



TOTAL POLISHING SYSTEMS

OPERATING MANUAL



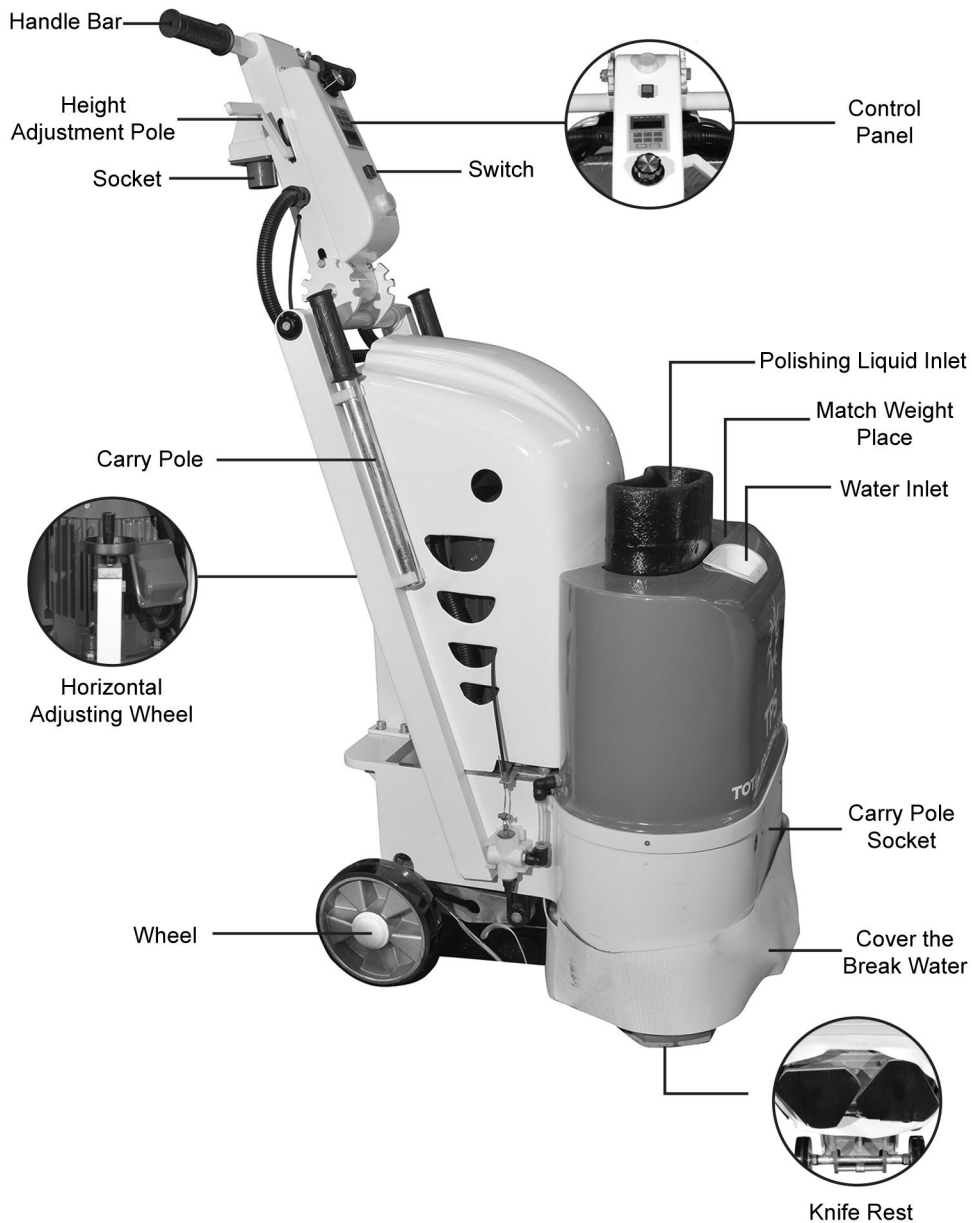
TPS-X1

**TOTAL POLISHING SYSTEMS X1
20" VARIABLE SPEED 5 HP
DIAMOND CONCRETE FLOOR POLISHING MACHINE**

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INTRODUCTION TO TPS-X1 POLISHING MACHINE



GENERAL INFORMATION & FEATURES

If you are looking to diversify into concrete floor polishing and surface preparation, the TPS-X1 machine is for you. The demand for polished concrete is growing and in addition to concrete polishing and grinding, this machine will allow you to take on sidewalk grinding and trip hazard removal operations and complete concrete floor leveling and surface preparation needs prior to tile setting.

The TPS X1 is the ideal primary machine for residential and small commercial projects under 5000 square feet. It's a robust, compact concrete polishing machine with the versatility for polishing, grinding, texturing or removing materials on most surfaces including concrete, tile, marble, and terrazzo. The dual 10" counter-rotating grinding heads on the X1 represent close to 50% of the machine's entire footprint. This allows you to navigate small areas that are common in residential situations such as bathrooms, kitchens, and closets. With a grinding width of 20" and adjustable speed up to 1,500 RPM the X1 can grind 1/32" of material at a rate of 400-750 sq. feet per hour.

Grind and polish using common, non-proprietary, diamond grinding heads and accessories with the X1's 2 multipurpose discs. These mounting plates allow you to accommodate various surfacing attachments for a variety of projects. The TPS-X1 is engineered with a hardened steel gear transmission system for trouble free operation and long life with little maintenance. Being the work-horse of residential and small commercial projects the TPS X1 delivers portability, easily accommodated power requirements, and the tooling versatility to tackle virtually any flooring project. Using the TPS X1 for dust free dry grinding and polishing of concrete can be achieved by attaching a concrete vacuum to the dust extraction port built into the machine.

SPECIFICATIONS:

- 5 HP 220V powerful electric motor
- Variable speed 0-1500 RPM for versatility
- 2 mounting plates achieve cross grind scratch pattern
- Depending on concrete hardness and removal thickness, grinding speeds range between 300 and 750 sq. ft. per hour
- Utilizes commonly available trapezoidal metal bond diamonds

SAFETY INSTRUCTIONS

WARNING! Failure to read this Operating Manual prior to operating or attempting any service or maintenance procedure to your machine could result in injury to the operator and/or other personnel.

WARNING! To prevent the risk of fire, only use commercially available detergent intended for machine applications. Never use the TPS-X1 with flammable liquids.

WARNING! To prevent the risk of explosion, ensure floor grinding is done in well ventilated area. Floor grinding can result in an explosive mixture of fine dust and air.

WARNING! To prevent the risk of electrocution, never operate an unassembled machine. Ensure electrical cords are not damaged, carry out repairs on a machine that's disconnected from power source, keep power cord away from the grinding plates at all times and never use the machine in wet or moist environment.

WARNING! Ensure only professional and experienced personnel carries out service, repairs and maintenance of the machine. Inexperienced amateur operator is prone to personal injury and/or property damage.

- Total Polishing Systems polishing machines are made under strict safety rules and regulations. Every operator of the polishing machine **MUST** read and follow the instructions given below to avoid personal injury and/or property damage:
- Only trained operators who've read and understood the instructions completely should operate and maintain the polishing machine.
- Prior to every use, ensure the power cord isn't damaged or compromised in any way. If the power cord isn't in perfect condition, it must be replaced before operation to avoid personal and/or property damage. Make sure the replacement cord has the same voltage rating as the original cord.
- When operating grinder, make sure you're using the compatible voltage outlet and effective grounding is present to prevent any potential damage or losses.

- Clean and secure the work area around the machine and ensure all non-operation personnel are at a safe distance from the polishing machine.
- Prior to operation, check whether there are any loose screws or fasteners. Tighten the fasteners if necessary.
- When not operational, always store the polishing machine in a cool and dry place.

WARNING! TPS-X1's electrical components are not waterproofed, NEVER use it in wet or damp conditions.

- Always ensure that all power leads are disconnected when changing tools, during transportation, cleaning, repair or maintenance. The service of electrical components should be carried out by authorized personnel.
- When carrying out repairs or maintenance work on the machine, remember to disconnect the polishing machine from the power source to prevent the machine from being turned on accidentally.
- While operating, never leave the polishing machine unattended. If leaving is necessary, turn off the polishing machine.
- High-speed operation of the machine is prohibited while the base plate has been raised up, otherwise, it might cause damage or injury.
- Don't use the polishing machine without a dust guard and always wear insulated waterproof boots.
- In the event that polishing machine exhibits signs of malfunction, switch off the machine immediately and disconnect it from the power source. Do not use the polishing machine until the problem is diagnosed and resolved.

SPECIFICATIONS

Type	220A	220B
Voltage	220	220
Power (HP)	3	3
Axle velocity (out) (RPM)	600	600
Work Area (mm) ²	300x650	300x650
Weight of Machine (net weight)	145	145
Number of grinding Blades	6 - 12	6 - 12
Water out put	Axle	Axle
Capacity of water tank (L)	20	20
Functions	Can be renovated	Can be renovated polished, crystal faced
Effect	Better	Best

Type	380A	380B
Voltage	380	380
Power (HP)	5	3
Axle velocity (out) (RPM)	600	200 - 1000
Work Area (mm) ²	300x650	300x650
Weight of Machine (net weight)	160	145
Number of grinding Blades	6 - 12	6 - 12
Water out put	Axle	Axle
Capacity of water tank (L)	20	20
Functions	Can be renovated polished	Can be renovated polished, crystal faced
Effect	Better	Best

SETTING UP & OPERATION

1. Installation of TPS-X1: adjust the handle to the vertical position, pull back hard to tilt the machine till the base plate has been raised up, and install the grinding plates.

ATTENTION:The machine must be secured & supported to ensure that machine doesn't move.

2. Place the TPS-X1 back on the ground gently so the blade touches the surface.
3. Adjust the horizontal wheel by turning it until the air bubble is in the center of the level.
4. Ensure that the power supply is correct for the machine. Use the appropriate stable voltage, standard power, and a grounded electrical box. Do not use non-standard wires, and plugs. Connect the machine to the power supply with the plug tightly plugged in.
5. Check the work surface to be treated; it should be free from loose parts (stones, screws, etc.). If necessary, clean the floor of any debris prior to operation. Ensure that the machine can run over all uneven areas on the surface and small hurdles like floor joints aren't a barrier for the machine.
6. Adjust the height of the handle by pushing or pulling the adjustment pole so it's positioned at a comfortable height for the operator.
7. Turn on the switch that controls water quantity.
8. Once you ensure safe operation in accordance with the provided instructions, switch on the power source to turn the TPS-X1 on.
9. If you want to stop the machine or it's showing signs of malfunctioning, press the safety button to cut off the power source completely.
10. When polishing, keep an eye on the wear and tear of grinding blade. A blade that has been worn out or torn too much can result in knife rest damage.
11. Ensure that shear doesn't exceed 1.5mm when finishing a shear. Otherwise, this machine could only be used if the shear is first treated with a small mallet.

ATTENTION:The machine must be set into its safety off position before starting any kind of maintenance or repair work.

ATTENTION:Don't change any initial pre-set on the frequency screen unless there are problems occurring during operation.

TRANSPORTATION

TPS-X1 comes with an ergonomic compact design so it's not only user friendly to operate but easily portable and stored. Total Polishing Systems has equipped the machine with two friction free wheels so it's convenient to move around making portability easier for the operator. Additionally, TPS-X1 comes with an adjustable handle for different height, and folding for easy transportation and storage.

MAINTENANCE

Regular periodical maintenance of the TPS-X1 and its components is crucial for reliable functionality and safety. Educate all operators and repairmen with the following important instructions:

- Prior to any maintenance or adjustment disconnect the machine from the power supply.
- After every use, clean the machine to remove all buildup of dust and surface residue. If you are using a hose pipe or pressure washer, ensure that water is not directed onto electrical components and switches which are not water proof. Wet components can be an electrocution hazard.
- All screws and fasteners should be checked daily for tightness.
- Check the plugs and cables for damage, age, and any other type of compromise.
- Ensure all electrical connections are secure and snug.
- Prior to any repairs on the machine and its drives, secure the machine against unintentional switch-on. Disconnect the main plug in order to do this.
- In order to prevent unnecessary down times it is recommended to keep original spare and wear parts on stock.
- Store the plug near the machine to avoid accidents.

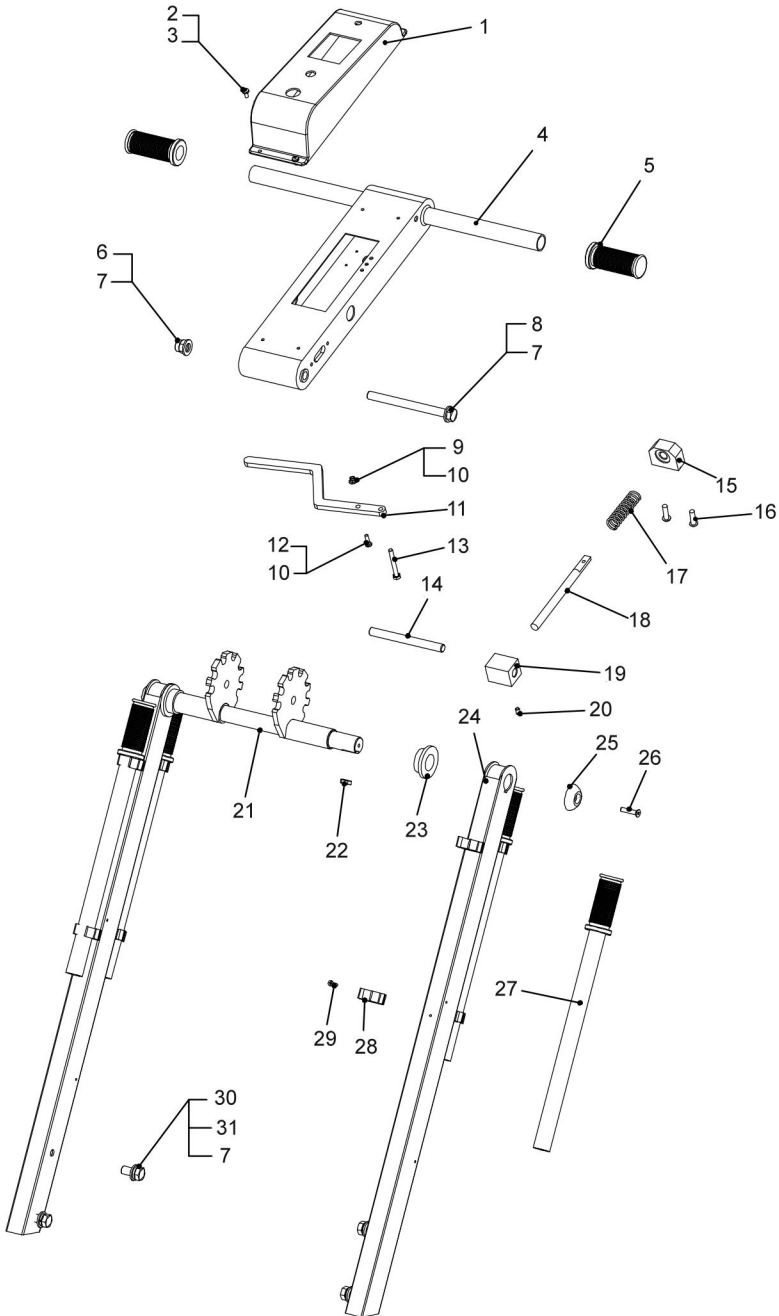
TROUBLESHOOTING

- If the machine seems to malfunction, shut it down right away and assess the integrity of the electrical ribbon cable connected to the computer. A loose or worn down electrical ribbon cable can cause abnormal function. You may also contact an experienced service technician.
- If machine is making unusual sounds during the operation, cut off the power source immediately and contact an experienced service technician.
- If the machine does not turn on:
 - o Check that the power cord is connected and whether the voltage of the power supply and the machine is compatible.
 - o Check the power to see whether it lacks phase or breakage of wiring.
 - o Check whether the building circuit breaker is functional.
- If TPS-X1 wobbles during operation
 - o Check if the surface is evenly leveled, uneven surface with differences of 2 mm or more can cause serious wobbling. For such situations, level out the surface with angle polishing machine and then grind slowly from high to low surface with constant speed.
 - o Check the pad holders if they are tight and leveled.
 - o Check whether adaptors are leveled.
- If polishing machine swirls on the floor after grinding
 - o You're moving the polishing machine too fast or machine is in stationary state for too long
 - o You're using incompatible polishing/grinding pad for the job or the surface
- If polishing machine is making scratches on the floor
 - o Machine is in stationary state for too long while pad is operational
 - o Polishing method isn't correct
 - o You're using incompatible polishing/grinding pad for the job or the surface

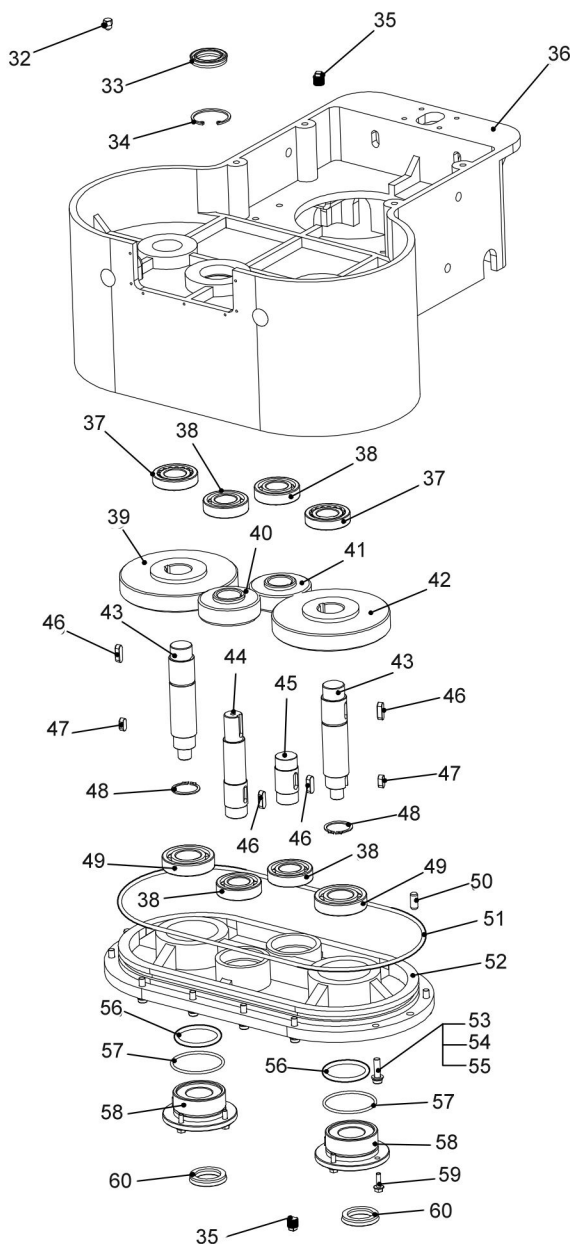
ACCESSORIES

- Power Source Cable - 1
- Match Weight (20kg) - 1
- Dust Apron Skirt - 1

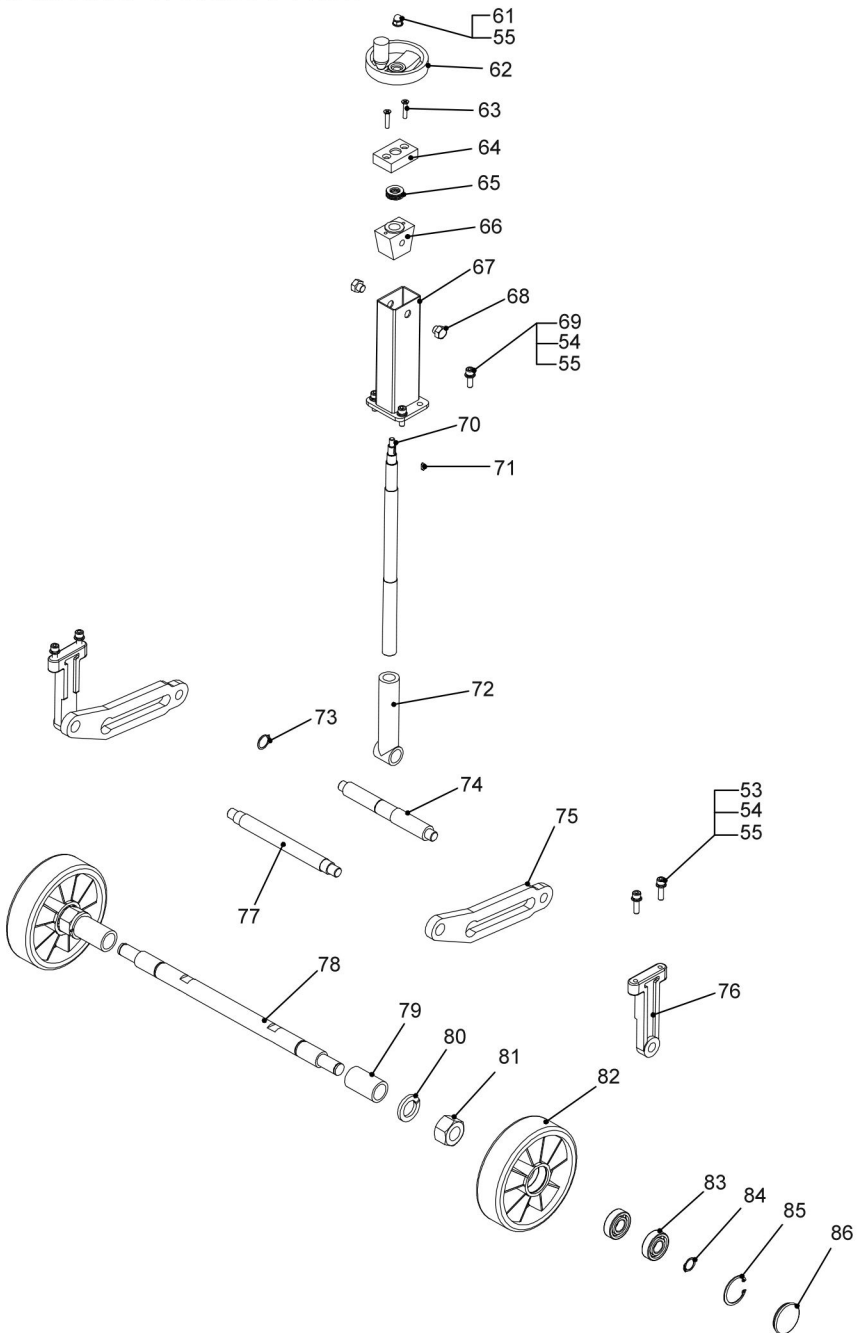
SCHEMATIC & PARTS LIST



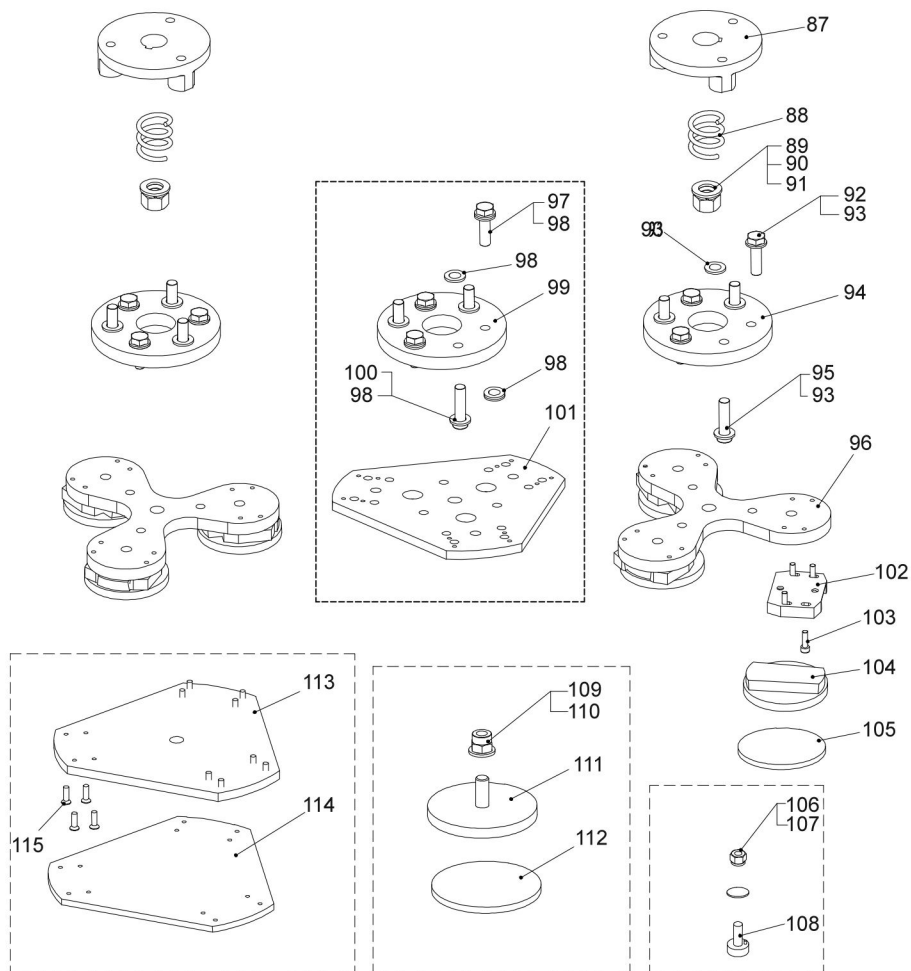
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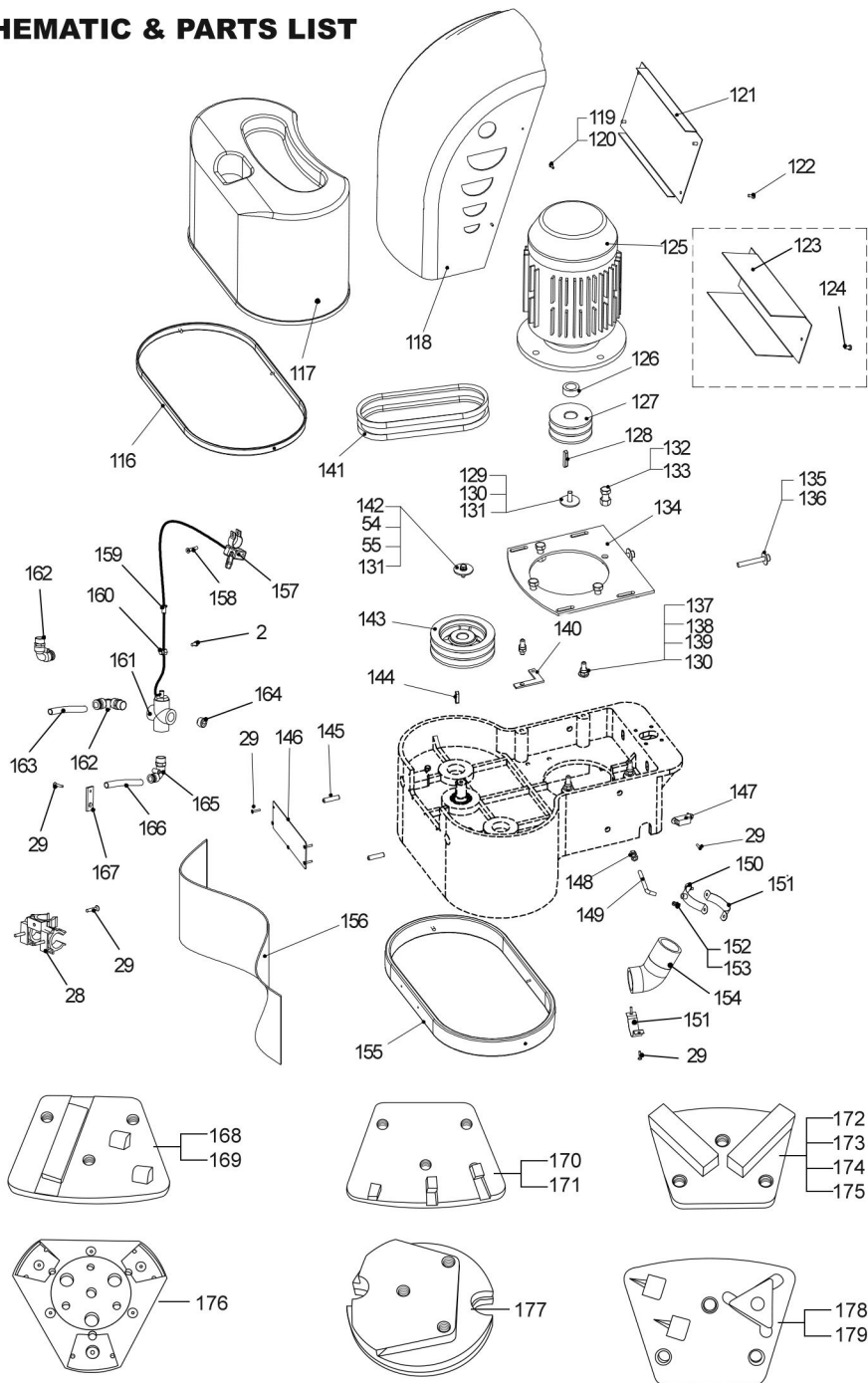
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SCHEMATIC & PARTS LIST

S.No.	Description	Qty.	S.No.	Description	Qty.
1	Control Panel	1	55	Flat Gasket	1
2	Pan Head Screw	1	56	Iron Mat	1
3	Flat Gasket	1	57	O-Ring	1
4	Handle	1	58	Gear Case	1
5	Rubber Handle Grip	1	59	Hex Flange Bolts	1
6	Locknut	1	60	Grease Seal	1
7	Gasket	1	61	Cap Nut	1
8	Hex Bolt	1	62	Double Fold Handwheel	1
9	Locknut	1	63	Hex Screw	1
10	Gasket	1	64	Adjustable Bearing Seat	1
11	Handgrip	1	65	Bearing Seat	1
12	Hex Socket Cap Screws	1	66	Adjustable Holder Head	1
13	Hex Bolt	1	67	Adjustable Holder (Welding)	1
14	Hinge Pin	1	68	Lock Holder Head Bolts	1
15	Block	1	69	Hex Socket Cap Screws	1
16	Hex Socket Cap Screws	1	70	Adjustable Screw	1
17	Adjustable Spring	1	71	Flat Key	1
18	Pull Rod	1	72	Adjustable Screw Cover (Welding)	1
19	Pull Rod Head	1	73	Shaft Clip	1
20	Hex Set Screw	1	74	Wheel Holder Back Shaft	1
21	Gear Shaft	1	75	Wheel Holder Block	1
22	Flat Key	1	76	Wheel Holder Fixed Block	1
23	Handle Holder Cover	1	77	Wheel Holder Forward Shaft	1
24	Handle Holder (Welding)	1	78	Wheel Holder Axis	1
25	Handle Decorating Cover	1	79	Wheel Holder Axis Cover	1
26	Hex Screw	1	80	Spring Gasket	1
27	Lever	1	81	Hex Nut	1
28	Plastic Clamp	1	82	Gearwheel	1
29	Screw	1	83	Bearing	1
30	Hex Bolt	1	84	Shaft Clip	1
31	Spring Gasket	1	85	Hole Clip	1
32	Valve	1	86	Dust Cover	1
33	Grease Seal	1	87	Three Jaw Grinding Head	1
34	Hole Clip	1	88	Compression Spring	1
35	Greasy Blockage	1	89	Gasket	1
36	Tank	1	90	Spring Gasket	1
37	Conical Roller Bearing	1	91	Hex Nut	1
38	Deep Rroove Ball Bearing	1	92	Hex Bolt	1
39	Gear	1	93	Gasket	1
40	Gear	1	94	Plastic Disc	1
41	Gear	1	95	Hex Socket Cap Screws	1
42	Gear	1	96	Triangle Plate	1
43	Gear Output Shaft	1	97	Triangle Plate (Insertion)	1
44	Gear Centre Shaft	1	98	Triangle Plate (Diamond)	1
45	Gear Short Shaft	1	99	Triangle Plate (Diamond)	1
46	Flat Key	1	100	Hex Bolt	1
47	Flat Key	1	101	Gasket	1
48	Shaft Clip	1	102	Plastic Disc	1
49	Bearing	1	103	Hex Socket Cap Screws	1
50	Cylindrical Pin	1	104	Triangle Chassis	1
51	O-Ring	1	105	Triangle Chassis (4 Diamond)	1
52	Box Cover	1	106	Hex Nut	1
53	Hex Socket Cap Screws	1	107	Spring Gasket	1
54	Spring Gasket	1	108	Diamond Grinding Head	1

S.No.	Description	Qty.	S.No.	Description	Qty.
109	Locknut	1	163	Water Pipe Holder	1
110	Gasket	1	164	End Cap	1
111	Grinding Head	1	165	Tube Connector	1
112	Hook & Loop Disc	1	166	Water Pipe	1
113	Triangle Chassis (Plastic)	1	167	Water Pipe Block	1
114	Hook & Loop Disc	1			
115	Hex Screw	1			
116	Seal	1		ACCESSORIES	
117	Water Tank	1		2 Tooth Left Hand PCD with 1 Bar, Diamond Counterclockwise (PCD21L)	1
118	Motor Cover	1			
119	Hex Socket Cap Screws	1			
120	Gasket	1			
121	Aluminum Plate Converter	1		2 Tooth Right Hand PCD with 1 Bar, Diamond Counterclockwise (PCD21R)	1
122	Pan Head Screw	1			
123	Aluminum Plate Contactor	1			
124	Pan Head Screw	1			
125	Motor	1		3PCD Left - (3PCDL)	1
126	Motor Shaft Cover	1			
127	Motor With Wheel	1		3 PCD Right, Clockwise - (3PCDR)	1
128	Flat Key	1			
129	Hex Bolt	1			
130	Spring Gasket	1		Trapezoidal Diamond Block	
131	Gasket	1		20 Grit - Red - (TRAP20)	1
132	Hex Bolt	1		20 Grit - Black - (TRAP36)	1
133	Hex Nut	1		20 Grit - Blue - (TRAP80)	1
134	Motor Baseplate (Welding)	1		20 Grit - White - (TRAP120)	1
135	Hex Socket Cap Screws	1			
136	Gasket	1		Quick Plate for TPSX-1 Floor Grinding Machine (TPSX1QPLATE)	1
137	Hex Set Screw	1			
138	Locknut	1			
139	Flat Gasket	1			
140	Water Pipe Holder	1		Trapezoidal Magnetic Velcro Adapter for TPS Quickplate (TPSMAGADAPT)	1
141	Belt	1			
142	Hex Bolt	1			
143	Follower Pulley	1			
144	Flat Key	1		2 Tooth PCD with 1 Triangle Carbide Cutter - Left (PCD31CL)	1
145	Hex Set Screw	1			
146	Shrouding	1			
147	Gradienter	1			
148	Hex Nut	1		2 Tooth PCD with 1 Triangle Carbide Cutter - Right (PCD31CR)	1
149	Vacuum Cleaner Retaining Bolt	1			
150	Clip A	1			
151	Clip B	1			
152	Pan Head Screw	1			
153	Hex Nut	1			
154	Suction Inlet	1			
155	Protection Bar	1			
156	Waterproof Deflector	1			
157	Accelerograph Switch	1			
158	Screw	1			
159	Accelerograph Copper Wire	1			
160	Accelerograph Copper Wire	1			
161	Four-Way Valve	1			
162	Tube Connector	1			