	SM450-T-20-24V	Locking Solenoid	1	AC24V
17	4.3CP-SLA-17	Lock Cover	1	
18	4.3CP-SLA-14	Spring Washer	2	φ 4.1x1.1
19	4.3CP-SLA-18	Plain Washer	2	φ 9xφ4x0.8
20	4.3CP-SLA-15	Cross head screw	2	M4X8

### 9- Run Up Ramp Assemblies

Subject: Exploded Illustration of Run Up Ramp Assemblies	
Drawing No:	Part No:



Item No	Part Number	Description	Qty	Specifications
1	4.3CP-S-10	Run Up Ramp Assembly LP	1	For Lower Platform
	4.3CP-S-9	Extended Run Up Ramp Assembly TP	1	For Top Platform
2	4.3CP-RUR-2	Connecting Shaft Ramp	1	φ 25x434L
3	4.3CP-RUR-3	Split Washer	2	φ 23.2x1.2
4	4.3CP-RUR-4	Pin For Ramp Roller	1	φ 15x502L
5	4.3CP-UR-4	Ramp Roller	2	φ 30xφ16x228L
6	SM450-S-14	Split Washer	2	φ 10

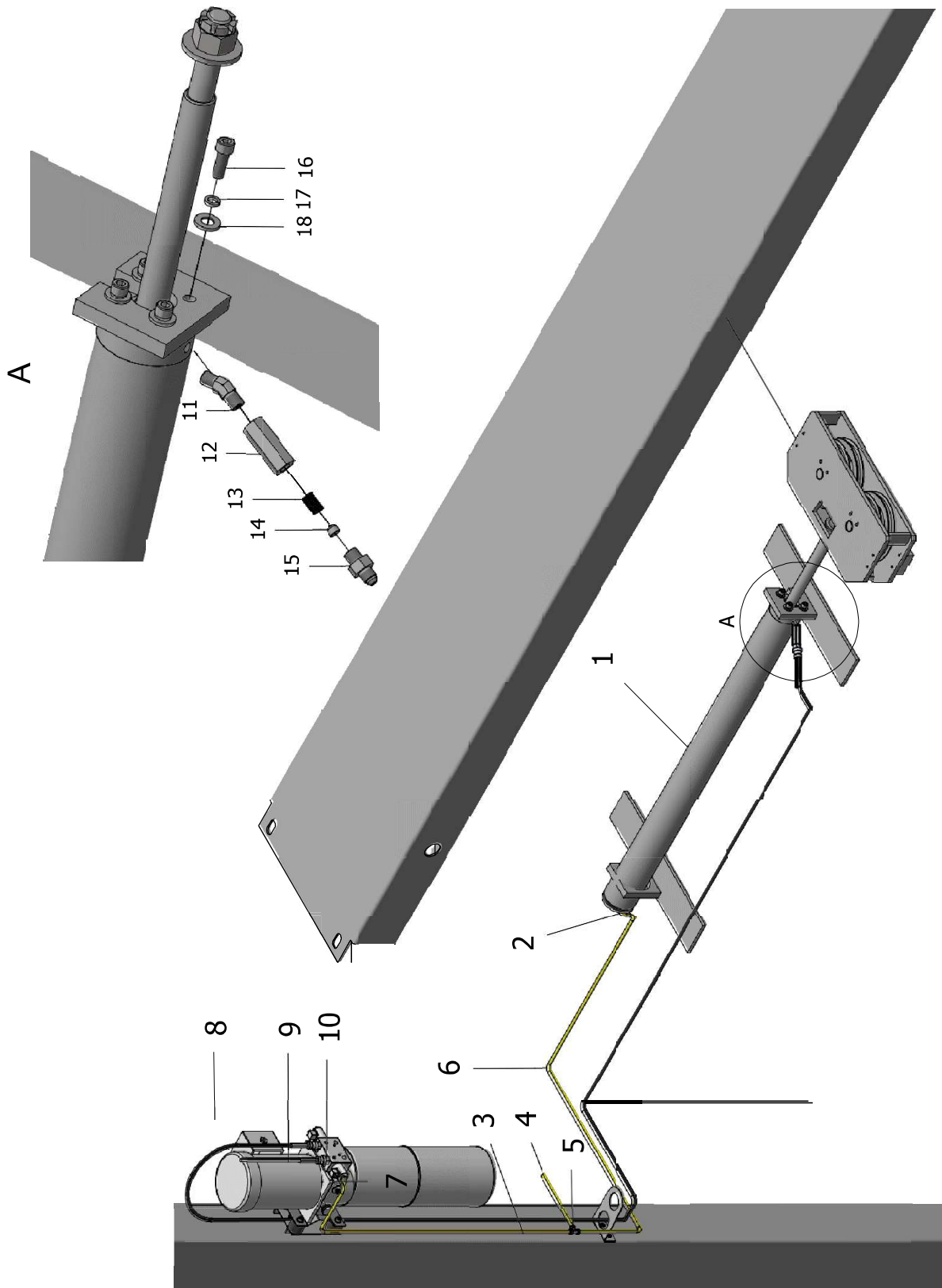
## 10- Fastening Hardware for Installation

Item	Name of Parts	Description	Q'ty	Remarks	
1	Bracket of Limit Switch	230×50×6	1	For Limit Switch	
	Hex Screw with Flat Round head	M6X12	3		
	Plain Washer	φ12xφ6.6x1.6t	3		
	Spring Washer	φ9.3xφ6.1x1.6t	3		
	Cross Head Screw	M4x12L	8		
		M4x25L	8		
2	Rubber Shock Absorber for Powerpack	c/w M8 hex nut & washers	4	SM245-M-18	
3	Mounting Plate for Powerpack		1	For Power Unit	
4	Hex Head Full Thread Bolt	M8x15	4		
	Plain Washer	φ8	4		
	Spring Washer	φ8	4		
5	Bracket for Cable Gland		1	For Cable Gland	
	Cross Head Screw	M6x8L	2		
6	Shim	t=2.5mm	20	For Post Adjustment	
		t=0.5mm	20		
7	Hex Socket Head Screws	M8×20	16	For Support Rod	
	Plain Washer	φ16xφ9x1.6t	16		
	Spring Washer	φ12.3xφ8.1x2.1t	16		
8	Hex Screw With Flat Round Head	M5x8L	8	For Pulley Cover	
	Plain Washer	φ5	8		
	Hex Socket Head Screws	M10x20	16	For Wheel Stop	
	Plain Washer	φ20xφ11x2	16		
	Spring Washer	φ10.2x2.6	16		
	Hex Head Bolt	M10X30	16	For Platform and Transverse Beam	
		Plain Washer	φ10		16
		Spring Washer	φ10		16
9	Hex Head Bolt	M16×110	16		
	Plain Washer	φ30xφ17.5x3	16		
10	Cable Tie Holder	HC-2	6	Fix Power Cables	
	Cross Head Screw	M6×8	6		
	Cable Tie	5×200	40		

Checked by:

Date:

### 11- Hydraulic Line Diagram

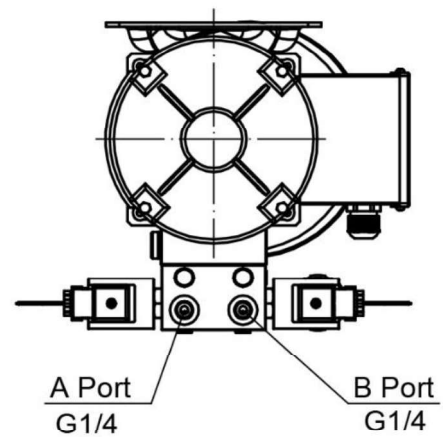
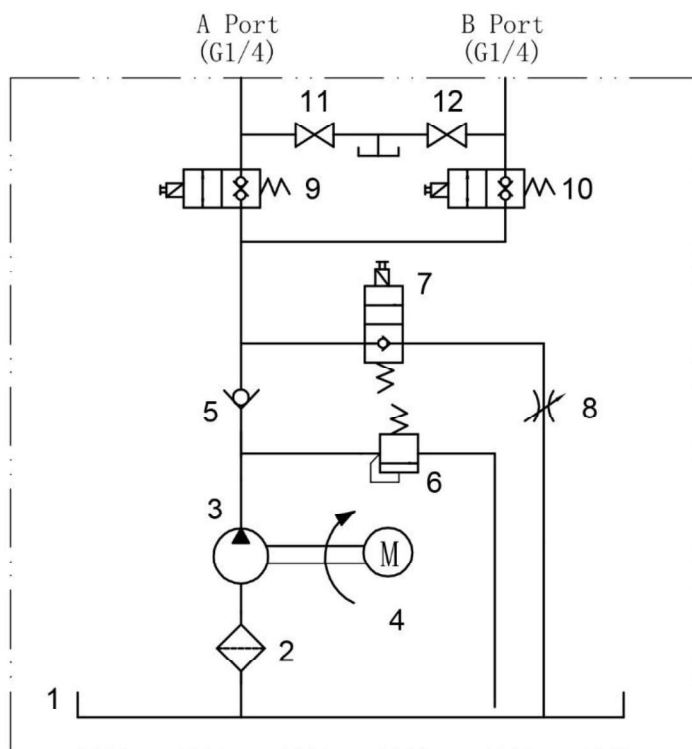
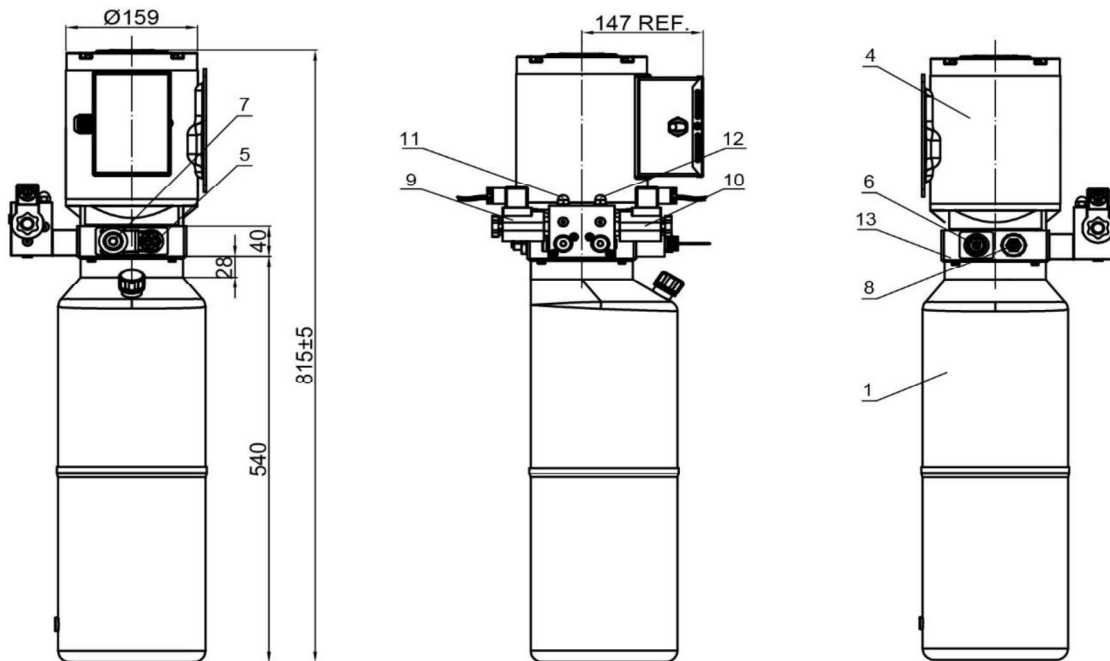


11-1-

Subject: Hydraulic Line Layout	
Drawing No:	Part No:

Item No	Part Number	Description	Qty	Specifications
1	4.3CP-C-1	Hydraulic Cylinder of Lower Platform	1	φ90×1202mm
	4.3CP-C-1.1	Hydraulic Cylinder of Top Platform	1	φ90×1992mm
2	4.3CP-C-2	Fast Wring Two Way Coupler	1	KLL8-02
3	4.3CP-C-3	Nylon Hose	1	φ8×1700
4	4.3CP-C-4	Nylon Hose for Upper Platform	1	φ8,L=2800 (B)
5	4.3CP-C-5	Fast Wring Three Way Coupler	1	KLE-8
6	4.3CP-C-6	Nylon Hose for Lower Platform	1	φ8,L=3500(T)
7	4.3CP-C-7	Fast Wring Straight Coupler	1	KLC8-02
8	4.3CP-C-8	Hydraulic Hose for Lower Platform	1	L=5600mm (B)
9	4.3CP-C-9	Hydraulic Hose for Top Platform	1	L=5900mm (T)
10	4.3CP-C-10	Straight Coupler		JT21 G1/4-1/2-20UNF
11	4.3CP-C-11	45°Connector	2	JT18-4
12	4.3CP-C-12	Throttle Valve Body	1	L=52
13	4.3CP-C-13	Spring	1	L=18 φ11×φ9×φ1
14	4.3CP-C-14	Throttling Valve Core	1	
15	4.3CP-C-10	Straight Coupler	1	JT21 G1/4-1/2-20UNF
16	4.3CP-C-16	Hex socket head screws	4	M10X30
17	4.3CP-T-21	Spring Washer	4	φ10.2x2.6
18	4.3CP-C-18	Plain Spring	4	φ20xφ11x2

### 12- Schematic Diagram of Power Unit



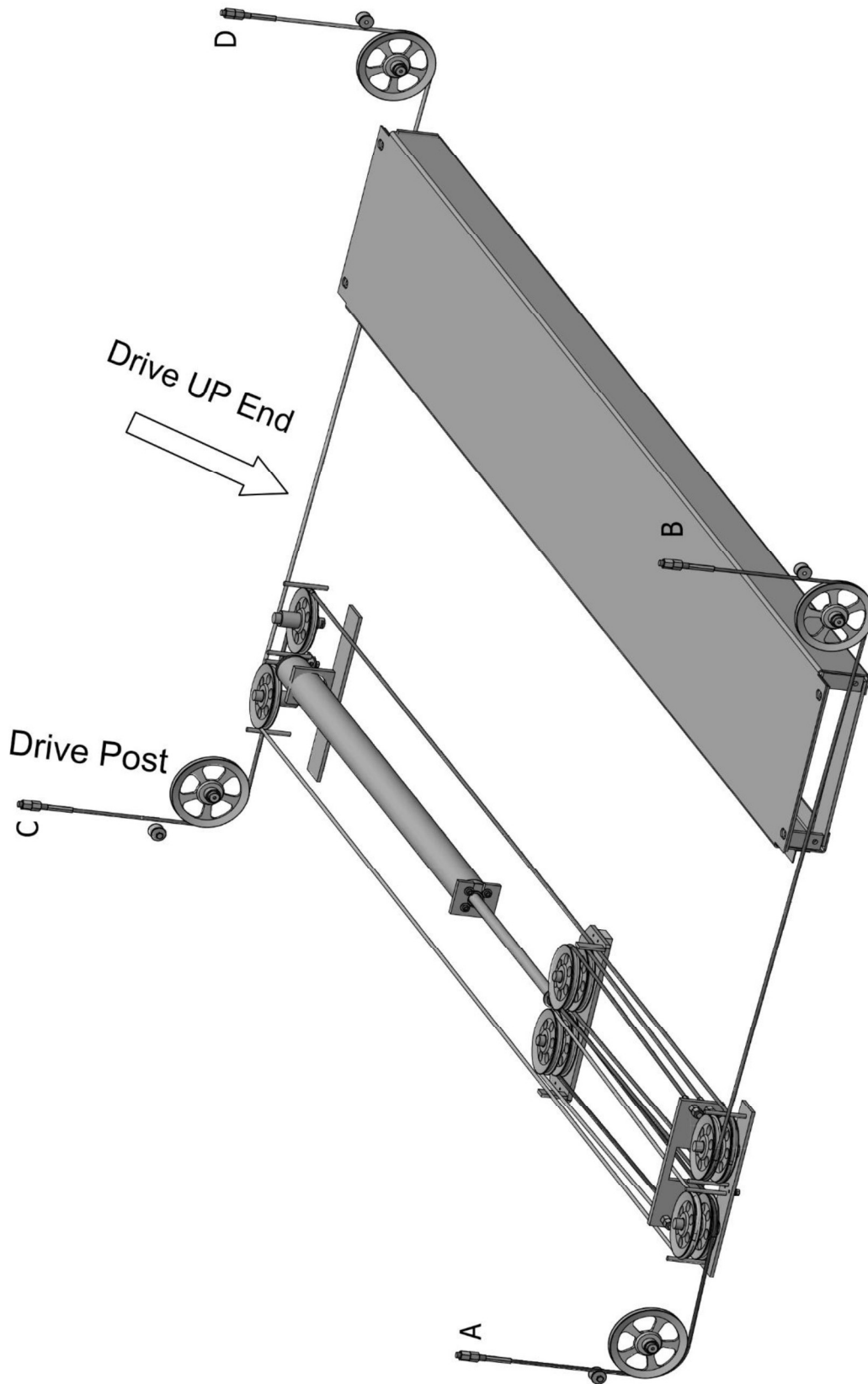


12-1-

Subject: Schematic Diagram Of Power Unit	
Drawing No:	Part No: YBZ5-F2.1E6H30/ACBIN1

Item No	Part Number	Description	Qty	Specifications
1	4.3CP-M-1	Oil Tank	1	YBZ-E2E1-1-02 14L
2	4.3CP-M-2	Filter	1	YBZ-E2D3I1/1-10
3	4.3CP-M-3	Gear Pump	1	CBKA-F2.1F 2.1cc/r
4	4.3CP-M-4	Motor	1	AM13-6HAC-3BA1 415V,2.2KW,50HZ,2850RPM
5	4.3CP-M-5	Check Valve	1	DF08-01-00
6	4.3CP-M-6	Overflow Valve	1	YF08-40 20MPa
7	4.3CP-M-7	Solenoid Valve	1	LSV2-08-2NCP-M-2H 24VDC
8	4.3CP-M-8	Throttle Valve	1	JLF-M20x1.5
9/10	4.3CP-M-9	Solenoid Valve	2	LSV2-08-2NCSP-LM-2H 24VDC
11/12	4.3CP-M-12	Pressure Relief Screw	2	YBZ5-F2.14H30A/ACOBN1-03
11	4.3CP-M-11	Pump Base	1	LBZ-N2FK-1

### 13- Cable Routing Diagram



**13-1-** Refer to above diagram, there are 4 pieces cables for each level, and cable layout of each level are exactly same, total 8 pieces cable were used in the Parking Lift.

The specification of cable listed as following.



Location	Part Number	Name	Length of Cable (mm)	Qty
Top Control (4510mm)	4.3CP-R-1	A	φ 9.3x 5430	1
	4.3CP-R-2	B	φ 9.3x 6770	1
	4.3CP-R-3	C	φ 9.3x 10200	1
	4.3CP-R-4	D	φ 9.3x 11540	1
Bottom Control (4900mm)	4.3CP-R-5	a	φ 9.3x 7420	1
	4.3CP-R-6	b	φ 9.3x 8760	1
	4.3CP-R-7	c	φ 9.3x 12580	1
	4.3CP-R-8	d	φ 9.3x 13920	1