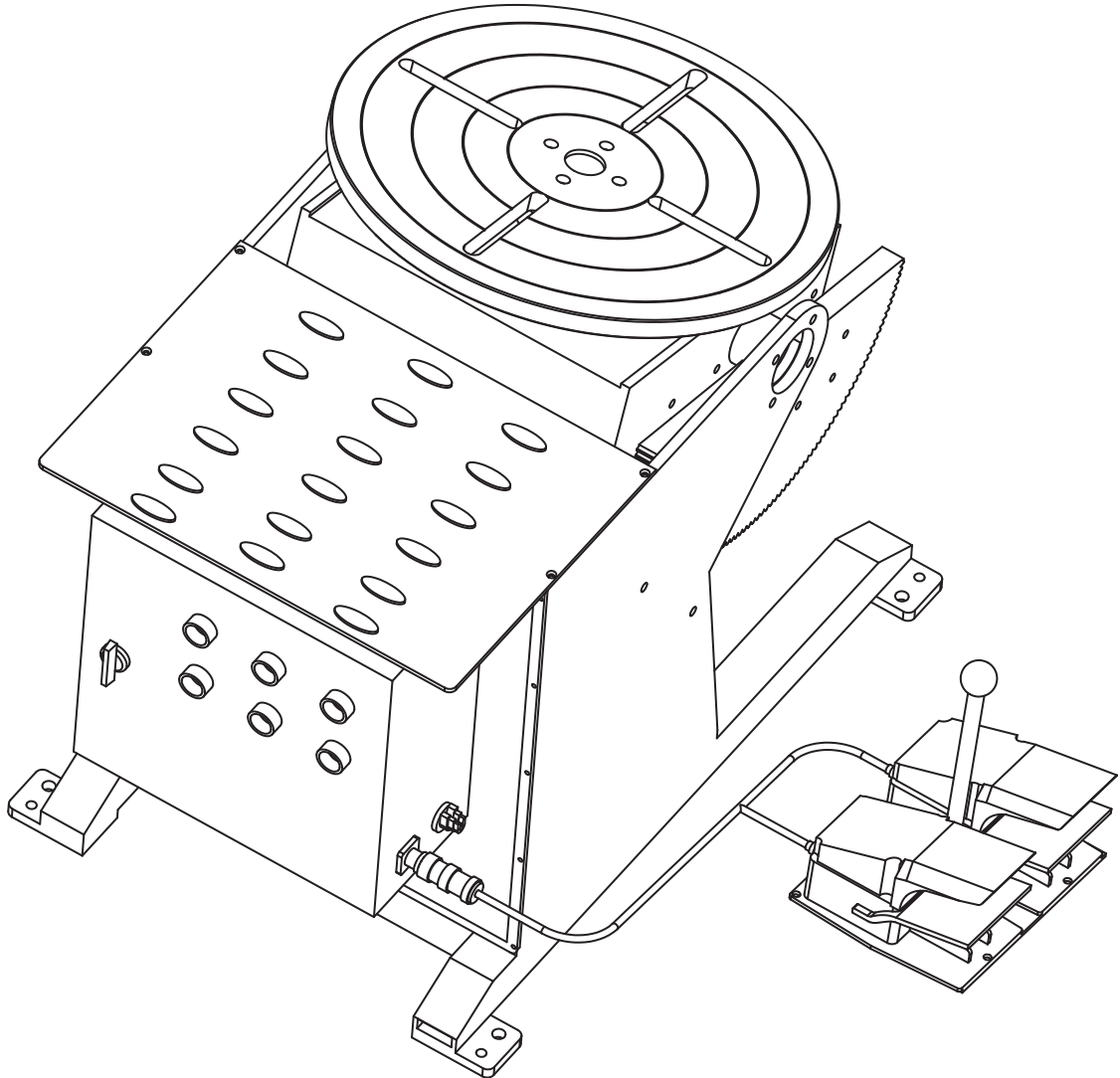




# **PROFAV<sup>®</sup>**

## **WELDING POSITIONER**



**MODEL NO: WP-500/110VAC  
(WP-500-2/220VAC)**

**WARNINGS, SAFEGUARDS  
&  
OPERATING INSTRUCTIONS**



# Warnings and Safeguards for Welding and Cutting Operations



**IMPORTANT** - Protect yourself and others! Remember that safety depends on you. The operator, supervisor, and helper must read and understand all warning and safety information provided in these instructions.  **Serious injury or death**  could result if welding equipment is not properly installed, used and maintained. Training and proper supervision are most important for a safe work place. Installation, operation, repair work, and maintenance must be performed by qualified personnel. Retain these instructions for future use.



## ELECTRICAL SHOCK CAN CAUSE INJURY OR DEATH

Electrical equipment must be installed and maintained in accordance with the National Electrical Code, NFPA 70, and all local codes. Maintain Mig-Guns, Electrode Holders, Tig Torches, Plasma Torches, Work Clamp, Welding Cable, and Welding Machines in good, safe operating condition. Replace worn or damaged insulation. Do not try to repair or service equipment while the power is still on. Do not service or repair equipment unless you are trained and qualified to do so. The Electrode and Work (or Ground) circuits are electrically "HOT" when equipment power is on. At no time should you touch the Electrode and Electrical Ground at the same time with bare skin or wet clothing while the power is on. Insulate yourself from work and ground using dry insulation. When welding in damp locations make certain the insulation is large enough to cover your full area of physical contact with work and ground. Ground the work (metal to be welded) to a good electrical earth ground. Keep gas cylinders, chains, wire ropes, hoists, cranes, and elevators away from any part of the electrical path. Always be sure the work cable makes a good electrical connection with the metal being welded. Occasionally check all ground connections to determine if they are mechanically strong and electrically adequate for the current required. The ground connection should be as close as possible to the area being welded. Never touch electrically "HOT" parts of electrode holders connected to two welding power sources at the same time. The voltage between the two can be the total of the open circuit voltage of both power sources. When the welding or cutting process requires values of open circuit voltages in alternating current machines higher than 80 volts, and direct current machines higher than 100 volts, adequate insulation or other means must be provided to prevent the operator from making accidental contact with the high voltage. The use of reliable automatic controls for reducing no load voltage is recommended to reduce shock hazard. When not welding for any substantial period of time, make certain that no part of the electrode circuit will accidentally make contact with the work or ground. Never immerse Mig-Guns, Electrode Holders, Tig Torches, Plasma Torches, or Electrodes in water for cooling.

REFERENCES: See Safety and Operating References A,F,H, and I.



## SMOKE, FUMES, AND GASES CAN BE DANGEROUS TO YOUR HEALTH

Keep smoke, fumes, and gases from your breathing zone and the general area. Smoke, fumes, and gases from the welding or cutting process are of various types and strengths, depending on the kind of base metal being welded on. To ensure your safety, do not breathe these fumes or gases. Ventilation must be adequate to remove smoke, fumes, and gases during the welding procedure to protect operators and others in the immediate area. Do not weld in locations where chlorinated hydrocarbon vapors are coming from degreasing, cleaning, or spraying operations. Vapors of chlorinated solvents can form the toxic gas "phosgene" when exposed to ultraviolet radiation from an electric arc. All solvents, degreasers, and potential sources of these vapors must be removed from the welding area. Shielding gases used for arc welding can displace air and cause injury or death. Fumes produced by welding or cutting, especially in confined areas, can cause discomfort and physical harm if inhaled over an extended period of time.

Always provide adequate ventilation in the welding and cutting area to insure breathing air is safe. Use air-supplied respirators if ventilation is not adequate to remove all fumes and gases. **Never Ventilate with Oxygen**, because oxygen supports and vigorously accelerates fire.

REFERENCES: See Safety and Operating References A,B,C,H, and I.



## HOT PARTS

Hot parts can cause serious burns. The area at and near the work being welded should be handled with proper gloves. Proper clothing should be worn to prevent spatter or chipped slag from causing burns. Never pick up welded material until it has properly cooled.

REFERENCES: See Safety and Operating References A, B, H, & I.



## MOVING PARTS MAY CAUSE INJURY

Have only qualified people remove guards or covers for performing maintenance and troubleshooting. Moving parts such as cooling fans can maim fingers or hands and catch loose clothing. Keep tools, hands, hair and clothing away from moving parts. Be sure to reinstall all panels and guards before operating equipment.



## FALLING EQUIPMENT

Lift only the unit to be moved without any running gear, accessories or gas cylinders that may be attached to it. Use equipment of a proper size to lift and move the unit. Falling equipment can cause personal injury and equipment damage.

REFERENCES: See Safety and Operating References A, B, H, & I.

## Safety and Operating References

- A) ANSI Z49.1, "Safety in Welding and Cutting"
- B) ANSI Z87.1, "Practice for Occupational and Educational Eye and Face Protection"
- C) ANSI Z88.2, "Standard Practice for Respiratory Protection"  
ANSI: American National Standard Institute, 1430 Broadway, New York, NY 10018
- D) ANSI F4.1, "Recommended Safe Practices for Welding and Cutting Containers"  
AWS: The American Welding Society, P.O. Box 351040, 550 NW Lejeune Rd., Miami, FL 33135
- E) NFPA 51B, "Fire Prevention in Cutting and Welding Processes"
- F) NFPA-70, "National Electrical Code"  
NFPA: National Fire Protection Association, Batterymarch Park, Quincy, MA 02269
- G) CGA P-1, "Precautions for Safe Handling of Compressed Gases in Cylinders"  
CGA: Compressed Gas Association, 1235 Jefferson Davis Hwy., Arlington, Va 22202
- H) Code of Federal Regulations (OSHA) 29 CFR 1910  
US: U.S. Government Printing Office, Washington, DC 20402
- I) CSA Standard W117.2, "Safety in Welding, Cutting and Allied Processes"  
CSA: Canadian Standards Association, 178 Rexdale Blvd., Rexdale, Ontario, Canada M9W 1R3



# Warranty



**LIMITED WARRANTY:** Subject to the terms and conditions hereof, **PROFAX**, Pearland, TX warrants its products to be free from defects in workmanship and material at the time of delivery by **PROFAX**.

**PROFAX** will honor warranty claims on products as a result of failure from defect for a time period of 1 year from the date of sale to the original user. Upon return of the merchandise at the user's expense, **PROFAX** reserves the right to either repair or replace as necessary. This is the only warranty either expressed or implied covering this product.

### Positioner Specifications:

Horizontal Weight Capacity, (Lbs.) Note: C/G of load not to be more than 6" from Center of Turntable.	900
Vertical Weight Capacity, (Lbs.) Note: C/G of load not to be more than from Center of Turntable.	500
Power Requirement, (Volts/Amps)	110V @ 10 amps
Rotation Speed Range, (RPM)	0.4 - 4rpm@9-90VDC
Table Diameter, (in.)	19.50
Tilting Angle	0 - 115°
Tilting Method	Motorized
Table Grounding	500 Amps
Table Height @ Horizontal, (in.)	25.25"
Unit Length, (in.)	33.85"
Unit Width, (in.)	26.00
Shipping Weight, (Lbs.)	580 lbs (263 kg)

## Daily Maintenance

### TROUBLE SHOOTING

PROBLEM	POSSIBLE CAUSE	SOLUTION
Indicator Light Fails to light	<ol style="list-style-type: none"> <li>1. No power</li> <li>2. Fuse blown</li> <li>3. Faulty indicator light</li> <li>4. Faulty power switch</li> </ol>	<ol style="list-style-type: none"> <li>1. Check power supply.</li> <li>2. Check and replace fuse.</li> <li>3. Check and replace indicator light.</li> <li>4. Check and replace power switch.</li> </ol>
Table fails to turn	<ol style="list-style-type: none"> <li>1. Tilt/Rotate switch in TILT position</li> <li>2. VR1 set at 0 position</li> <li>3. Foot switch</li> <li>4. The Relay CR3, CR4</li> <li>5. Circuit board</li> </ol>	<ol style="list-style-type: none"> <li>1. Change to "Rotate".</li> <li>2. Adjust it.</li> <li>3. Check and replace Foot switch.</li> <li>4. Check and replace CR3, CR4.</li> <li>5. Check and replace.</li> </ol>
Table will not tilt	<ol style="list-style-type: none"> <li>1. Tilt/Rotate switch in Rotate position</li> <li>2. The Relay CR3, CR4</li> <li>3. Circuit board</li> </ol>	<ol style="list-style-type: none"> <li>1. Change it to "Tilt".</li> <li>2. Check and replace.</li> <li>3. Check and replace.</li> </ol>

**\*NOTE: INSPECT & REPAIR BEFORE OPERATION.**

- Inspect table ground for proper ground tension against table.
- Check oil level in gear cases & fill if necessary.
- Inspect foot pedal and/or pendant for proper operation.
- Test limit switches if applicable.
- Test operation of power switch and/or emergency stop button.
- Check for any broken wires, loose connections, worn parts or damages before operation.
- Apply grease to all gears and grease fittings. (Weekly)



# WP-500 General Operating Instructions



The **PROFAX** Welding Positioner is designed for light loads, with a maximum load of 500 lbs. when the table is in a vertical position and 900 lbs. when it is in the horizontal position.

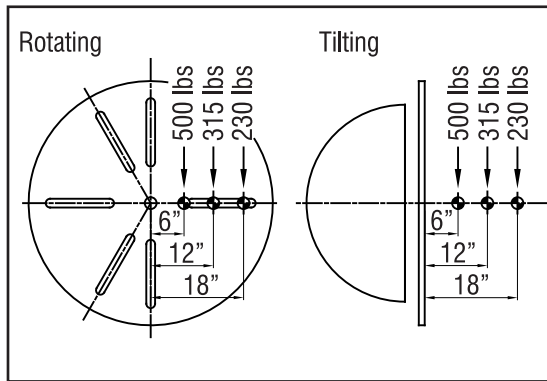
## Loading the Positioner

The positioner may be floor or bench mounted. When mounting the positioner on a bench it is advisable to secure it solidly to the bench to avoid any possibility of tipping over with a load.

When loading the work piece onto the table it is important that the following guide lines are followed to avoid overturning the positioner and/or overloading the motor and gear train.

1. Determine the total weight of your work piece including all fixtures, chucks, brackets, etc.  
Note: This must not exceed 500 lbs. with the table in the vertical position or 900 lbs. with the table in the horizontal position.
2. Locate the center of gravity of the work piece with any fixtures attached.
3. Mount the work piece to the turn table making sure that the center of gravity is within 6" of the center of the turn table.

## Load Chart:

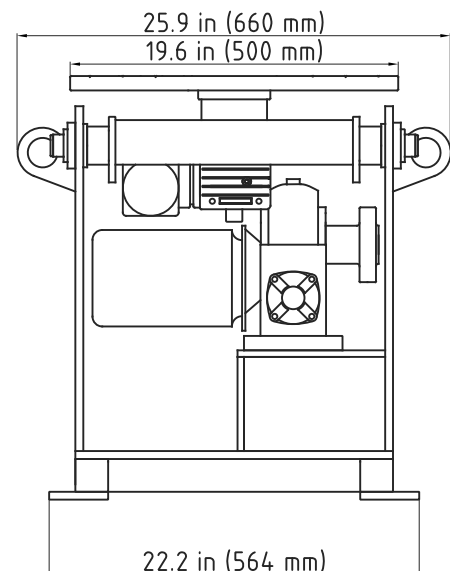
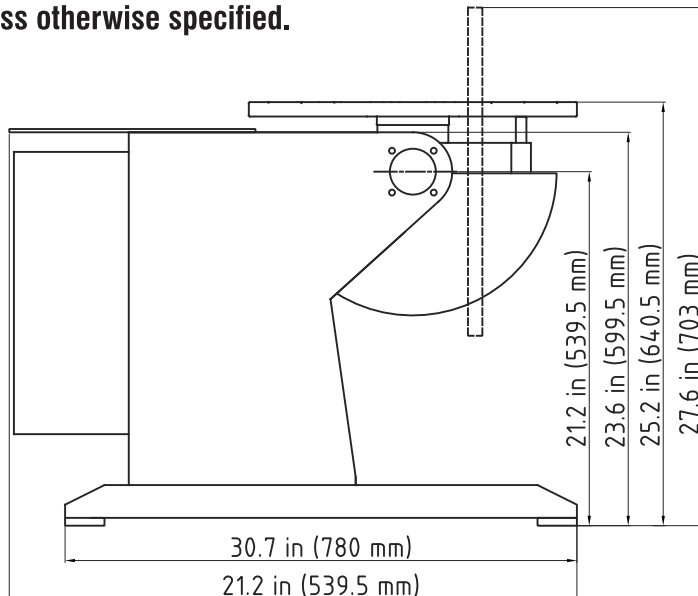


## Specifications for Positioner

Model	WP-500 (WP-500-2)
Capacity (Turning)	500 lb @ 6 in
Capacity (Tilting)	500 lb @ 6 in
Rotation Torque	3000 in/lb
Tilt Torque	5125 in/lb
Electrical Panel	Yes
Rotation Speed	0.4-4rpm @ 9-90VDC
Tilt Range	0-115°
Incoming Supply	110V-1P-50/60Hz (220V-1P-50/60Hz)
Control Voltage	24VDC
Rotation Drive Control	DC Motor Controller
Rotation Control Means	For/Rev Foot Switch (Toggle Type) With 12' Cord
Rotation Drive Motor	DC 100W
Tilt Speed	0-135Deg in 20sec
Tilt Drive Motor	DC 300W
Earthing	500A
Surface Preparation	Gritblast to SA2.5
Painting	Spray Paint
Color	Black
Weight	505 lb (229 kg)
Shipping Weight	580 lb (263 kg)

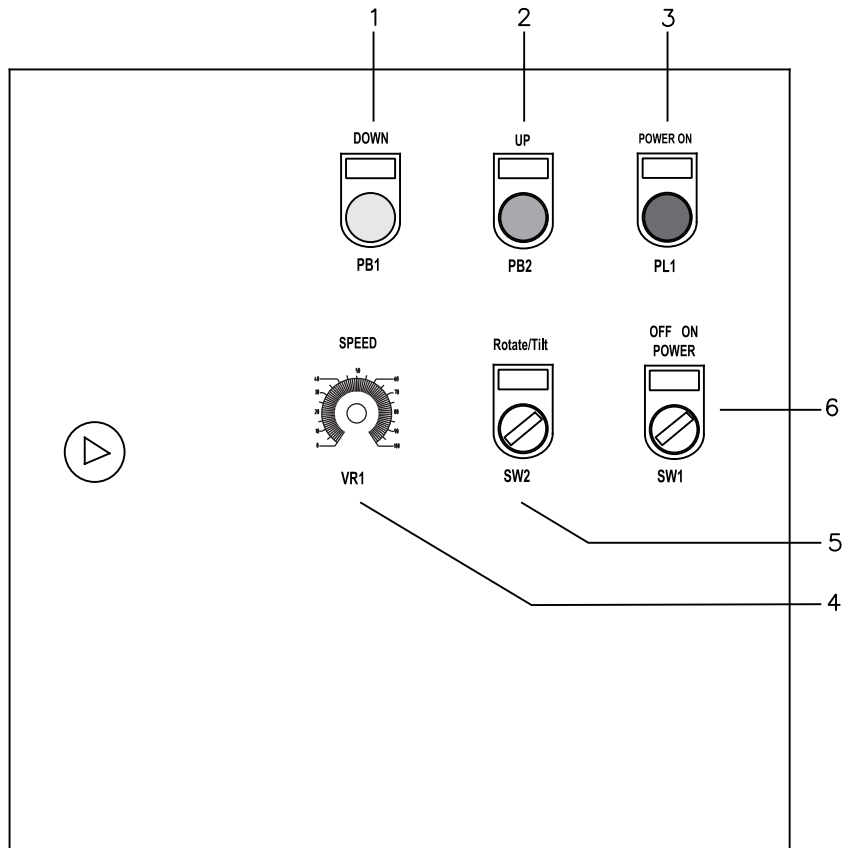
**Warning!** Use equipment of a proper size to lift and/or move the weldment onto the positioning table. Falling equipment can cause personal injury and/or equipment damage.

**All dimensions in inches,  
unless otherwise specified.**

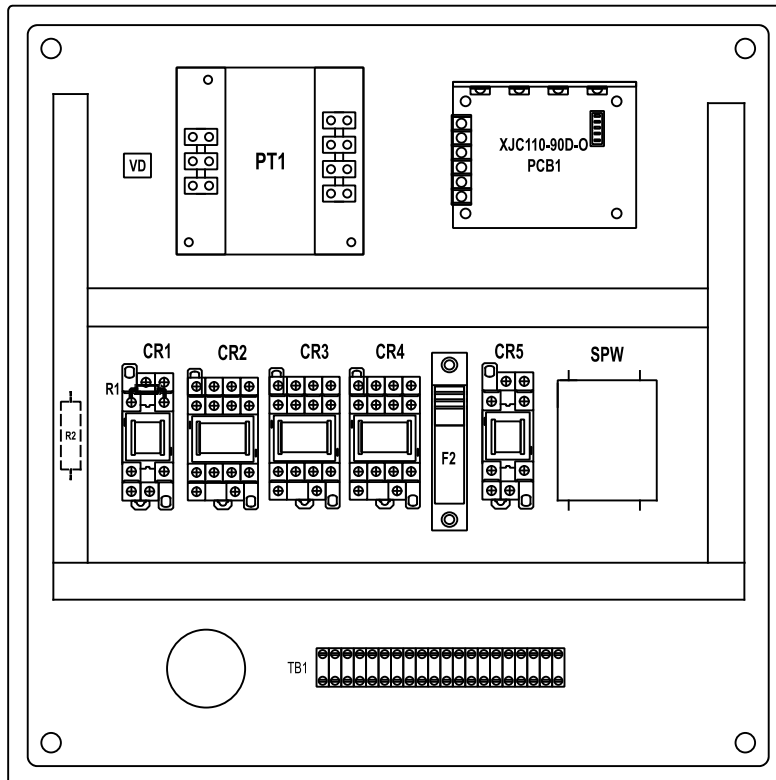




# WP-500 Control Panel



CONTROL PANEL (CP1)



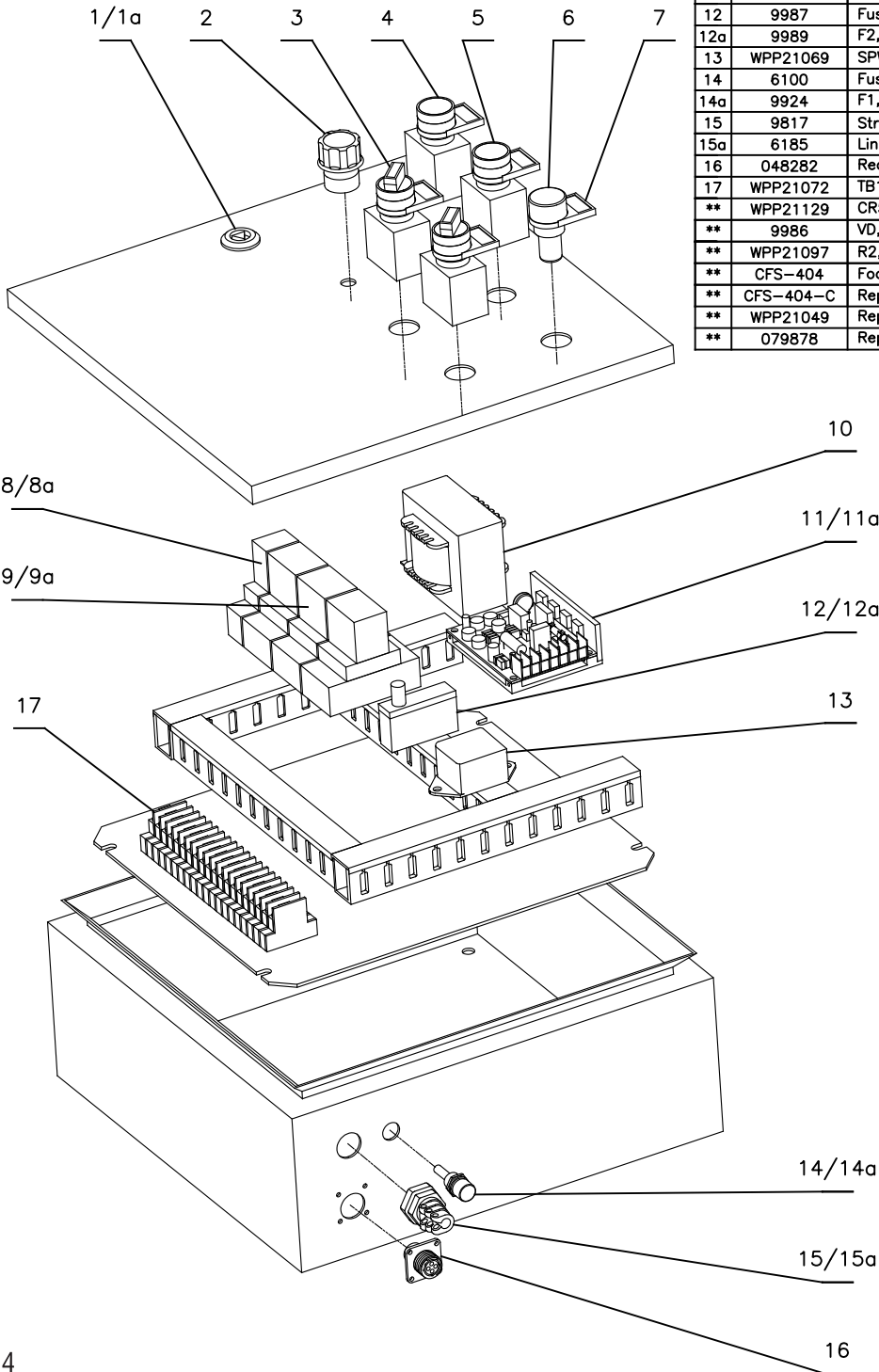
1	PB1	Yellow push button switch for tilting table down.
2	PB2	Green push button switch for tilting table up.
3	PL1	Red pilot light to indicate power ON.
4	VR1	Speed control for table rotation.
5	SW2	Switch for rotate or tilt selection.
6	SW1	Switch for power ON/OFF.



# WP-500 Control Box Parts List

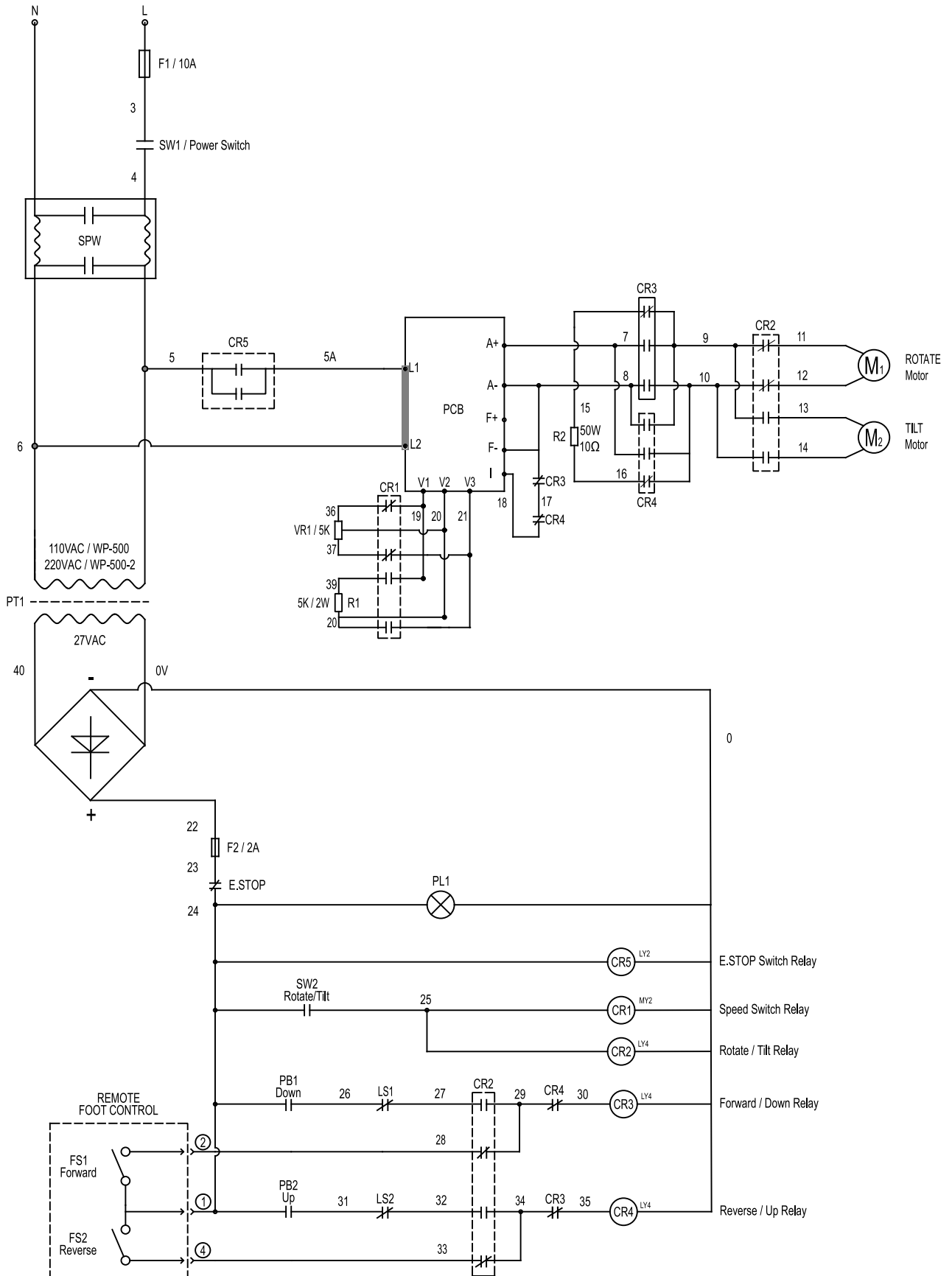


**	9955	Complete Control, WP-500/WP-1000, 110VAC
**	9955-2	Complete Control, WP-500-2/WP-1000-2, 220VAC
1	9990	Door Lock
1a	WPP21045	Key, Door Lock
2	7177	VR1, Speed Control Potentiometer, 5K, 2W, With Knob
3	9973	SW1, SW2, Switch, 22mm With Contact Block, On/Off, Rotate/Tilt
4	9972	PB1, Push Button Switch, Yellow, 22mm With Contact Block
5	9971	PB2, Push Button Switch, Green, 22mm With Contact Block
6	9977	PL1, Pilot Light, Red, 22mm, 24V AC/DC
7	7442	Switch Legend, Blank, 22mm
8	9980	CR1, Relay, MY2, 24VDC
8a	PYF14A-E	Relay Base For MY Series
9	9981	CR2, CR3, CR4, Relay, LY4, 24VDC
9a	PFT14A-E	Relay Base For LY Series
10	9985	PT1, Transformer, Control, 30W, 110/220 to 24VAC
11	9978	PCB1, DC Motor Control, 110VAC
11	9978-2	PCB1, DC Motor Control, 220VAC
11a	9984	Fuse, Miniature, 10 Amp
12	9987	Fuse Holder, Control
12a	9989	F2, Fuse, Control, 2 Amp
13	WPP21069	SPW, Filter
14	6100	Fuse Holder, Main
14a	9924	F1, Fuse, Main, 10 Amp
15	9817	Strain Relief
15a	6185	Line Cord, 16/3, 110VAC
16	048282	Receptacle, 4 socket For Foot Control
17	WPP21072	TB1, Terminal Strip
**	WPP21129	CR5, Relay, LY2, 24VDC
**	9986	VD, Bridge Rectifier, *NOT SHOWN*
**	WPP21097	R2, Brake Resistor, 50W, 10 OHM, *NOT SHOWN*
**	CFS-404	Foot Control, Dual, Forward/Reverse, 12', *NOT SHOWN*
**	CFS-404-C	Replacement Cord For CFS-404, 12', *NOT SHOWN*
**	WPP21049	Replacement Micro Switch For CFS-404, *NOT SHOWN*
**	079878	Replacement 4 Pin Plug For CFS-404, *NOT SHOWN*





# WP-500 Wiring Diagram

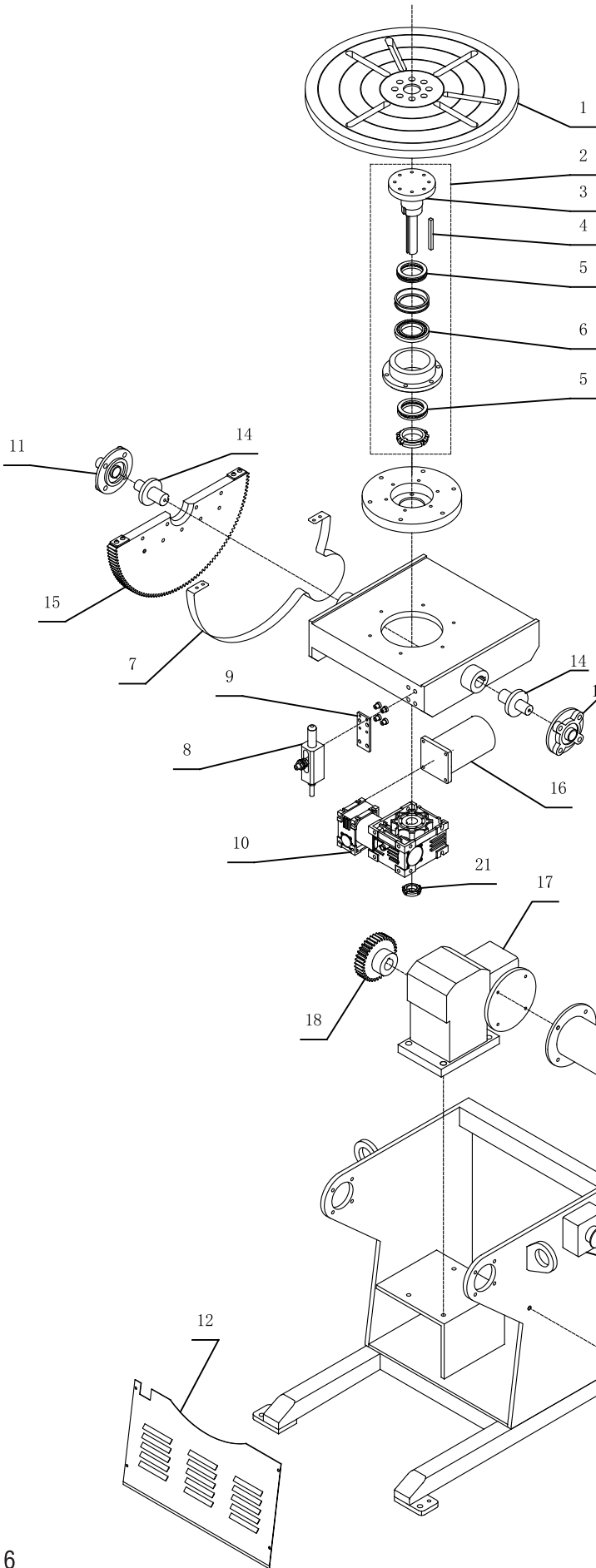


Service or repair of this unit must be done by qualified personnel only.

**Warning!** Before performing any maintenance on this control circuit disconnect the unit from any power supply.



# WP-500 Parts List



1	9997	Table, Six Slot
2	7000A	Table Shaft & Bearing Assembly
3	7000	Table Shaft
4	7000K	Table Shaft Key, 8x7x85mm
5	7429-A	Thrust Bearing
6	7429-B	Ball Bearing
7	WPP21058	Tilt Gear Band
8	7023	Table Ground Assembly
9	7437	Table Ground Insulator Set
10	9960	Gearbox, Rotation
11	7003	Tilt Bearing
12	9991	Cover Plate, Front
13	7005	Cover Plate, Top
14	7007	Tilt Shaft
15	9959	Tilt Gear
16	9995	Motor, Rotation, 100W, 90VDC
17	9956	Gearbox, Tilt
18	9957	Tilt Pinion Gear
19	9994	Motor, Tilt, 90VDC
20	7010	Cover Plate, Rear
21	7439	Table Shaft Nut Retainer Set
22	9975	Switch, Emergency Stop, 22mm With Contact Block
23	9976	Emergency Stop Box Enclosure
24	9996	Limit Switch
25	9955	Control Box, Complete, 110VAC For WP-500
25a	9955-2	Control Box, Complete, 220VAC For WP-500-2
26	CFS-404	Foot Control, Dual, Forward/Reverse With 12' Cord
26a	CFS-404-C	Replacement Cord For CFS-404, 12', *NOT SHOWN*
26b	WPP21049	Replacement Micro Switch For CFS-404, *NOT SHOWN*
26c	079878	Replacement 4 Pin Plug For CFS-404, *NOT SHOWN*