

LASER 2.2-CP

2 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

Web: 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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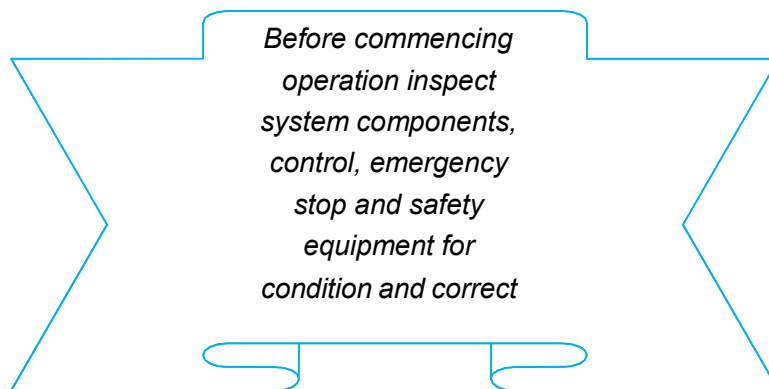
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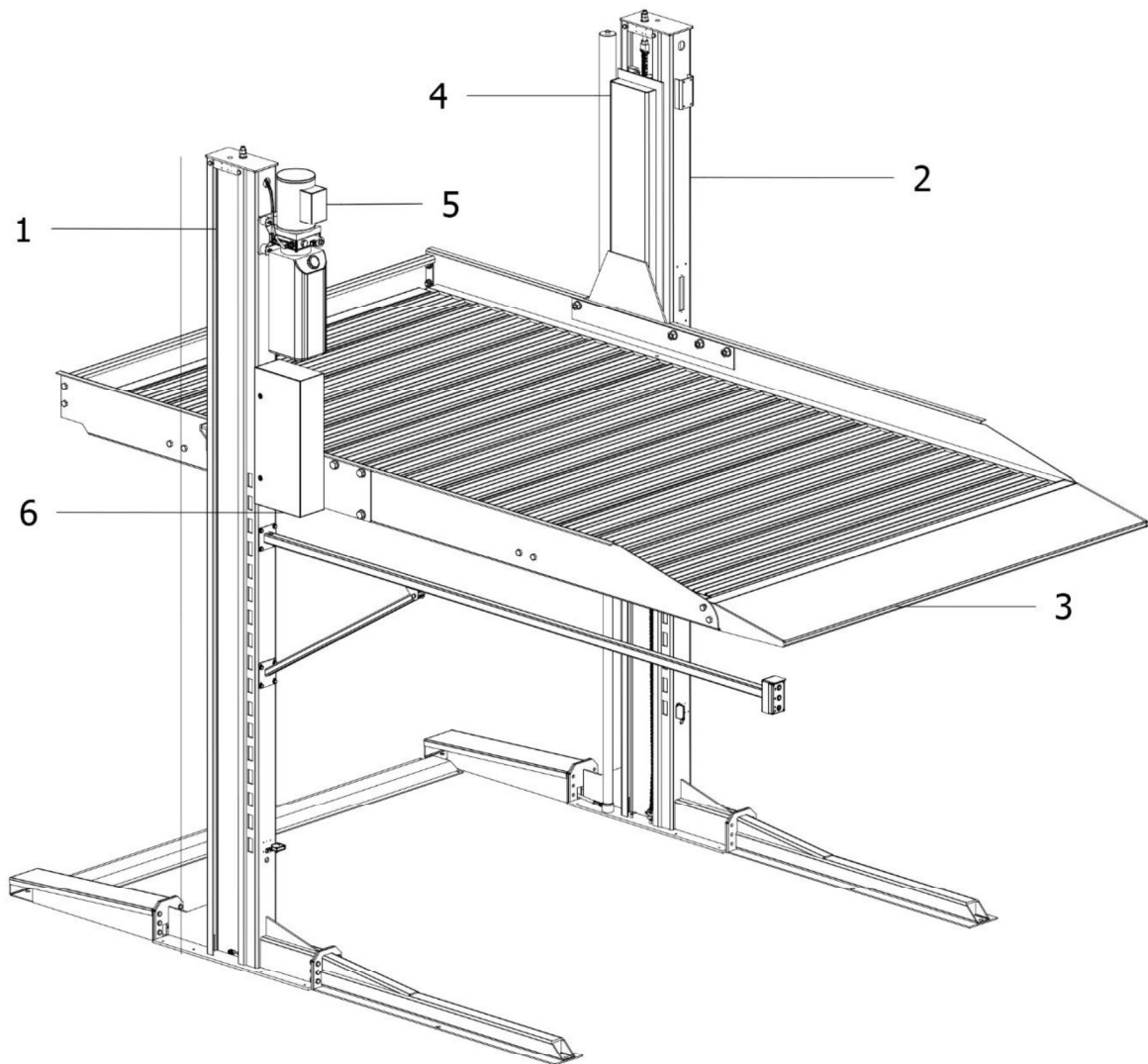
Please read this manual before you get started.

You must read and understand the precautions for safety purposes and any damages that may occur to your property.

If these instructions are not followed strictly, the **car stacker** is not covered by warranty.

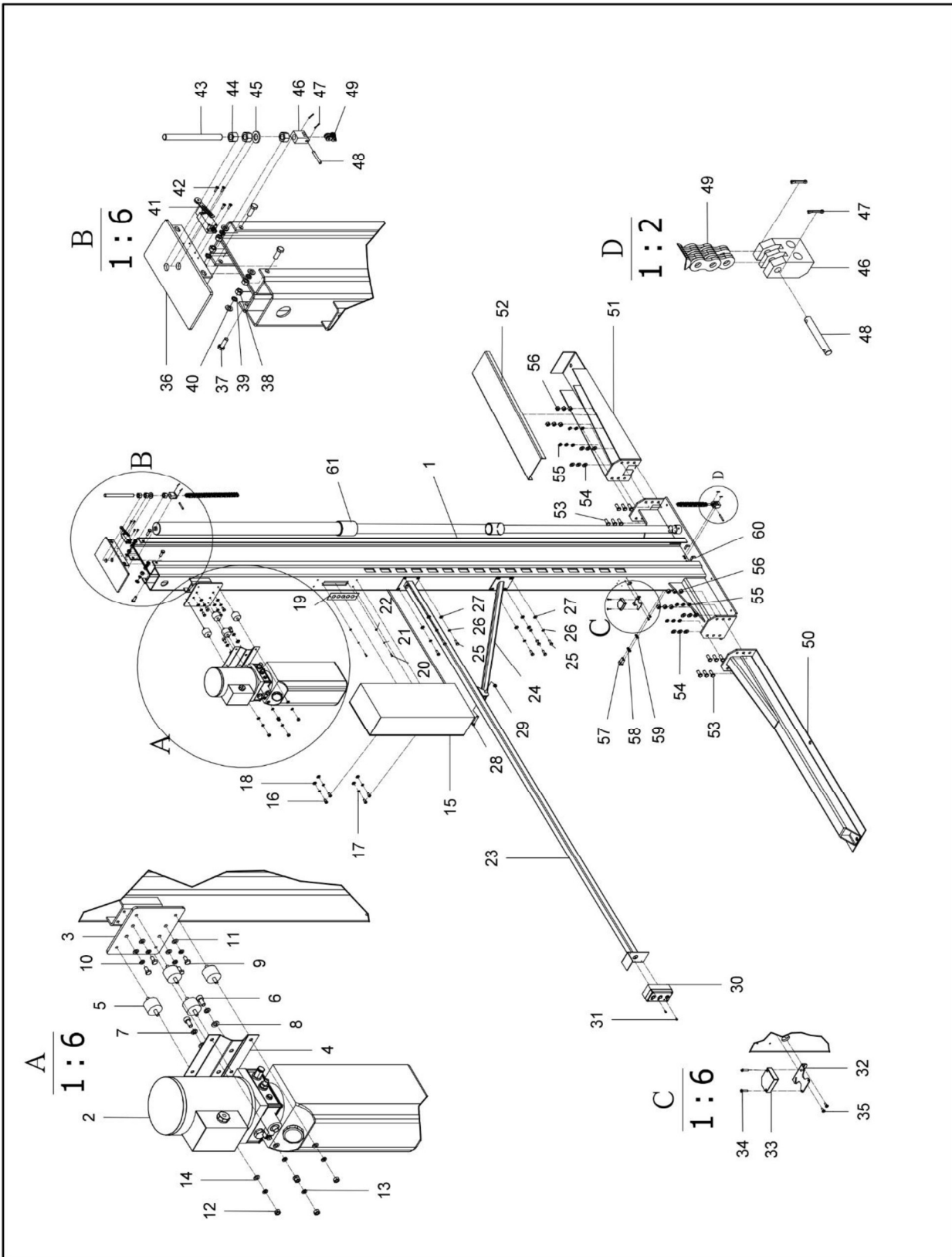


1- Total Assembly



Subject: Total Assembly		Drawing No:	
Item No	Designation	Item No	Designation
1	Motor Post & Base Assembly	4	Carriage & Cylinder Assembly
2	Non Motor Post & Base Assembly	5	Power Unit Assembly
3	Platform Assembly	6	Control Panel Assembly

2- Exploded Illustration of Motor Post Assembly

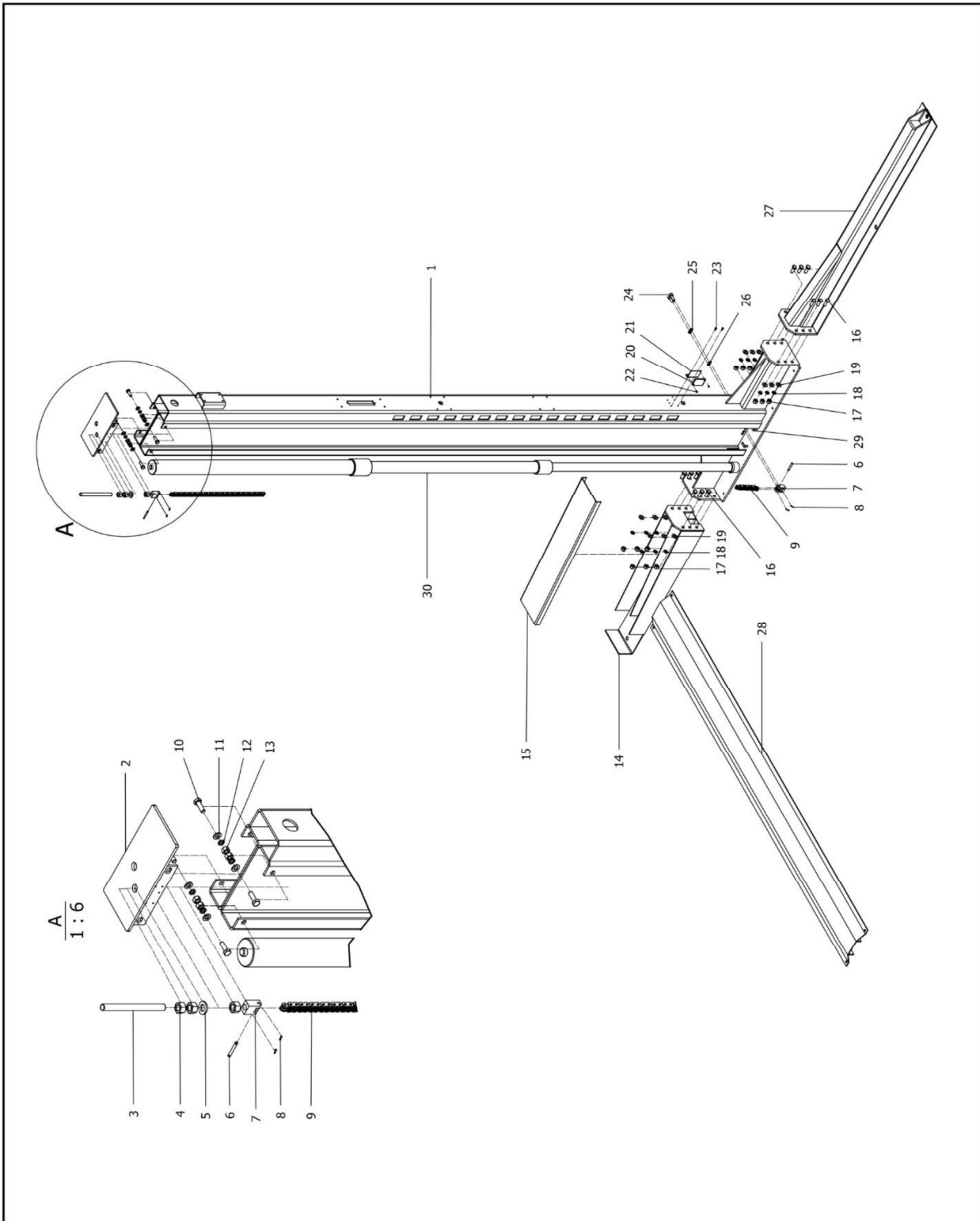


Subject: Motor Post Assembly	Drawing No:
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Item No.	Part Number	Description	Qty	Specification
1	2.2CP-MP-1	Driver Post Weldment	1	
2	SM245-M-1	Power Unit cpl. – 3PH	1	YBZ6-F3.7C6I2
3	SM245-M-17	Plate	1	
4	SM245-M-19	Motor Mounting Plate	1	
5	SM245-M-18	Rubber Shock Absorber	4	M8
6	2.2CP-MP-6	Hex Socket Head Screws	2	M10x20
7	2.2CP-MP-7	Spring Washer	2	φ 10
8	2.2CP-MP-8	Plain Washer	2	φ 10
9	2.2CP-MP-9	Hex Head Full Thread Bolt	4	M8×15
10	2.2CP-MP-10	Spring Washer	4	φ 8.1×2.1
11	2.2CP-MP-11	Plain Washer	4	φ 16× φ 9×1.6
12	2.2CP-MP-12	Hex Nut	4	M8
13	2.2CP-MP-13	Spring Washer	4	φ 8.1×2.1
14	2.2CP-MP-14	Plain Washer	4	φ 16× φ 9×1.6
15	2.2CP-MP-15	Control Panel	1	260X140X600
16	2.2CP-MP-16	Hex Socket Head Screws	4	M8×16
17	2.2CP-MP-17	Spring Washer	4	φ 8.1×2.1
18	2.2CP-MP-18	Plain Washer	4	φ 16× φ 9×1.6
19	2.2CP-MP-19	Plate for Cable Routing	1	
20	2.2CP-MP-20	Cross Head Screw	2	M4x10
21	2.2CP-MP-21	Spring Washer	2	φ 4.1×1.1
22	2.2CP-MP-22	Plain Washer	2	φ 9× φ 4.5×0.8
23	2.2CP-MP-23	Bracket for Operating Box	1	
24	2.2CP-MP-24	Support for Operating Box	1	
25	2.2CP-MP-25	Hex Head Full Thread Bolt	8	M8×25
26	2.2CP-MP-26	Spring Washer	8	φ 8.1×2.1
27	2.2CP-MP-27	Plain Washer	8	φ 16× φ 9×1.6
28	2.2CP-MP-28	Hex Head Full Thread Bolt	1	M10×55
29	2.2CP-MP-29	Self-locking Nut	1	M10
30	2.2CP-MP-30	Operating Box	1	
31	2.2CP-MP-31	Cross Head Screw	2	M4×10

Item No.	Part Number	Description	Qty	Specification
32	2.2CP-MP-32	Bracket for Photoelectric Switch	1	
33	2.2CP-MP-33	Photoelectric Switch	1	E3JK-DS30M1
34	2.2CP-MP-34	Cross Head Screw	2	M4×25
35	2.2CP-MP-35	Cross Head Screw	2	M4×10
36	2.2CP-MP-36	Top Cover of Column	1	
37	2.2CP-MP-37	Hex Head Full Thread Bolt	4	M10×30
38	2.2CP-MP-38	Hex Nut	4	M10
39	2.2CP-MP-39	Spring Washer	4	φ 10.2×2.6
40	2.2CP-MP-40	Plain Washer	4	φ 20×φ11×2
41	2.2CP-MP-41	Limit Switch	1	YBLX-ME/8108
42	2.2CP-MP-42	Cross Head Screw	4	M4×16
43	2.2CP-MP-43	Full Thread Bolt	1	M16×180
44	2.2CP-MP-44	Hex Nut	3	M16
45	2.2CP-MP-45	Plain Washer	1	φ 17× φ 32×3.2
46	2.2CP-MP-46	Chain Connector	2	
47	2.2CP-MP-47	Cotter	4	
48	2.2CP-MP-48	Chain Pin	2	
49	2.2CP-MP-49	Chain	1	LH1044
50	2.2CP-MP-50	Front Leg Weldment	1	L=1403mm
51	2.2CP-MP-51	Rear Leg Weldment	1	L=838mm
52	2.2CP-MP-52	Rear Leg Cover	1	
53	2.2CP-MP-53	Hex Head Full Thread Bolt	12	M12×30
54	2.2CP-MP-54	Spring Washer	12	φ 12.2×3.1
55	2.2CP-MP-55	Plain Washer	12	φ 24× φ 13.5×2.5
56	2.2CP-MP-56	Hex Nut	12	M12
57	2.2CP-MP-57	Hex Socket Head Screws	2	M10×30
58	2.2CP-MP-58	Spring Washer	2	φ 10.2×2.6
59	2.2CP-MP-59	Plain Washer	2	φ 20×φ11×2
60	2.2CP-MP-60	Bracket for Hydraulic Hose	2	
61	2.2CP-MP-61	Cylinder	1	φ 70x(1100+1040)

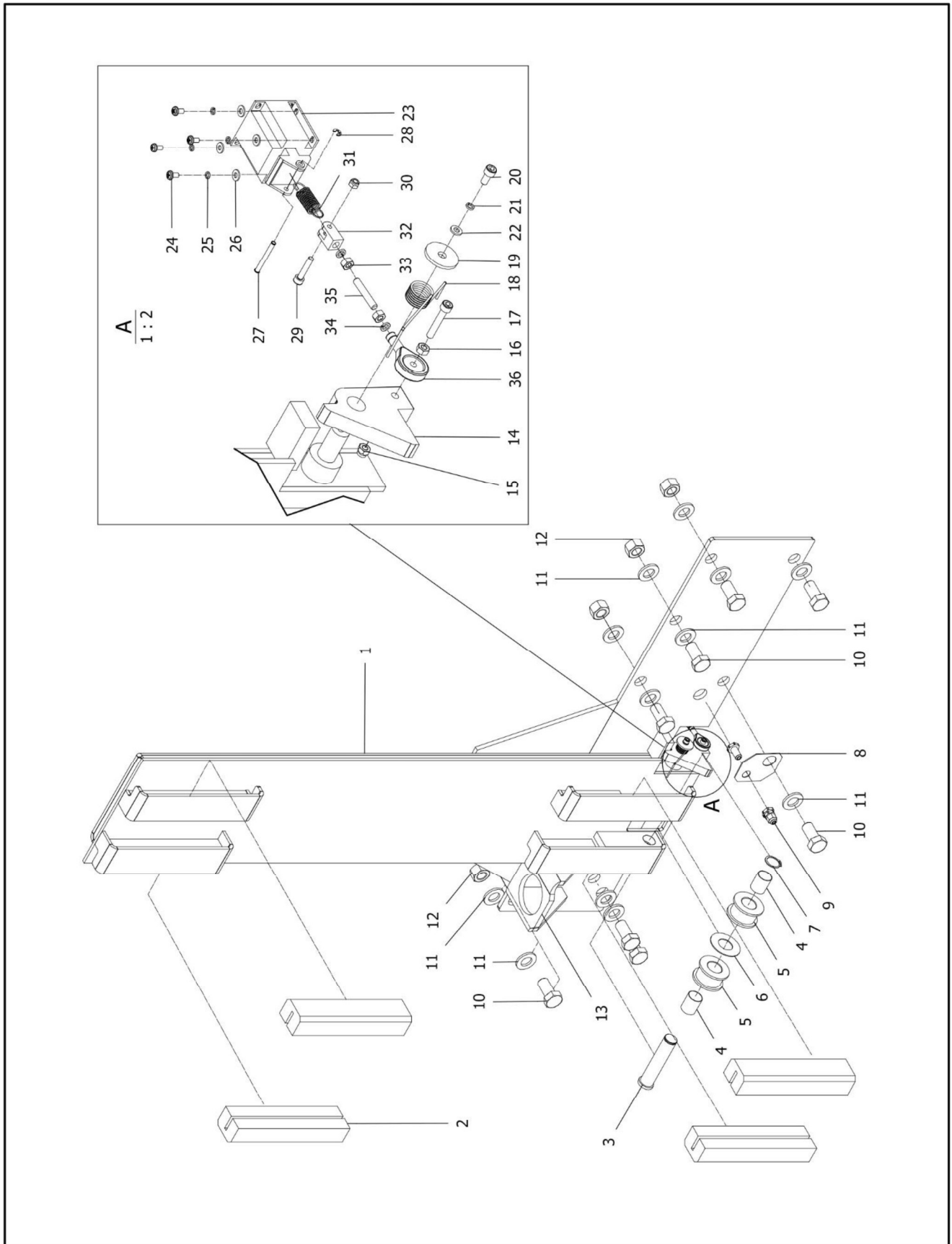
3- Exploded Illustration of Non Motor Post Assembly



Subject: Non Motor Post Assembly	Drawing No:
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Item No.	Part Number	Description	Qty	Specification
1	2.2CP-NMP-1	Slave Post Weldment	1	
2	2.2CP-NMP-2	Top Cover of Column	1	
3	2.2CP-NMP-3	Full Thread Bolt	1	M16×180
4	2.2CP-NMP-4	Hex Nut	3	M16
5	2.2CP-NMP-5	Plain Washer	1	φ 17× φ 32×3.2
6	2.2CP-MP-48	Chain Pin	2	
7	2.2CP-MP-46	Chain Connector	2	
8	2.2CP-NMP-8	Cotter	4	
9	2.2CP-MP-49	Chain	1	LH1044
10	2.2CP-NMP-10	Hex Head Full Thread Bolt	4	M10×30
11	2.2CP-NMP-11	Plain Washer	4	φ 20× φ 11×2
12	2.2CP-NMP-12	Spring Washer	4	φ 10.2×2.6
13	2.2CP-NMP-13	Hex Nut	4	M10
14	2.2CP-NMP-14	Rear Leg Weldment	1	L=838mm
15	2.2CP-NMP-15	Rear Leg Cover	1	
16	2.2CP-NMP-16	Hex Head Full Thread Bolt	12	M12×30
17	2.2CP-NMP-17	Hex Nut	12	M12
18	2.2CP-NMP-18	Spring Washer	12	φ 12.2×3.1
19	2.2CP-NMP-19	Plain Washer	12	φ 24× φ 13.5×2.5
20	2.2CP-NMP-20	Sensor Reflector	1	
21	2.2CP-NMP-21	Bracket for Sensor Reflector	2	
22	2.2CP-NMP-22	Cross Head Screw	2	M3×10
23	2.2CP-NMP-23	Cross Head Screw	2	M4×10
24	2.2CP-NMP-24	Hex Socket Head Screws	2	M10×30
25	2.2CP-NMP-25	Spring Washer	2	φ 10.2×2.6
26	2.2CP-NMP-26	Plain Washer	2	φ 20× φ 11×2
27	2.2CP-NMP-27	Front Leg Weldment	1	L=1403mm
28	2.2CP-NMP-28	Oil Hose Cover Weldment	1	L=2283mm
29	2.2CP-NMP-29	Bracket for Hydraulic Hose	2	
30	2.2CP-NMP-30	Cylinder	1	φ 70x(1100+1040)

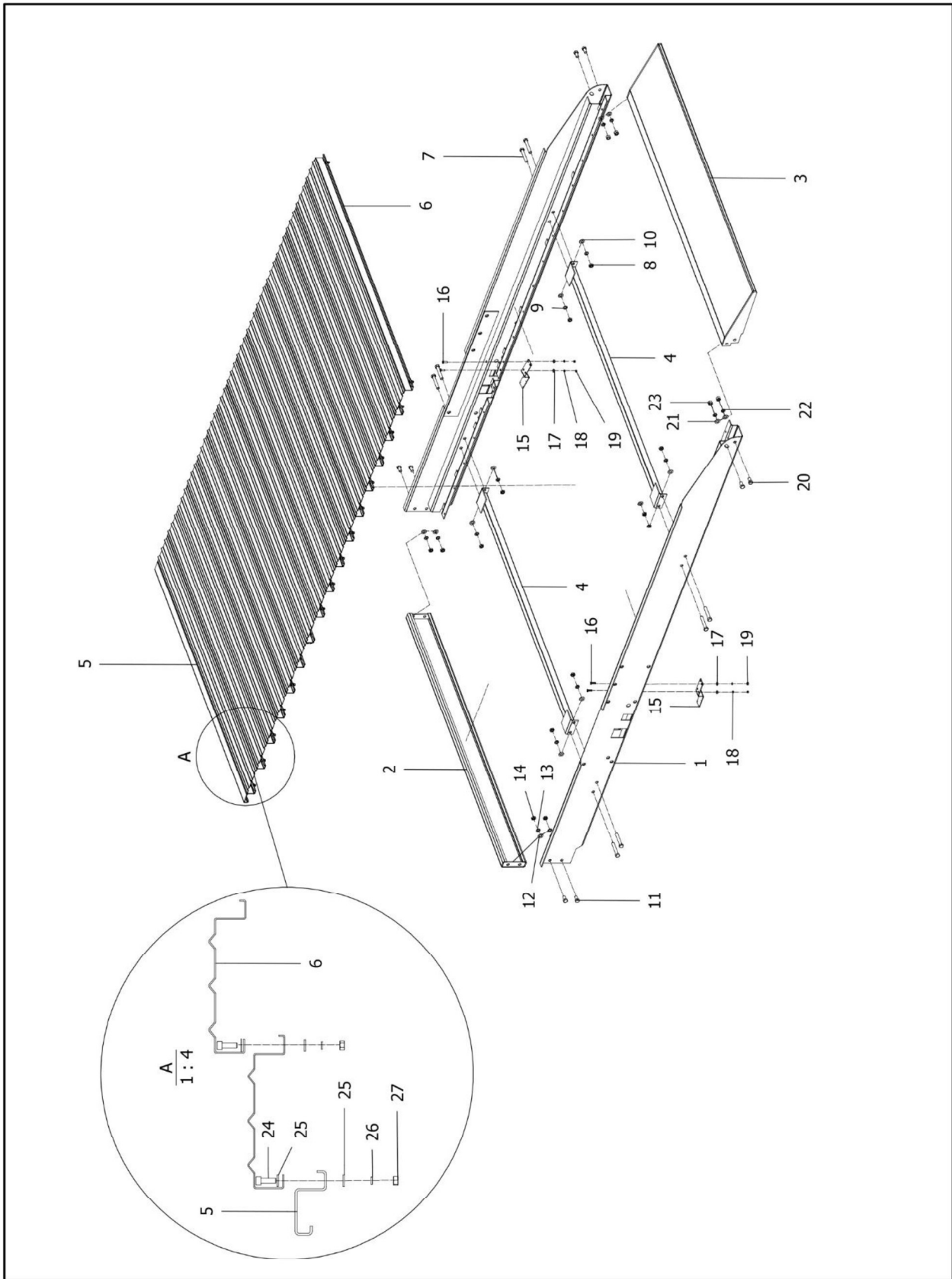
4- Exploded Illustration of Carriage Assembly



Subject: Carriage & Safety Lock Assembly	Drawing No:
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Item No.	Part Number	Description	Qty	Specification
1	2.2CP-C-1	Carriage Weldment	1	
2	2.2CP-C-2A 2.2CP-C-2B 2.2CP-C-2C 2.2CP-C-2D	Sliding Block A Sliding Block B Sliding Block C Sliding Block D	4	11x28 11x27 10x28 10x27
3	2.2CP-C-3	Pulley Shaft	1	φ 29×114
4	2.2CP-C-4	Composite Bearing	2	φ 28× φ 24×33
5	2.2CP-C-5	Pulley	2	φ 58× φ 28×33
6	2.2CP-C-6	Pulley Spacer	1	φ 58× φ 28×1.5t
7	2.2CP-C-7	Split Washer	1	φ 29
8	2.2CP-C-8	Plate for Spring Cable	1	
9	2.2CP-C-9	Waterproof Connector for Spring Cable	1	PG9
10	2.2CP-C-10	Hex Head Full Thread Bolt	8	M20×40
11	2.2CP-C-11	Plain Washer	16	φ 37× φ 22×3
12	2.2CP-C-12	Hex Nut	4	M20
13	2.2CP-C-13	Cylinder Fixed Bracket	1	
14	2.2CP-C-14	Ratchet	1	96×73×16t
15	2.2CP-C-15	Self-locking Nut	1	M6
16	2.2CP-C-16	Hex Nut	1	M6
17	2.2CP-C-17	Hex Socket Head Screws	1	M6×35
18	2.2CP-C-18	Torsion Spring	1	φ 20x14h
19	2.2CP-C-19	Spacer for Lock	1	φ 32× φ 8×3t
20	2.2CP-C-20	Hex Socket Head Screws	1	M6×12
21	2.2CP-C-21	Spring Washer	1	φ 9.3x φ 6.1x1.6t
22	2.2CP-C-22	Plain Washer	1	φ 12x φ 6.6x1.6t
23	SM245-P-15	Solenoid Coil	1	AC24V
24	SM245-P-16	Screw	4	M4×8
25	2.2CP-C-25	Spring Washer	4	φ 4.1×1.1
26	2.2CP-C-26	Plain Washer	4	φ 9× φ 4.5×0.8
27	SM245-P-8	Axle	1	φ 4×39
28	SM245-P-9	Seeger Clip Ring	1	φ 4
29	2.2CP-C-29	Hex Socket Head Screws	1	M5×25
30	2.2CP-C-30	Self-locking Nut	1	M5
31	2.2CP-C-31	Lock Release Spring	1	φ 12x33.5L
32	2.2CP-C-32	Solenoid Connector	1	
33	2.2CP-C-33	Hex Nut	2	M6
34	2.2CP-C-34	Spring Washer	2	φ 12× φ 6.6×1.6
35	2.2CP-C-35	Hex Socket Set Screws With Flat Point	2	M6×35
36	2.2CP-C-36	Knuckle Bearing	1	SI6T/K

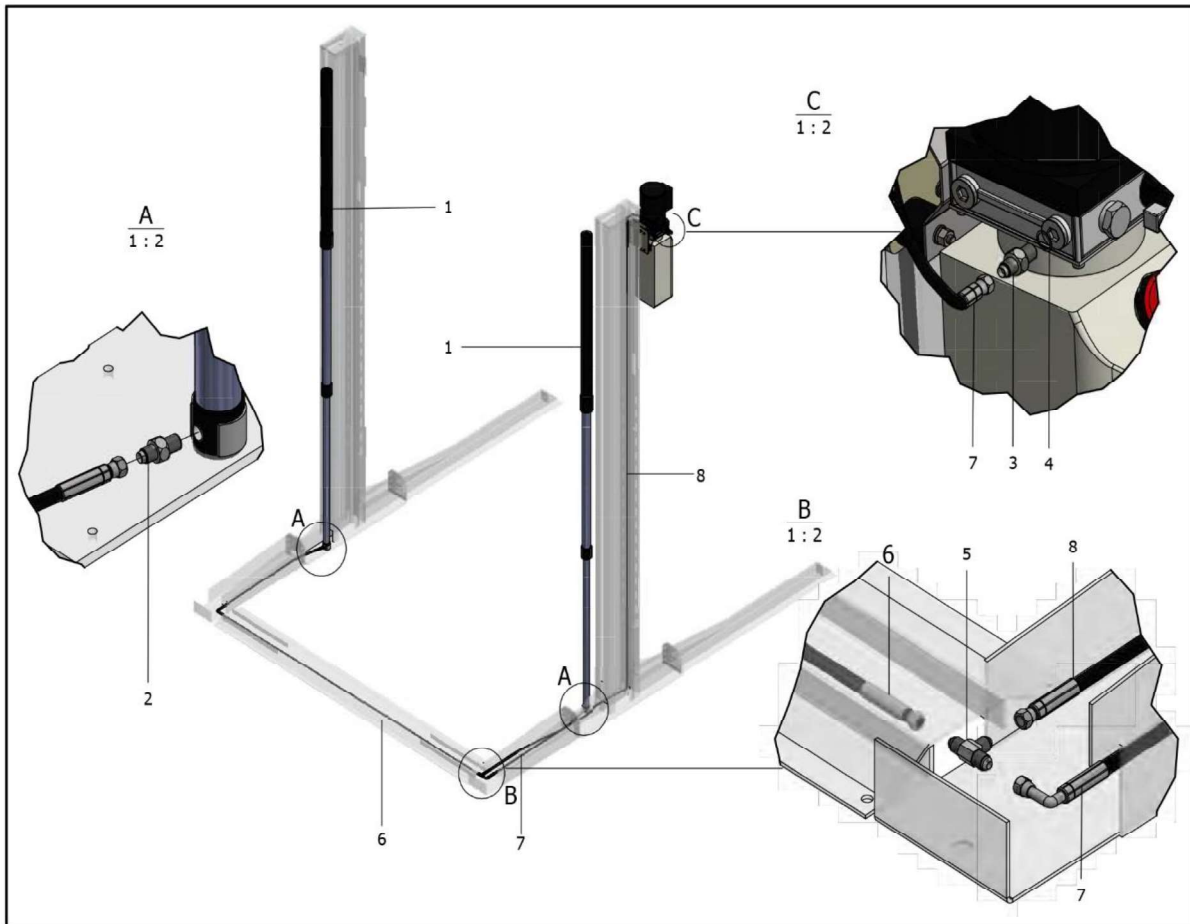
5- Exploded Illustration of Platform Assembly



Subject: Platform Assembly	Drawing No:
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Item No.	Part Number	Description	Qty	Specification
1	2.2CP-PA-1	Crossbeam Weldment	2	L=3800mm
2	2.2CP-PA-2	Rear Support of Platform	1	L=2174mm
3	2.2CP-PA-3	Drive-on Ramp Weldment	1	L=2174mm
4	2.2CP-PA-4	Connecting Bar	2	L=2040mm
5	2.2CP-PA-5	Rear Extension Adapter	1	L=2036mm
6	2.2CP-PA-6	Wave Plate	16	2035×225×62×2t
7	2.2CP-PA-7	Hex Head Full Thread Bolt	8	M16×100
8	2.2CP-PA-8	Hex Nut	8	M16
9	2.2CP-PA-9	Spring Washer	8	φ 16.2×4.1
10	2.2CP-PA-10	Plain Washer	8	φ 30× φ 17.5×3
11	2.2CP-PA-11	Hex Head Full Thread Bolt	4	M16×30
12	2.2CP-PA-12	Plain Washer	4	φ 30× φ 17.5×3
13	2.2CP-PA-13	Spring Washer	4	φ 16.2×4.1
14	2.2CP-PA-14	Hex Nut	4	M16
15	2.2CP-PA-15	Mounting bracket for Electromagnet	2	
16	2.2CP-PA-16	Hex Head Full Thread Bolt	4	M10×25
17	2.2CP-PA-17	Plain Washer	4	φ 20× φ 11×2
18	2.2CP-PA-18	Spring Washer	4	φ 10.2×2.6
19	2.2CP-PA-19	Hex Nut	4	M10
20	2.2CP-PA-20	Hex Head Full Thread Bolt	4	M16×30
21	2.2CP-PA-21	Plain Washer	4	φ 30× φ 17.5×3
22	2.2CP-PA-22	Spring Washer	4	φ 16.2×4.1
23	2.2CP-PA-23	Hex Nut	4	M16
24	2.2CP-PA-24	Hex Socket Head Screws	64	M8×25
25	2.2CP-PA-25	Plain Washer	128	φ 16× φ 9×1.6
26	2.2CP-PA-26	Spring Washer	64	φ 8.1×2.1
27	2.2CP-PA-27	Hex Nut	64	M8

6- Hydraulic Line Diagram

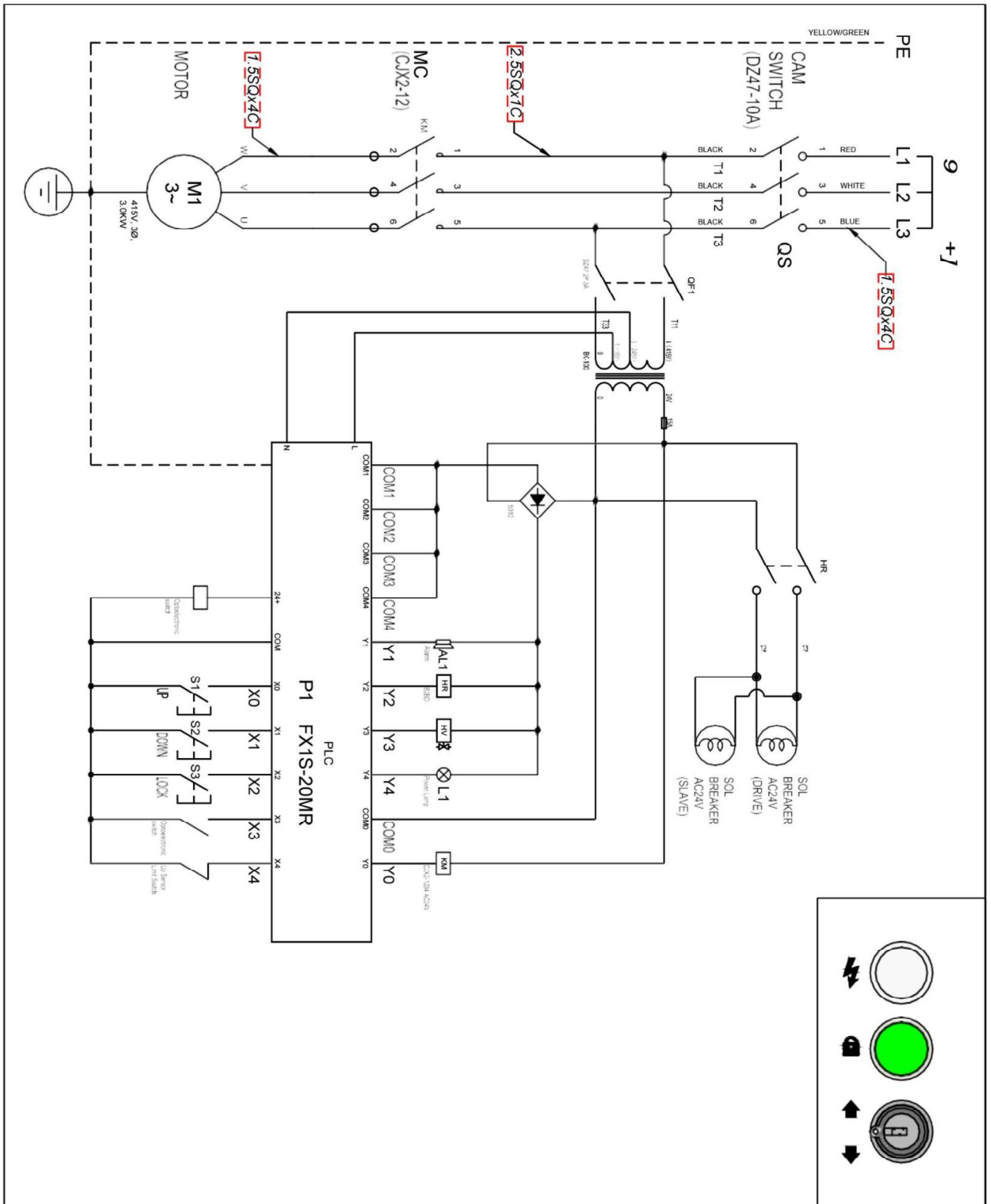


Subject: Hydraulic Line Diagram

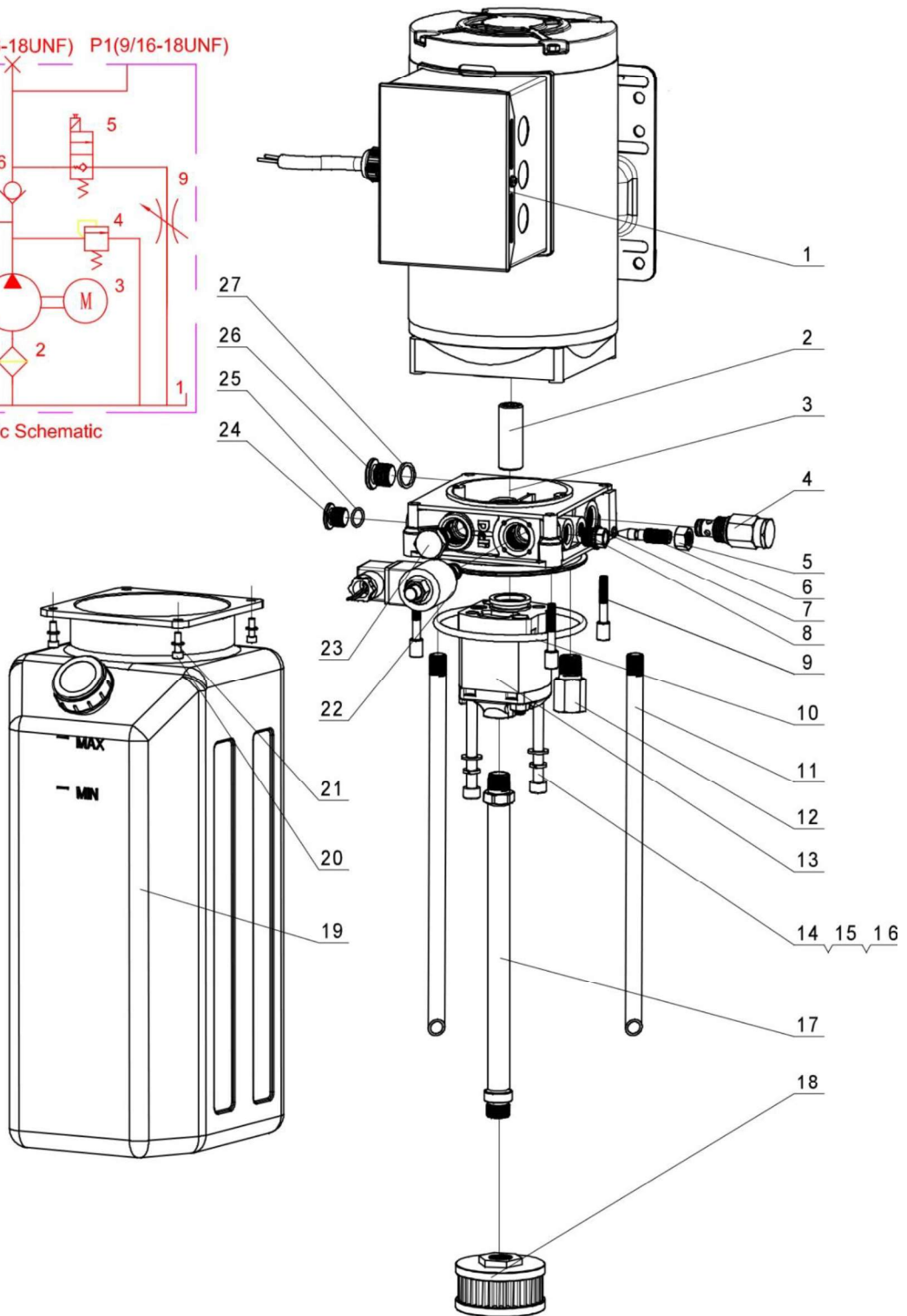
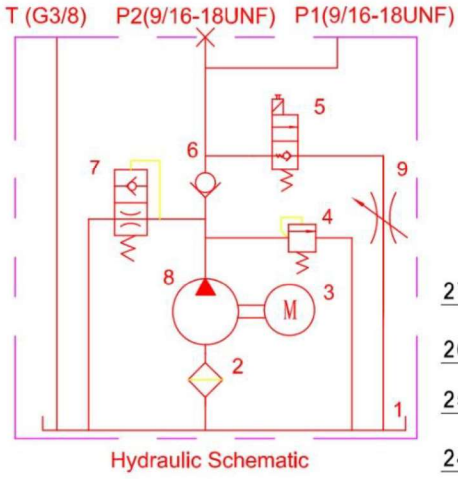
Drawing No:

Item No.	Part Number	Description	Qty	Specification
1	2.2CP-H-1	Hydraulic Cylinder	2	φ 70x(1100+1040)
2	2.2CP-H-2	Fitting JT05	2	
3	SM245-M-13	Fitting JT01	1	9/16-1/2-20UNF
4	2.2CP-H-4	Dotty Washer	1	
5	SM245-M-12	Three Way Fitting JT09	1	
6	2.2CP-H-6	Hydraulic hose	1	L=3410
7	2.2CP-H-7	Hydraulic hose	1	L=950
8	2.2CP-H-8	Hydraulic hose	1	L=5310mm

7- 3 Phase Electrical Schematic Diagram



8- Hydraulic Power Unit Diagram



	Description	Part Number	Technical Data
1	MOTOR 2.2kW	SM245-M-2	415V 3kW 3PH
2	Coupling	2.2CP-HPU-2	YBZ-E2.1Y1W14/1- 54mm
3	Endhead	2.2CP-HPU-2	YLBZ-T2KK-1
4	Pressure Control Valve	SM245-M-3	HLRV-08-42 220 Bar
5	Screw Nut	2.2CP-HPU-5	GB/T 6171 M10x1
6	Lowering Control Valve	SM245-M-27	YBZ-E2D3i1/1-11
7	O-ring	2.2CP-HPU-7	GB/T 3452.1 5x1.8
8	Plug	SM245-M-11	POP-SAE6
9	Hex Socket cap Screw	2.2CP-HPU-9	YBZ-E3D4H1/10-02
10	O-ring	2.2CP-HPU-10	GB/T
11	Return Tube	2.2CP-HPU-11	YBZ-E2D1/1-01 Length 340
12	Buffer Valve	2.2CP-HPU-12	HCF-Z1/4
13	Pump	SM245-M-26	CBKA F3.75 3.7cc/r
14	Hex Socket Cap Screw	2.2CP-HPU-14	GB/T 70.1 M8x85
15	Spring Washer	2.2CP-HPU-15	GB/T 859 8
16	Washer	2.2CP-HPU-16	GB/T 95 8
17	Suction Tube	2.2CP-HPU-17	YBZ-F2.1D4H1/1-0Length 294
18	Suction Filter	SM245-M-9	YBZ-E2D3i1/1-10
19	Oil Tank	SM245-M-OT-10L	10L , Pastic (White)
20	Hex Socket Cap Screw Washer	2.2CP-HPU-20	GB/T 70.1/M5x18
21	Washer	2.2CP-HPU-21	GB/T 95 5
22	Coil	SM245-M-6	24VDC
23	Non Return Valve	SM245-M-4	DF08-01-00
24	Plug	2.2CP-HPU-24	YBZ!-PG06B
25	O-ring	2.2CP-HPU-25	GB/T 3452.1 16x2
26	Plug	2.2CP-HPU-26	YBZ1-PG3/8A
27	Bonded Washer	2.2CP-HPU-27	JB 982-77 18A
Name: Hydraulic Power Unit		P/N: YBZ6-F3.7C612/ACQIT1	

Fastening Hardware for Installation

MOLNAR LASER 2.2-CP-(A) Fastening Hardware For Installation					
Item	Name of Parts		Description	Q'ty	Remarks
1	Base	Hex head full thread bolt	M12×30	24	Fix post with front leg and rear leg
		Plain washer	φ24×φ13.5×2.5	24	
		Spring washer	φ12.2×3.1	24	
		Hex nut	M12	24	
2		Hex head full thread bolt	M20×40	8	Connect carriage and channel of platform
		Plain washer	φ37×φ22×3	8	
		Hex nut	M20	8	
		Hex head full thread bolt	M20×40	8	
		Plain washer	φ37×φ22×3	8	
3		Hex socket head screws	M8×25	82	Connect plates and channel of platform
		Plain washer	φ16×φ9×1.6	164	
		Spring washer	φ8.1×2.1	82	
		Hex nut	M8	82	
4		Hex head full thread bolt	M16×30	4	Connect rear support and channel of platform
		Plain washer	φ30×φ17.5×3	4	
		Spring washer	φ16.2×4.1	4	
5		Hex nut	M16	4	Fix drive-on ramp
		Hex head full thread bolt	M16×30	4	
		Plain washer	φ30×φ17.5×3	4	
		Spring washer	φ16.2×4.1	4	
6		Hex nut	M16	4	Fix carriage connecting bar
		Hex head full thread bolt	M16×100	8	
		Plain washer	φ30×φ17.5×3	8	
		Spring washer	φ16.2×4.1	8	
7	Platform	Hex nut	M16	8	Fix connecting plate for lock solenoid
		Hex head full thread bolt	M10×25	4	
		Plain washer	φ20×φ11×2	4	
		Spring washer	φ10.2×2.6	4	
		Hex nut	M10	4	
		Hex socket head screws	M6×35	2	
		Self-locking nut	M6	2	
		Nut	M6	2	
		Hex socket head screws	M5×25	2	
		Self-locking nut	M5	2	
8		Cross head screw	M4×8	8	Safety lock ass'y
		Plain washer	φ9×φ4.5×0.8	8	
		Spring washer	φ4.1×1.1	8	
		Electromagnet AC24V		2	
		Bolt	φ4×39	2	
		E-ring	φ4	2	
		Mounting bracket for Electromagnet		2	
		Solenoid connector		2	
		Hex socket set screws with flat point	M6×35	2	
		Nut	M6	2	
		Spring washer	φ12×φ6.6×1.6	2	
		Knuckle bearing	SI6T/K	2	
		Lock release spring		2	
		9		Hex head full thread bolt	
Plain washer	φ16×φ9×1.6			8	
Spring washer	φ8.1×2.1			8	
Hex head full thread bolt	M10×55			1	
Self-locking nut	M10			1	Fix support for pushbutton box
Chain connector				2	
Hex socket head screws	M10×30			4	Fix chain connector
Plain washer	φ20×φ11×2			4	
Spring washer	φ10.2×2.6			4	
Mounting plate for powerpack				1	
10	Post	Hex head full thread bolt	M8×15	4	For mounting powerpack
		Plain washer	φ16×φ9×1.6	4	
		Spring washer	φ8.1×2.1	4	
		Anti vibration rubber for powerpack	M8	4	
		Plain washer	φ16×φ9×1.6	4	
		Spring washer	φ8.1×2.1	4	
		Hex nut	M8	4	For powerpack
		Fitting JT01	9/16-1/2-20UNF	1	
		Dotty washer		1	
		Hydraulic hose	L=3410	1	
11		Hydraulic hose	L=950	1	For powerpack
		Fitting	JT09	1	
		Hex head full thread bolt	M10×30	4	
12		Plain washer	φ20×φ11×2	4	Fix post cover
		Spring washer	φ10.2×2.6	4	
		Hex nut	M10	4	
		Chain pin	LH1044	2	
13	Carriage	Chain connector		2	
		Hex nut	M16	6	
		Plain washer	φ30×φ17.5×3	6	