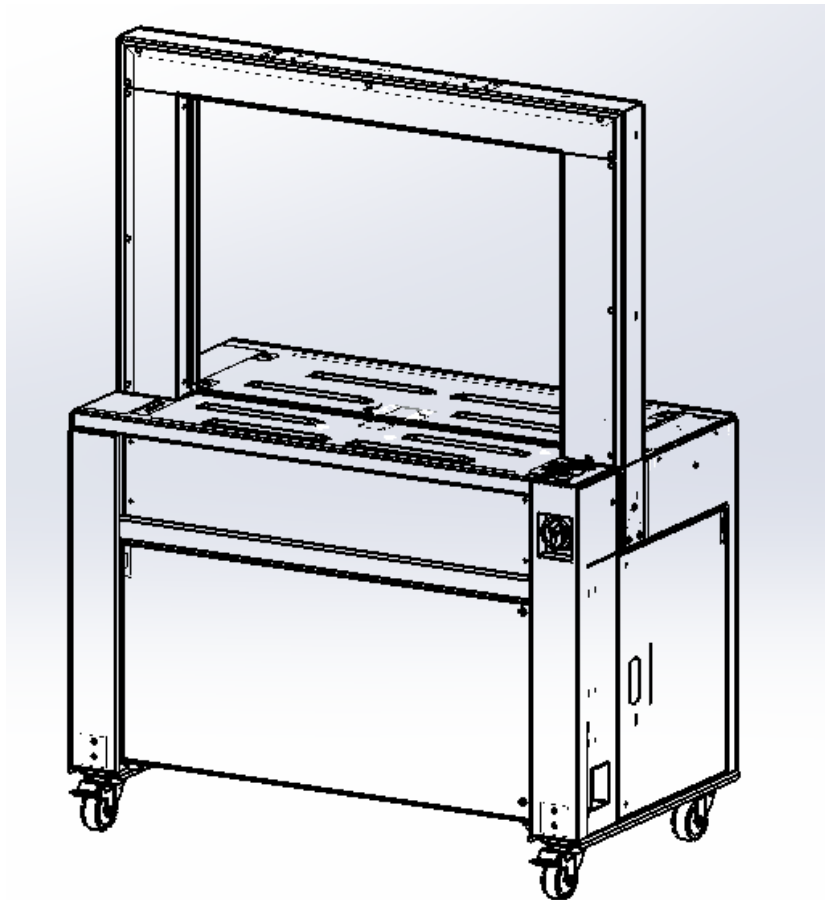


AUTOMATIC STRAPPING MACHINE



MODEL: EXS-138 & EXS-138-PLUS

OPERATION MANUAL

2025



EC Declaration of Conformity

According to the following EU Directives:

- Machinery Directive: 2006/42/EC
- Low Voltage Directive: 2014/35/EU
- Electromagnetic Compatibility Directive: 2014/30/EU

We, [EXTEND GREAT INTERNATIONAL CORP.](#)

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Declare that the machines mentioned hereafter:

◎**Product: Strapping Machine**

◎**Model: EXS-138 & EXS-138-PLUS**

◎**Serial No.:**

◎**Functions: They are used for packaging products by polypropylene strap**

They are designed and manufactured in compliance with the essential health and safety requirements of the Machinery Directive and Electromagnetic Compatibility Directive, and are based on the following European harmonized standards:

- EN 415-1:2000+A1:2009, Safety of packaging machines - Part 1: Terminology and classification of packaging machines and associated equipment
- EN 415-8:2008, Safety of packaging machines - Part 8: Strapping machines
- EN ISO 12100:2010, Safety of machinery - General principles for design - Risk assessment and risk reduction
- EN ISO 13849-1:2008, Safety of machinery – Safety related parts of control systems Part 1: General principles for design
- EN 60204-1:2006+AC:2010, Safety of machinery - Electrical equipment of machines - Part 1: General requirements
- EN 55011:2009+A1:2010, Electromagnetic compatibility - Industrial, scientific and medical (ISM) radio-frequency equipment- Radio disturbance characteristics- Limits and methods of measurement
- EN 61000-4-2:2009, Electrostatic discharge (ESD)
- EN 61000-4-4:2012, Electrical fast transient/burst requirements (EFT/Burst)
- EN 61000-4-6:2014, Immunity to conducted disturbances, induced by radio-frequency fields (CS)

Representative : _____

Name and Position : *Robert Lai, President*

Place / Date : *Taichung, Taiwan. / April 22, 2016.*

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1. GENERAL SAFETY INSTRUCTIONS

1.1 Basic Operation

- The manual and the safety remarks are to be read before use. The operator manual should be kept with the machine at all times. Intervals for maintenance and inspections are to be adhered to.
- This machine was built with state of the art technology and rigid adherence to safety standards.
- Unless used properly, it can cause injury to operators or persons in close proximity to the machine. In addition, improper use can cause damage to the machine or property around the machine.

1.2 Basic Safety Precautions

- The user is to be instructed in all other generally applicable legal and other mandatory regulations relevant to accident prevention and environmental protection in addition to the operating instructions.
- For safety reasons, long hair must be tied back or otherwise secured, garments must be close fitting and no jewelry may be worn.
- Use protective equipment whenever required by circumstances or by law.
- Carefully observe all safety instructions and warnings attached to the machine and make sure that they are always complete and perfectly legible.
- Always make certain that persons being trained and instructed in working on or with the machine are permanently supervised by an experienced person.
- Work on the electrical system and equipment of the machine is only to be carried out by a skilled electrician or by persons under the supervision and guidance of a skilled electrician and in accordance with the rules and regulations of electrical engineering.



1.3 Safety Instructions Governing Specific Operational Phases

- Avoid any operation mode that might be unsafe.
- All necessary precautions to ensure that the machine is only used being in a safe and reliable state are to be taken. The machine is only to be operated if all protective and safety devices, including removable safety devices, emergency shut-off equipment, noise-protection elements and exhaust systems are in right place and fully functional.
- The machine is to be checked for damage and defects at least once per work shift. Any changes including the working behavior of the machine are to be reported to competent persons immediately. If necessary, the machine is to be stopped and locked immediately.
- In case of any malfunction the machine must be stopped and locked until the defect has been eliminated.
- Generally make sure that nobody is at risk before starting up the machine.
- All personnel that will be operating this machine should be thoroughly trained in all phases of operation and safety.
- Always tighten unscrewed connections after maintenance and repair.
- After completing maintenance and repair all safety devices removed for setting up or repairing the machine must be reinstalled and checked for functionality prior to putting the machine back into service.
- To minimize the environmental impact all consumables and replaced parts must be disposed of safely.
- Before starting the machine check that the accessories have been stowed away safely.
- Do not attempt any operation that may be a risk to the stability of the machine.



1.4 Warning of Electrical Dangers

- Immediately remove power to the machine in case of trouble in the electrical system.
- Replace a fuse with one with the same style and ratings; pay particular attention to matching the specified current.
- Any electrical work performed on the equipment must be conducted by a skilled electrician or under the supervision of a skilled electrician. All work must be observed good electrical engineering practice and follow safety rules and local wiring standards.
- Inspect the electrical equipment of the machine at regular intervals. Tighten any loose connections. Check wiring for scorch marks; replace scorched wiring and determine and correct the reason for the overheating.
- When working on live equipment, ensure that a second person is available to cut power in case of an emergency. When appropriate, secure the working area with safety tape and a warning sign. Use insulated tools for electrical work.
- Before working on high-voltage assemblies, turn off the power supply. Carefully discharge the supply cable and short-circuit any energy-storage components such as capacitors.
- If the equipment was moved, carefully refit and refasten all parts removed for transport before reapplying power.
- Before moving the machine, remember to disconnect the power cable.

1.5 Grounding Instructions Shall Include the Following

- This product must be grounded. In the event of an electrical short circuit, grounding reduces the risk of electric shock. This product is equipped with a cord that has a grounding wire and an appropriate grounding plug. The plug must be plugged into an outlet that is properly installed and grounded in accordance with all local codes and ordinances.
- If repair or replacement of the cord or plug is necessary, connect the ground wire to the ground terminal of the plug. The wire with green insulation (with or without yellow stripes) is the grounding wire.
- Check with a qualified electrician or service person if the grounding instructions are not clear or if in doubt about the proper grounding of the machine. Do not modify the plug provided; if it will not fit the power outlet, have the proper outlet installed by a qualified electrician.
- This product is designed for use on a nominal 230 volt AC circuit and has a grounding plug.

DANGER!

Improper installation of the grounding can result in electrocution.

1.6 Before Operating

- Verify that the power line voltage is correct.
- The machine must be properly grounded to avoid a shock hazard. All wiring must be in accordance with local wiring standards.
- The strapping machine can only be operated with polypropylene (P.P.) strapping; do not use polyester (PET) strapping or polyethylene (PE) cord strap.

1.7 During Operation

- The weight of the package cannot exceed 70kg. For package weight over 25kg, it may be necessary to use lifting aids for handling; while package weight over 40kg, it's necessary to handle it with conveyor system.
- The size of the package should not be less than 70 mm × 20 mm (2.75 inches × 0.75 inches).
- While running, check the unit for any unusual sounds or smoke emissions.
- Keep away from the inside of the arch while the machine is operating; do not put your hands or body into the arch when the machine is running.

NOTE: It is normal for the heater tongue to smoke during the sealing operation.

1.8 After operating

- Remove dust and dirt from the unit
- Turn off the power when the machine is not in use.

1.9 Signs

	Caution! Electric Shock Hazard.
	Caution! Hot Surface.
	Caution! Moving Parts Can Crush Hand.
	Caution! Pinch Point Entanglement
	Caution! Blade. Cutting of Fingers or Hand
	Wear Eye Protection
	Refer to Operator Manual

2. MACHINE INFORMATION

2.1 Areas of Application

This plastic strapping machine can be used for a wide range of applications.

This machine is particularly suitable for heavy packaged goods as well as printed products, boxes, etc.

Packaging Limitation

It's not possible to pack:

- Products larger or heavier than that allowed.
- Wet Products
- Flammable products
- Explosive products
- Agri-foodstuffs
- Pharmaceuticals
- Hazardous products

2.2 Environmental Information

The strapping machine shall be installed in the following conditions:

- Supply voltage: $\pm 10\%$ nominal supply voltage
- Source frequency: $\pm 10\%$ nominal frequency
- Ambient temperature: $5^{\circ}\text{C} - 40^{\circ}\text{C}$ ($41^{\circ}\text{F} - 104^{\circ}\text{F}$).
- Relative humidity: not exceed 35~85%RH
- Please provide a suitable illumination around the machine for safety operation.

Conditions For Use

Make sure there is room for easy application and maintenance

The machine must be installed in a closed, well-ventilated area where there are no explosions or fire hazards Position the machine in a place free of humidity, flammable

materials, gas or explosives. Make sure that it is level.

Please do not spray water or wet wipe machine body.

Noise - characteristic values

The noise emission values determined according to EN ISO 3746 for the sound power level or EN ISO 11202 for the sound pressure level at the workplace on the basis of the working conditions are as below:

A measurement uncertainty allowance of $K = 4 \text{ dB(A)}$ applies to the stated emission values.

Sound power level $L_{WA} = 88.7 \text{ dB(A)}$

Emission sound pressure level at the workplace $L_{PA} = 75.3 \text{ dB(A)}$

To minimize the emission sound pressure level, machine is equipped with a timer standby mode that can be adjusted by technician.

Demolition and Waste Disposal

The machine does not contain dangerous components or substances which require special disposal procedure. For that which concerns material elimination, comply with the Standards in the country where the machine has been disassembled.

Caution: do not leave waste polypropylene strap on the floor to minimize slip hazards.

2.3 Machine Description

- Automatic strapping machine for polypropylene (PP) strapping material.
- Strap width 8-15mm adjustable.
- High efficiency heater plate.
- Loop ejection in case of strapping cycle without package.
- Extra strong construction.
- Simple and user-friendly operation.
- Automatic strap threading system. (EXS-138-PLUS)
- Automatic strap end detection and ejection.
- Dispenser inside cabinet for safety
- Table made of stainless steel.
- Strap tension adjustable from soft to very high.
- Electronic control tension
- Automatically second try feed function to increase efficiency

2.4 Safety Devices

DANGER!

Operate the machine only when all safety devices are at their place and are functioning correctly.

The machine has been constructed in accordance with the applicable legal regulations.

The machine is reliable in operation. Nevertheless the machine may constitute a danger if it is operated in improper or undue condition.

Danger points that cannot be avoided due to equipment design are equipped with safety devices. If necessary, these points are marked on the machine with warning signs, and in the manual under working safety instructions.

The machine is equipped with safety devices as:

- Warning labels
- Live parts are covered
- Table cover with screw fixed (1)

Only Polypropylene strapping can be used in this machine. The use of other synthetic Straps can produce substances hazardous to health.

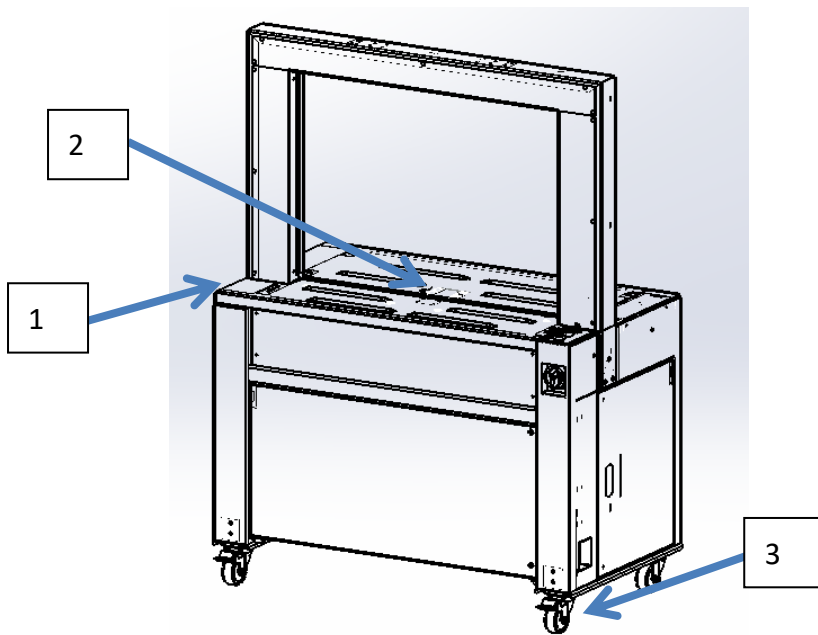
Caution!



The heating unit operates at a very high temperature in order to melt the P.P. strapping.

To prevent burns, avoid contact with this area. (2)

To move the machine, the two lockable casters (3) must be unlocked. Relock the two casters when the machine is in its new position.



The machine is turned on when it is connected to AC power and the main power switch, located on the front operating panel, is placed in the ON position. After approximately 1 minute, the heating element will reach its operating temperature and the machine will be ready for use.

If it is necessary to make adjustments inside the machine during operation, after a strap jam for example, the table top can be unscrewed. Observe caution as the machine is still fully functional with the covers removed. If machine with safety switch, when table top is opened, safety switch is activated. This will remove power but heating element is keeping heating.

Caution!

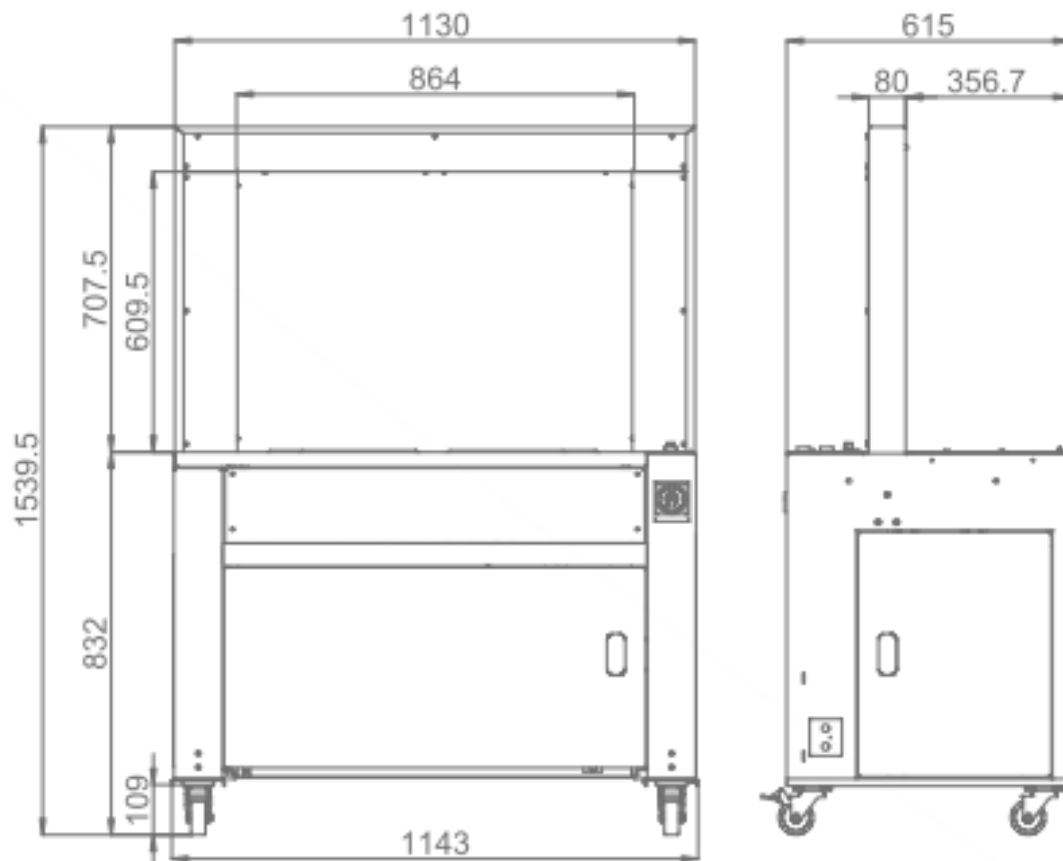


2.5 Technical Specification

2.5.1 Electrical Specification

System Configuration	L1+N+PE (GROUND)	L1+N+PE (GROUND)
Nominal Power	0.72 kW	0.72 kW
Rated Current	3.1 A	6.5 A
Rated Voltage	200V/220V/230V/240V	100V/110V
Rated Frequency	50 Hz	60 Hz
Type of Current	AC- single phase	AC – single phase

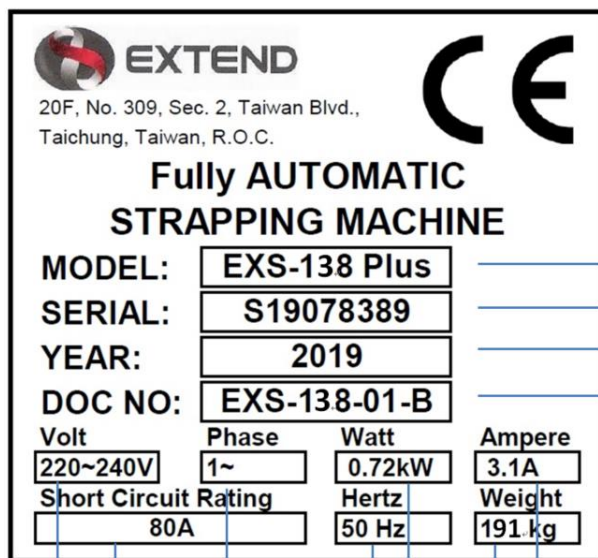
2.5.2 Technical information



STRAP WIDTH	8mm - 15mm
STRAP THICKNESS	0.45mm – 0.7mm
STRAP COIL	Coil diameter: 200mm (230mm/280mm as option) Width: 190mm-200mm
MACHINE SIZE	1130mm (L)* 615mm (W) * 1539.5mm (H)
NET WEIGHT	191 Kg
TENSION RANGE	50 N – 650 N
SPEED	29.5 STRAP/MIN
TABLE HEIGHT	832mm
NOISE EMISSION	78 dB
AMBIENT TEMP.	5°C - 40°C
MIN PACKAGE SIZE	70mm*20mm
MAX PACKAGE SIZE	850mm*600mm (standard arch size)

2.6 Identification Data of the Machine

Each model is provided with a plate where it is easy to recover data which must be communicated to the manufacturer in case of problem or when requesting spare parts etc. (ref. 1-2-3-4) This plate also carries electrical technical data for installation of the machine. (ref. a-b-c-d-e-f-g).



The identification plate contains the following information:

- EXTEND** logo and address: 20F, No. 309, Sec. 2, Taiwan Blvd., Taichung, Taiwan, R.O.C.
- CE** mark
- Fully AUTOMATIC STRAPPING MACHINE**
- MODEL:** EXS-138 Plus
- SERIAL:** S19078389
- YEAR:** 2019
- DOC NO:** EXS-138-01-B
- Electrical Data:**
 - Volt: 220~240V
 - Phase: 1~
 - Watt: 0.72kW
 - Ampere: 3.1A
 - Short Circuit Rating: 80A
 - Hertz: 50 Hz
 - Weight: 191 kg

Labels 1-4 point to the Model, Serial, Year, and Doc. Number fields respectively. Labels a-g point to the electrical data fields respectively.

1. Model
2. Serial Number
3. Year of Manufacture
4. Doc. Number
- a. Rated voltage (V)
- b. Rated Current (A)
- c. Frequency (Hz)
- d. Short Circuit Rating (A)
- e. Phase (PH)
- f. Rated power (Watts)
- g. Weight (kg)

3. BEFORE OPERATING THE MACHINE

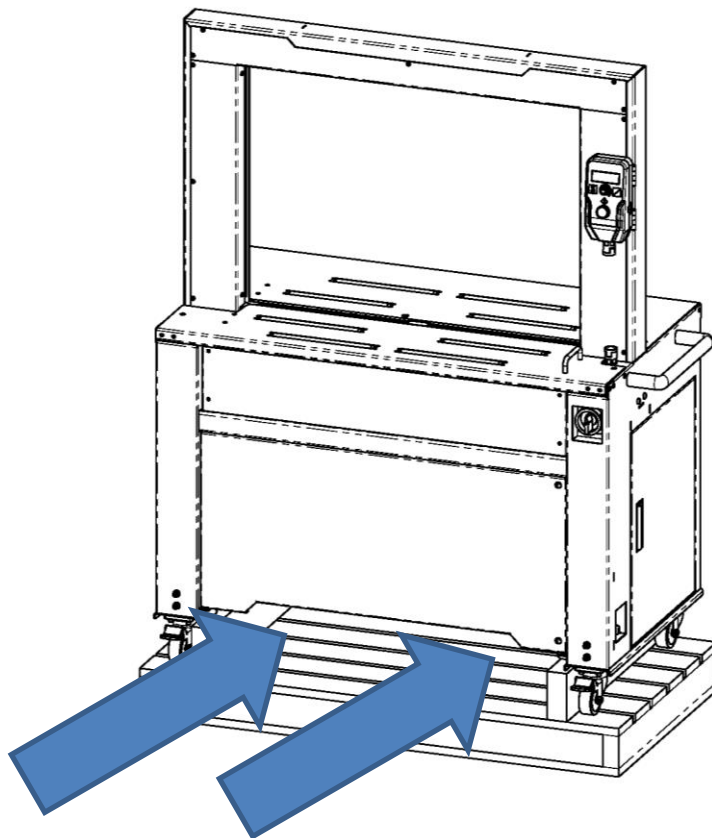
3.1 Shipping

The machine is delivered as a transport unit. The machine is loaded onto a wooden pallet with Polyester strap secured. Outside with carbon box also with Polyester strap secured.

3.2 Transportation & Unload Machine from Pallet

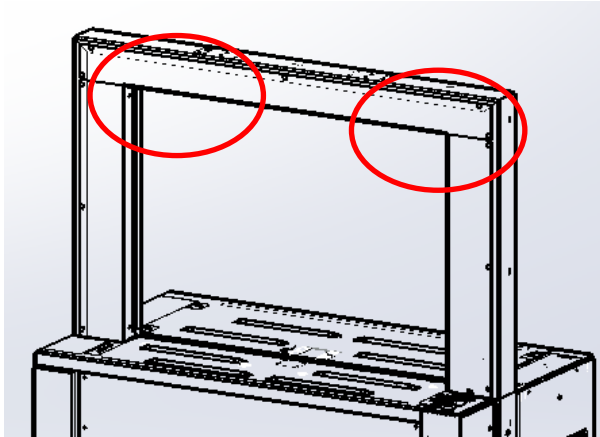
The machine needs to be secured well on wooden pallet. The side edge of machine body needs to be sitting on the pallet to make sure casters are free (1). Remove protection material around the machine like stretch film and plastic cover, and then do remove the Polyester strap.

Please carry the machine by having forklift's fork under the machine, be careful if you have foot bar switch to avoid not damaged from the forklift.



3.3 Installation

- a. Remove packaging material and check if the machine is complete without any transportation damage
- b. Remove cushion material inside the arch.

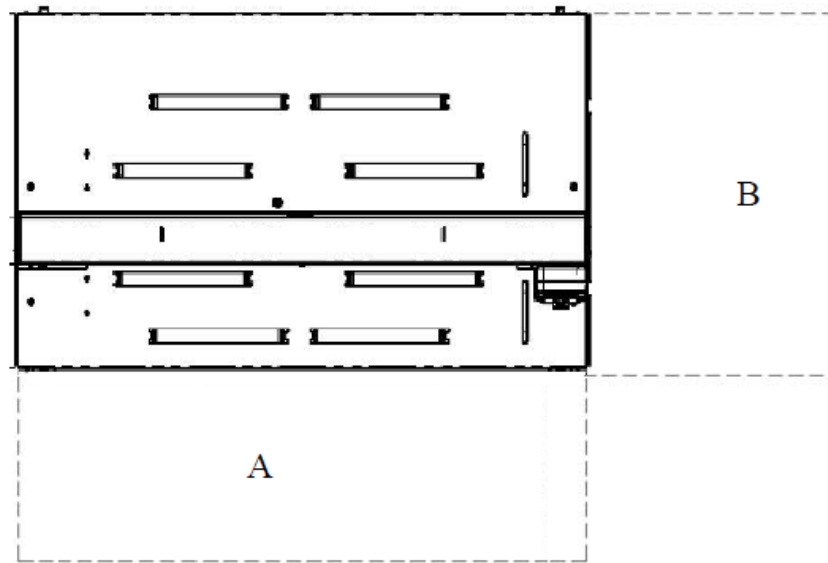


- c. After positioning the machine, do make sure lock brake of casters (two front casters with brake)

Note: when moving the machine again, do remember to unlock the brake of casters, then lock again after relocate.

Note: when moving the machine, do turn the machine power off and make sure cable is on the table to avoid cable damage.

3.4 Operation Space



Keep the area (A) and (B) free for the operator.

The area (A) is necessary for operating strapping machine.

The area (B) is necessary for changing the strap.

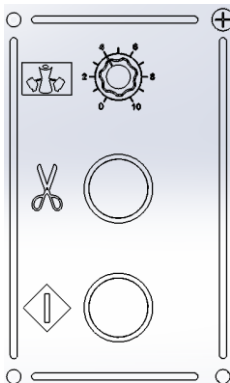
3.5 Operation Elements

a. Main Power Switch:

Provide the machine with Power. Switch to "I" for ON to operate the machine; switch to "—" for OFF to shut power off.



b. Main Panel – Standard



- ELECTRONIC TENSION CONTROL

You can simply control tension by potentiometer from level 0 ~ 10

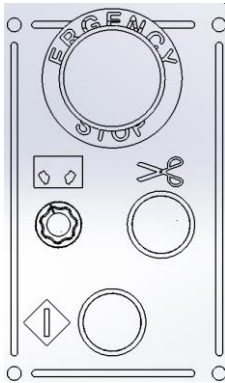
- RESET BUTTON

- With blue light as indicator showing machine situation
- Press RESET BUTTON to reset the cycle

- START BUTTON

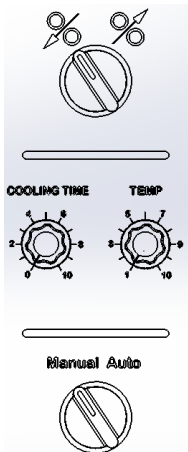
- To start 1st cycle when strap firstly installed
- To start cycles

c. Main Panel – Option



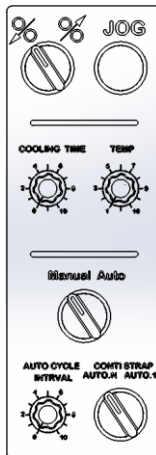
- EMERGENCY STOP BUTTON (Option)

d. Sub Panel - Standard



- MANUAL FEED or MANUAL FEVERSE
You can manual control M2 motor to feed strap forward or backward
- COOLING TIME
You can simply control cooling time by potentiometer from level 0 ~ 10
- TEMPERATURE SETTING
You can simply control heater temperature by potentiometer from level 0 ~ 10
- MANUAL / AUTO (detect by photo eye on table)
 - Manual Mode: only cycle when START BUTTON is pressed
 - AUTO Mode: when photo eye on table is detected, the cycle will continuous run

e. Sub Panel – Option



- JOG (Option): can manual control CAM step by step
- AUTO CYCLE INTERVAL: can control timer between auto straps
- AUTO. N / AUTO. 1: can choose mode of continuous auto mode or only one cycle

3.6 Strap Coil Installation and Strap Thread

3.6.1 Strap Specification

Material: Polypropylene Strap

Width: 8~15mm only adjustment

Thickness: 0.45mm-0.7mm (any strap outside this range, please contact EXTEND for further studying)

Core diameter: 200mm (230mm and 280mm as option)

Core width: 190mm-200mm

Strap with excessive chamber (5mm with 200cm length) cannot be used.

3.6.2 Strap Coil Installation

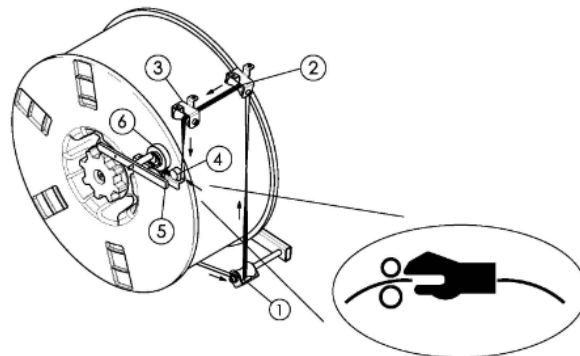
- Open the side door
- Release the Reel Nut Handle by clockwise rotation
- Take out the outer flange
- Remove the old strap coil or other dust material, then install the new strap coil

onto the drum according to the direction shown on dispenser label

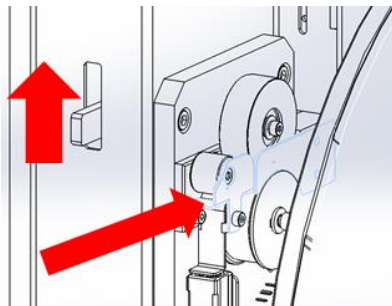
- e. Put back the outer flange and right the Reel Nut Handel by counter clockwise rotation.
- f. Remove the protect straps and the sticker on the new strap coil

3.6.3 Strap Thread (EXS-138)

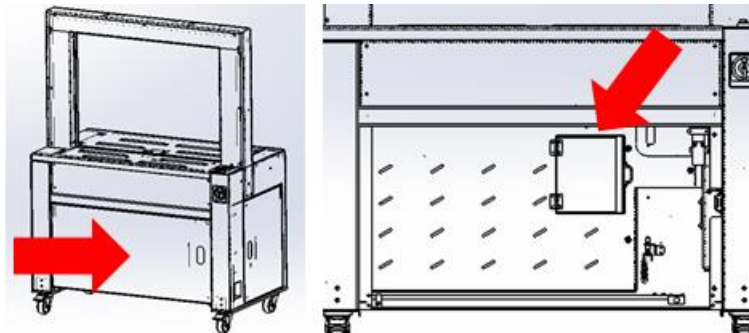
- a. Turn on the main power switch
- b. Press START BUTTON to make machine self-detect
- c. Ensure RESET BUTTON flashes 4 times (it means there is no strap inside machine)
- d. Ensure no previous strap left in the chute
- e. Open the side door and thread strap as indicate picture/sticker through three guide rollers (1,2,3)



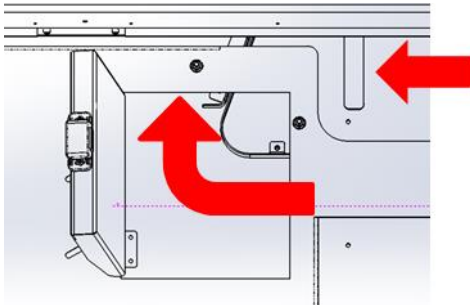
- f. Lift up the lever (#5 in above picture) and insert 80cm strap inward



- g. Open the front door and the threading window



- h. Insert strap upward until hitting the rollers, then push this lever to open the roller and then go further about 3cm to ensure the strap is caught by rollers



- i. Close all the doors, after pressing the START BUTTON, then machine will ensure HOME position, then pool feed until the pool sensor is OFF, and feed around the arch

3.6.4 Auto Thread Function (EXS-138-PLUS)

- Follow 3.6.3 Strap Thread (EXS-138) from (a) to (e)
- Lift up the lever and insert only 3-5cm strap inward
- Ensure the RESET BUTTON flashes 1 time and press START BUTTON to start auto threading function

Note: If the strap is fed too much more than 5 cm ahead roller, it could cause auto threading fail.

Note: Please make sure PP strap is in correct curve down direction, to have the PP strap insert into machine in opposite direction, it might cause auto threading, feed, refeed...functions not stable.

4. ADJUSTMENT

4.1 Strap amount in the Pool Box

The recommended strap amount in Pool Box will be 2 of full arch size, it will be sufficient for 3-5 strap cycles. (Depend on package size, fewer cycles for larger package size)

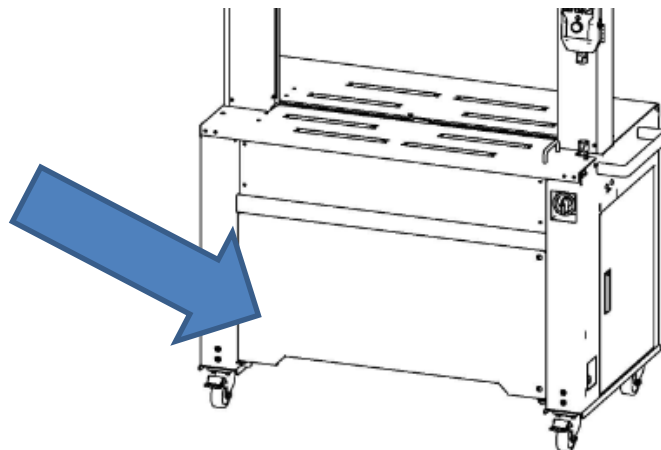
Note: Excessive strap amount stored in Pool Box will cause feed problem (too curved)

Note: Insufficient strap amount stored in Pool Box will cause short feed

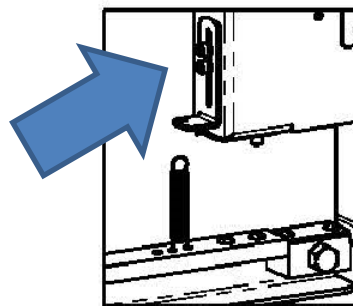
Note: Strap stored in Pool Box overnight will make itself too curved and have chance to cause feed problem.

The adjustment of strap amount of Pool Box as following:

- a. Open the front door



- b. Loose two screws for spring bracket, lifting upward for stronger spring force with more strap amount, vice versa



- c. Adjust to proper position on the spring bracket, then tight the screw

4.2 Pool Feed pressure & gap

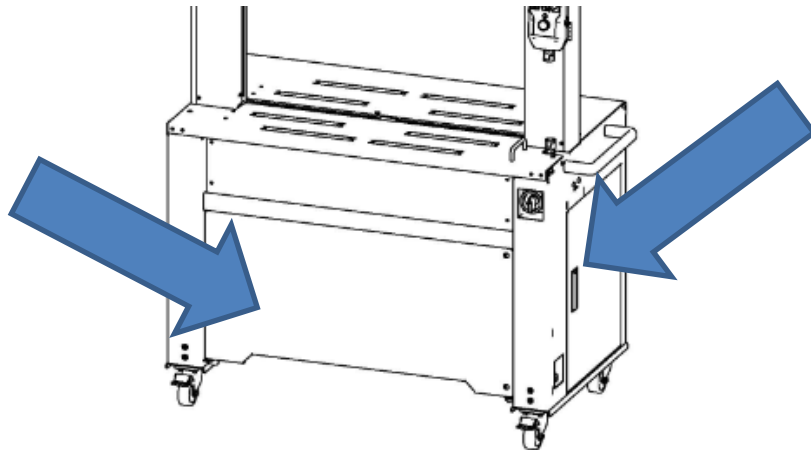
The machine is well set for the Pool Feed pressure and gap. It might need some adjustment when you have smooth strap on this machine.

Note: Excessive pressure for Pool Feed Roller might cause strap squeezed then jammed

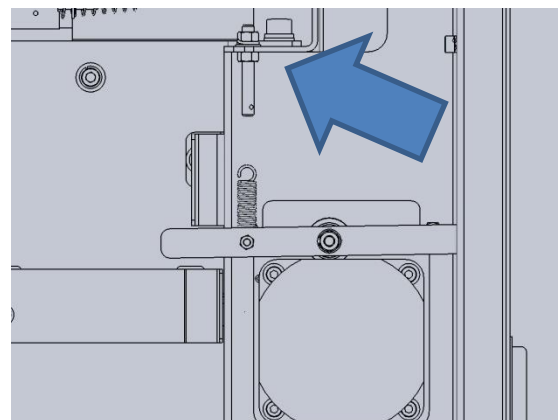
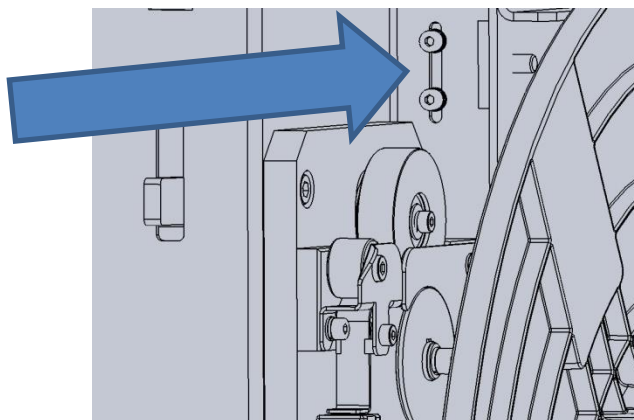
Note: Insufficient pressure for Pool Feed Roller might cause insufficient strap amount in Pool Box.

The adjustment of Pool Feed pressure and gap as following:

- a. Open the front door and side door



- b. Two screws from the side door could adjust the limit plate to control gap between Pool Feed Rollers, the suggested setting is 0.1mm for the gap. Then from the front door, there's one spring with nut to adjust pressure between Pool Feed Rollers.



4.3 Brush in Arch

The machine is well set for Brush in Arch to avoid strap floating or flipping.

Note: Brush in Arch might needs some adjustment for special package shape or different application/different strap width.

The adjustment of Brush:

Release screws to adjust brush

➤ Left:

Left Upper: Brush slight touch width of strap

Left Lower: Brush covers 1/3 width of strap

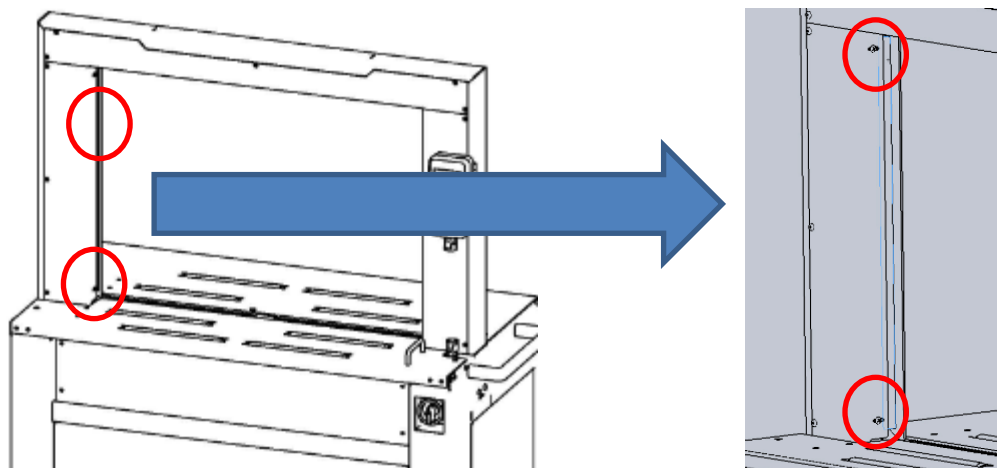
➤ Upper:

Complete open

➤ Right:

Right Upper: Brush covers 2/3 width of strap

Right Lower: complete close



5. TROUBLE SHOOTING

The RESET BUTTON with blue light also works as indicator light for machine situation.

Flash times	Situation
1	Ready for auto threading (only on EXS-138-PLUS)
2	Short Feed
3	Emergency switch activated (door not closed)
4	Strap running out
5	Not in HOME position
6	Can not detect HOME position sensor
7	Can not detect REVERSE position sensor
8	Strap running out with automatic ejection
Continuously	Heater heating up

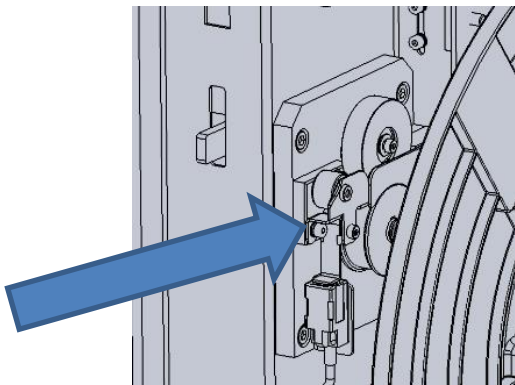
6. MAINTENANCE

Note: Before doing any maintenance or service, please do switch off the main power on the machine, then wait about 5 minutes to cool down the heater plate.

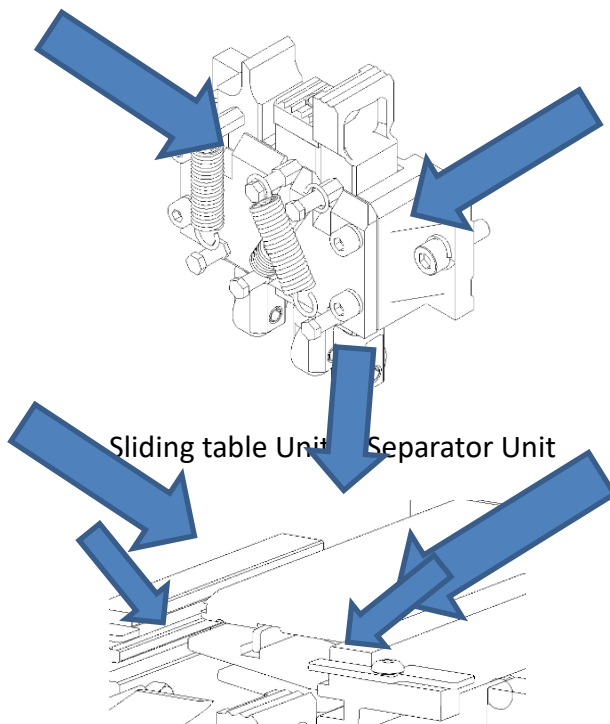
Weekly Maintenance:

- Use air gun to clean dust from the machine, especially following clean dust from following structures:

- Pool Feed Unit

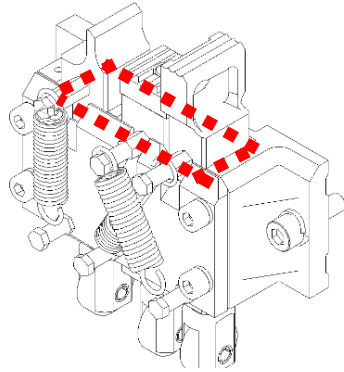


- Clamps Unit

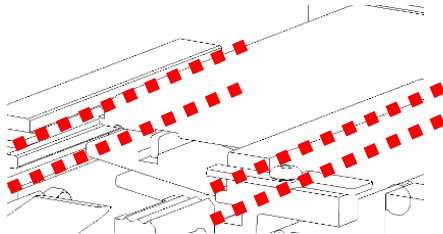


- Lubrication on moving mechanism , especially lubricate on following structures:

- Clamps Unit



- Sliding table Unit & Separator Unit

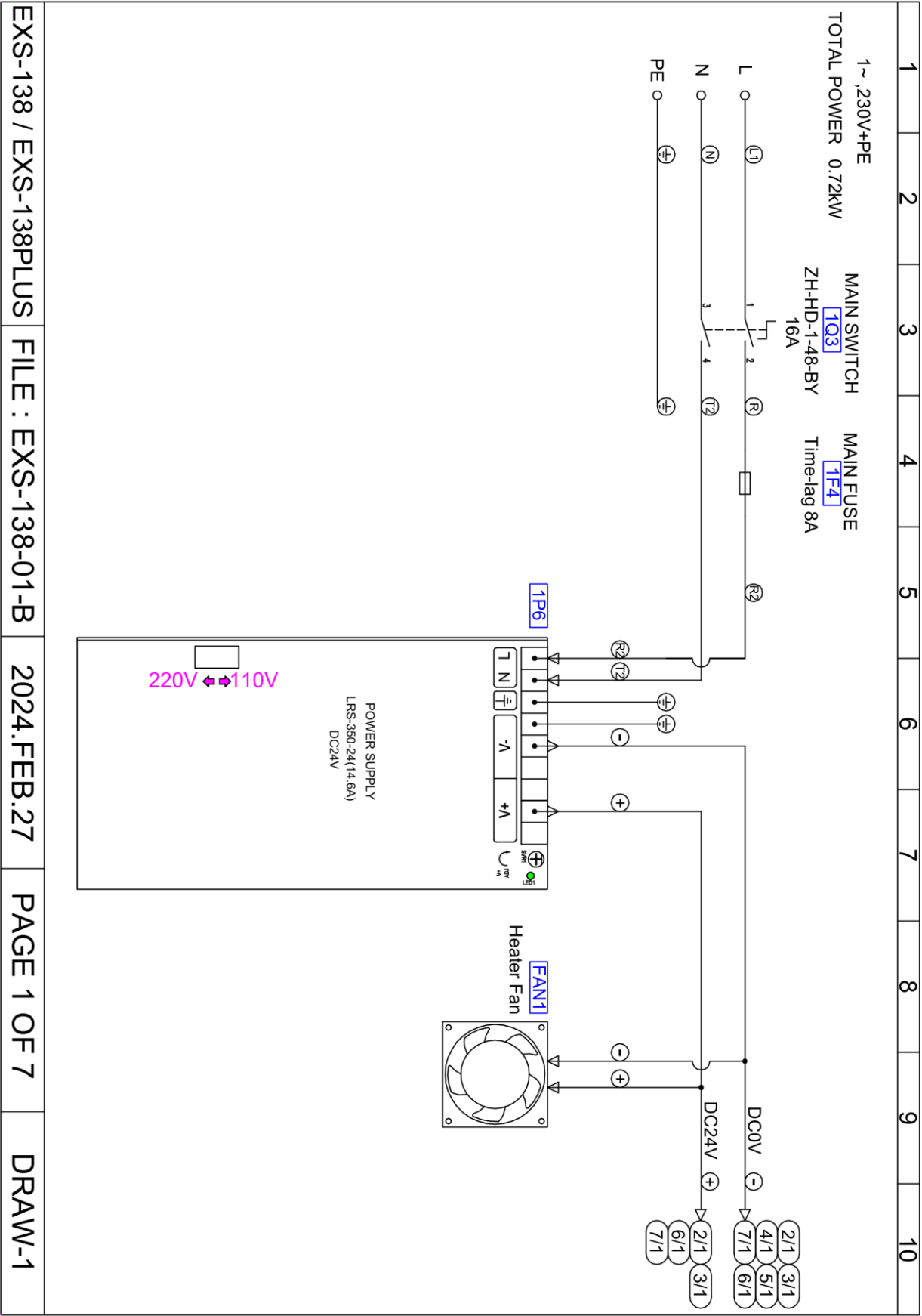


Note: Do not lubricate on any bandway or guide where transport strap.

Monthly Maintenance:

- Please take out END GRIPPER UNIT and WELDING CLAMP UNIT to do complete cleaning and lubrication
- Please clean both sides (upper/lower) of Heater Plate
- Please check all structure with spring if working smoothly
- Please clean dust around sensor, limit switch
- Please clean dust accumulated on rollers (Pool Feed Roller, Tension Roller, Feed Roller)

7. ELECTRIC WIRING DIAGRAM & PART



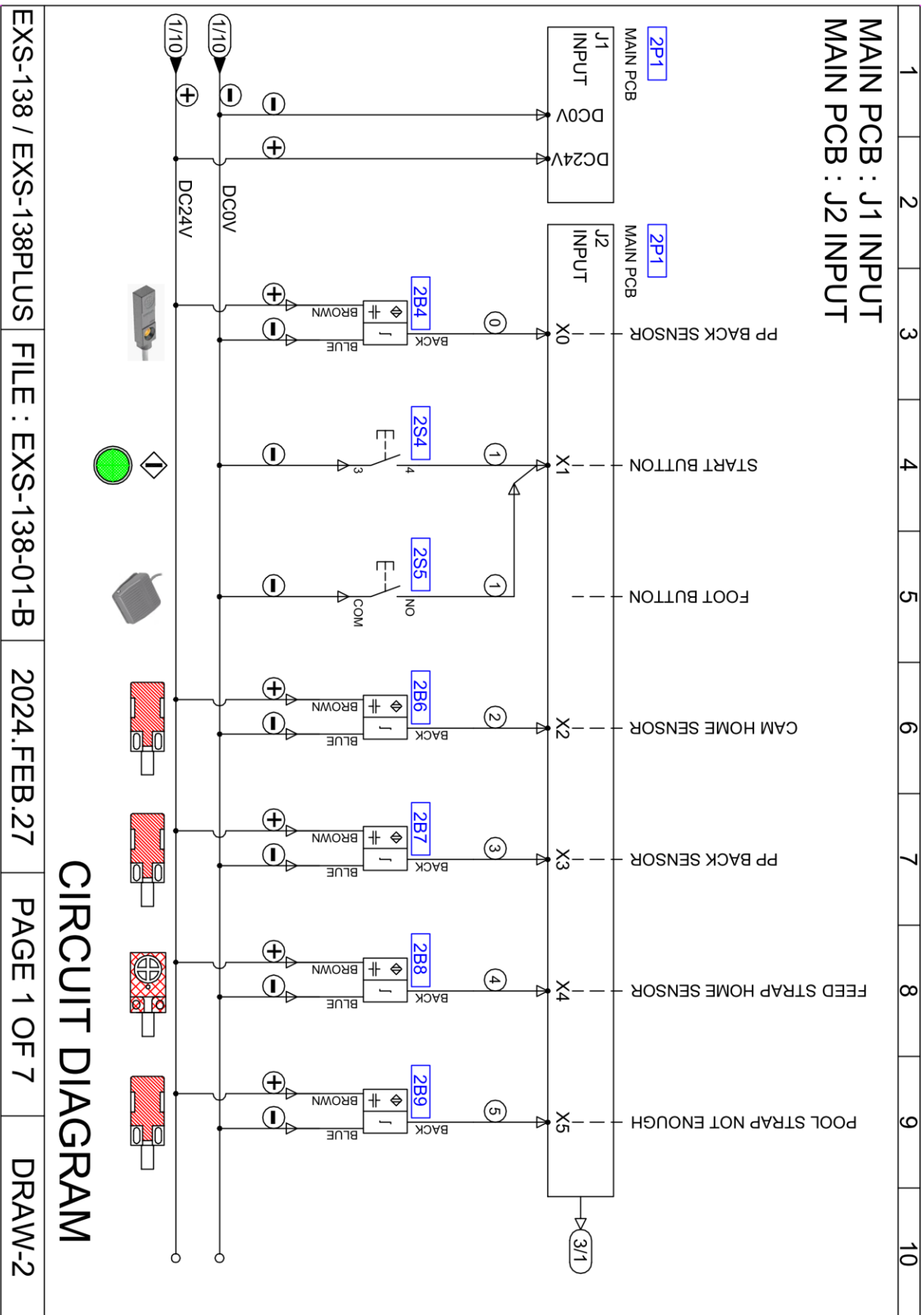
EXS-138 / EXS-138PLUS

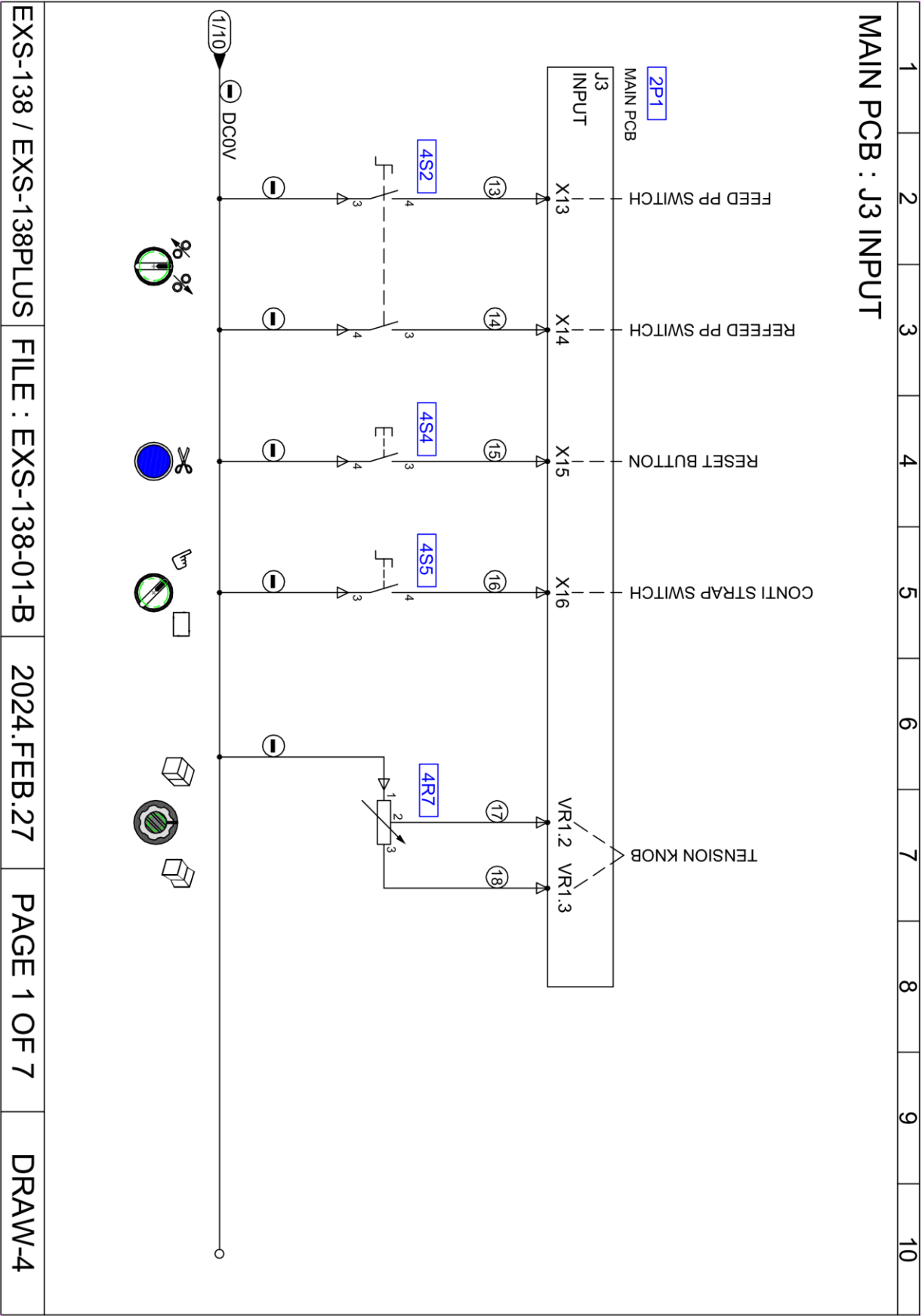
FILE : EXS-138-01-B

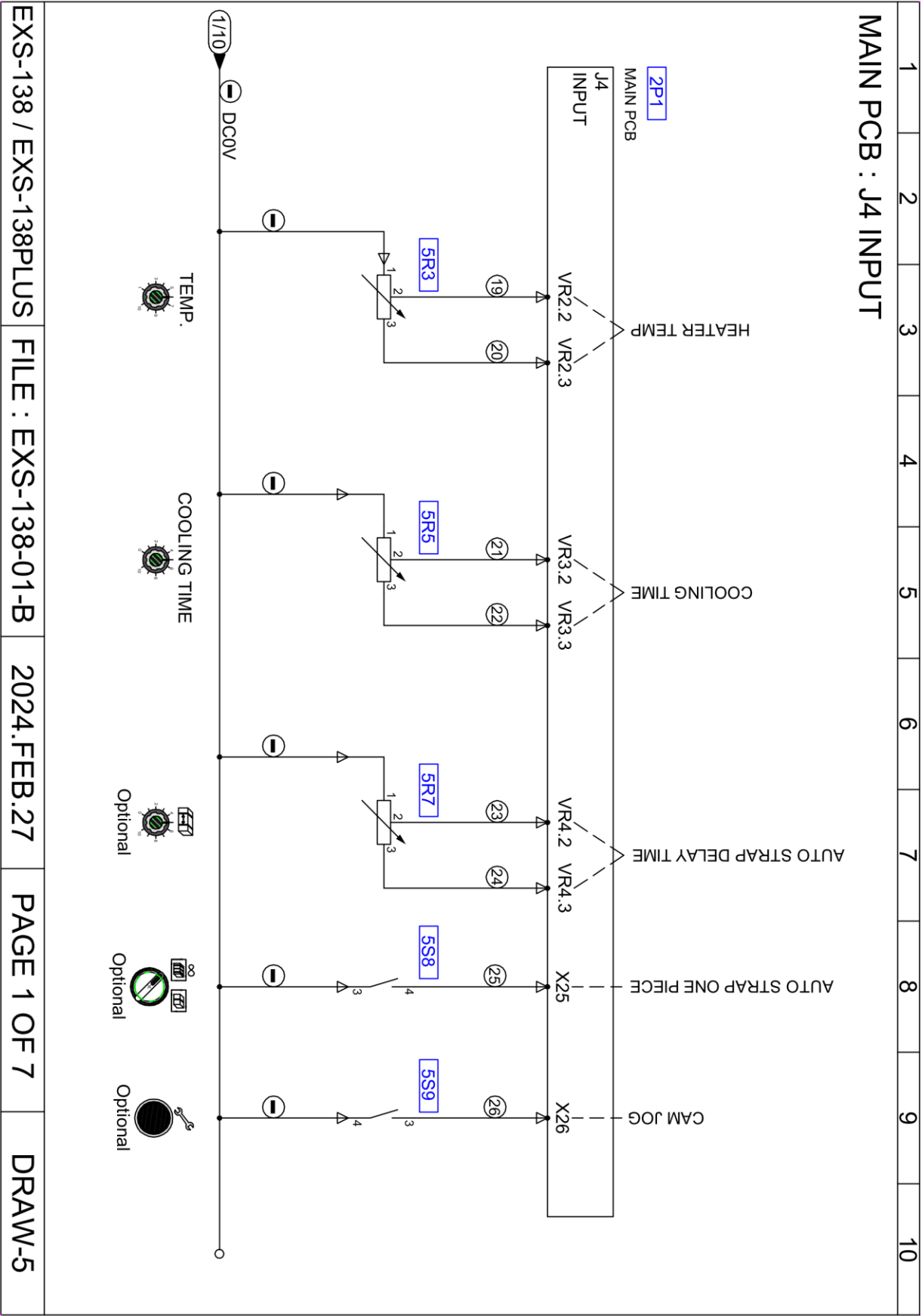
2024.FEB.27

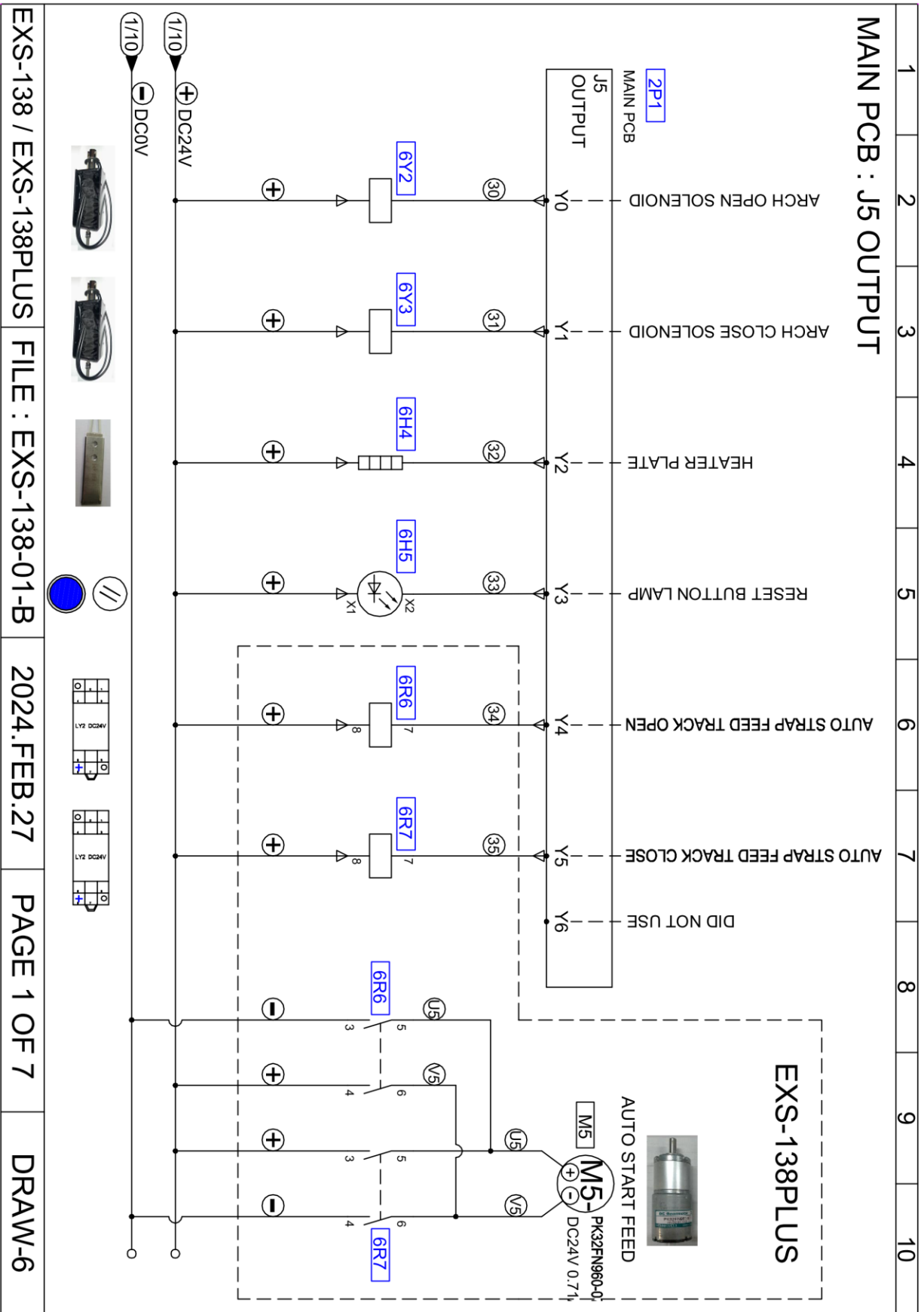
PAGE 1 OF 7

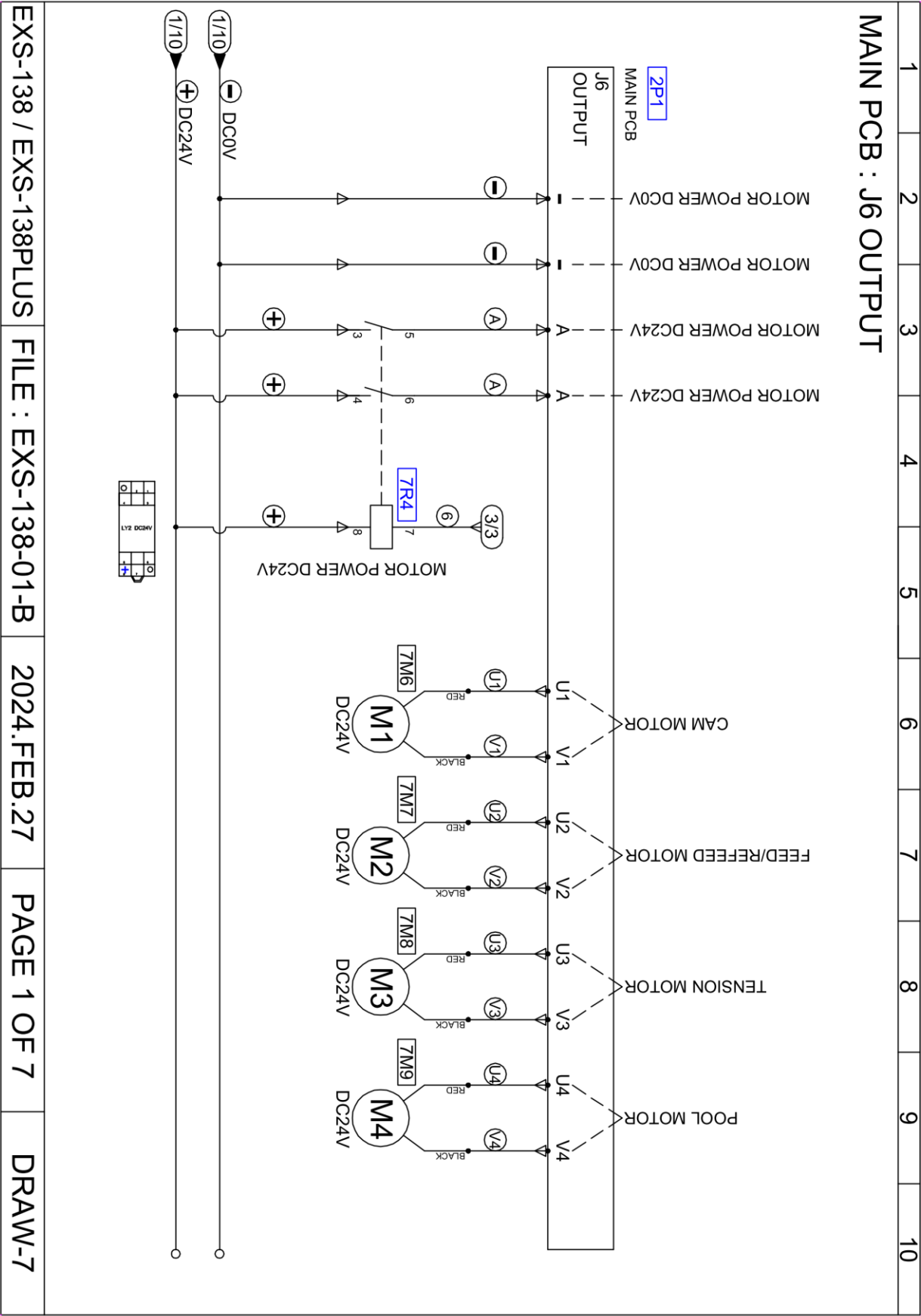
DRAW-1





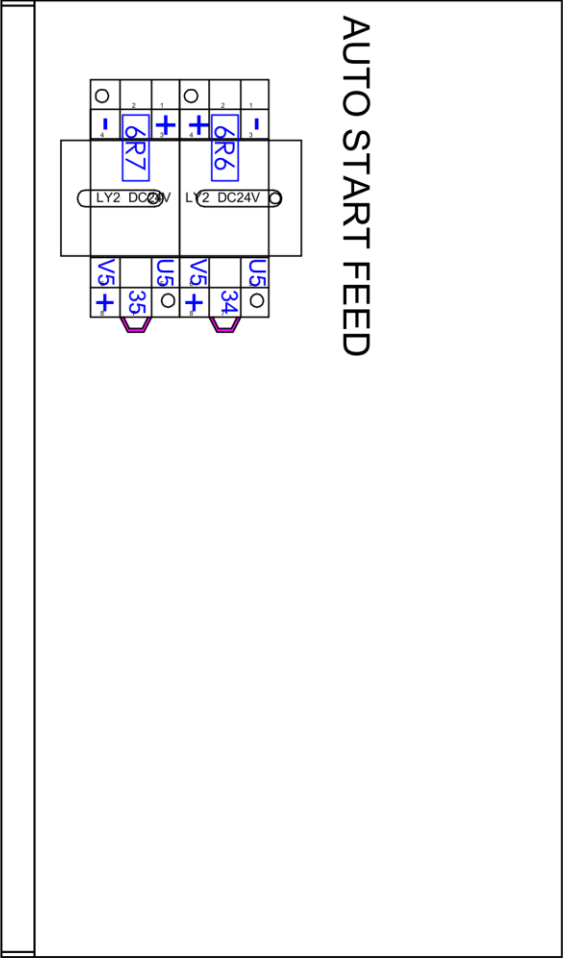






MODEL:EXS-138 PLUS
 FILM:EXS-138-01-A
 DATE:2024.OCT.07
 PAGE 01 OF 03
 DRAW 3

ELECTRICAL LAYOUT

AUTO START FEED
 



			EXS-138-PLUS	EXS-138
PART NUMBER	#	ITEM	QTY	QTY
P0309-010014000	2P1	PCB for EXS-138		1
P0309-010014050	2P1	PCB for EXS-138-PLUS	1	
P0307-010001550	1P6	Power supply LSR-350-24	1	1
P0306-020000100	7R4,6R6,6R7	Relay LY2NJ,DC24V	3	1
P0306-030000100	7R4,6R6,6R7	Relay seat (LY2)STF08AM	3	1
P0305-020001000	1F4	Fuse seat GGL-20 1P 30mm	1	1
P0305-020001100	1F4	Fuse cover GGL-40 30mm	1	1
P0305-030001100	1F4	Fuse 8A-6*30mm(JTG-63)	1	1
P0501-001850A	M5	Auto thread motor	1	
P0311-020000100	3S3	Safety switch		1
P0311-030000100	3S3	Safety switch key		1
P0501-0019100	M4	Pool motor	1	1
P0302-010004200(S13833)	3B5	proximity switch (3m cable)	1	1
P0302-010000400(S13836)	2B9	proximity switch (2m cable)	1	1
P0311-010002800	1Q3	Main switch	1	1
P0316-030000100	1Q3	Main switch cover	1	1
P0324-010000100	C1	connector	1	1
P1002-000901A	C10	Main panel label	1	1
P1113-000100A	4R7	Knob	1	1
P0318-010001700	4R7	Potentiometer	1	1
P0313-010005700	2S4	Start button	1	1
P0313-010007300	4S4	Reset button	1	1
P1002-0009060	C20	Sub panel label	1	1

P0313-010006000	4S5	switch - 2	1	1
P0313-010006200	4S2	switch - 3	1	1
P0318-010001700	5R3,5R5	Potentiometer	2	2
P0301-0002100(S13817)	6Y2	Arch solenoid (right)	1	1
P0301-0002100(S13818)	6Y3	Arch solenoid (left)	1	1
P0314-01000140A(S13838)	6H4	Heater	1	1
P0303-010002000(S13837)	FAN1	Fan	1	1
P0302-010000400(S13834)	2B6	proximity switch (2m cable)	1	1
P0302-010000400(S13835)	2B7	proximity switch (2m cable)	1	1
P0302-010000300(S13832)	2B8	proximity switch (2m cable)	1	1
P0302-010000100(S13831)	2B4	proximity switch	1	1
P0302-020003210(S13840)	3B7	photo eye	1	1
P0501-0019400	M1	M1 motor gearbox	1	1
P0501-0019600	M3	M3 motor gearbox	1	1
P0319-S15819	2S5	Foot switch	1	1

8. PART LIST

FIG. 1-1 CASTER UNIT

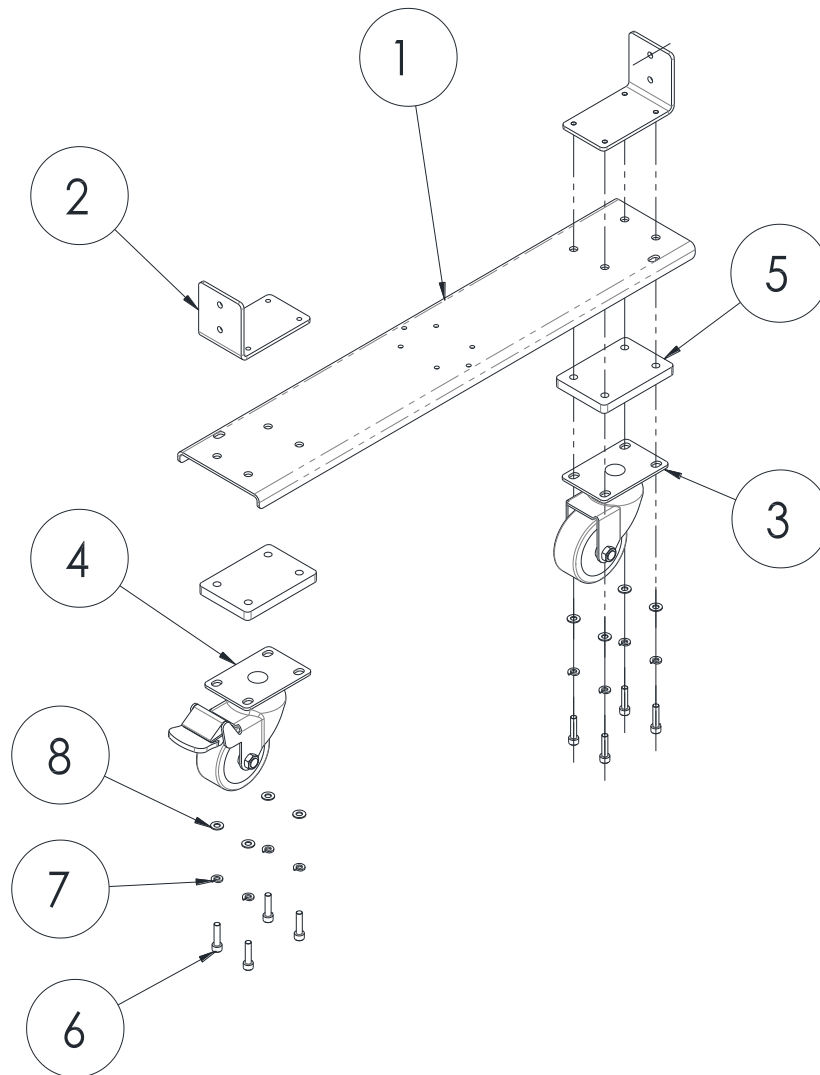
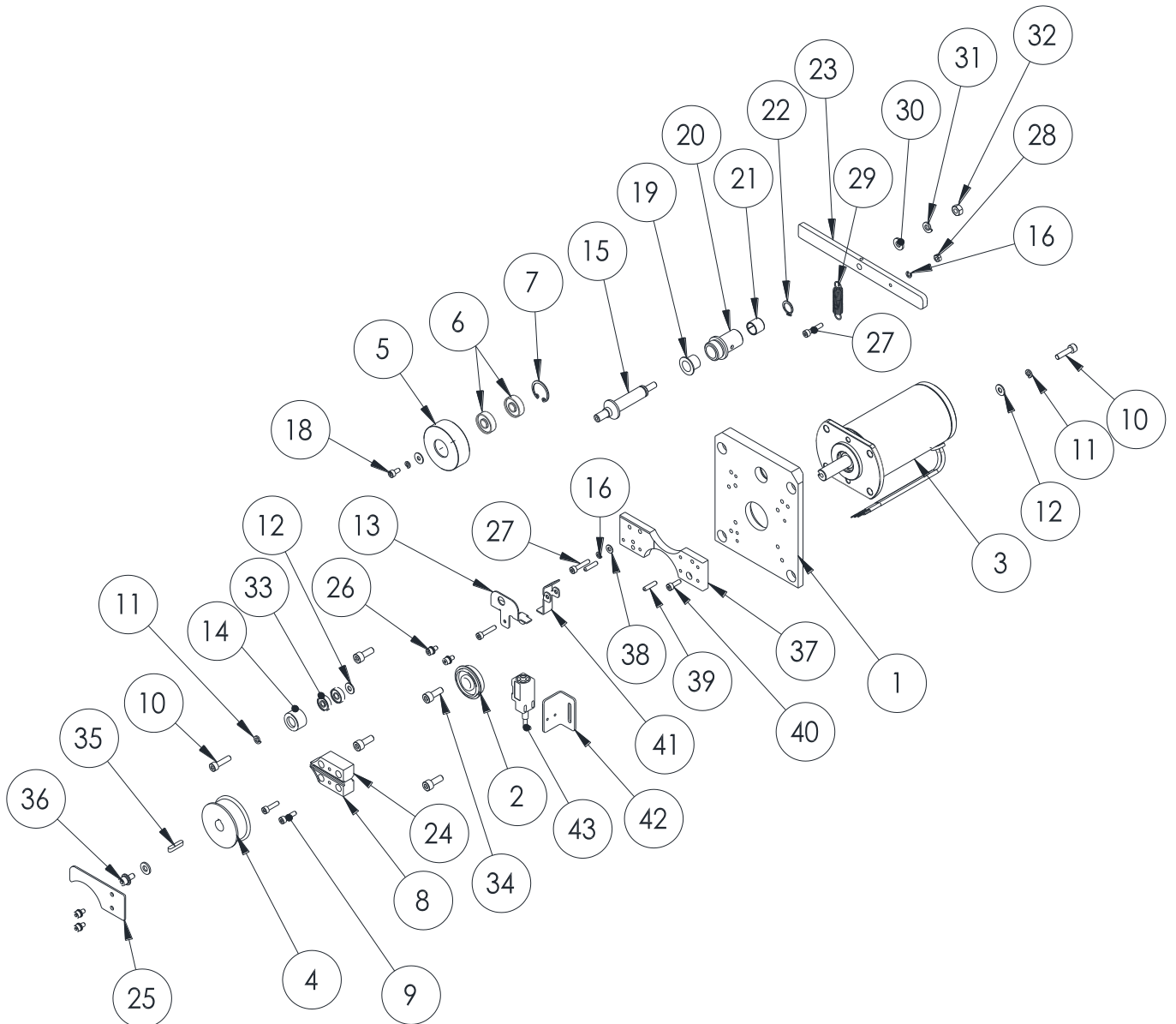


FIGURE 1-1 CASTER UNIT			
NO	PART NUMBER	Description	QTY
1	P01-054830A	BASE	1
2	P01-054850A	ADJUST LAG	2
3	P1107-0004500	CASTER	1
4	P1107-0004600	CASTER WITH BRAKE	1
5	P01-054840A	FIXER	2
6	P1103-01061301Z	WASER $\phi 6 \times 13 \times 1t$	8
7	P1103-0206Z	SPRING WASHER $\phi 6$	8
8	P1101-0506025AN	SCREW M6*25L	8

FIG. 2-1 POOL FEED UNIT



**EXTEND**

Extend the partnership

FIGURE 2-1 POOL FEED UNIT

NO	PART NUMBER	Description	QTY
1	P02-033970B	POOL FEED SEAT	1
2	P1104-076201ZZ0	BEARING	1
3	P0501-0019100	POOL MOTOR	1
4	P02-034041A	POOL FEED DRIVING ROLLER 15mm	1
5	P02-041960A	POOL FEED DRIVEN ROLLER 15mm	1
6	P1104-020608ZZ0	BEARING, 608ZZ	2
7	P1105-0222B	R-RING, R-22	1
8	P02-034012A	POOL FEED LOWER GUIDE 15mm	1
9	P1101-0504016AN	SCREW M4*16	2
10	P1101-0505020AN	SCREW M5*20	5
11	P1103-0205Z	SPRING WASHER $\phi 5$	5
12	P1103-010512N	WASHER $\phi 5 \times 12$	5
13	P01-055601A	THREADING SEAT 15mm	1
14	P02-034121A	GUIDE ROLLER 15MM	1
15	P02-0340200	POOL FEED ECCENTRIC SHAFT	1
16	P1103-0204Z	SPRING WASHER $\phi 4$	3
17	P1103-010412N	WASHER $\phi 4 \times 12$	1
18	P1101-0504008AN	SCREW M4*8	1
19	P1104-0312122	BEARING	1
20	P02-0339900	POOL FEED BUSHING	1
21	P1104-0312120	BEARING	1
22	P1105-0112B	C-RING, S-12	1
23	P01-0555800	LIFTING LEVER	1
24	P02-0340020	POOL FEED UPPER GUIDE 15mm	1
25	P01-0555900	POOL FEED FRONT GUIDE	1
26	P1101-0904008AN	SCREW M4*8	4

FIGURE 2-1 POOL FEED UNIT

NO	PART NUMBER	Description	QTY
27	P1101-0504020AN	SCREW M4*20	3
28	P1102-0104AZ	NUT M4	1
29	P1202-0001000	SPRING	1
30	P1103-010613N	WASHER $\phi 6 \times 13$	2
31	P1103-0206Z	SPRING WASHER $\phi 6$	5
32	P1102-0106AN	NUT M6	1
33	P1104-020625ZZ0	BEARING, 625ZZ	2
34	P1101-0506016AN	SCREW M6*16	4
35	P1108-010404020G	KEY 4*4*20	1
36	P1101-0905012AN	SCREW M5*12	1
37	P02-0339820	POOL SPACER 15mm	1
38	P1103-010409N	WASHER $\psi 4 \times 9$	1
39	P1109-0204018G	PIN 4*18	2
40	P1101-0504012AN	SCREW M4*12	1
41	P01-0558610	DETECTION PLATE 15mm	1
42	P01-0555600	DETECTION PLATE FIXER	1
43	P0319-S15835	PROX SWITCH (3METER)	1

FIG. 3-1 FRONT TABLE UNIT

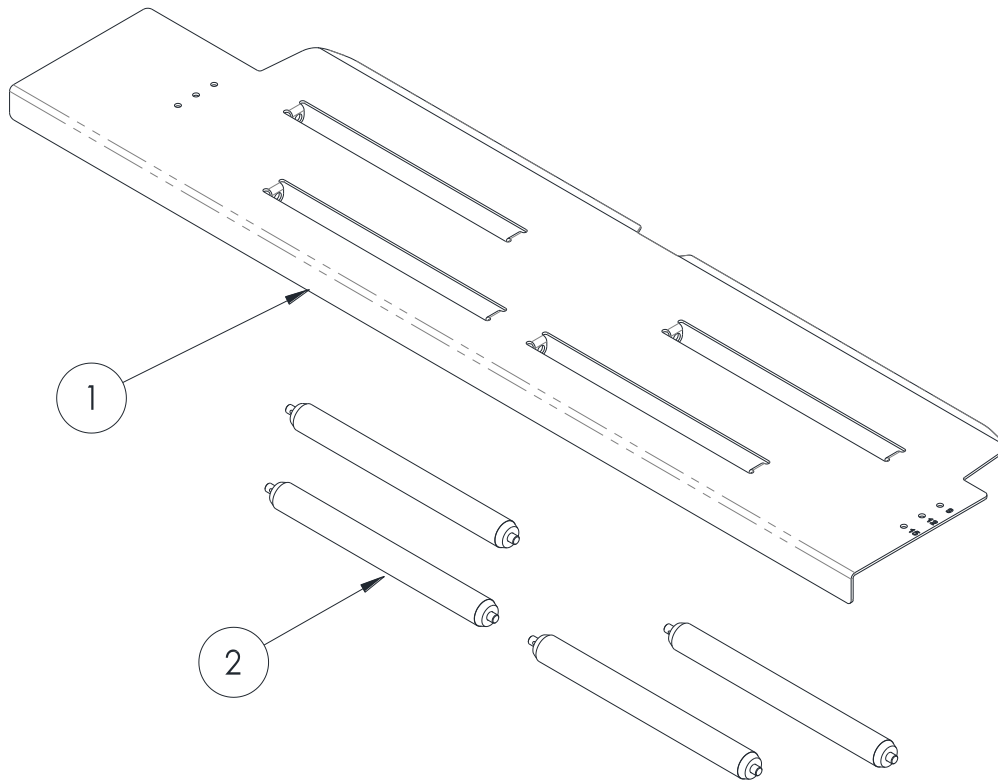


FIGURE 3-1 FRONT TABLE UNIT			
NO	PART NUMBER	Description	QTY
1	P01-068660A	FRONT TABLE COVER	1
2	P08-0002800	TABLE ROLLER	4

FIG.4-1 REAR TABLE UNIT

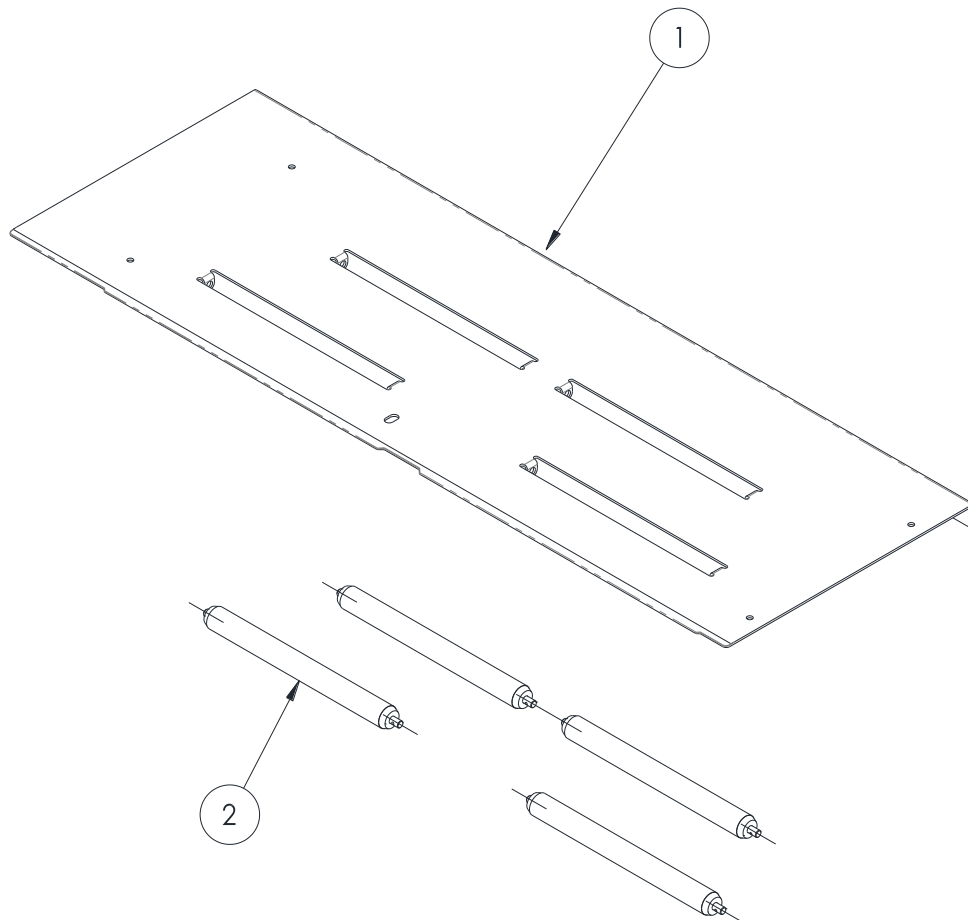


FIGURE 4-1 REAR TABLE UNIT			
NO	PART NUMBER	Description	QTY
1	P01-068530A	REAR TABLE COVER	1
2	P08-0002800	TABLE ROLLER	4

FIG. 5-1 POOL GUIDE ROLLER UNIT

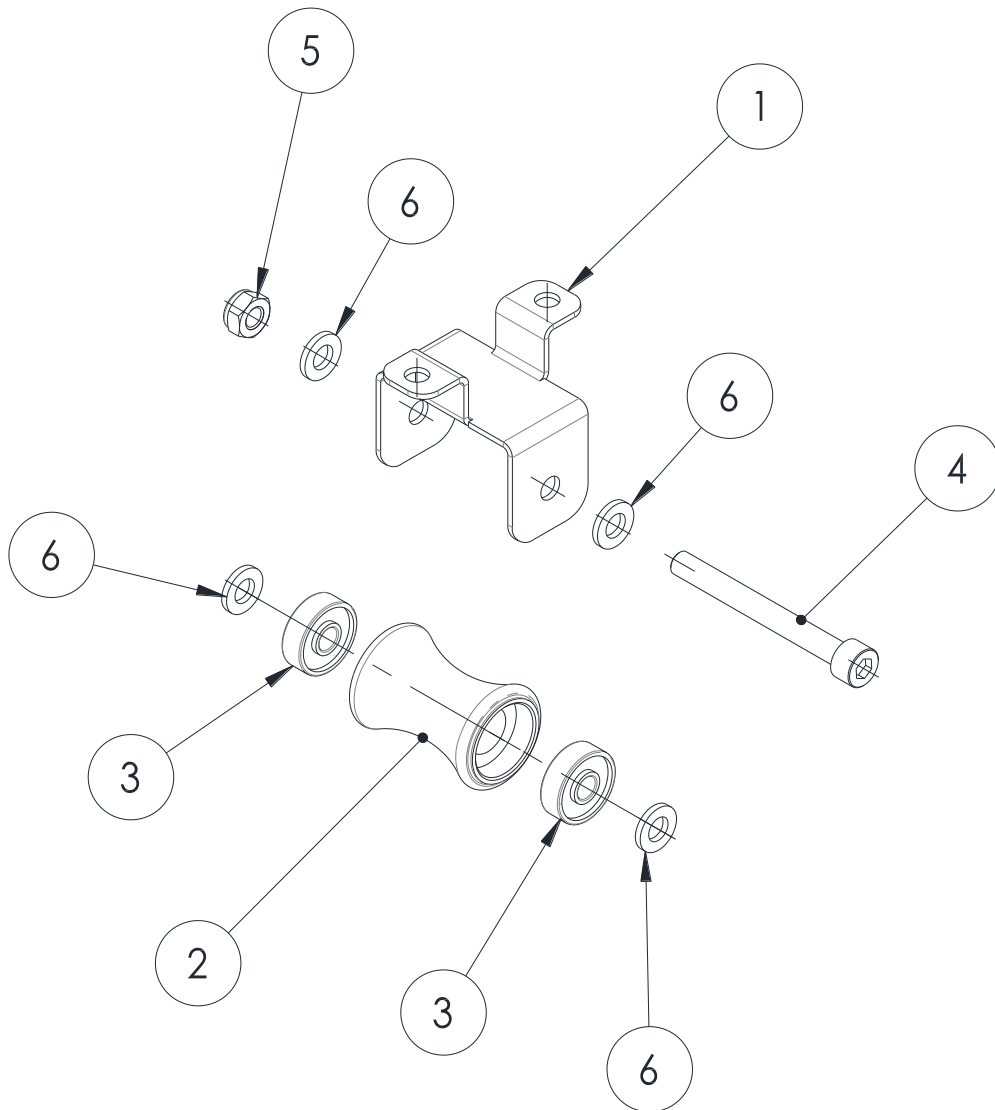
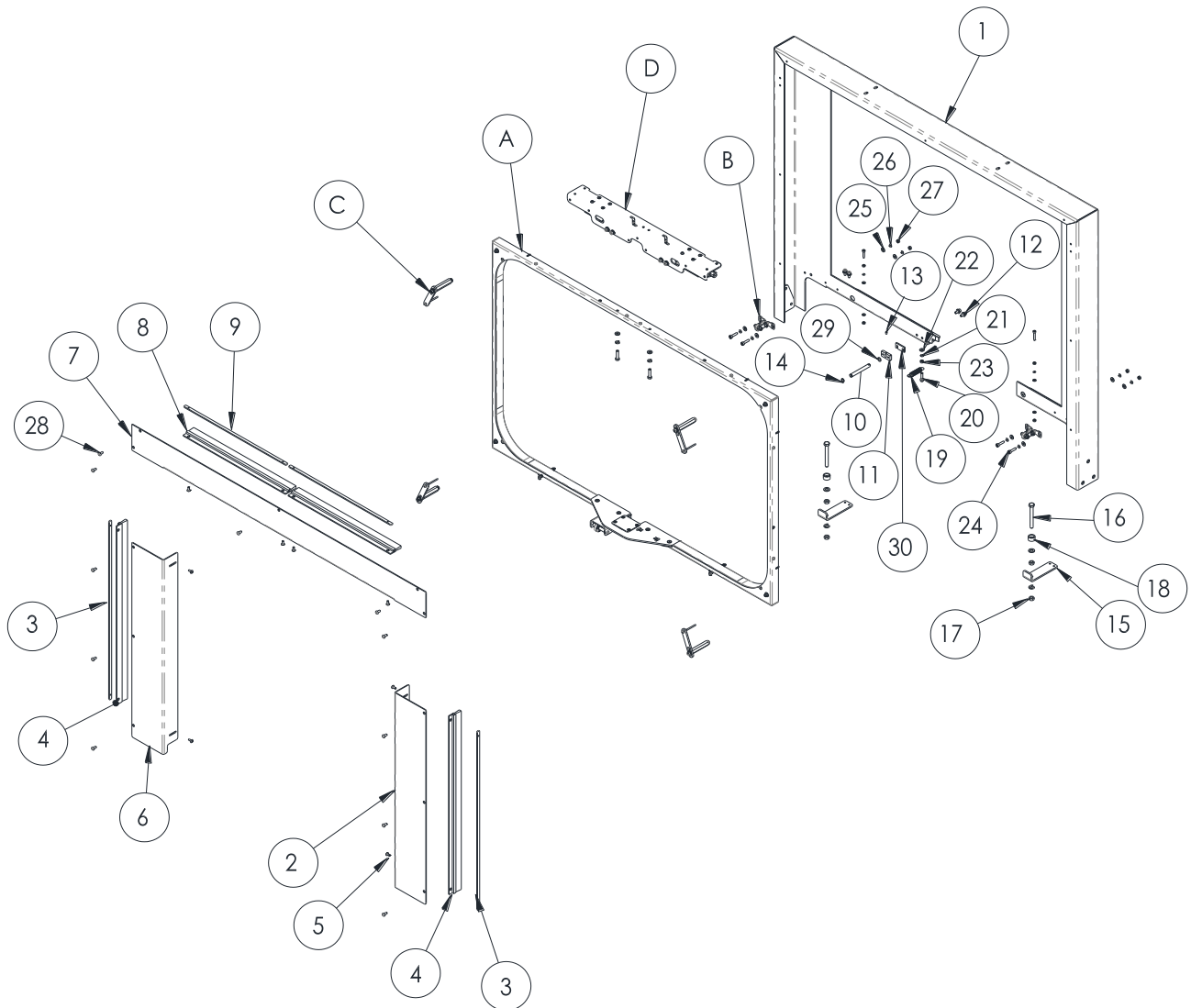


FIGURE 7-1 POOL GUIDE ROLLER UNIT

NO	PART NUMBER	Description	QTY
1	P01-0552800	POOL GUIDE ROLLER BRACKET	1
2	P02-034160A	POOL GUIDE ROLLER	1
3	P1104-020626ZZ0	BEARING, 626ZZ	2
4	P1101-0506055AN	SCREW M6*55	1
5	P1102-0106BZ	NUT, M6	1
6	P1103-01061301Z	WASHER, $\phi 6 \times 13 \times 1t$	4

FIG. 6-1 ARCH UNIT



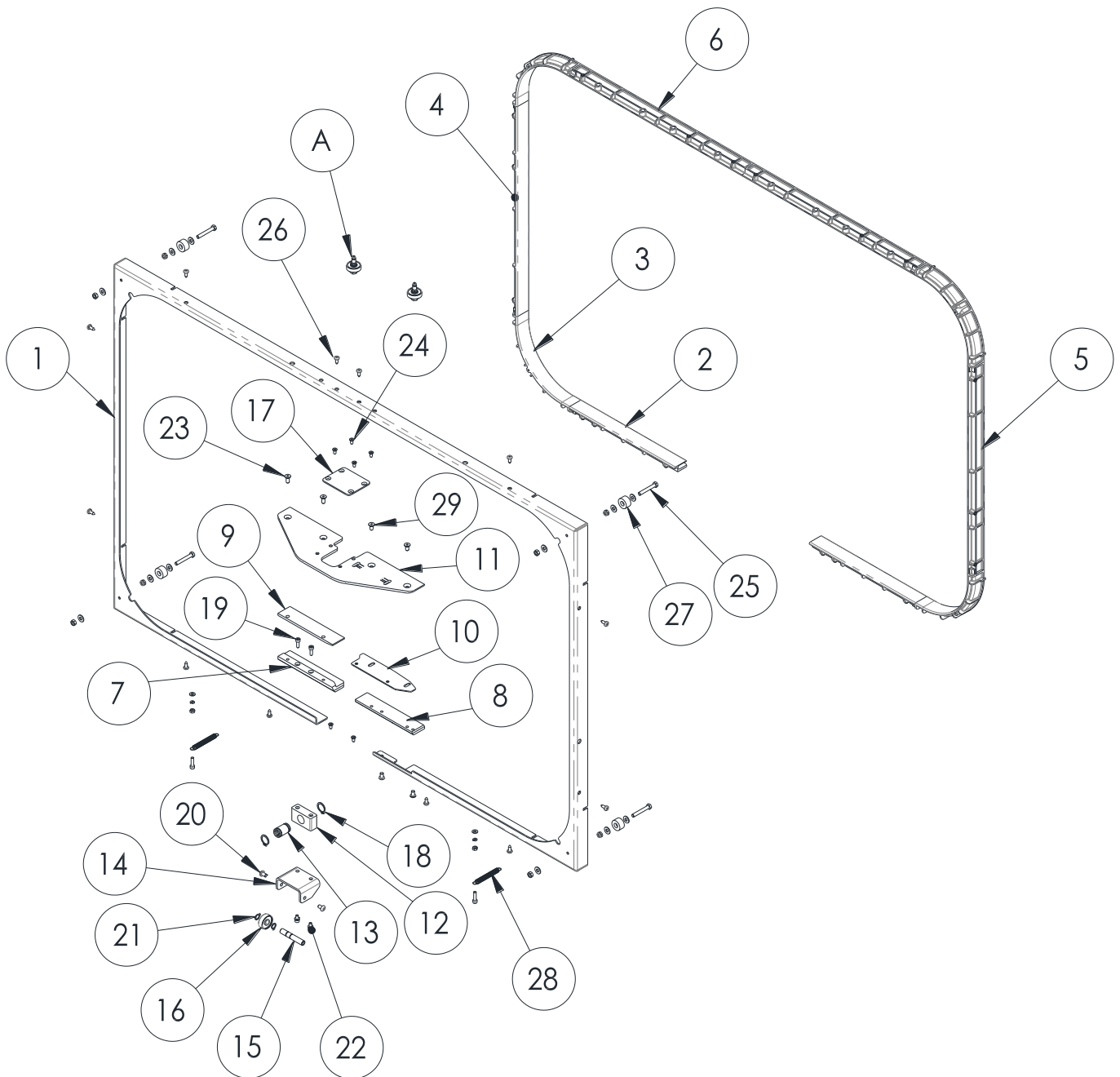


EXTEND

Extend the partnership

FIGURE 6-1 ARCH UNIT			
NO	PART NUMBER	Description	QTY
A		ARCH (850*600MM) - FIG. 7-1	1
B		ARCH SUPPORT UNIT – FIG 8-1	2
C		EJECT PIN UNIT – FIG 9-1	4
D		UPPER ARCH OPEN UNIT FIG 10-1	1
1		ARCH	1
2	P01-054712A	ARCH COVER (RIGHT)	1
3	P01-0549620	BRUSH FIX PLATE	2
4	P13-0001100	BRUSH	2
5	P1101-0104015AZ	SCREW M4*15	8
6	P01-054722A	ARCH COVER (LEFT)	1
7	P01-0686500	ARCH COVER (UPPER)	1
8	P13-0000900	BRUSH (UPPER)	2
9	P01-0549600	BRUSH FIX PLATE (UPPER)	2
10	P02-033870B	ARCH GUIDE SHAFT	1
11	P02-0338900	ARCH GUIDE SEAT	1
12	P1101-0905012AN	SCREW M5*12	6
13	P1101-0704006AB	SCREW M4*6	2
14	P1105-0108B	C-RING S-8	2
15	P01-060850A	ARCH ADJUST PLATE	2
16	P1101-0508070AN	SCREW M8*70	2
17	P1102-0108AZ	HEX NUT, M8	2
18	P06-006500B	CUSHION M8	2
19	P1202-0007300	SPRING	1
20	P1101-0505020AN	SCREW M5*20	1
21	P1103-0205Z	SPRING WASHER $\phi 5$	1
22	P1103-010512N	WASHER $\phi 5 \times 12$	1
23	P1102-0105AN	HEX NUT, M5	1
24	P1101-0505020AN	SCREW M5*20	4
25	P1103-01051001Z	WASHER $\phi 5 \times 10$	4
26	P1103-0205Z	SPRING WASHER $\phi 5$	4
27	P1102-0105AZ	HEX NUT, M5	4
28	P1101-0605010AN	SCREW M5*10	11
29	P1116-P0080	O RING	1
30	P01-0589300	SPACER 1.5t	1

FIG. 7-1 INNER ARCH UNIT





EXTEND

Extend the partnership

FIGURE 7-1 INNER ARCH UNIT

NO	PART NUMBER	Description	QTY
A		BEARING FOLLOWER UNIT – FIG 11-1	2
1		INNER ARCH BRACKET 850*600	1
2	P06-0064000	9~12MM BANDWAY 237	2
3	P06-0064300	9~12MM BANDWAY CORNER	4
4	P06-0064200	9~12MM BANDWAY 410	1
5	P06-0064240	9~12MM BANDWAY 405.5	1
6	P06-0064100	9~12MM BANDWAY 388	2
7	P02-0339100	BANDWAY CONNECTING GUIDE (L)	1
8	P02-033920A	BANDWAY CONNECTING GUIDE (R)	1
9	P01-0554400	ARCH LEFT GUIDE PLATE	1
10	P01-055450B	ARCH RIGHT ADJUSTING PLATE	1
11	P01-055460C	ARCH BRIDGE	1
12	P02-033880A	ARCH GUIDE SEAT	1
13	P1104-260815240	LINEAR BEARING	1
14	P01-0556200	ARCH OPENING BRACKET	1
15	P02-0339000	SHAFT	1
16	P1104-020628ZZ0	BEARING 628ZZ	1
17	P01-055470B	HEATER PLATE COVER	1
18	P1105-0115B	C RING S-15	4
19	P1101-0504012AN	SCREW M4*12	2
20	P1101-0605008AN	SCREW M5*8	4
21	P1105-0108B	C RING S-8	2
22	P1101-0904008AN	SCREW M4*8	4
23	P1101-0405012AN	SCREW M5*12	2
24	P1101-0204008AZ	SCREW M4*8	4
25	P1101-1005035AZ	SCREW M5*35	4
26	P1101-14040080	SCREW M4*8	12
27	P06-006500B	CUSHIONG M8	4
28	P1202-0001200	SPRING	2
29	P1101-0405010AN	SCREW M5*10	2

FIG. 8-1 ARCH SUPPORT UNIT

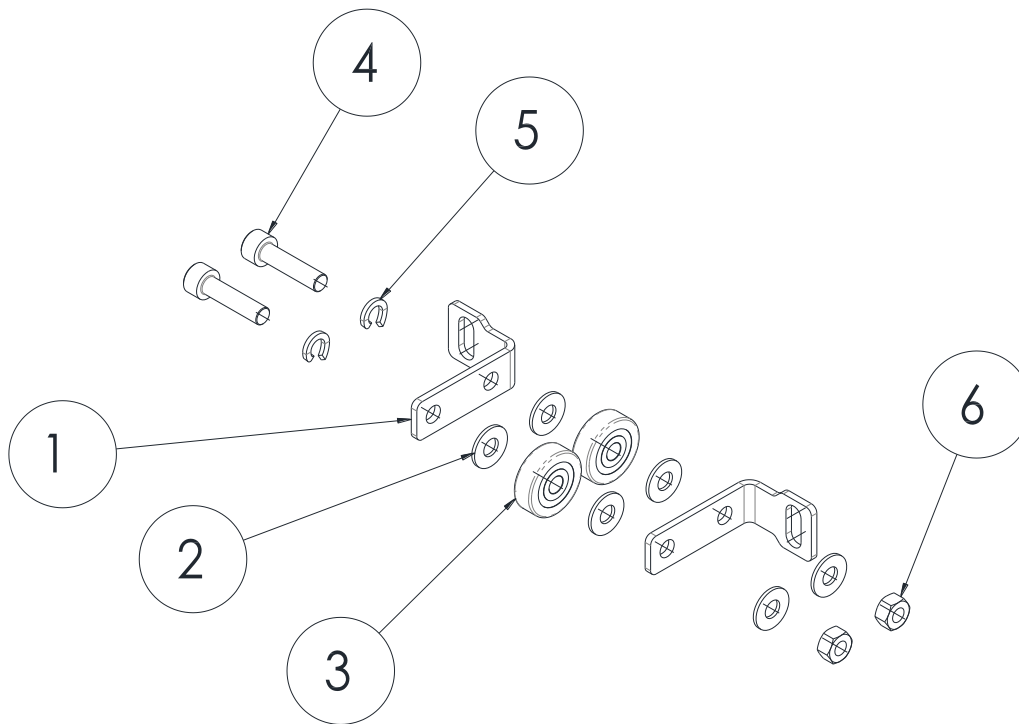


FIGURE 8-1 ARCH SUPPORT UNIT			
NO	PART NUMBER	Description	QTY
1	P01-0611900	SUPPORT BRACKET	2
2	P1103-010512N	WASHER 5	6
3	P1104-020635ZZ2	BEARING	2
4	P1101-0505020AN	SCREW M5*20L	2
5	P1103-0205Z	SPRING WASHER 5	2
6	P1102-0105AN	NUT M5	2

FIG. 9-1 EJECT PIN UNIT

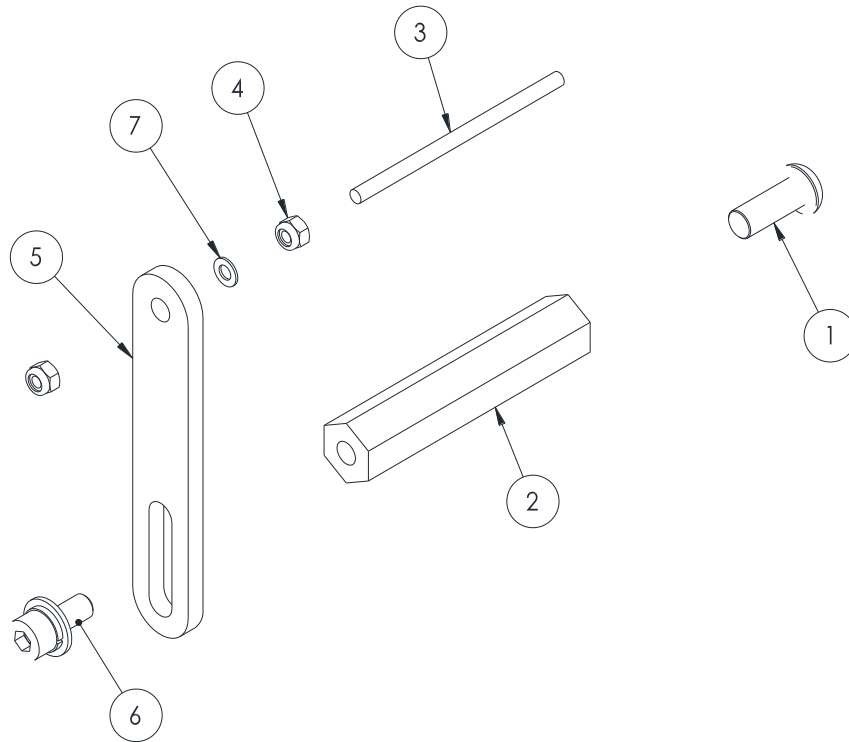


FIGURE 9-1 EJECT PIN UNIT			
NO	PART NUMBER	Description	QTY
1	P1101-0606016AN	SCREW M6*16	1
2	P02-0347800	SUPPORT	1
3	P02-034790C	EJECT PIN	1
4	P1102-0103BZ	NUT, M3	2
5	P01-055540A	PIN FIXER	1
6	P1101-0905012AN	SCREW M5*12	1
7	P1103-010306B5Z	WASHER M3*6*0.5	1

FIG. 10-1 UPPER ARCH OPEN UNIT

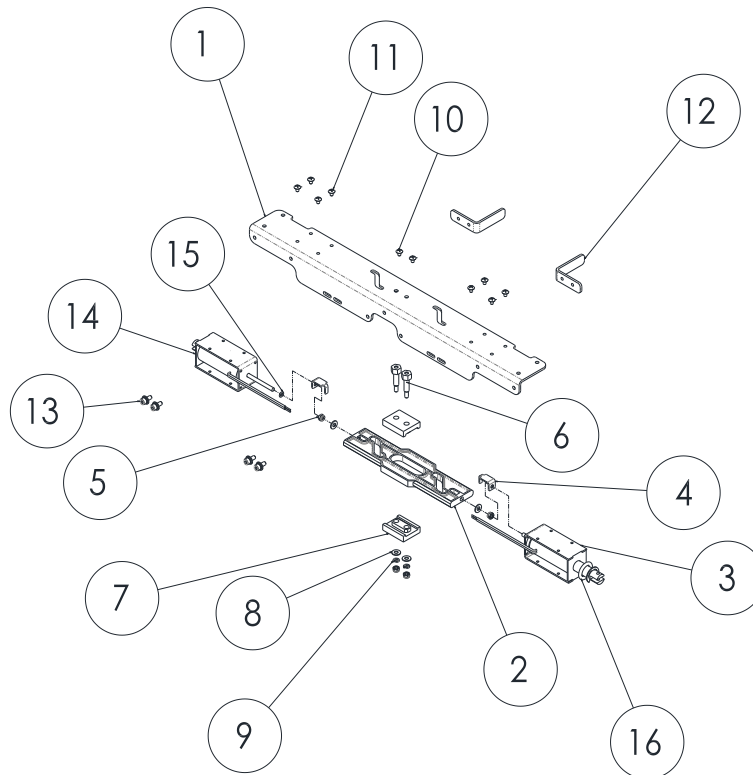


FIGURE 10-1 UPPER ARCH OPEN UNIT

NO	PART NUMBER	Description	QTY
1	P01-054980D	SOLENOID FIX PLATE	1
2	P06-006510B	GUIDE	1
3	BEXS-158-PLUS-070-E01-071-00	ARCH OPENING SOLENOID	1
4	P01-0640000	LIMIT PLATE	2
5	P1102-0105BZ	NUT M5	4
6	P02-0400600	GUIDE FIXER SHAFT	2
7	P06-0075700	GUIDE BLOCK	2
8	P1103-010512N	WASER 5	4
9	P1103-0205Z	SPRING WASHER 5	2
10	P1101-0605010AN	SCREW M5*10	2
11	P1101-0104006AZ	SCREW M4*6L	8
12	P01-0549700	PLATE	2
13	P1101-0905012AN	SCREW M5*12	4
14	BEXS-158-PLUS-070-E01-072-00	ARCH CLOSING SOLENOID	1
15	P1116-P0050	O RING P05	2
16	P1116-P0150	O RING P15	2

FIG. 11-1 BEARING FOLLOWER UNIT

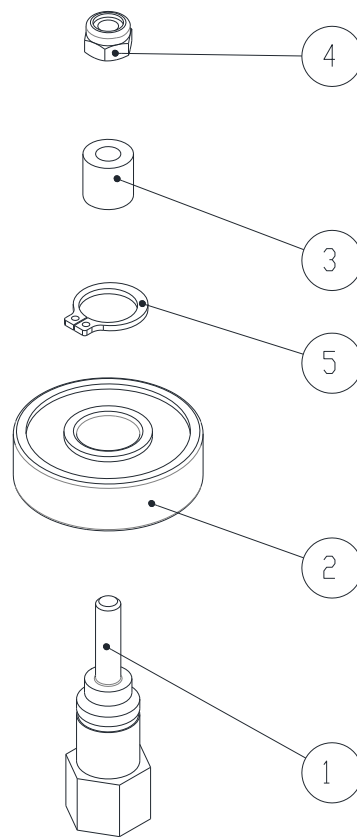


FIGURE 11-1 BEARING FOLLOWER UNIT			
NO	PART NUMBER	Description	QTY
1	P02-034850A	BEARING SEAT	1
2	P1104-026200ZZ0	BEARING	1
3	P1104-05HK04080	BEARING	1
4	P1102-0104BZ	NUT M4	1
5	P1105-0110B	C CLIP	1

FIG. 12-1 MACHINE ASSEMBLE

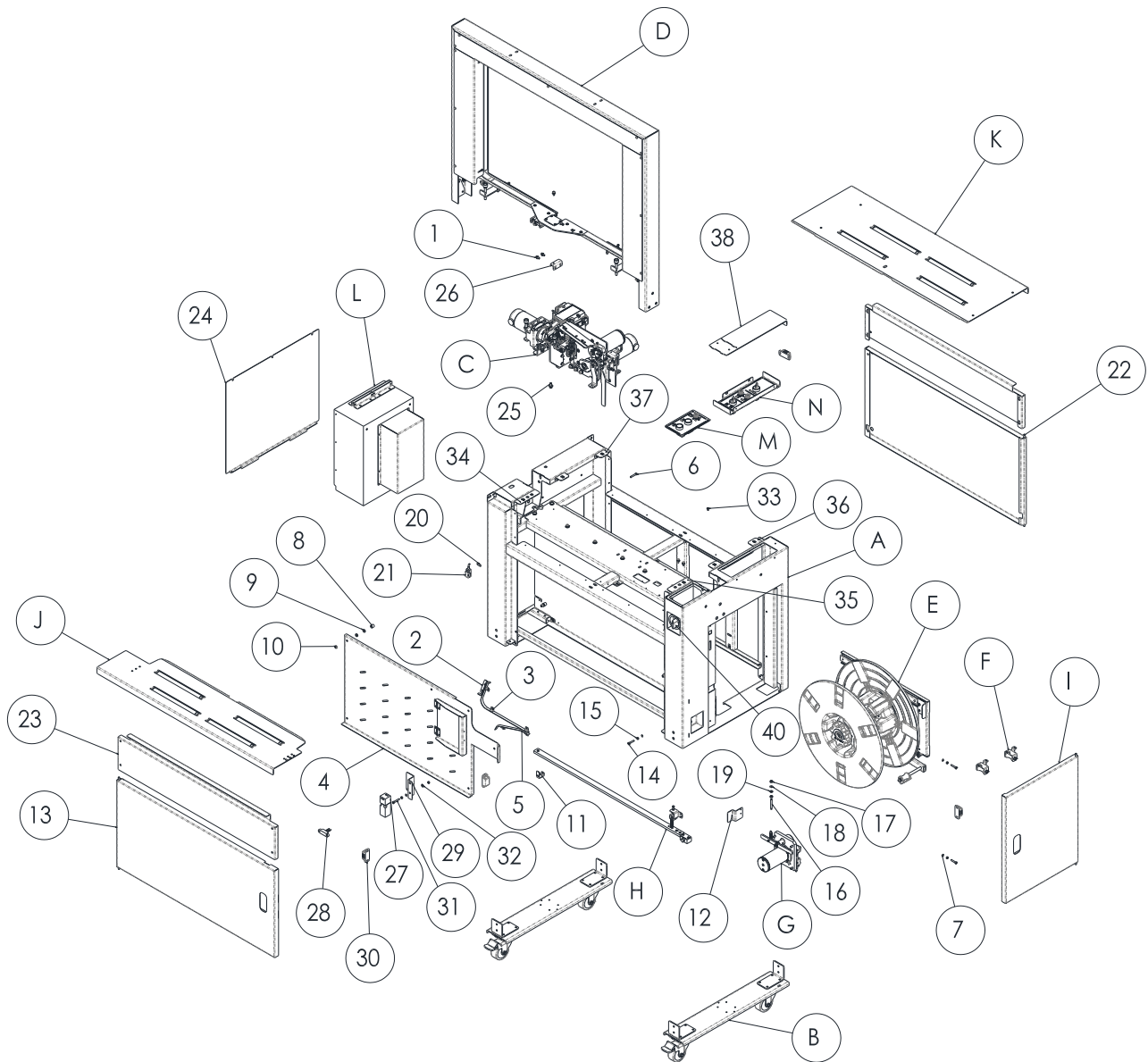


FIGURE 12-1 MACHINE ASSEMBLE

NO	PART NUMBER	Description	QTY
A		MACHINE FRAME UNIT (W 850)	1
B		CASTER UNIT – FIG 1-1	2
C		SEALER UNIT – FIG 19-1	1
D		ARCH UNIT – 850*600 – FIG 6-1	1
E		DISPENSER UNIT – FIG 14-1	1
F		POOL GUIDE ROLLER UNIT – FIG 5-1	2
G		POOL FEED UNIT – FIG 2-1	1
H		POOL SENSOR LEVER 850 – FIG 13-1	1
I		SIDE DOOR UNIT – FIG 15-1	1
J		FRONT TABLE UNIT – FIG 3-1 (W 850)	1
K		REAR TABLE UNIT – FIG 4-1 (W 850)	1
L		ELECTRIC BOX – FIG 31-1	1
M		MAIN PANEL – FIG 32-1	1
N		SUB PANEL – FIG 33-1	1
1	P1101-0905012AN	SCREW M5x12L	6
2	P01-068480B	GUIDE PLATE LEFT	1
3	P01-0684700	GUIDE PLAET RIGHT	1
4	P01-068510A	POOL COVER	1
5	P01-068490B	GUIDE PLATE LOWER	1
6	P1101-1005030AZ	SCREW M5x30L	6
7	P1103-0205Z	SPRING WASHER $\phi 5$	10
8	P06-0064610	POOL SPACER 11L	6
9	P06-0064630	POOL SPACER 3L	12
10	P1102-0705AB	NUT M5	6
11	P01-0575500	SEAT	1
12	P01-0553200	STOPPER	1
13	P01-068500B	FRONT DOOR	1
14	P1101-0505025AN	SCREW M5x25L	3
15	P1102-0105AN	NUT M5	5
16	P02-0338500	ADJUST SHAFT	1
17	P1102-0106AZ	NUT M6	2
18	P1103-0206Z	SPRING WASHER $\phi 6$	1
19	P1103-010612N	WASER 6	2
20	P01-0041700	PROXIMITY SWITCH SEAT	1

FIGURE 12-1 MACHINE ASSEMBLE

NO	PART NUMBER	Description	QTY
21	P0302-010004200	PROXIMITY SWITCH	1
22	P01-068420B	REAR DOOR	1
23	P01-054782A	UPPER COVER	2
24	P01-0548200	SIDE COVER	1
25	P1101-0906016AN	SCREW M6x16L	6
26	P01-0685200	ARCH FIXER	1
27	P0311-020000200	SAFETY SWITCH	1
28	P0311-030000100	SAFETY SWITCH KEY	1
29	P01-0685400	SAFETY SWITCH SEAT	1
30	P1106-010000400	MAGNETIC	3
31	P1101-0505030AN	SCREW M5x30L	1
32	P1103-010512N	WASER 5	1
33	P1101-0104006AZ	SCREW M4x6L	4
34	P01-0686400	TABLE SEAT LEFT-FRONT	1
35	P01-0697100	TABLE SEAT RIGHT-FRONT	1
36	P01-0697200	TABLE SEAT RIGHT-REAR	1
37	P01-0684600	TABLE SEAT LEFT-REAR	2
38	P01-068710A	SUB PANEL	1
39			
40	P0311-010002800	MAIN SWITCH	1

FIG. 13-1 POOL LEVER UNIT

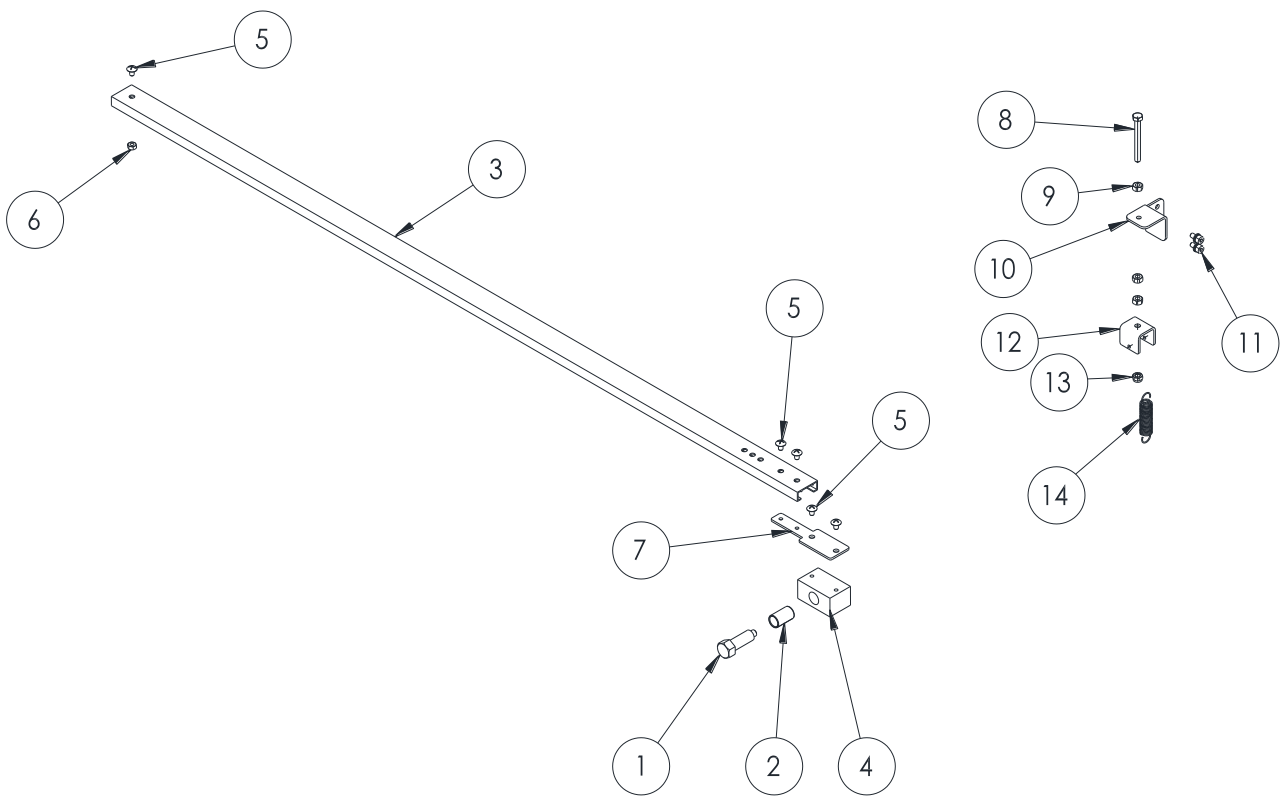


FIGURE 13-1 POOL LEVER UNIT			
NO	PART NUMBER	Description	QTY
1	P02-0348700	POOL LEVER SHAFT	1
2	P1104-0310201	BEARING CB1020	1
3	P02-0352720	POOL LEVER	1
4	P02-0352600	POOL LEVER FIXER	1
5	P1101-0104006AZ	SCREW M4*6	5
6	P1102-0104AN	HEX NUT M4	1
7	P01-0575400	POOL LEVER SUPPORT PLATE	1
8	P1101-1005045AZ	SCREW M5x45L	1
9	P1102-0105AN	HEX NUT M5	3
10	P01-0628510	FIX PLATE	1
11	P1101-0904008AN	SCREW M4x8L	2
12	P01-0628400	ADJUST PLATE	1
13	P1102-0105BZ	HEX NUT M5	1
14	P1202-0007300	SPRING	1

FIGURE 14-1 DISPENSER UNIT			
NO	PART NUMBER	Description	QTY
1	P1124-0001600	SLIDE	2
2	P01-055190G	DISPENSER SEAT	1
3	P02-033930A	DISPENSER SHAFT	1
4	P1104-026304ZZ0	BEARING, 6304ZZ	2
5	P02-0339400	BRAKE ARM SPACER	1
6	P01-0041200	PULLEY BRACKET	1
7	P02-034160A	PULLEY	1
8	P1101-0504030AN	SCREW M4*30	2
9	P1103-0204Z	SPRING WASHER $\phi 4$	7
10	P1101-0506016AN	SCREW M6*16L	5
11	P1102-0106AN	NUT M6	5
12	P1202-0000400	SPRING	1
13	P01-0551700	SLIDE HANDLE	1
14	P01-055180B	FIXING PLATE	1
15	P1106-010000400	SIDE DOOR MAGNET	1
16	P06-0058200	DISPENSER	2
17	P06-0058100	DISPENSER KNOB	1
18	P06-0058300	DISPENSER CONNECT PULLEY	1
19	P06-0058400	BRAKE WHEEL	1
20	P06-0058500	(OPTION) EXTENSION CLAW	3
21	P1105-0120B	C RING S-20	1
22	P1103-0206Z	SPRING WASHER $\phi 6$	4
23	P1101-0204012AZ	SCREW M4*12	2
24	P1102-0104AN	NUT M4	2
25	P01-0133100	DISPENSER SPACER	1
26	P1105-0125B	C RING S-25	1
27	P02-0076300	PIN	1
28	P1109-030801Z	PIN R-08	1
29	P01-0552000	BRAKE ARM	1
30	P02-033950A	PULLEY SHAFT	1
31	P01-0552100	BELT FIXER	1
32	P02-0339600	BELT FIX BLOCK	1

FIGURE 14-1 DISPENSER UNIT			
NO	PART NUMBER	Description	QTY
33	P01-0552200	PLATE	1
34	P1101-0504025AN	SCREW M4*25	2
35	P1102-0104AZ	NUT M4	9
36	P1104-0310201	BUSHING CB 1020	2
37	P01-0552300	BELT FIX PLATE	1
38	P0902-0008900	V-BELT	1
39	P1101-0504035AN	SCREW M4*35	2
40	P1103-010409N	WASHER ψ 4	11
41	P1101-0906016AN	SCREW M6*16L	1
42	P06-000690A	CUSHION CAP	1
43	P1103-010612N	WASHER ϕ 6	1
44	P1103-0206Z	SPRING WASHER ϕ 6	1
45	P01-0585300	PULL HANDLE	1
46	P1101-0904018AN	SCREW M4*18	6
47	P1101-0104006AZ	SCREW M4*6	2
48	P1101-0104012AN	SCREW M4*12	1
49	P1001-0015900	DISPENSER STICKER	1
50	P1101-0908020AN	SCREW M8*20	1
51	P1101-0906012AN	SCREW M6*12	4
52	P1102-0106AZ	NUT M6	1
53	P1101-0904008AN	SCREW M4x8L	3
54	P1101-0508030AN	SCREW M8x30L	1
55	P1102-0108BZ	NUT M8	1
56	P01-0665700	BELT SEAT	1
57	P1103-0208Z	SPRING WASHER ϕ 8	1
58	P1102-0108AZ	NUT M8	1
59	P01-0665800	BELT FIXER	1

FIG. 15-1 SIDE DOOR UNIT

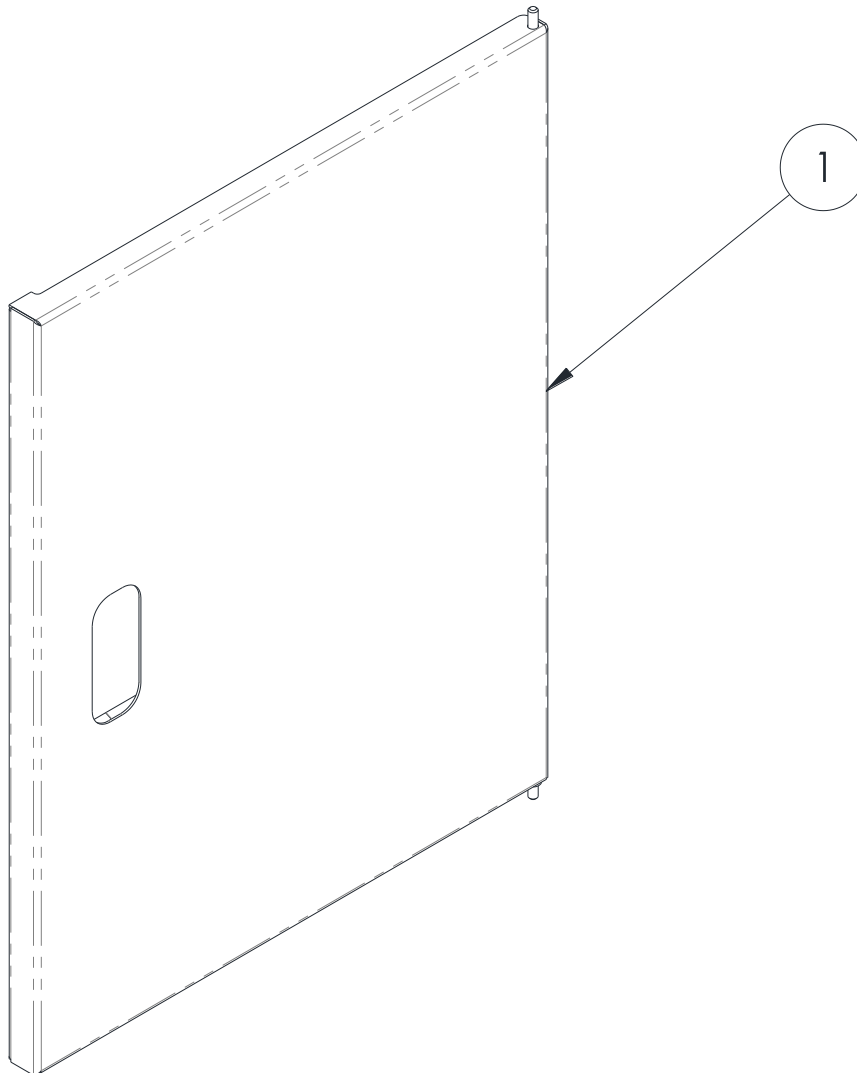


FIGURE 15-1 SIDE DOOR UNIT			
NO	PART NUMBER	Description	QTY
1	P01-0684000	SIDE DOOR	1

FIG. 16-1 FEEDING UNIT

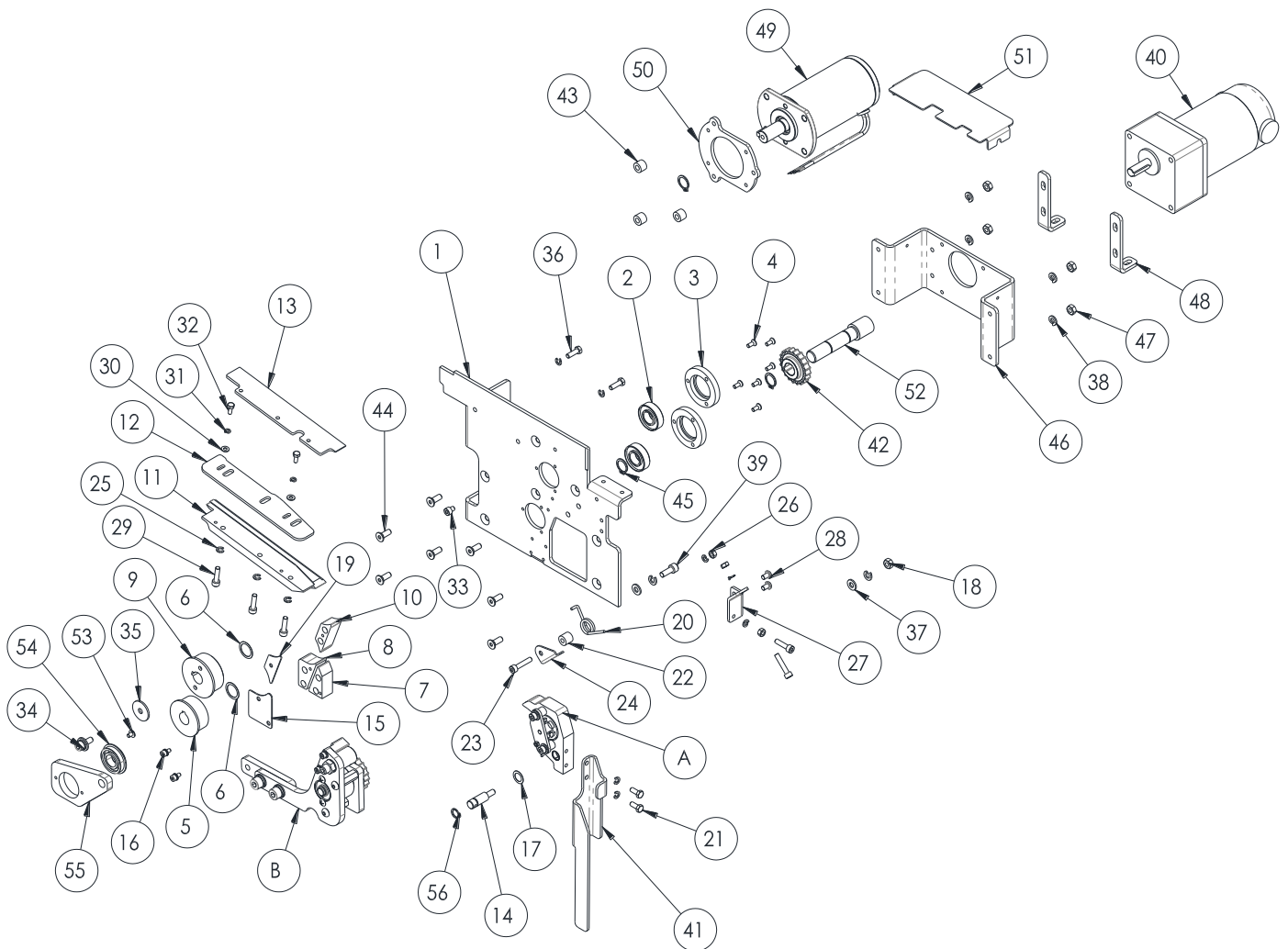


FIGURE 16-1 FEEDING UNIT			
NO	PART NUMBER	Description	QTY
A		FEED DRIVEN UNIT - FIG. 17-1	1
B		TENSION UNIT - FIG. 18-1	1
1	P01-068290A	BASE	1
2	P1104-026002ZZ3	BEARING	2
3	P02-0415000	BEARING SEAT	2
4	P1101-0404010AN	SCREW	6
5	P02-0337910	TENSION ROLLER	1
6	P1103-011521B2S	RING	2
7	P02-0416200	GUIDE RIGHT	1
8	P02-041630A	GUIDE LEFT	1
9	P02-0416600	FEED ROLLER	1
10	P02-0416700	GUIDE UPPER	1
11	P02-041680A	GUIDE	1
12	P01-068410A	ADJUST PLATE	1
13	P02-041690A	GUIDE COVER	1
14	P02-0417600	PIVOT	1
15	P01-0684300	GUIDE COVER LOWER	1
16	P1101-0904008AN	SCREW	2
17	P1103-011016B2S	RING	1
18	P1102-0106AZ	NUT	1
19	P01-068450A	GUIDE COVER UPPER	1
20	P1203-0003200	FEEDING SPRING	1
21	P1101-1005012AZ	SCREW	2
22	P06-0064610	POOL SPACER 11L	1
23	P1101-0505025AN	SCREW	2
24	P01-0685900	SPRING FIXER	1
25	P1103-0205Z	WASHER	10
26	P1102-0105AN	NUT	3
27	P01-0686000	ADJUST PLATE	1
28	P1101-0605008AN	SCREW	2
29	P1101-0505020AN	SCREW	4
30	P1103-010409N	WASHER	2

FIGURE 16-1 FEEDING UNIT			
NO	PART NUMBER	Description	QTY
31	P1103-0204Z	SPRING WASHER	2
32	P1101-1004010AZ	SCREW	2
33	P1101-0505006AN	SCREW	1
34	P1101-0906016AN	SCREW	1
35	P01-0686700	WASHER	1
36	P1101-1005016AZ	SCREW	2
37	P1103-010613N	WASHER	2
38	P1103-0206Z	SPRING WASHER	6
39	P1101-0506016AN	SCREW	1
40	P0501-0019600	M3 MOTOR GEARBOX	1
41	P01-0685800	LEVER	1
42	P0701-0004800	GEAR	1
43	P02-0415200	SPACER	3
44	P1101-0406016AN	SCREW	7
45	P1105-0115B	C CLIP	3
46	P01-0695400	M3 BRACKET	1
47	P1102-0106AN	NUT	4
48	P01-0695500	BASE SUPPORT	2
49	P0501-0019500	M2 MOTOR	1
50	P01-0686100	M2 BRACKET	1
51	P01-0687000	COVER	1
52	P02-0414800	TENSION SHAFT	1
53	P1101-0104006AZ	SCREW	1
54	P1104-076002ZZ0	BEARING	1
55	P02-0414700	BEARING LIMIT SEAT	1
56	P1105-0110B	C CLIP	1

FIG. 17-1 **FEED DRIVEN UNIT**

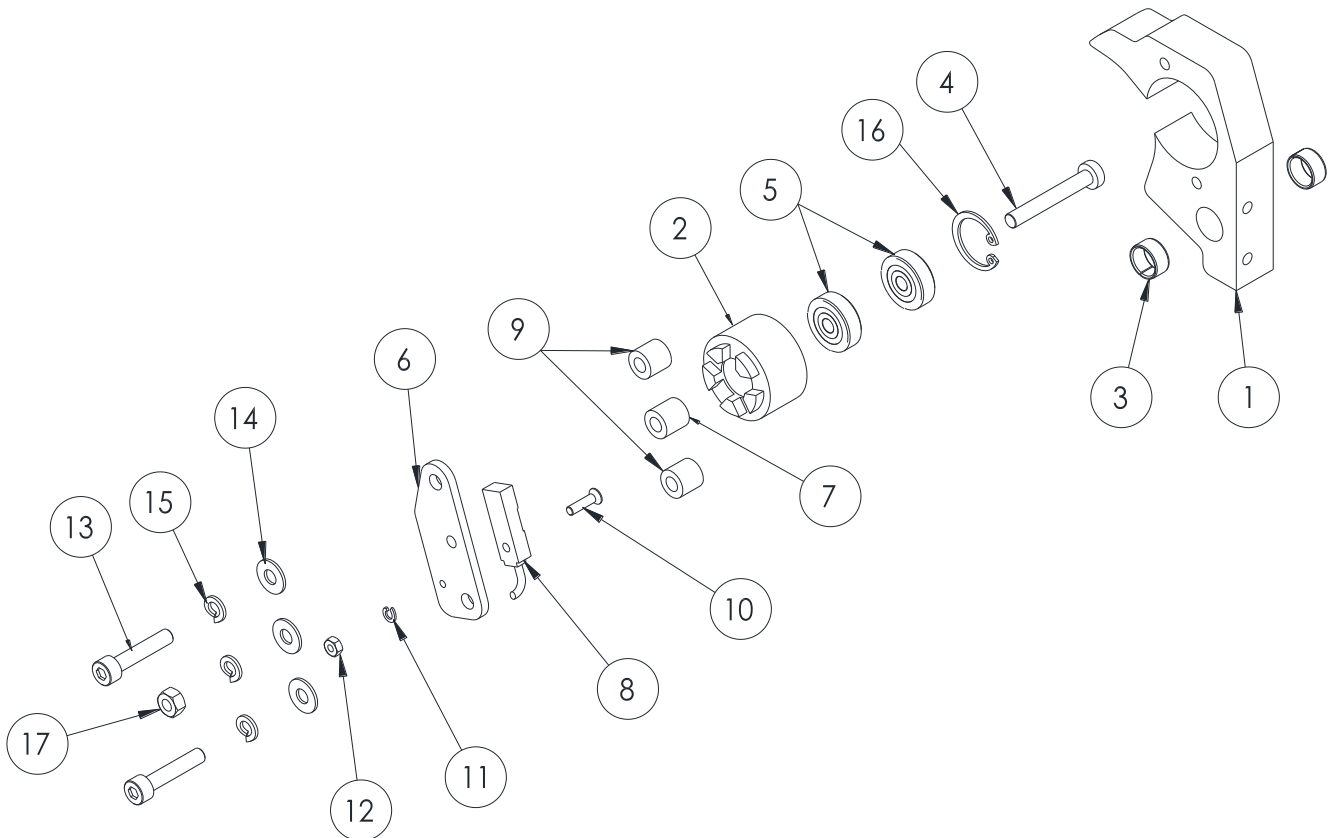


FIGURE 17-1 FEED DRIVEN UNIT

NO	PART NUMBER	Description	QTY
1	P02-041700A	FEEDING SEAT	1
2	P02-041730A	FEED DRIVEN ROLLER	1
3	P1104-0310060	BUSHING	2
4	P1101-1005035AZ	SCREW	1
5	P1104-020635ZZ2	BEARING	2
6	P01-068440A	DETECT PLATE	1
7	P02-041740A	SPACER	1
8	P0302-010000100	PROXIMITY SWITCH	1
9	P02-0417500	SPACER	2
10	P1101-0203012AZ	SCREW	1
11	P1103-0203Z	SPRING WASHER	1
12	P1102-0103AZ	NUT	1
13	P1101-0505025AN	SCREW	2
14	P1103-010512N	WASHER	2
15	P1103-0205Z	SPRING WASHER	2
16	P1105-0219B	R CLIP	

FIG. 18-1 TENSION UNIT

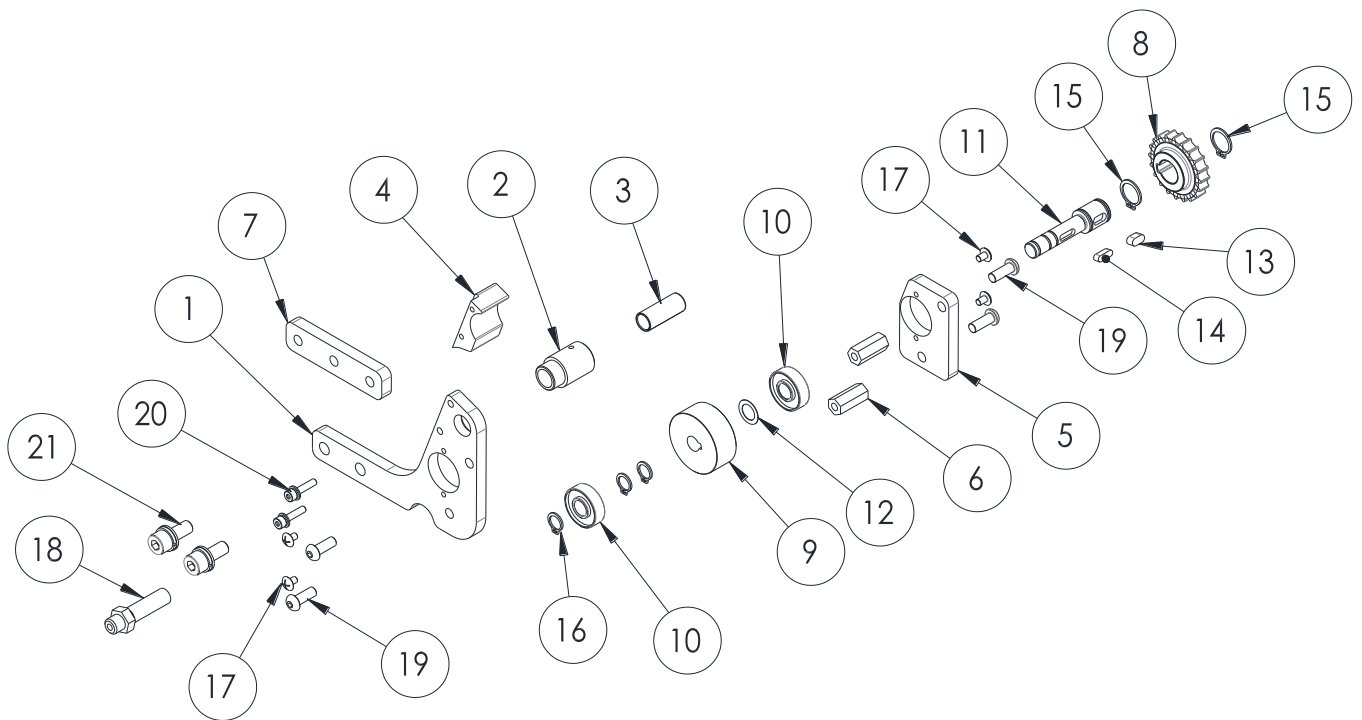


FIGURE 18-1 TENSION UNIT			
NO	PART NUMBER	Description	QTY
1	P01-0683100	TENSION ARM	1
2	P02-0417200	PIVOT	1
3	P1104-0310300	BUSHING	1
4	P02-0417100	TENSION GUIDE	1
5	P01-068320A	TENSION BRACKET	1
6	P02-0415100	TENSION SPACER	2
7	P01-0687400	TENSION ARM - SHORT	1
8	P0701-0004800	TENSION GEAR	1
9	P02-0337210	TENSION DRIVEN ROLLER 9~15mm	1
10	P1104-026000ZZ2	BEARING	2
11	P02-0416500	TENSION ARM SHAFT	1
12	P1103-011016B2S	WASHER $\psi 10^* \psi 16^* 0.2$	2
13	P1108-010505010G	KEY 5*5*10	1
14	P1108-010404012G	KEY 4*4*12	1
15	P1105-0115B	C RING S-15	2
16	P1105-0110B	C RING S-10	3
17	P1101-0104006AZ	SCREW M4x6	4
18	P02-0416400	TENSION SHAFT	1
19	P1101-0606016AN	SCREW M6x16	4
20	P1101-0904018AN	SCREW M4x18	2
21	P1101-0908020AN	SCREW M8x20	2

FIG. 19-1 SEALER UNIT

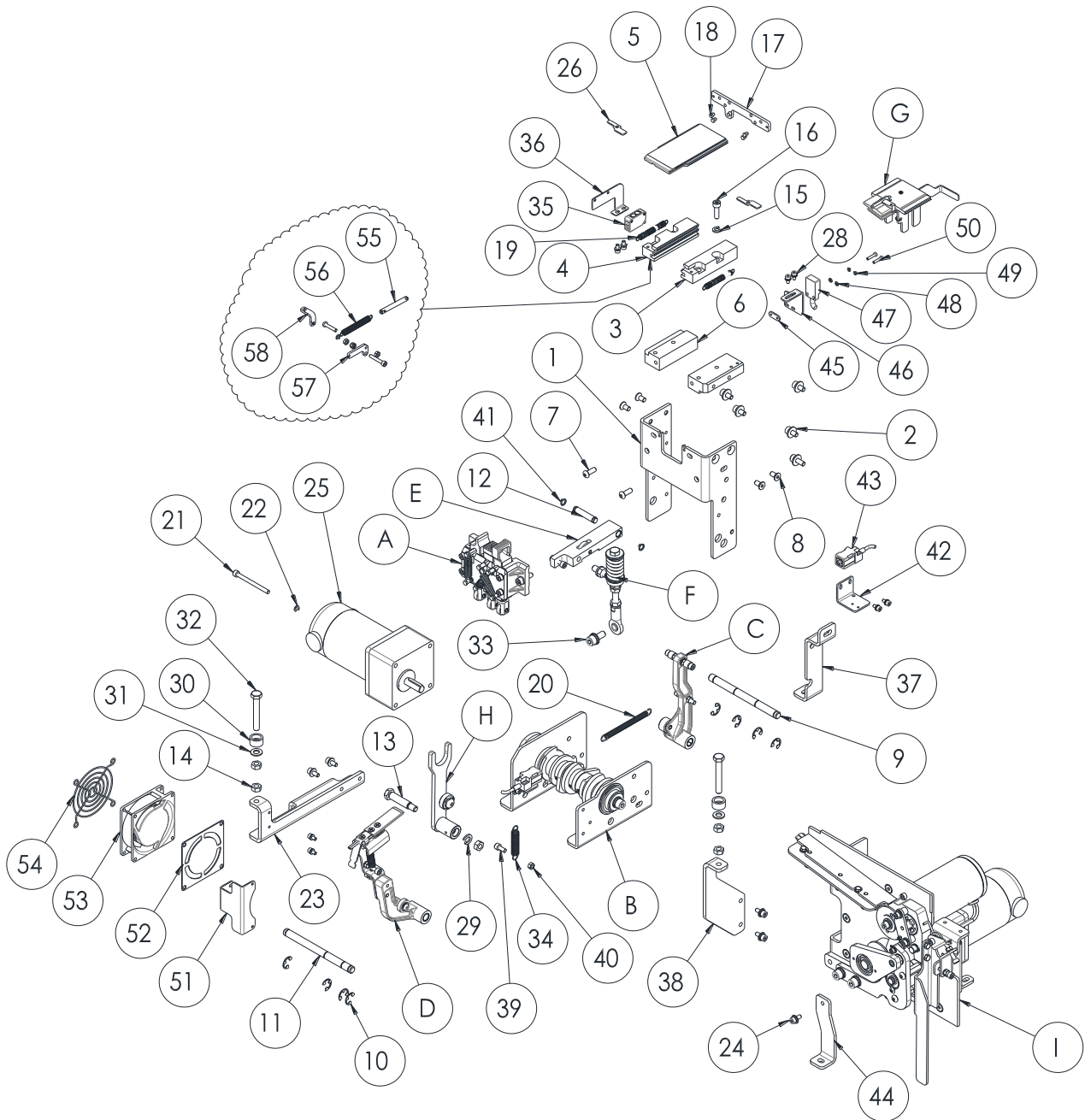


FIGURE 19-1 SEALER UNIT

NO	PART NUMBER	Description	QTY
A		CLAMP SEAT UNIT - FIG. 20-1	1
B		CAM UNIT - FIG. 24-1	1
C		SEPERATOR ARM UNIT - FIG. 25-1	1
D		HEATER PLATE UNIT - FIG. 26-1	1
E		- FIG. 27-1	1
F		- FIG. 28-1	1
G		SEPARATING PLATE UNIT - FIG. 29-1	1
H		ARCH OPENER UNIT - FIG. 30-1	1
I		FEEDING UNIT - FIG. 16-1	1
1	P01-068300A	CLAMP SEAT	1
2	P1101-0906012AN	SCREW M6x12	5
3	P02-041550A	SUPPORT BLOCK – RIGHT	1
4	P02-041560A	SUPPORT BLOCK - LEFT	1
5	P02-033400D	SLIDING TABLE	1
6	P02-041570A	SUPPORT BLOCK	2
7	P1101-0606016AN	SCREW M6x16	2
8	P1101-0406012AN	SCREW M6x12	4
9	P02-0415800	ARM SHAFT	1
10	P1105-0309B	E CLIP	8
11	P02-0415900	HEATER ARM SHAFT	1
12	P02-0416000	TENSION ARM SHAFT	1
13	P02-0414500	ARCH OPENER SHAFT	1
14	P1102-0108AZ	NUT	5
15	P1103-0206Z	SPRING WASHER	1
16	P1101-0506020AN	SCREW M6x20	1
17	P01-068380A	CONNECT PLATE	1
18	P06-006530A	CUSHION	4
19	P1202-0010600	SLIDING TABLE SPRING	2
20	P1202-001140A	FEEDING SPRING	1
21	P1101-0505060AN	SCREW M5x60	1
22	P1103-0205Z	SPRING WASHER	1
23	P01-0686200	SUPPORT - LEFT	1
24	P1101-0905012AN	SCREW M5x12	5
25	P0501-0019400	M1 MOTOR GEARBOX	1

**EXTEND**

Extend the partnership

FIGURE 19-1 SEALER UNIT

NO	PART NUMBER	Description	QTY
26	P01-0557300	LIMIT PLATE	2
27	P1101-0906016AN	SCREW M6x16	1
28	P1101-0904008AN	SCREW M4x8	8
29	P1103-0208Z	SPRING WASHER	1
30	P06-006500B	CUSHION	2
31	P1103-010816N	WASHER	2
32	P1101-1008055AHZ	SCREW M8x55	2
33	P1101-0908020AN	SCREW M8x20	1
34	P1202-0000100	HEATER SPRING	1
35	P0302-020003210	PHOTO EYE	1
36	P01-068760A	PHOTO EYE SEAT	1
37	P01-0683500	TENSION LEVER SUPPORT	1
38	P01-068720A	SUPPORT - RIGHT	1
39	P1101-0505012AN	SCREW	1
40	P1102-0105AN	NUT	1
41	P1105-0108B	C CLIP	2
42	P01-0687500	PROXIMITY SWITCH SEAT	1
43	P0302-010000200	PROXIMITY SWITCH	1
44	P01-0687300	SHAFT SUPPORT	1
45	P01-0631500	PROXIMITY SWITCH SEAT	1
46	P01-0683700	PROXIMITY SWITCH ADJUST PLATE	1
47	P0302-010000300	PROXIMITY SWITCH	1
48	P1103-010306B5Z	WASHER	2
49	P1103-0203Z	SPRING WASHER	2
50	P1101-0303015AZ	SCREW	2
51	P01-0686300	FAN SEAT	1
52	P01-0697300	FAN COVER	1
53	P0303-010002000	FAN	1
54	P0303-020000100	FAN NET	1
55	P02-0338500	SHAFT	1
56	P1202-0002800	SPRING	1
57	P01-0700700	LEVER	1
58	P01-0700800	FIX PLATE	1

FIG. 20-1 CLAMP SEAT UNIT

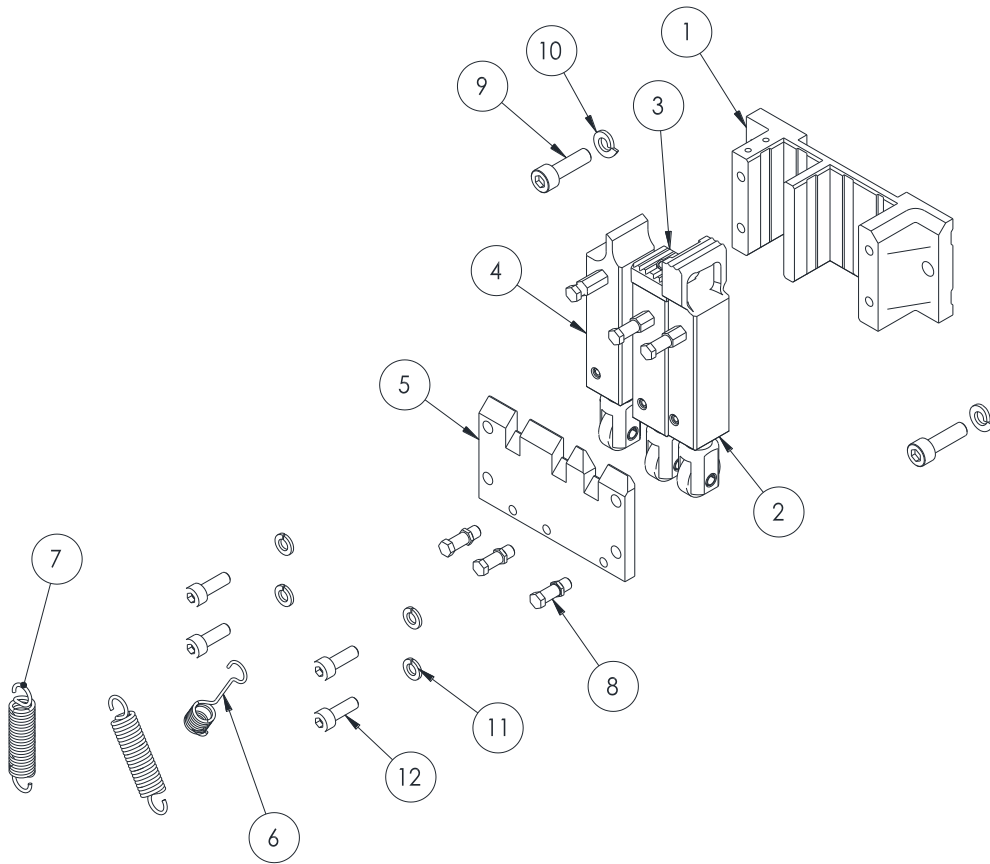


FIGURE 20-1 CLAMP SEAT UNIT			
NO	PART NUMBER	Description	QTY
1	P02-033330A	CLAMP SEAT	1
2	P02-0361800	END GRIPPER UNIT	1
3	P02-0361900	WELDING CLAMP UNIT	1
4	P02-0362000	HOLDING GRIPPER UNIT	1
5	P02-033340A	CLAMP SEAT COVER	1
6	P1202-0011310	SPRING	1
7	P1202-0009100	SPRING	2
8	P02-0333600	SCREW	3
9	P1101-0506020AN	SCREW M5x10	2
10	P1103-0206Z	SPRING WASHER φ6	2
11	P1103-0205Z	SPRING WASHER φ5	4
12	P1101-0505015AN	SCREW M5x15	4

FIG. 21-1 **END GRIPPER UNIT**

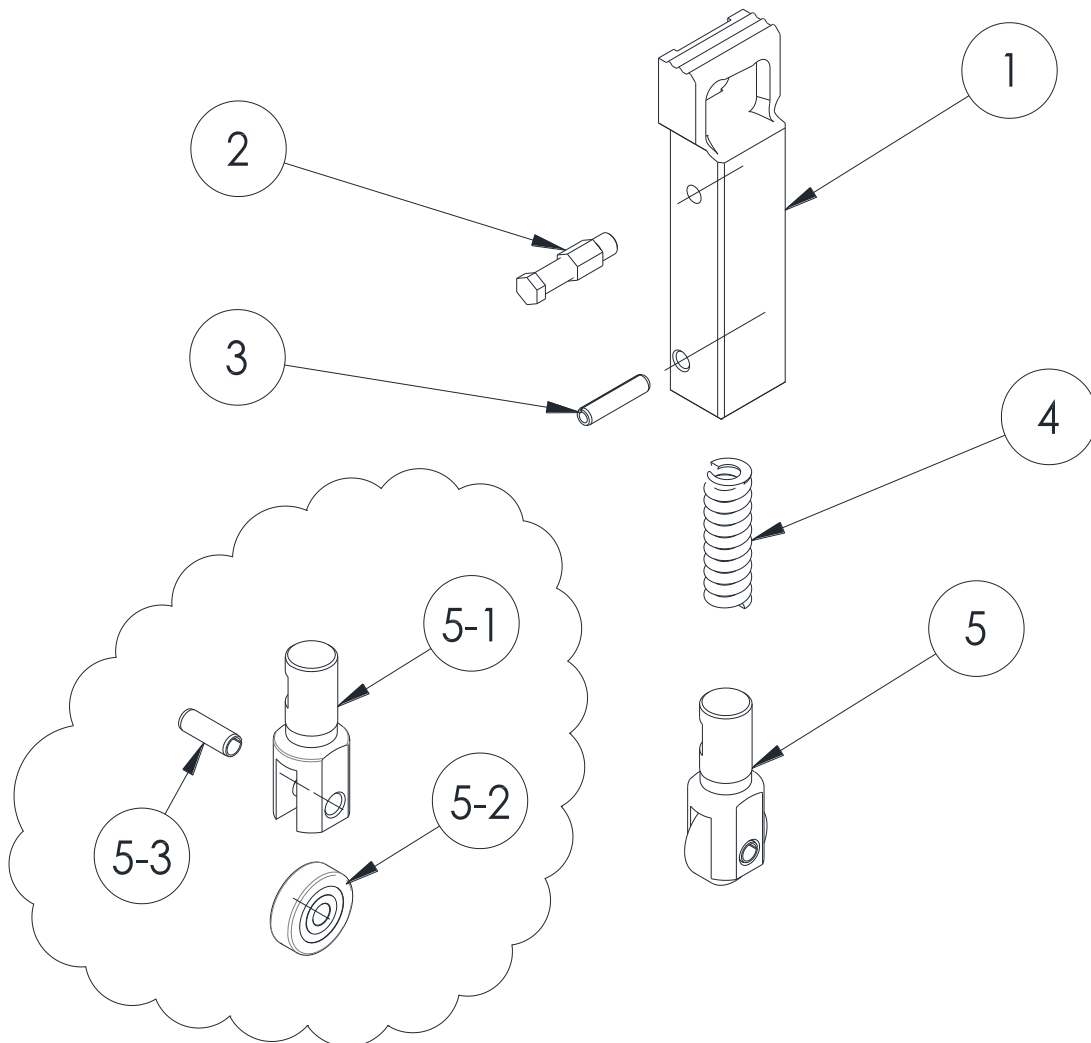


FIGURE 21-1 END GRIPPER UNIT			
NO	PART NUMBER	Description	QTY
1	P02-033290B	END GRIPPER	1
2	P02-0333500	HOOK BOLT	1
3	P1109-0104018B	SPRING PIN, 4 X 18L	1
4	P1201-0004600	COMPRESSION SPRING	1
5	P02-0363200	CAM FOLLOWER UNIT	1
5-1	P02-0332800	CAM FOLLOWER	1
5-2	P1104-020635ZZ2	BEARING 635ZZ	1
5-3	P1109-0105014B	SPRING PIN 5 X 14L	1

FIG. 22-1 WELDING CLAMP UNIT

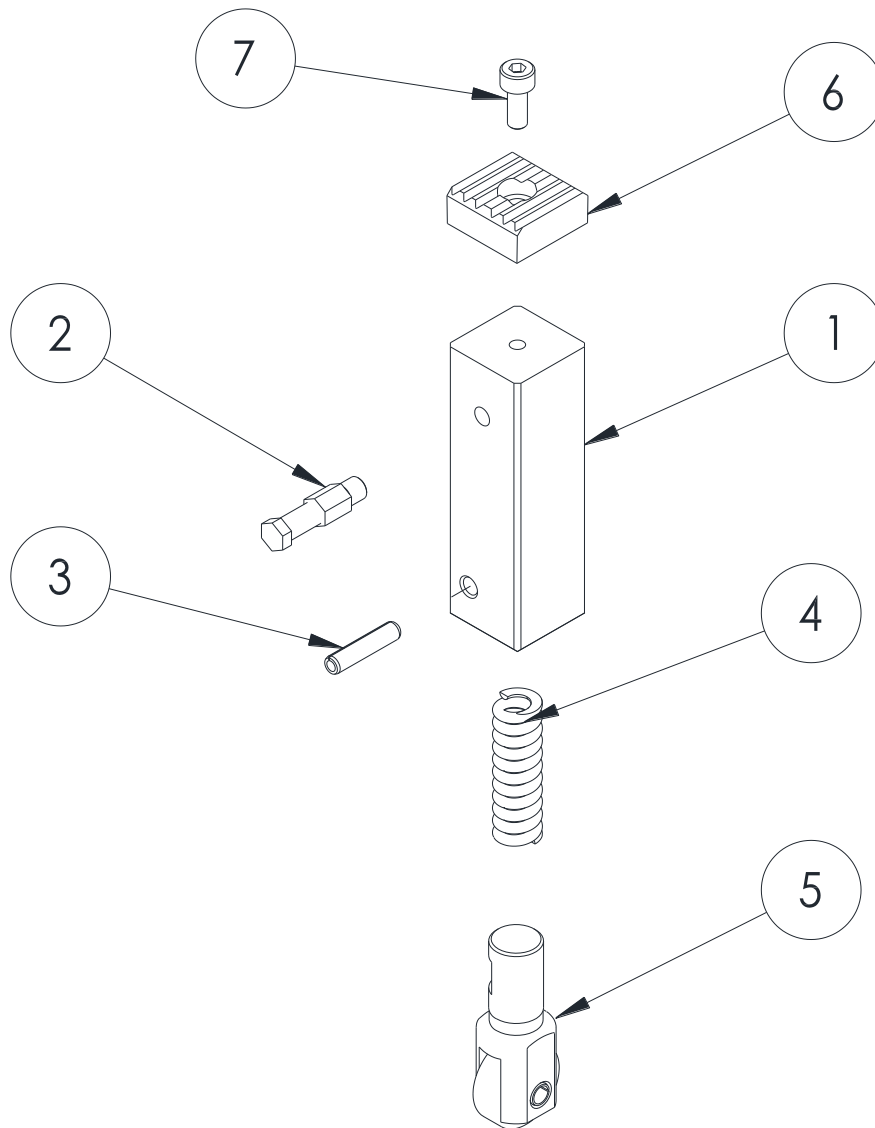


FIGURE 22-1 WELDING CLAMP UNIT			
NO	PART NUMBER	Description	QTY
1	P02-033300A	WELDING CLAMP	1
2	P02-0333500	HOOK BOLT	1
3	P1109-0104018B	SPRING PIN 4 X 18L	1
4	P1201-0004600	COMPRESSION SPRING	1
5	P02-0363200	CAM FOLLOWER UNIT	1
6	P02-033320A	CUTTER LOWER	1
7	P1101-0504010AN	SCREW M4 X 10	1

FIG. 23-1 HOLDING GRIPPER UNIT

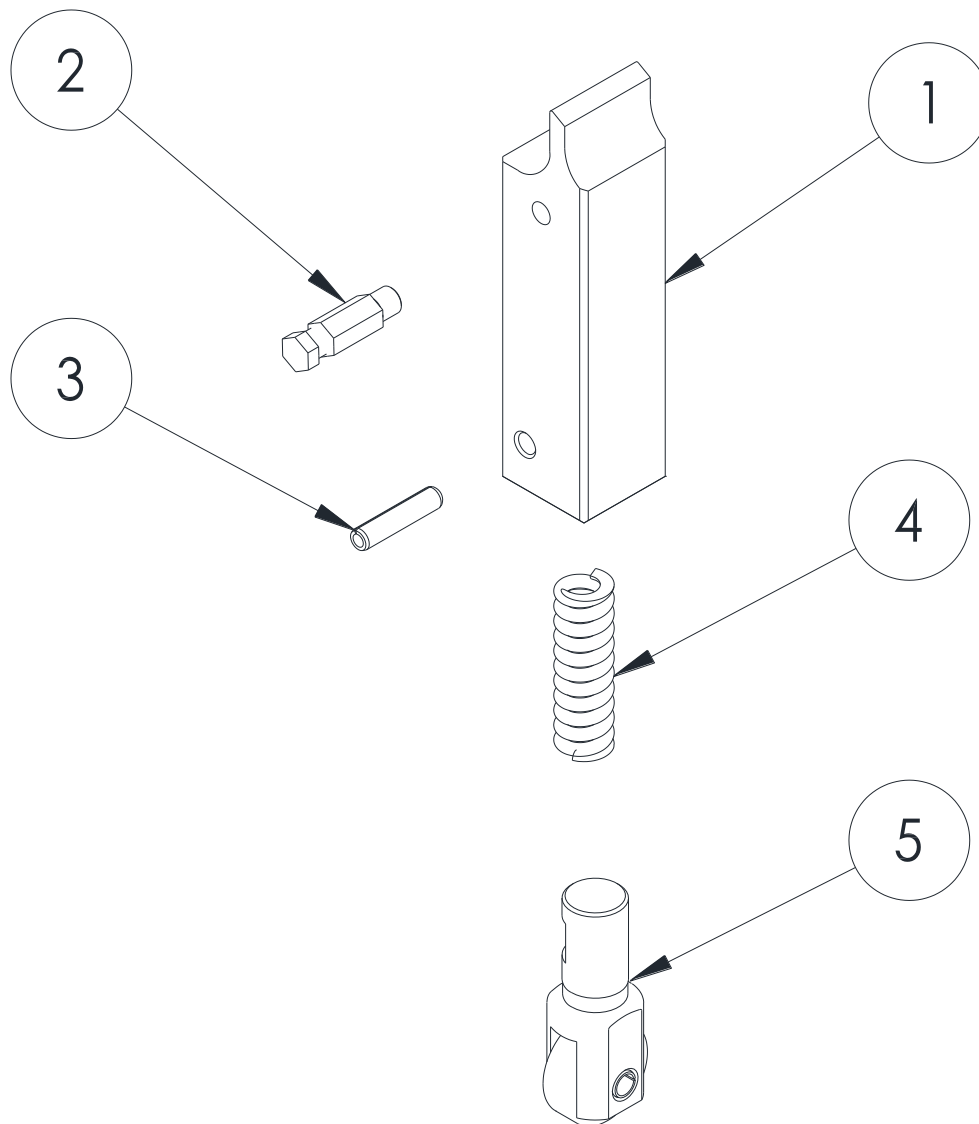


FIGURE 23-1 HOLDING GRIPPER UNIT			
NO	PART NUMBER	Description	QTY
1	P02-033310A	HOLDING GRIPPER	1
2	P02-0076600	HOOK BOLT	1
3	P1109-0104018B	SPRING PIN 4 X 18L	1
4	P1201-0004600	SPRING	1
5	P02-0363200	CAM FOLLOWER UNIT	1

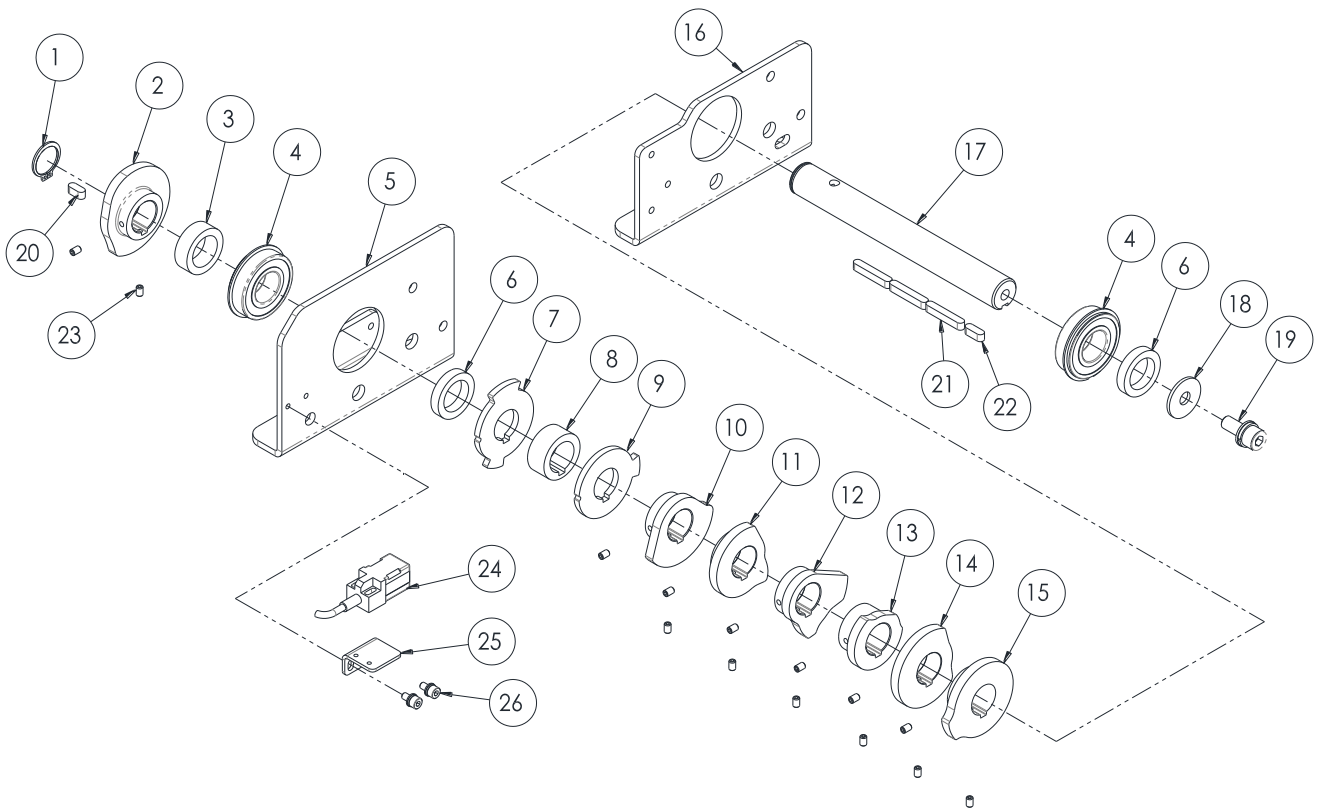
FIG. 24-1
CAM UNIT


FIGURE 24-1 CAM UNIT			
NO	PART NUMBER	Description	QTY
1	P1105-0120B	C CLIP	1
2	P02-0335000	ARCH CAM	1
3	P02-0335300	SPACER	1
4	P1104-076004ZZ1	BEARING	2
5	P01-068330B	SEAT – LEFT	1
6	P02-0335500	SPACER	2
7	P01-0612100	POSITION CAM	1
8	P02-0360400	SPACER	1
9	P01-0612200	HOME CAM	1
10	P02-033560B	HOLDING GRIPPER CAM	1
11	P02-0335700	SLIDING TABLE CAM	1
12	P02-033580A	CUTTER CAM	1
13	P02-033590A	END GRIPPER CAM	1
14	P02-0336000	HEATER CAM	1
15	P02-041530A	TENSION CAM	1
16	P01-068340A	SEAT - RIGHT	1
17	P02-0416100	CAM SHAFT	1
18	P01-0559300	WASHER	1
19	P1101-0908020AN	SCREW M8 X 20	1
20	P1108-010505012G	KEY 5*5*12	1
21	P1108-010505030G	KEY 5*5*30	3
22	P1108-010505014G	KEY 5*5*14	1
23	P1101-0704006AB	SCREW M4 X 6	14
24	P0302-010000200	PROXIMITY SWITCH	1
25	P01-068390A	PROXIMITY SWITCH SEAT	1
26	P1101-0904008AN	SCREW M4 X 8	2

FIG. 25-1 SEPARATOR ARM UNIT

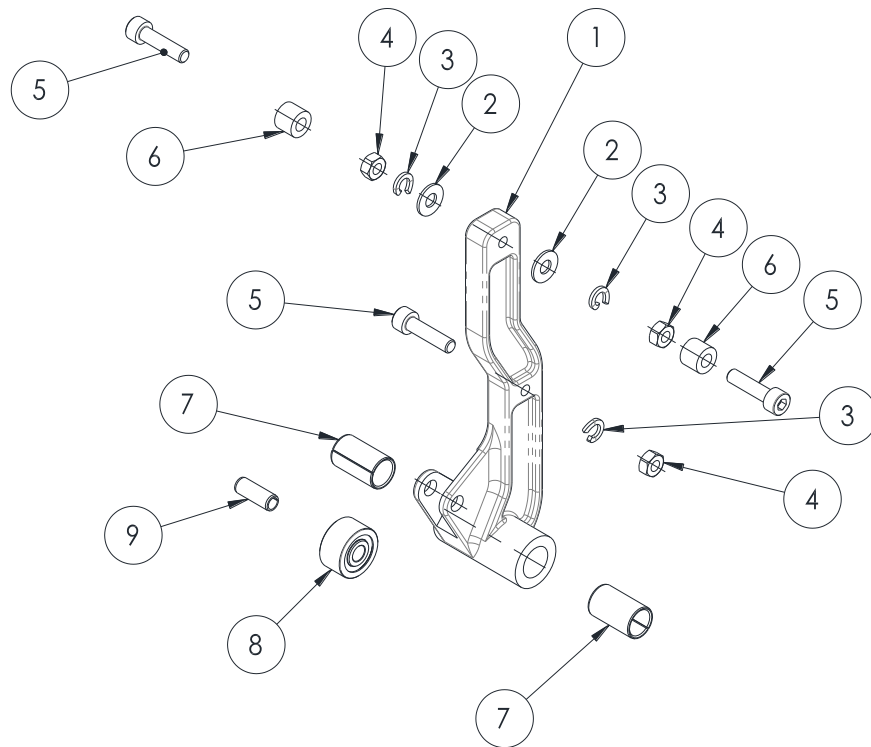


FIGURE 25-1 SEPERATOR ARM UNIT			
NO	PART NUMBER	Description	QTY
1	P02-0334300	SEPERATOR ARM	1
2	P1103-010512N	WASHER $\phi 5 \times 12$	2
3	P1103-0205Z	SPRING WASHER $\phi 5$	3
4	P1102-0105AZ	NUT M5	3
5	P1101-0505020AN	SCREW M5 X 20	3
6	P02-0025400	BUSH	2
7	P1104-0310201	BUSHING CB 1020	2
8	P1104-05NAST6ZZ0	BEARING	1
9	P1109-0106016B	SPRING PIN 6 X 16	1

FIG. 26-1 HEATER PLATE UNIT

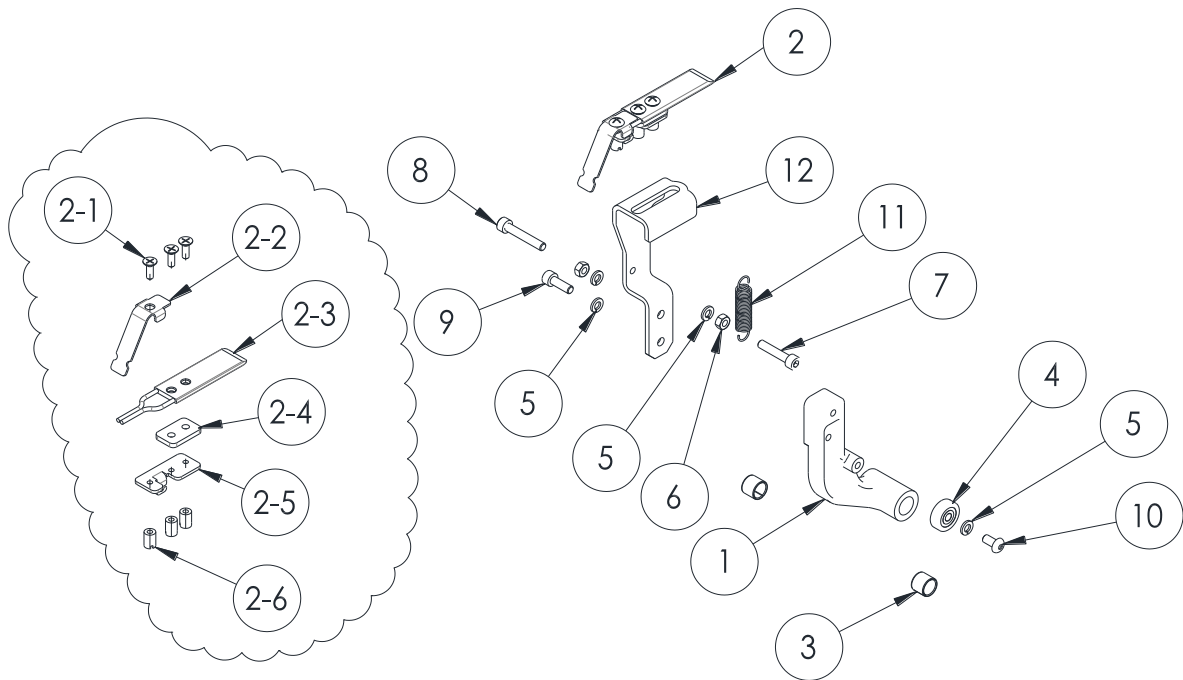


FIGURE 26-1 HEATER PLATE UNIT

NO	PART NUMBER	Description	QTY
1	P02-0334500	HEATER ARM	1
2	P02-0361700	HEATER PLATE ASSEM	1
2-1	P1101-0204012AS	SCREW	3
2-2	P01-055720C	CABLE FIXER	1
2-3	P0314-01000140A	HEATER	1
2-4	P02-0334600	HEATER WASHER	1
2-5	P01-055710B	HEATER SEAT	1
2-6	P02-0334710	HEATER FIXER	3
3	P1104-0310101	BEARING CB1010	2
4	P1104-020635ZZ2	BEARING 635ZZ	1
5	P1103-0205Z	SPRING WASHER $\phi 5$	4
6	P1102-0105AZ	NUT M5	2
7	P1101-0505025AN	SCREW M5*25	1
8	P1101-0505030AN	SCREW M5*30	1
9	P1101-0505015AN	SCREW M5*15	1
10	P1101-0605010AN	SCREW M5*10	1
11	P1202-0001000	SPRING	1
12	P01-055700A	SPRING SEAT	1

FIG. 27-1 TENSION LEVER UNIT

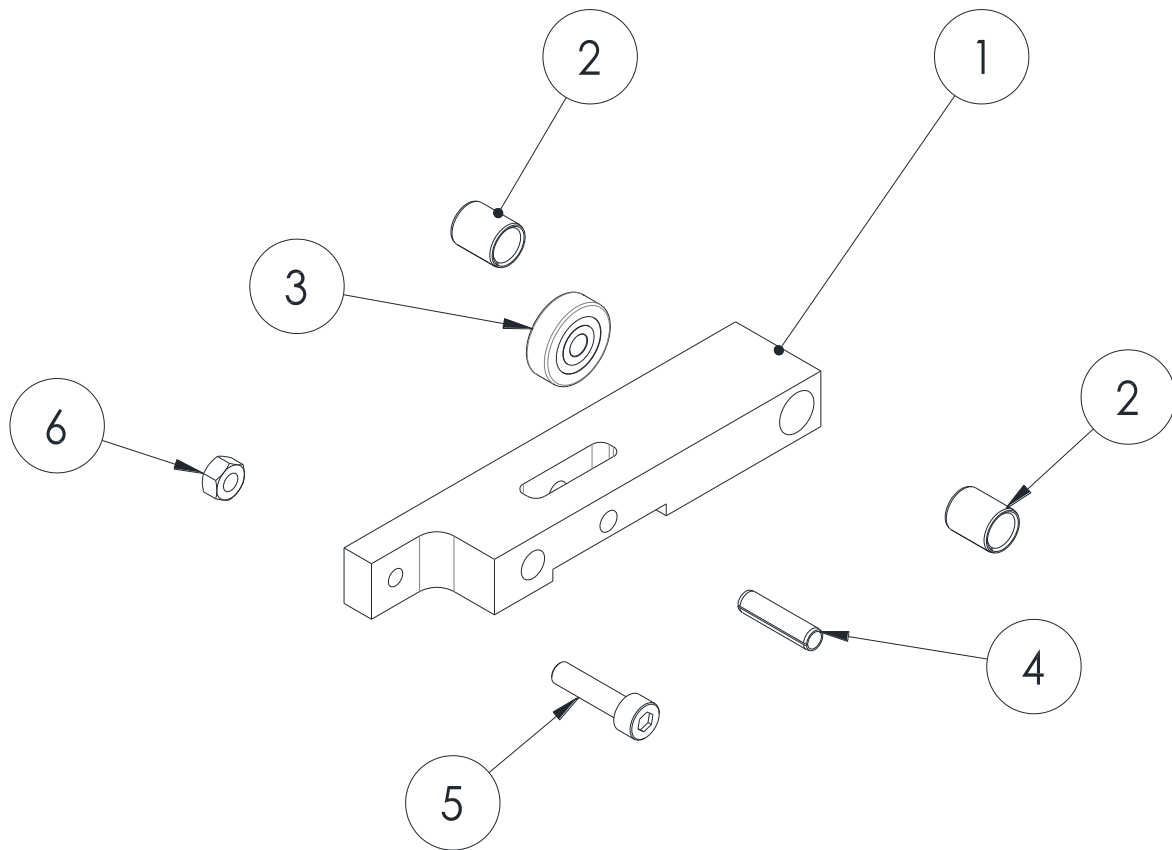


FIGURE 27-1 TENSION LEVER UNIT			
NO	PART NUMBER	Description	QTY
1	P02-041490A	TENSION LEVER	1
2	P1104-0308120	BUSHING	2
3	P1104-020635ZZ2	BEARING	1
4	P1109-0105020B	SPRING PIN 5 X 20L	1
5	P1101-0505020AN	SCREW M5*20L	1
6	P1102-0105DZ	NUT M5	1

FIG. 28-1 TENSION SPRING UNIT

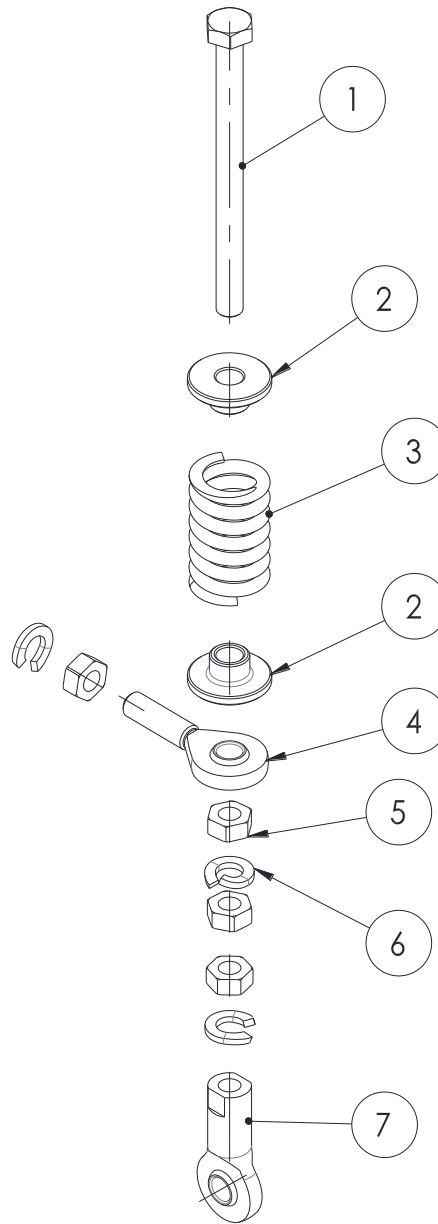


FIGURE 28-1 TENSION SPRING UNIT			
NO	PART NUMBER	Description	QTY
1	P1101-1008100AZ	SCREW M8*100L	1
2	P02-0415400	TENSION SHAFT	2
3	P1201-0004700	SPRING	1
4	P1104-060001500	ROD END	1
5	P1102-0108AZ	NUT M8	4
6	P1103-0208Z	SPRING WASHER $\phi 8$	3
7	P1104-060001600	ROD END	1

FIG. 29-1 SEPARATING PLATE UNIT

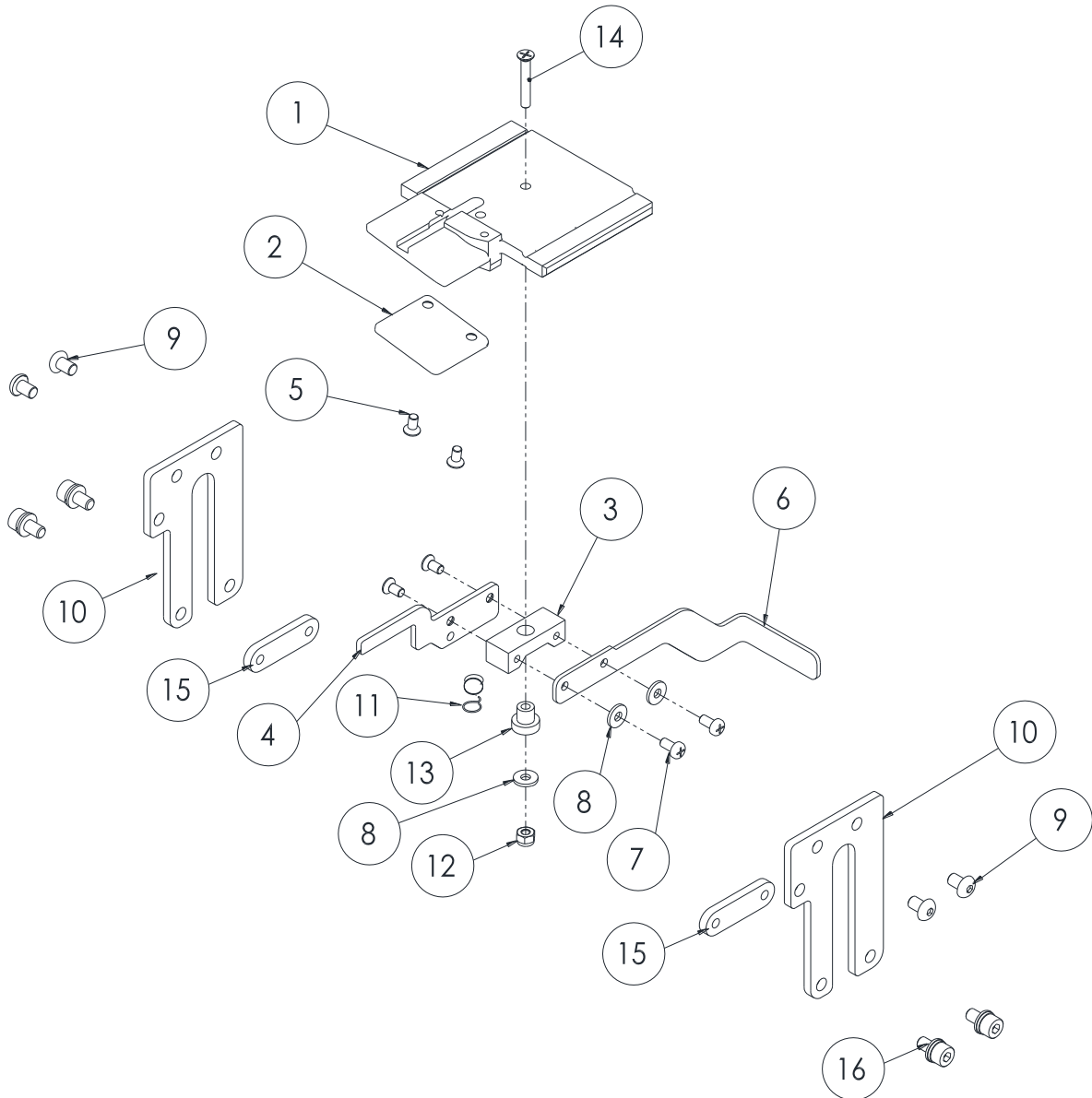


FIGURE 29-1 SEPARATING PLATE UNIT

NO	PART NUMBER	Description	QTY
1	P02-033410A	SEPARATOR	1
2	P01-0556700	SEPARTOR GUIDE PLATE	1
3	P02-033420B	ACTUATOR FIXER	1
4	P01-055660C	ACTUATOR	1
5	P1101-0203006AZ	SCREW M3x6	4
6	P01-064250B	DETECTOR PLATE	1
7	P1101-0303006AZ	SCREW M3x6	2
8	P1103-01030801Z	WASHER $\phi 3$	2
9	P1101-0604006AN	SCREW M4X6	4
10	P01-058780B	SEPERATOR PLATE FIXER RIGHT	2
11	P1202-0013100	PROX. DETECTOR SPRING	1
12	P1102-0103BZ	NUT M3	1
13	P02-0410800	BRONZE BUSHING	1
14	P1101-0203020AZ	SCREW M3x20	1
15	P01-0698100	GUIDE PLATE	2
16	P1101-0904008AN	SCREW M4*8	4

FIG. 30-1 ARCH OPENER UNIT

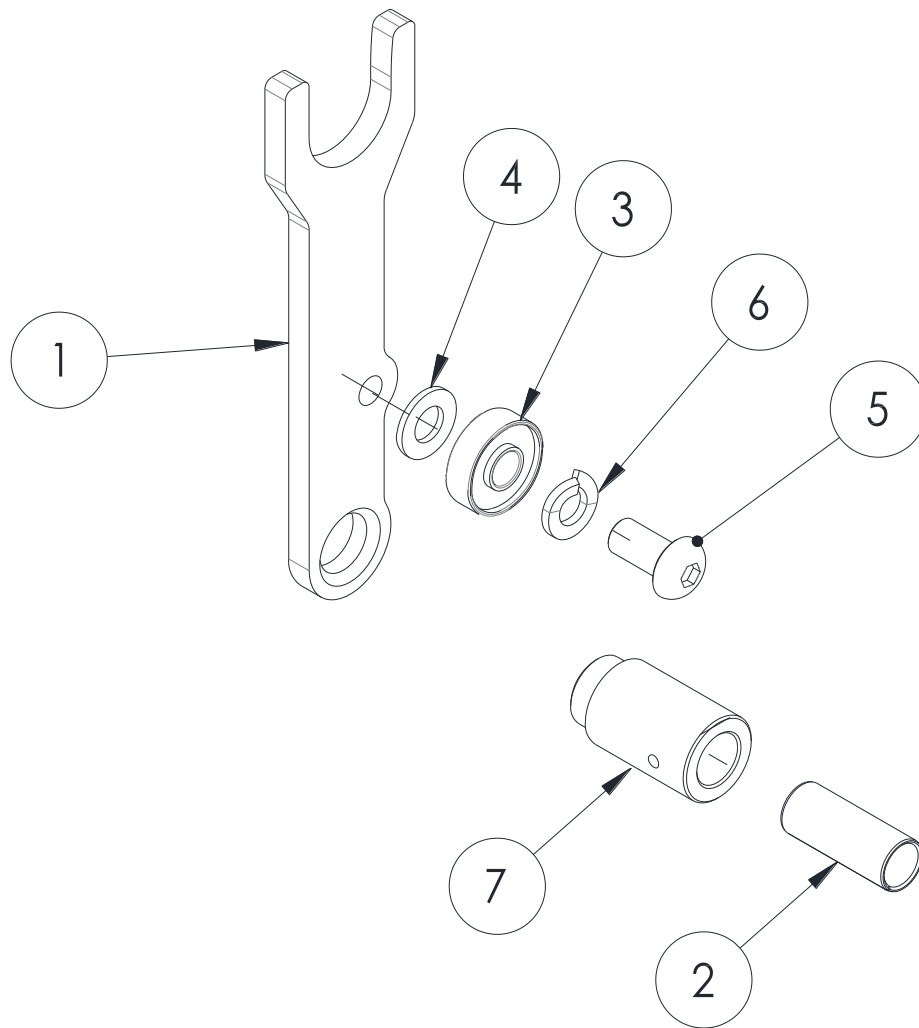


FIGURE 30-1 ARCH OPENER UNIT			
NO	PART NUMBER	Description	QTY
1	P01-0683600	ARCH OPENER	1
2	P1104-0310300	BEARING CB1030	1
3	P1104-020608ZZ0	BERRING 608ZZ(CWB)	1
4	P1103-010816C5Z	WASHER M8*16*1.5T	1
5	P1101-0608016AN	SCREW M8*16	1
6	P1103-0208Z	SPRING WASHER φ8	1
7	P02-0414600	OPENER SHAFT	1

FIG. 31-1 ELECTRIC BOX UNIT

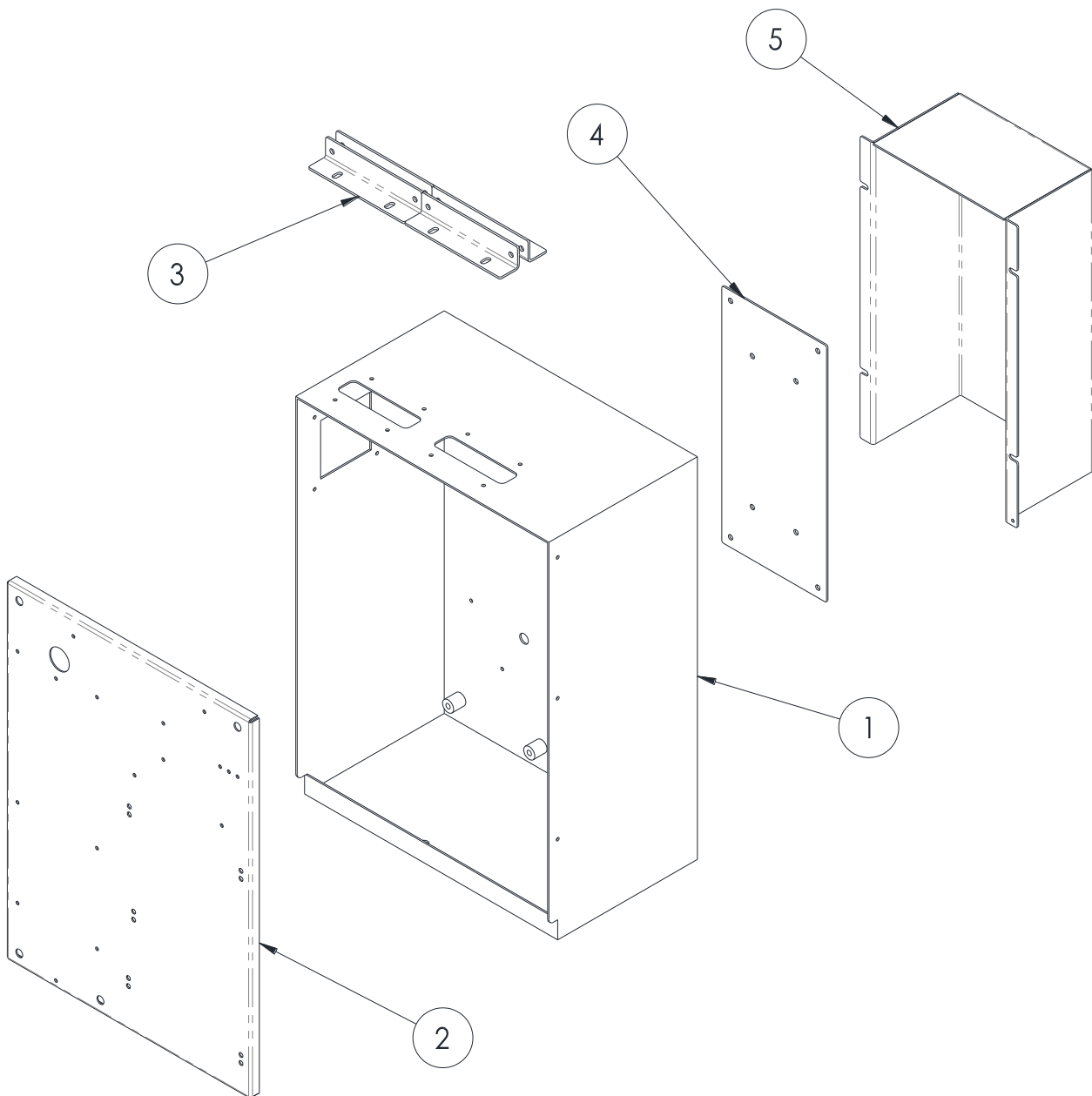


FIGURE 31-1ELECTRIC BOX UNIT			
NO	PART NUMBER	Description	QTY
1	P01-069610B	ELECTRIC BOX	1
2	P01-0696200	ELECTRIC PANEL	1
3	P01-0551000	CABLE FIXER	4
4	P01-0695900	POWER SUPPLY SEAT	1
5	P01-0696000	POWER SUPPLY COVER	1

FIG. 32-1 MAIN PANEL UNIT

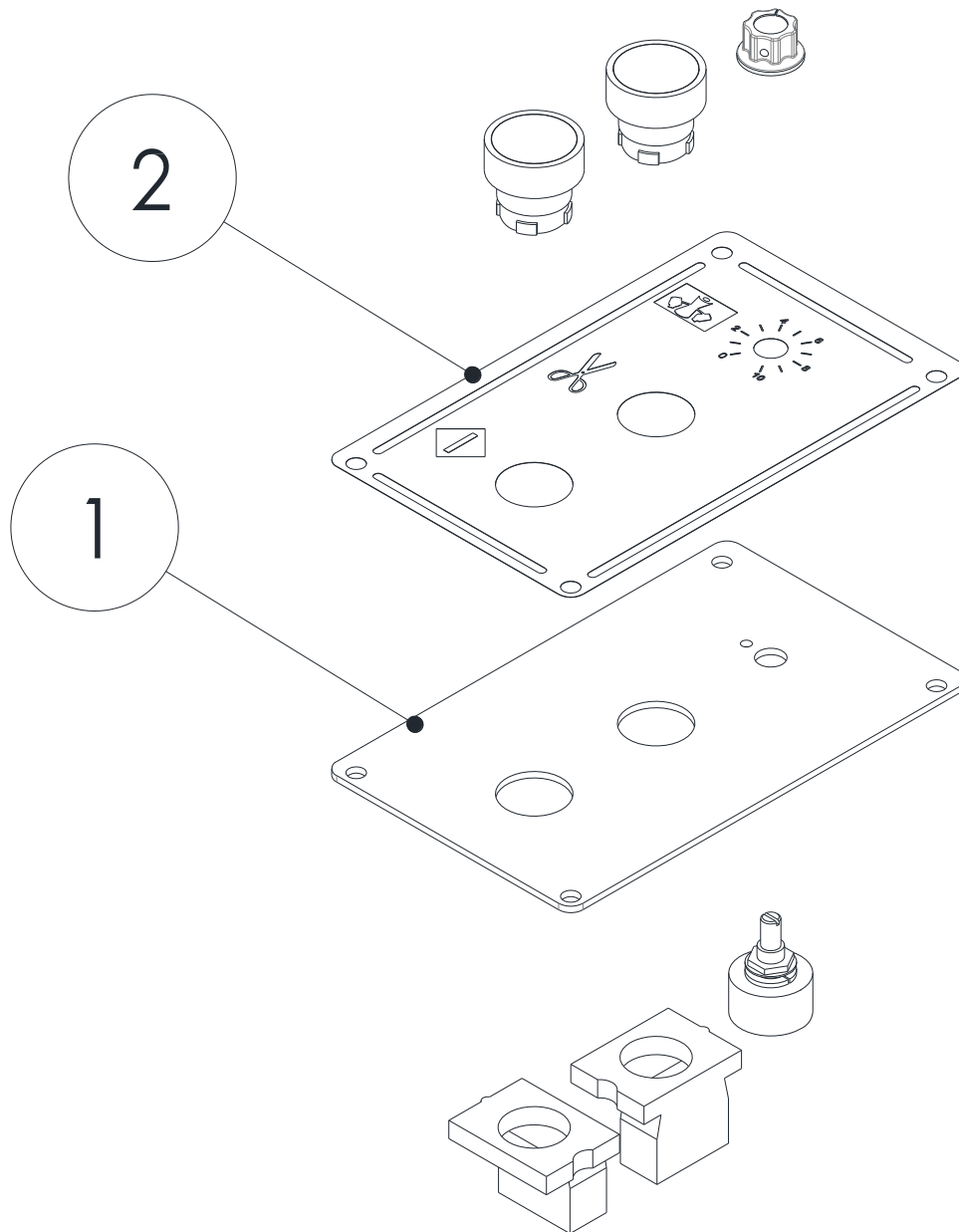


FIGURE 32-1 MAIN PANEL UNIT			
NO	PART NUMBER	Description	QTY
1	P01-0686800	MAIN PANEL PLATE	1
2	P1002-000901A	MAIN PANEL LABLE	1
3			
4			
5			

FIG. 33-1 SUB PANEL UNIT

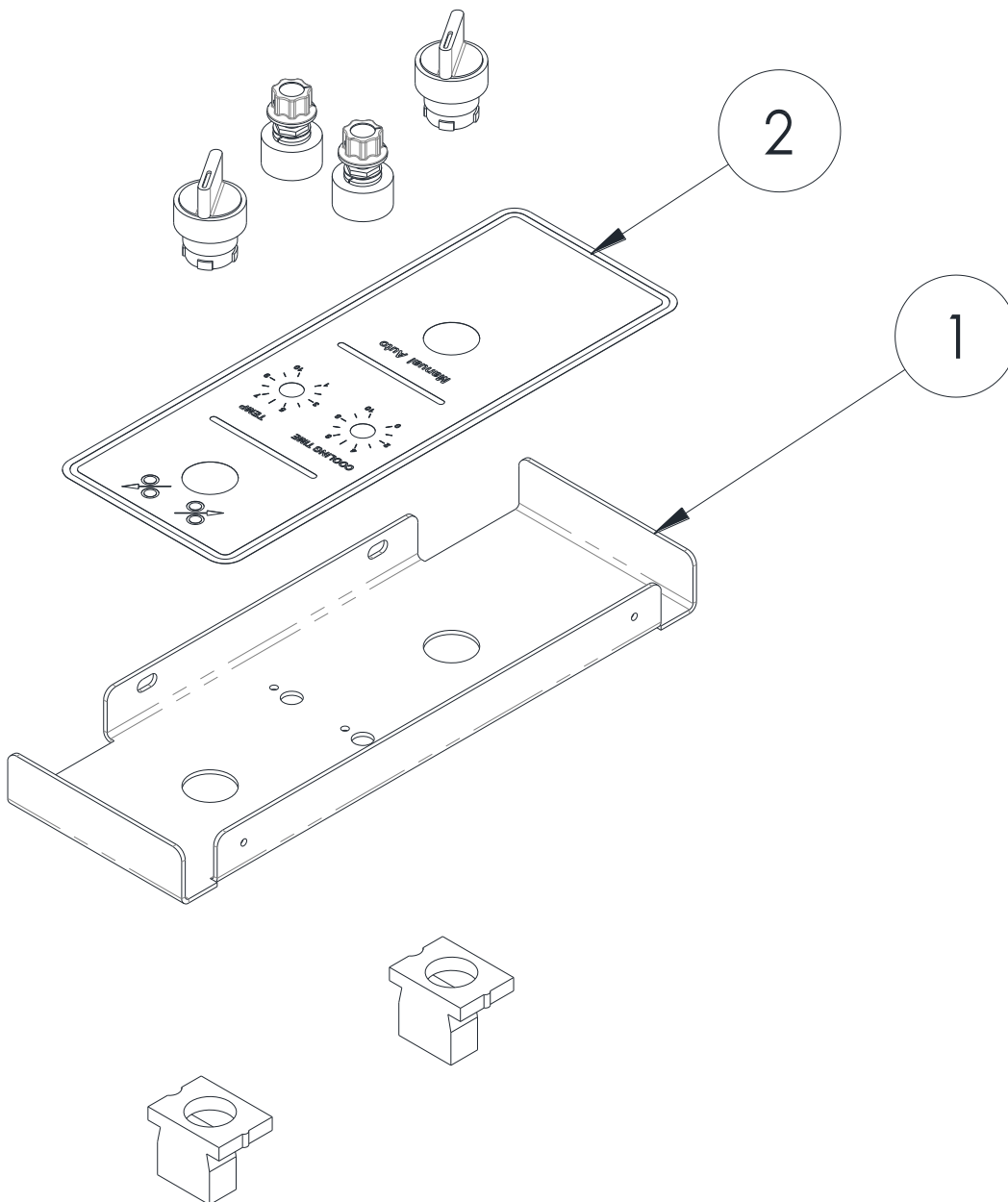


FIGURE 32-1 SUB PANEL UNIT

NO	PART NUMBER	Description	QTY
1	P01-068690A	SUB PANEL PLATE	1
2	P1002-0009060	SUB PANEL LABLE	1
3			
4			
5			