



OPERATOR'S MANUAL

Metal Working



Book 2 of 2

HYDRAULIC BOX AND PAN BRAKE MODEL: BB-12010H-NC

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Rev. 12/2018

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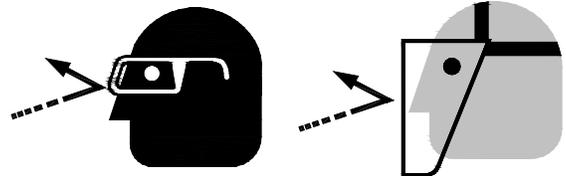


SAVE THESE INSTRUCTIONS.
Refer to them often and use them to instruct others.



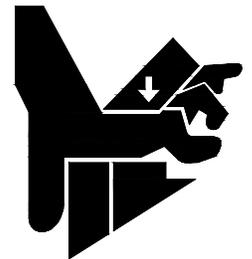
PROTECT EYES

Wear safety glasses or suitable eye protection when working on or around machinery.



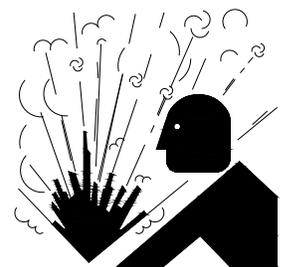
BEWARE OF CRUSH HAZARD

Closing upper beam and brake bed will result in loss of fingers or limbs if placed in machine. **NEVER** place your hand or any part of your body in this machine.



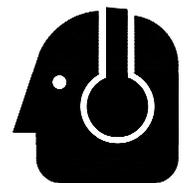
HYDRAULIC HOSE FAILURE

Exercise **CAUTION** around hydraulic hoses in case of a hose or fitting failure.



PROTECT AGAINST NOISE

Prolonged exposure to loud noise can cause impairment or loss of hearing. Wear suitable hearing protective devices such as ear muffs or earplugs to protect against objectionable or uncomfortable loud noises.



HIGH VOLTAGE

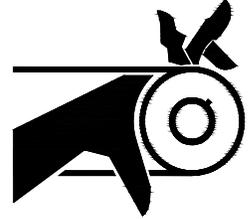
USE CAUTION IN HIGH VOLTAGE AREAS. DO NOT assume the power to be off.
FOLLOW PROPER LOCKOUT PROCEDURES.





MOVING BELTS CAN CRUSH AND DISMEMBER

DO NOT allow fingers to get pinched between belt and belt rollers. This may pull the operator's hand into the machine causing serious personal injury. **DO NOT** operate without guards in place.



KEEP CLEAR OF MOVING OBJECTS

Always be aware of the position of the moving objects such as material, bending leaf, clamp handle and the counterweight. They are heavy and can swing back suddenly causing serious body or head injuries.



EMERGENCY STOP BUTTON

In the event of incorrect operation or dangerous conditions, the machine can be stopped immediately by pressing the **E-STOP** button. Twist the emergency stop button clockwise (cw) to reset. Note: Resetting the E-Stop will not start the machine.





SAFETY PRECAUTIONS



Metal working can be dangerous if safe and proper operating procedures are not followed. As with all machinery, there are certain hazards involved with the operation of the product. Using the machine with respect and caution will considerably lessen the possibility of personal injury. However, if normal safety precautions are overlooked or ignored, personal injury to the operator may result.

Safety equipment such as guards, hold-downs, safety glasses, dust masks and hearing protection can reduce your potential for injury. But even the best guard will not make up for poor judgment, carelessness or inattention. **Always use common sense** and exercise **caution** in the workshop. If a procedure feels dangerous, don't try it.

REMEMBER: Your personal safety is your responsibility.



WARNING: FAILURE TO FOLLOW THESE RULES MAY RESULT IN SERIOUS PERSONAL INJURY

Dear Valued Customer:

- All Baileigh machines should be used only for their intended use.
- Baileigh does not recommend or endorse making any modifications or alterations to a Baileigh machine. Modifications or alterations to a machine may pose a substantial risk of injury to the operator or others and may do substantial damage to the machine.
- Any modifications or alterations to a Baileigh machine will invalidate the machine's warranty.

PLEASE ENJOY YOUR BAILEIGH MACHINE!PLEASE ENJOY IT SAFELY!

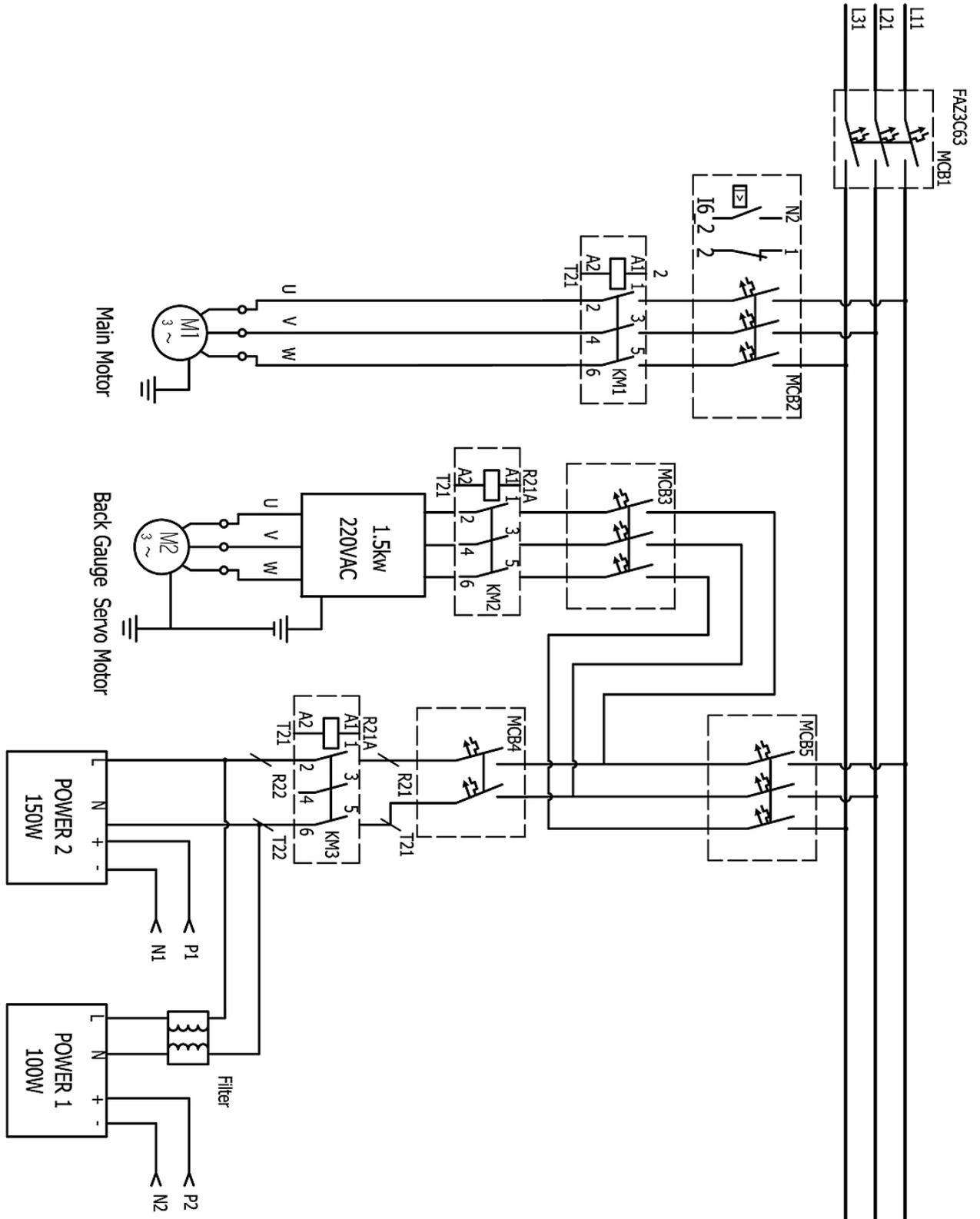
1. **FOR YOUR OWN SAFETY, READ INSTRUCTION MANUAL BEFORE OPERATING THE MACHINE.** Learn the machine's application and limitations as well as the specific hazards.
2. **Only trained and qualified personnel can operate this machine.**
3. **Make sure guards are in place and in proper working order before operating machinery.**
4. **Remove any adjusting tools.** Before operating the machine, make sure any adjusting tools have been removed.
5. **Keep work area clean.** Cluttered areas invite injuries.
6. **Overloading machine.** By overloading the machine, you may cause injury from flying parts. **DO NOT** exceed the specified machine capacities.

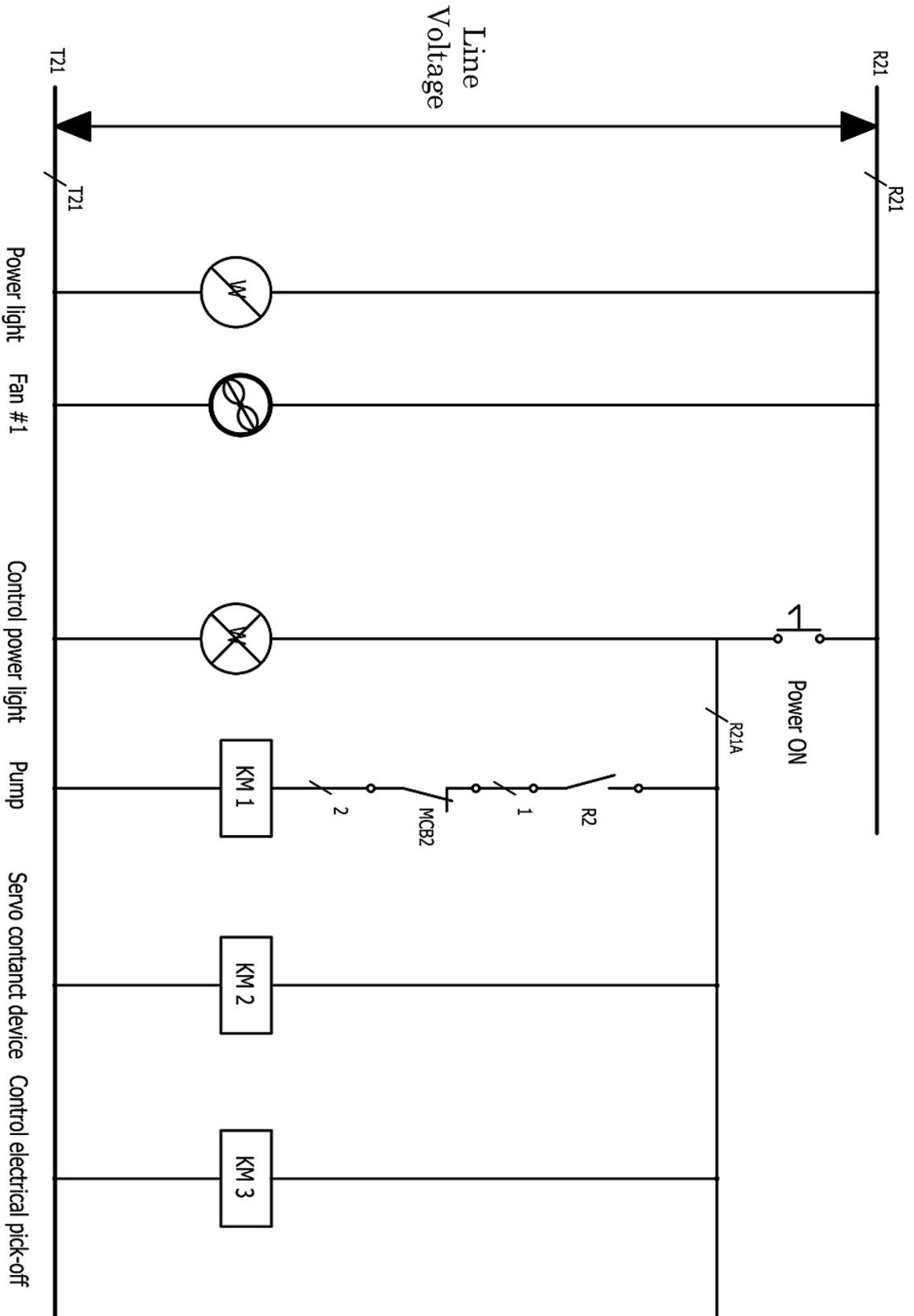


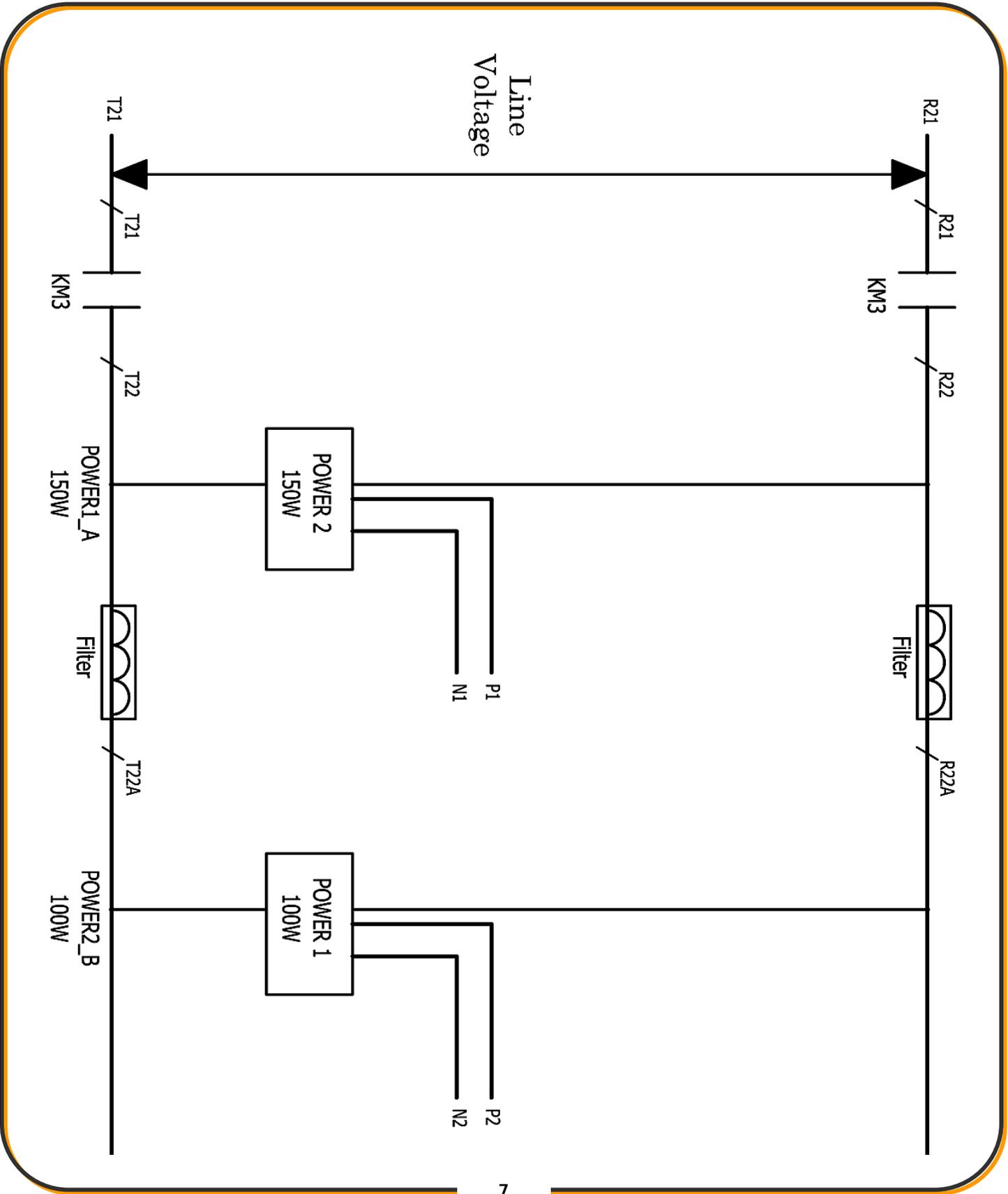
7. **Dressing material edges.** Always chamfer and deburr all sharp edges.
8. **Do not force tool.** Your machine will do a better and safer job if used as intended. **DO NOT** use inappropriate attachments in an attempt to exceed the machine's rated capacity.
9. **Use the right tool for the job. DO NOT** attempt to force a small tool or attachment to do the work of a large industrial tool. **DO NOT** use a tool for a purpose for which it was not intended.
10. **Dress appropriately. DO NOT** wear loose fitting clothing or jewelry as they can be caught in moving machine parts. Protective clothing and steel toe shoes are recommended when using machinery. Wear a restrictive hair covering to contain long hair.
11. **Use eye and ear protection.** Always wear ISO approved impact safety goggles. Wear a full-face shield if you are producing metal filings.
12. **Do not overreach.** Maintain proper footing and balance at all times. **DO NOT** reach over or across a running machine.
13. **Stay alert.** Watch what you are doing and use common sense. **DO NOT** operate any tool or machine when you are tired.
14. **Check for damaged parts.** Before using any tool or machine, carefully check any part that appears damaged. Check for alignment and binding of moving parts that may affect proper machine operation.
15. **Observe work area conditions. DO NOT** use machines or power tools in damp or wet locations. Do not expose to rain. Keep work area well lighted. **DO NOT** use electrically powered tools in the presence of flammable gases or liquids.
16. **Keep children away.** Children must never be allowed in the work area. **DO NOT** let them handle machines, tools, or extension cords.
17. Keep visitors a safe distance from the work area.
18. **Store idle equipment.** When not in use, tools must be stored in a dry location to inhibit rust. Always lock up tools and keep them out of reach of children.
19. **DO NOT operate machine if under the influence of alcohol or drugs.** Read warning labels on prescriptions. If there is any doubt, **DO NOT** operate the machine.
20. **Turn off** power before checking, cleaning, or replacing any parts.
21. Be sure **all** equipment is properly installed and grounded according to national, state, and local codes.
22. Keep **all** cords dry, free from grease and oil, and protected from sparks and hot metal.
23. Inspect power and control cables periodically. Replace if damaged or bare wires are exposed. **Bare wiring can kill! DO NOT** touch live electrical components or parts.
24. **DO NOT** bypass or defeat any safety interlock systems.

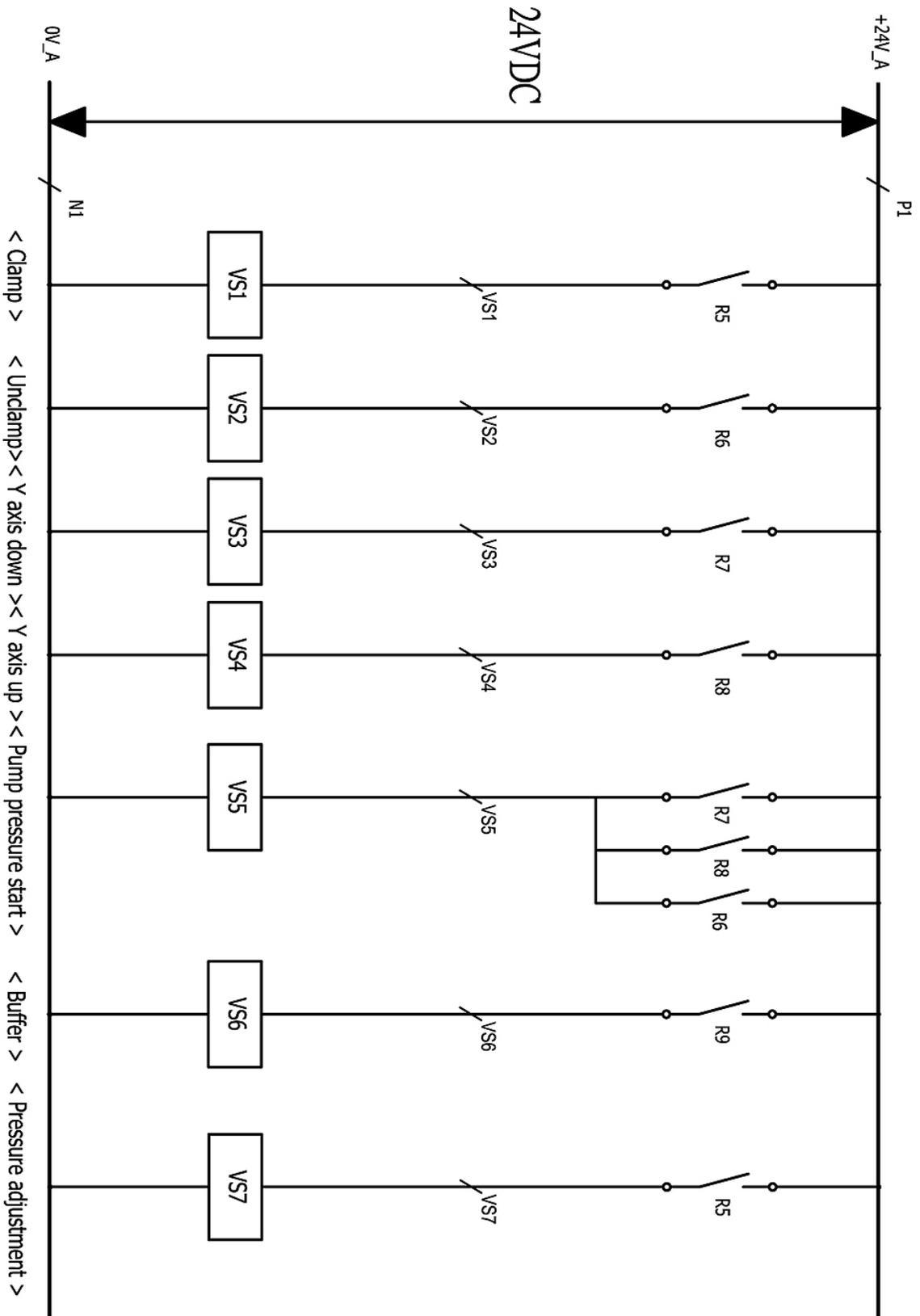


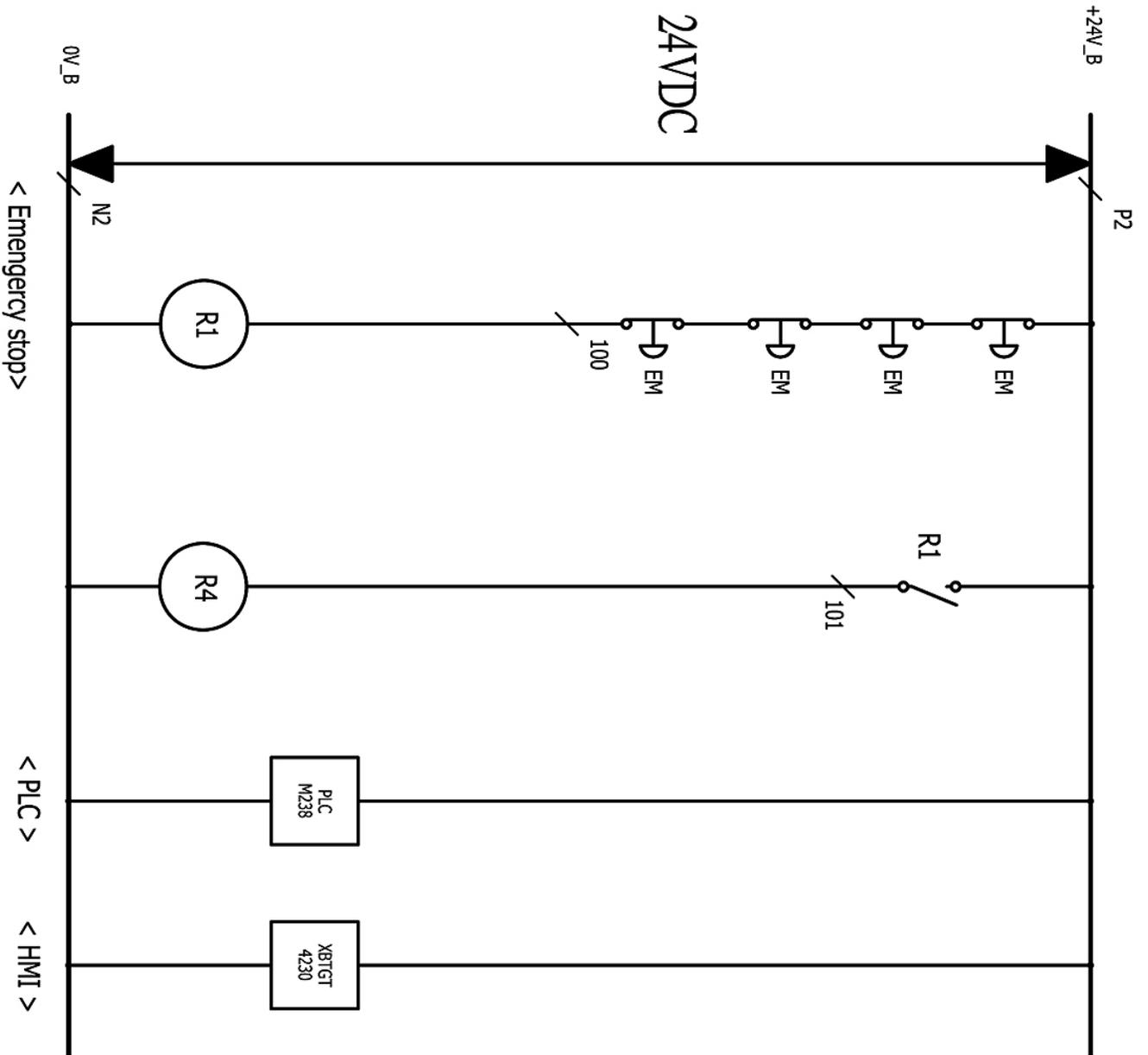
ELECTRICAL SCHEMATIC

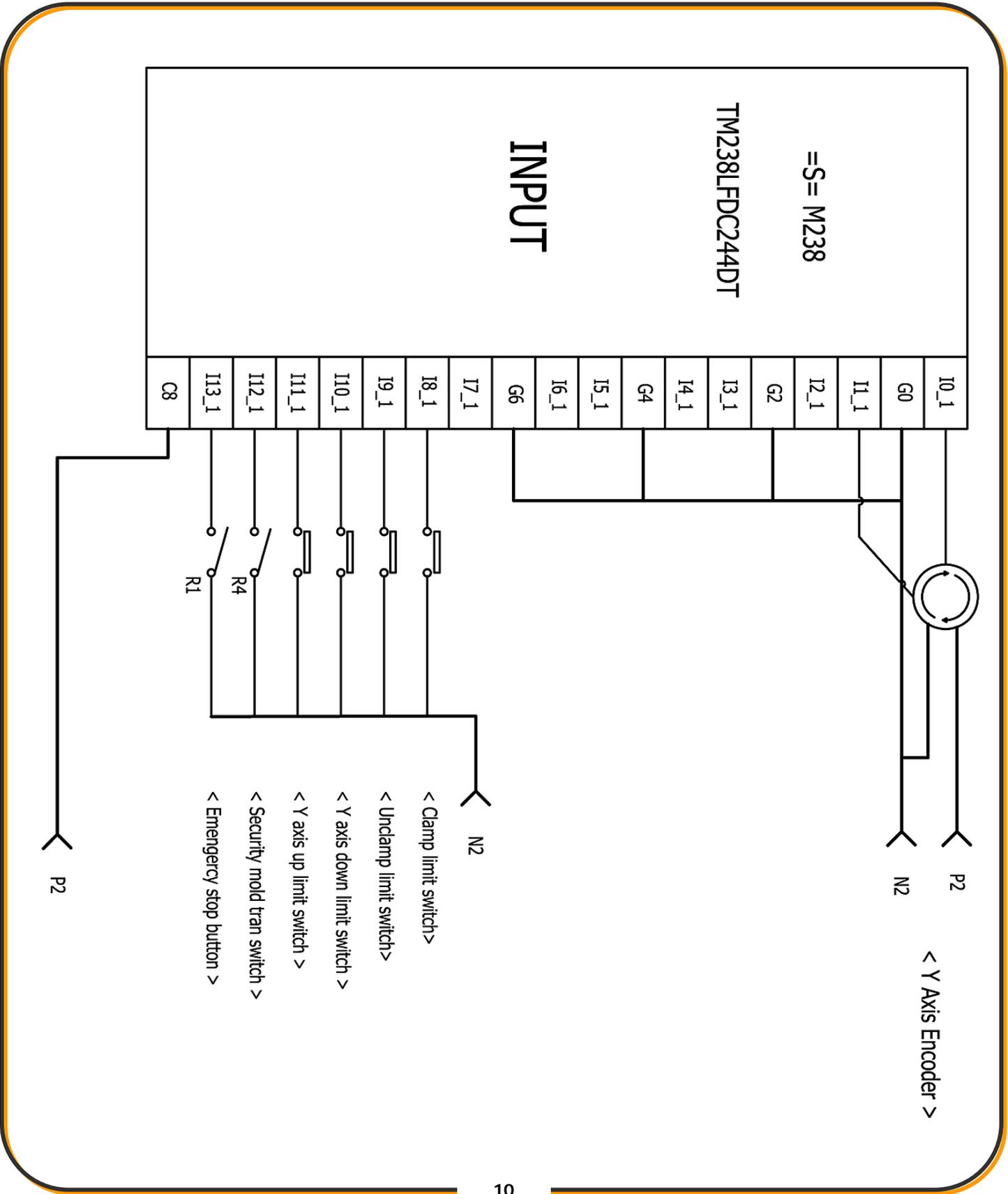


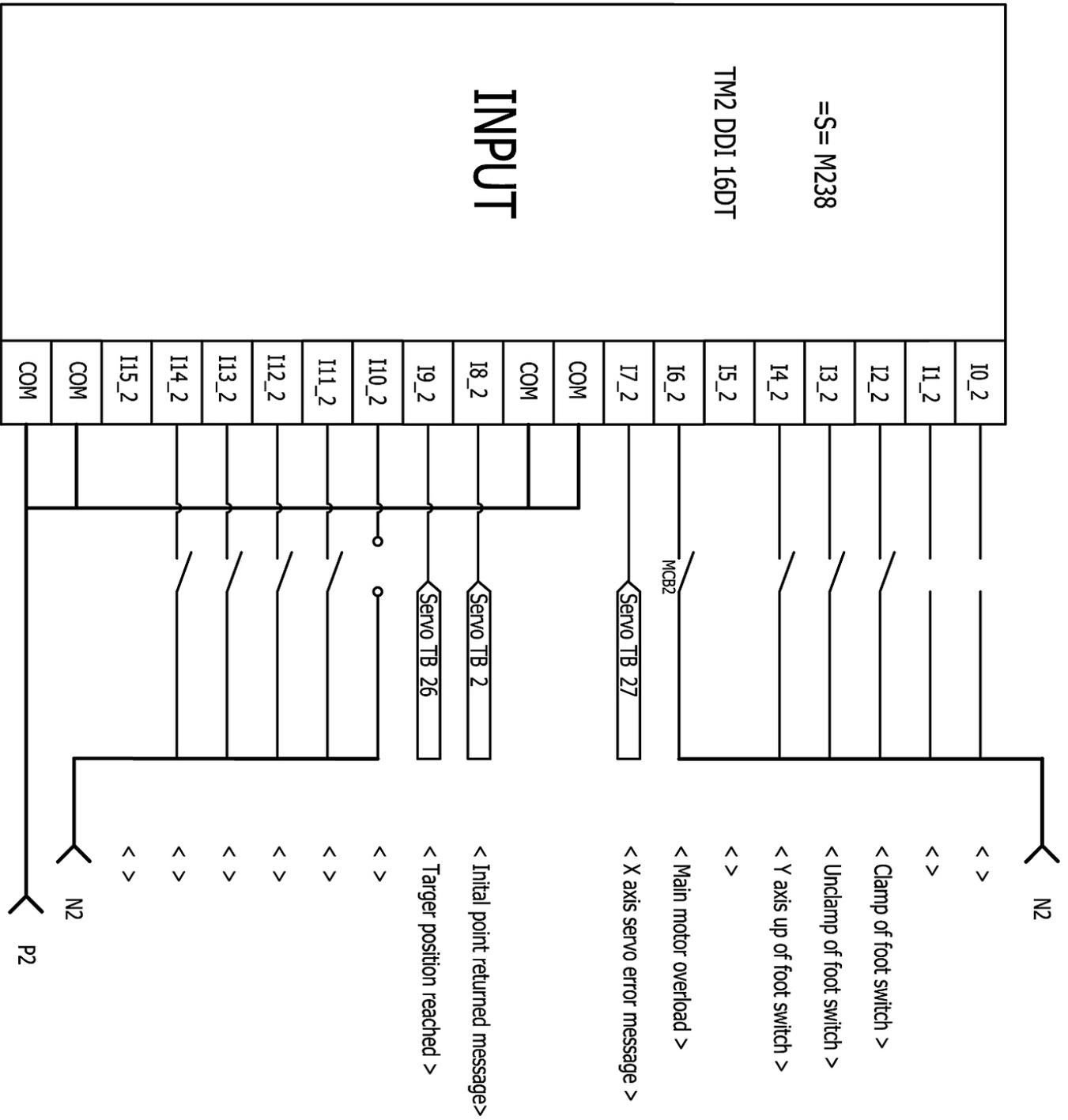


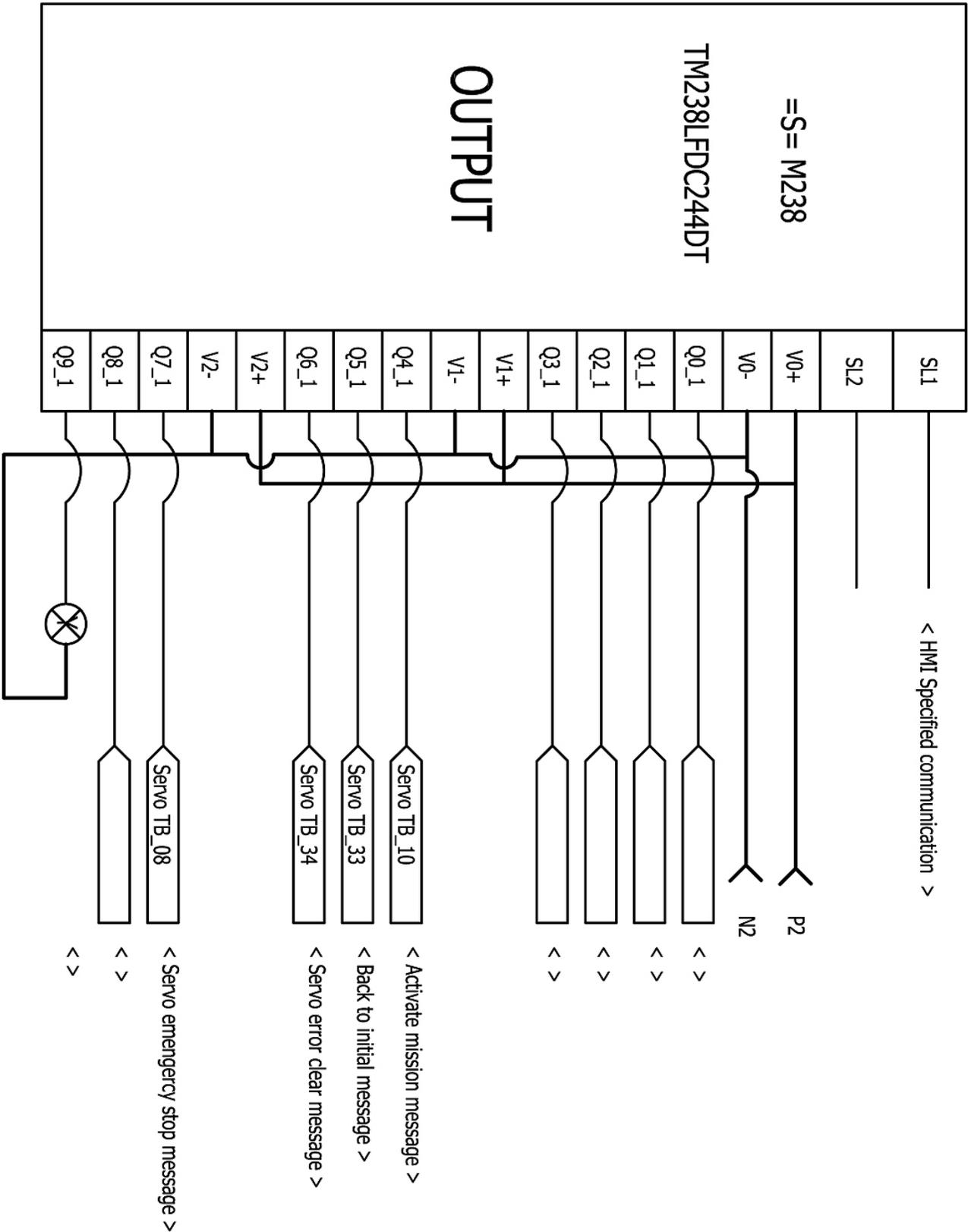


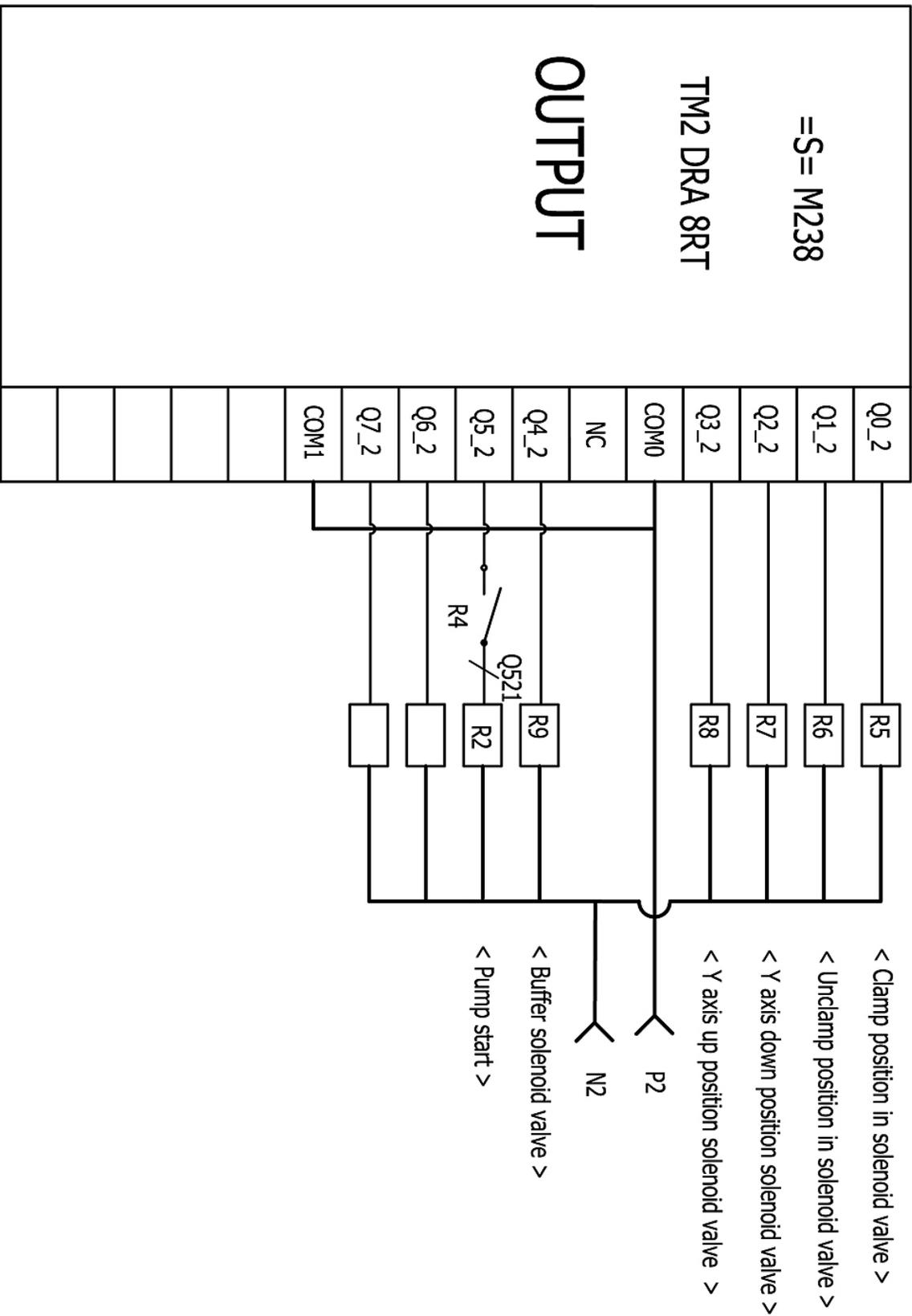






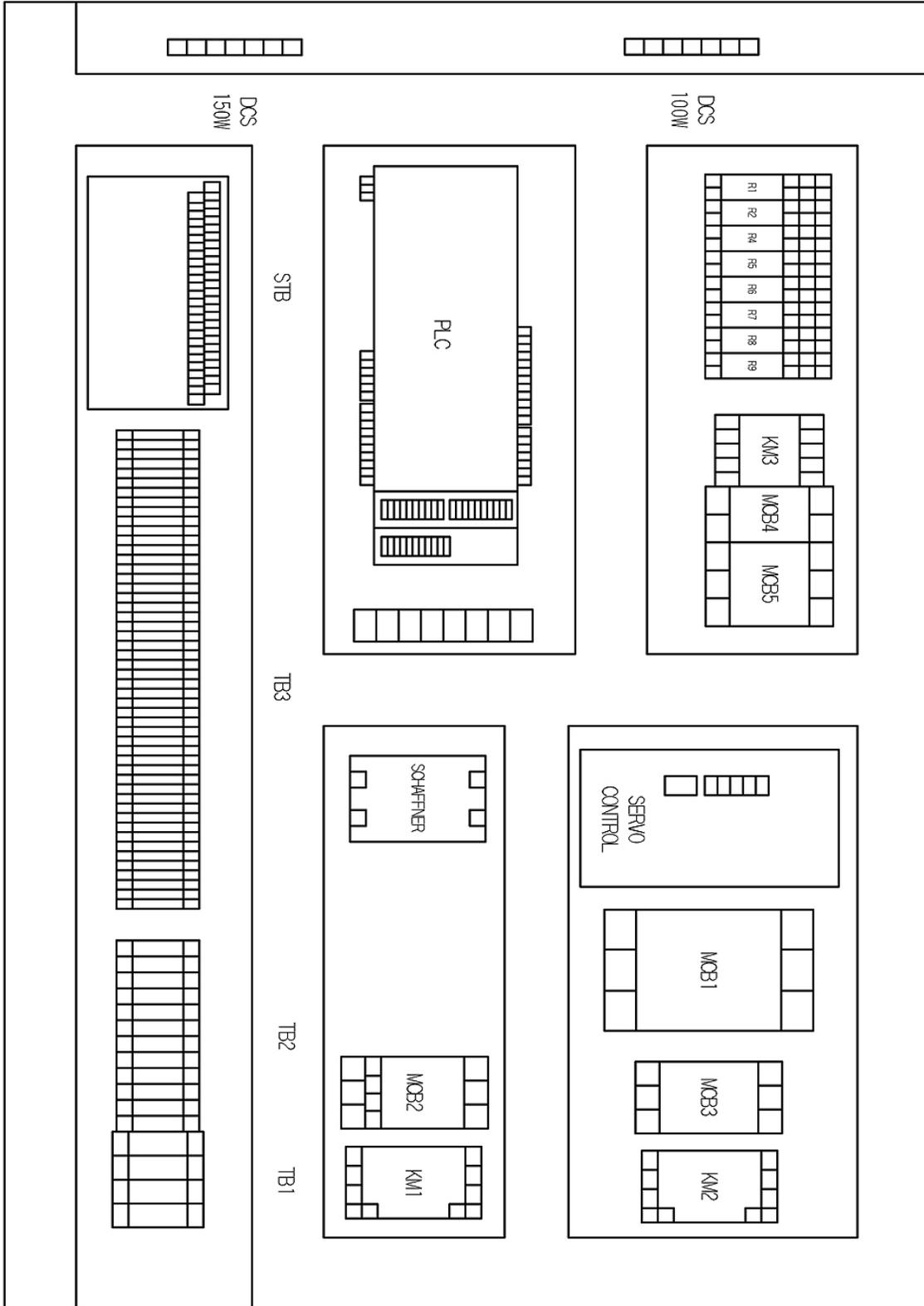






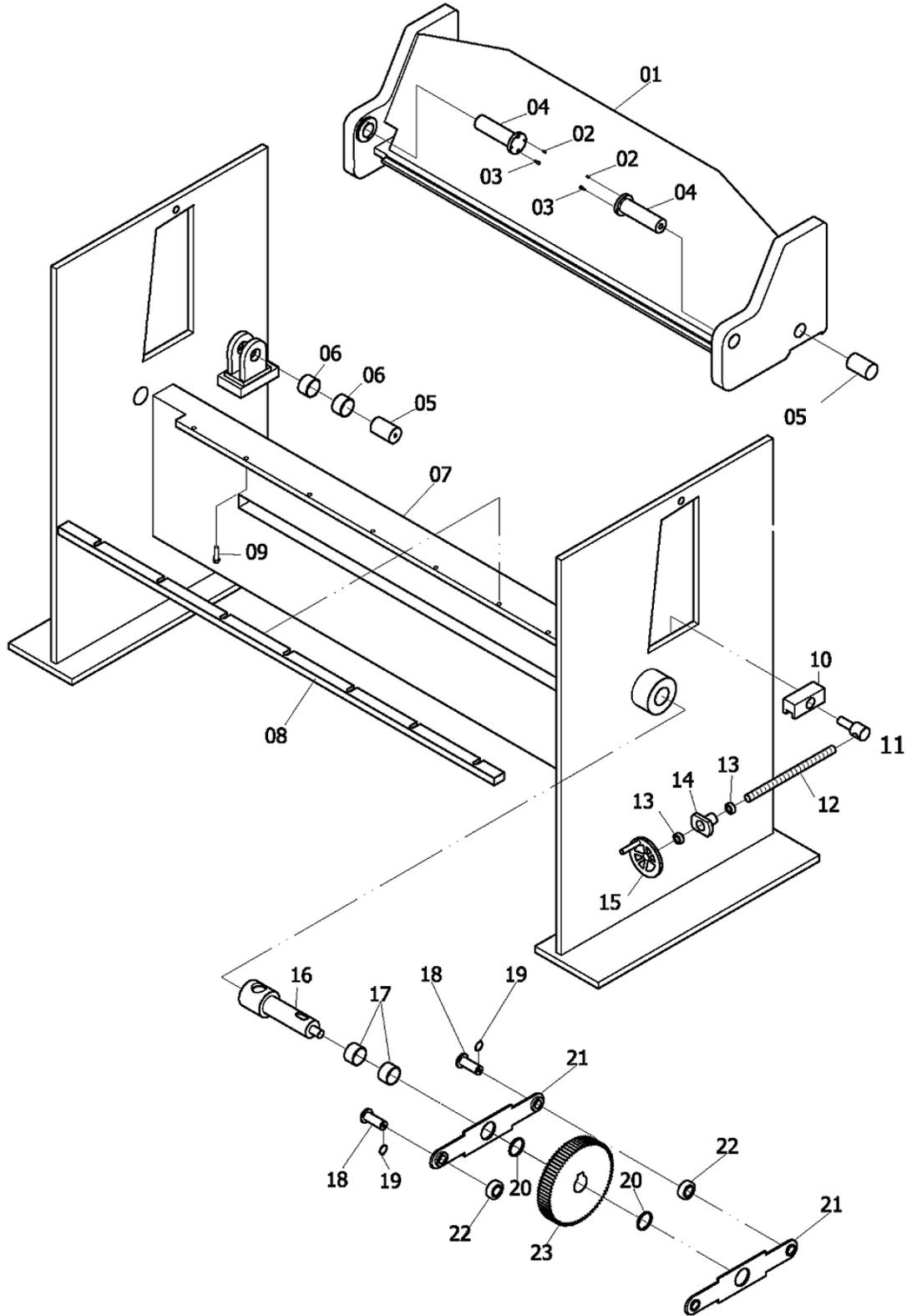


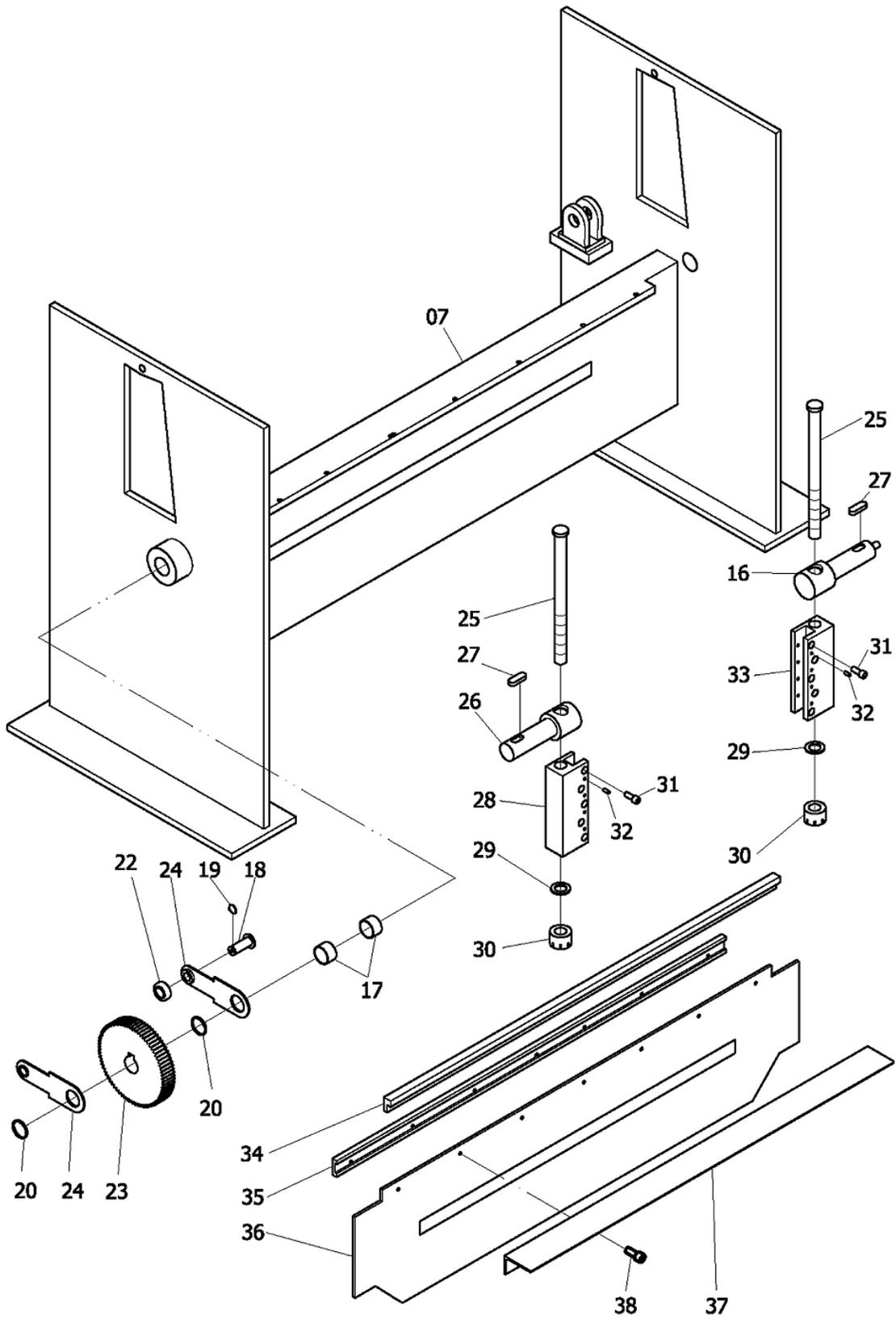
Electrical Enclosure





MAIN FRAME PARTS DIAGRAM







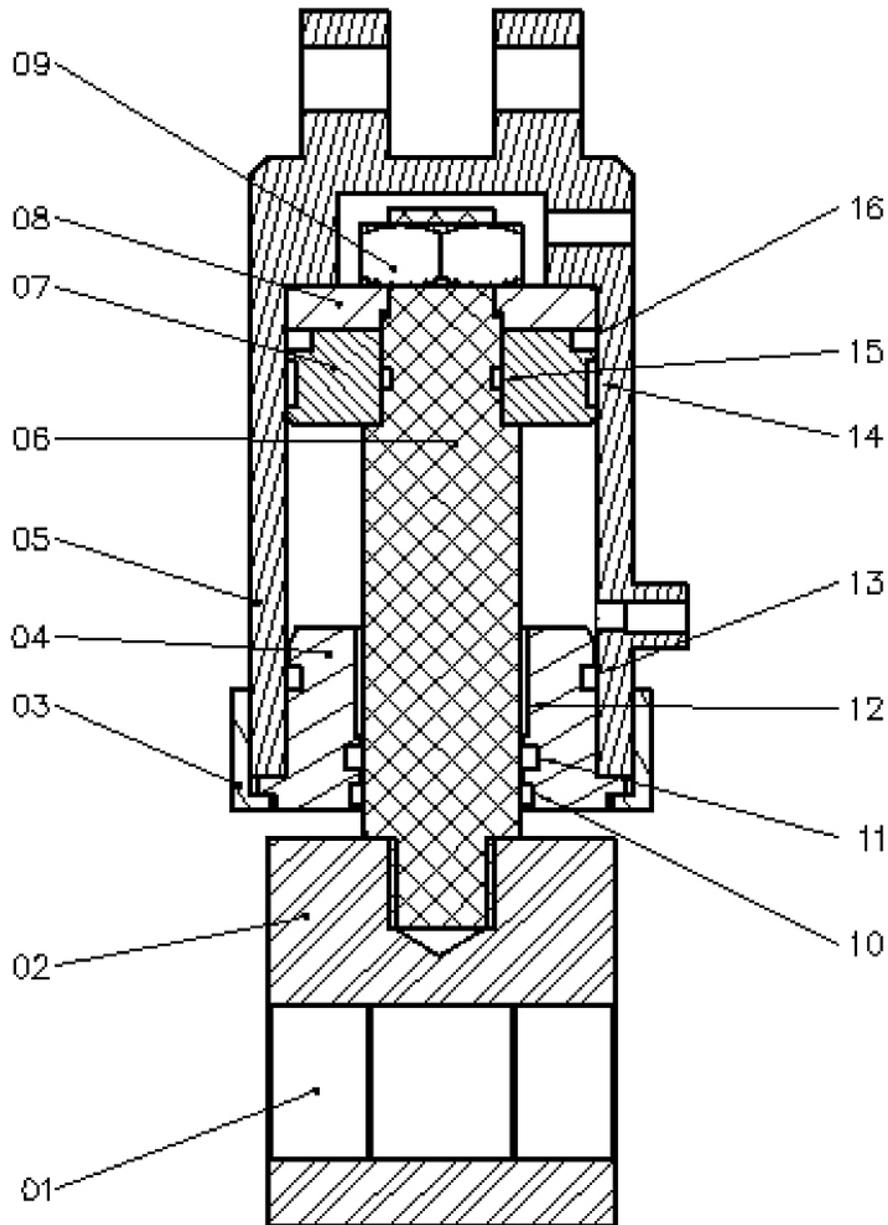
Main Frame Parts List

Item	Description
1	Clamping Beam Assy.
2	Set Screw
3	Screw
4	Cylinder Pin
5	Clamping Beam Hinge Pin
6	Clamping Beam Hinge Pin Bushing
7	Machine Bottom Base
8	Bottom Die
9	Screw
10	Wedge Block
11	Wedge Block Connecting Pin
12	Screw Rod
13	Bearing
14	Bearing Base
15	Hand Wheel
16	Bending Leaf Hinge Pin - Right Side
17	Bending Leaf Hinge Pin Bushing
18	Rack Set Pin
19	Spring Hook
20	Bush
21	Rack Set Plate – Right Side
22	Bearing
23	Gear
24	Rack Set Plate – Left Side
25	Oscillating Rod
26	Bending Leaf Hinge Pin - Left Side
27	Key
28	Bending Leaf Side Plate – Left Side
29	Copper Washer
30	Dial
31	Screw
32	Set Screw
33	Bending Leaf Side Plate – Left Side



Item	Description
34	Insert Bar
35	Clamping Bar
36	Bending Leaf
37	Angel Bar
38	Screw

BENDING CYLINDER ASSEMBLY PARTS DIAGRAM



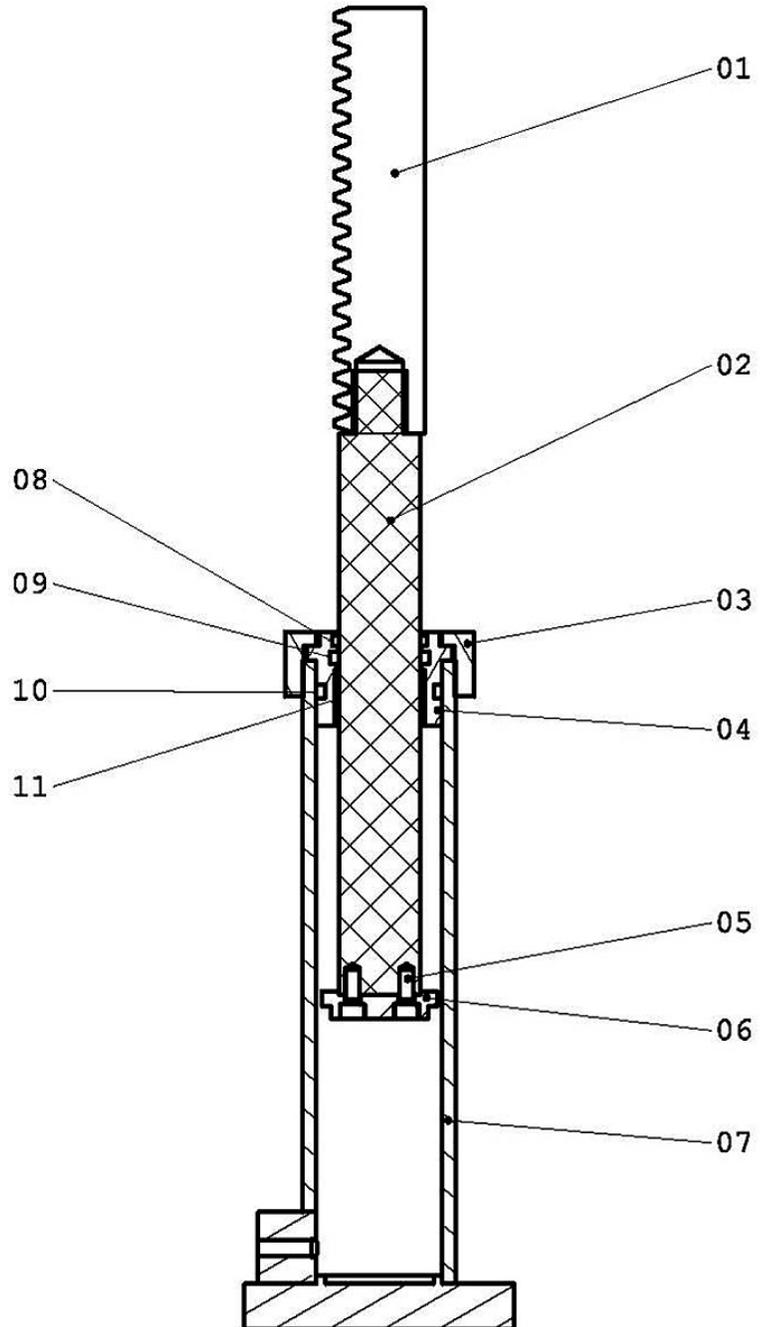


Bending Cylinder Assembly Parts List

Item	Description
1	Bushing
2	Connector Block
3	Cylinder Head Cover
4	Cylinder Head
5	Cylinder Pipe
6	Piston Rod
7	Main Piston
8	Piston
9	Piston Rod Bottom Nut
10	Wiper Seal
11	Rod Seal
12	DU
13	O-Ring
14	Wear-Resistant Ring
15	Piston Seal Double Action & O-Ring
16	Piston Seal



CLAMPING CYLINDER ASSEMBLY PARTS DIAGRAM

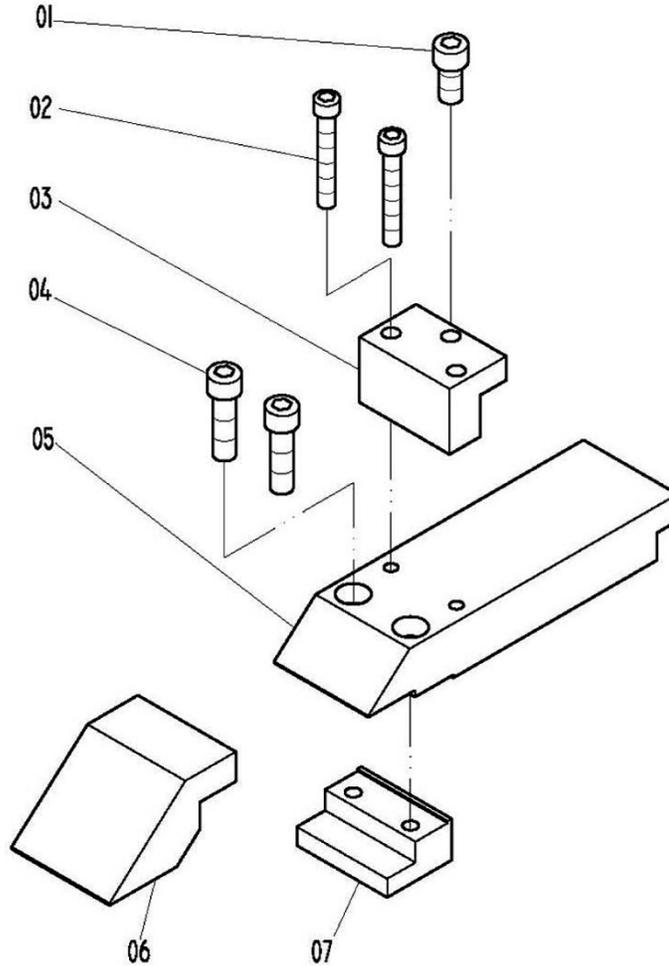


Clamping Cylinder Assembly Parts List

Item	Description
1	Rack
2	Piston Stem
3	Piston Head Cover
4	Piston Head
5	Screw
6	Piston
7	Cylinder Pipe
8	Wiper Seal
9	Rod Seal
10	O-Ring
11	Piston Stem Bushing



FINGER BLADE ASSEMBLY PARTS DIAGRAM



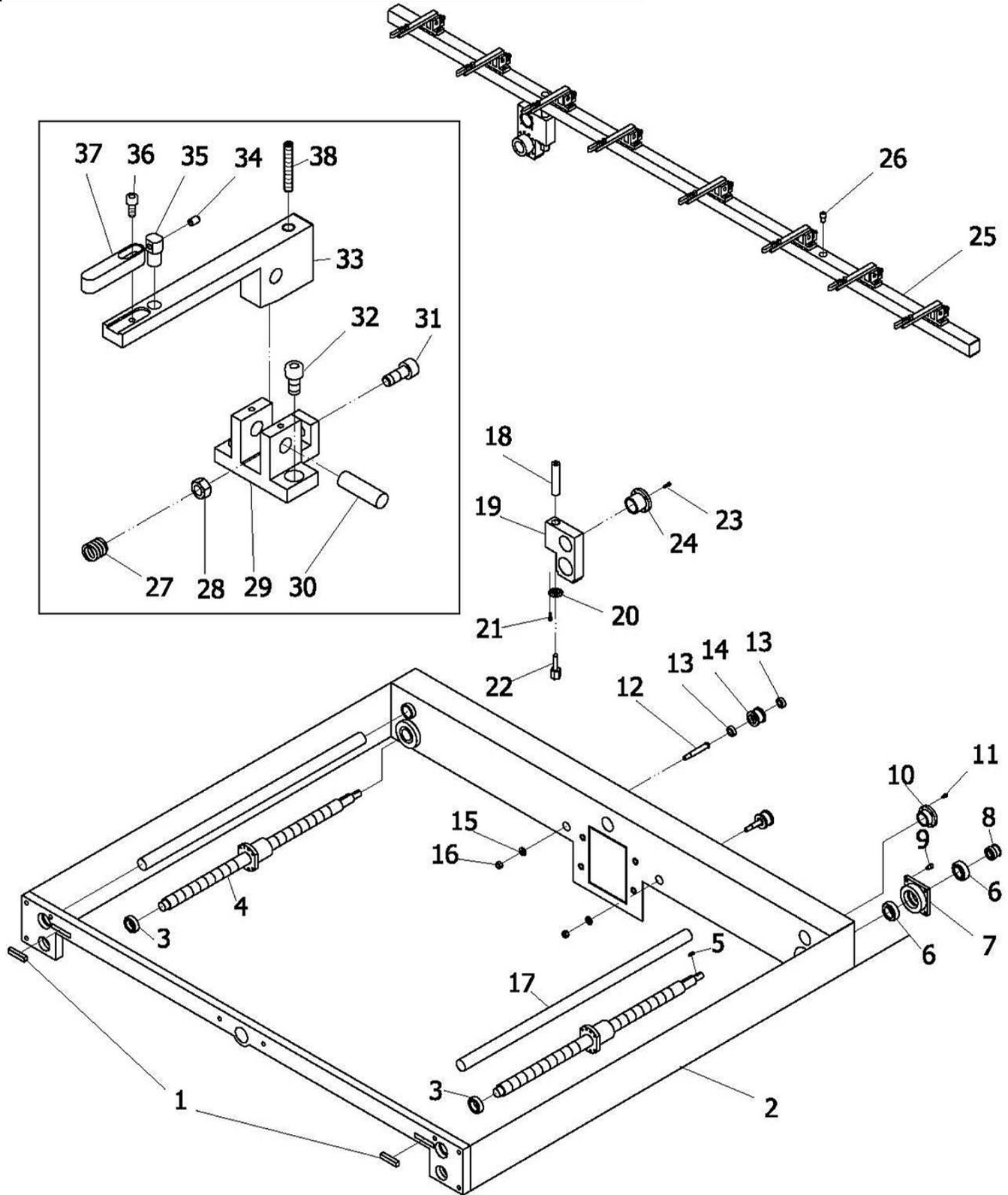
Finger Blade Assembly Parts List

Item	Description
1	Screw
2	Screw
3	Clamping Holder-Up
4	Screw
5	Upper Blade Base
6	Finger Blade
7	Clamping Holder-Bottom

FINGER BLADE SIZES	3" (76)	4" (102)	5" (127)	6" (152)
QTY. OF FINGERS	6	3	10	7



NC. BACK GAUGE ASSEMBLY PARTS DIAGRAM





NC. Back Gauge Assembly Parts List

Item	Description
1	Key
2	Back Gauge Base
3	Bearing
4	Ball Screw
5	Key
6	Bearing
7	Bearing Base
8	Tim Belt Wheel
9	Screw
10	Rod Rear Base
11	Screw
12	Axle Of Idle Wheel
13	Bearing
14	Idle Wheel
15	Washer
16	Nut
17	Guide Bar
18	Supporting Rod
19	Ball Screw Bearing Block
20	Bushing
21	Screw
22	Adjusting Nut
23	Screw
24	Bearing Base
25	Square Pipe
26	Screw
27	Spring
28	Nut
29	Stopper Unit Base
30	Hinge Pin
31	Screw
32	Screw
33	stop finger



Item	Description
34	Screw
35	Adjusting Rod
36	Screw
37	Stop Finger
38	Screw
39	Time Belt Wheel Of Motor
40	Time Belt
41	Back Gauge Motor

TROUBLESHOOTING

 **WARNING:** Make sure the electrical disconnect is OFF before working on the machine.

FAULT	PROBABLE CAUSE	REMEDY
Heavy resistance during bends.	Exceeding machine capacities.	Use materials within machine capabilities.
Bend radius is not consistent.	Brake blades and die are not aligned.	Adjust brake alignment.
Brake blade points are chipping.	Brake blades and die are not aligned.	Adjust brake alignment.
Piece part shows scoring marks after bend.	Brake blades or die has scratches.	Polish out scratches.

NOTES



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