

BUEHLER

**METASERV® 2000
GRINDER POLISHER**



Declaration of Conformity



Manufacturer:

BUEHLER, Ltd.

Of:

41 Waukegan Road

Lake Bluff, Illinois 60044

Declares the following product: **METASERV® 2000 Grinder Polisher**

To be in accordance with EC Directive(s);

Safety of Machinery:

89/392/EEC and 91/368/EEC and 93/44/EEC
according to the following standards:

EN 292 PART 1 1991
EN 292 PART 2 1991
EN 60204 PART 1 1993

EMC Directive:

89/336/EEC and 92/231/EEC according to the
following standards:

EN 50081-1: 1992
EN 50082-1: 1992

Position: Director of Engineering

Name: Arnie Buchanan

Signature: *Arnie Buchanan*

Date: 12/16/2002

THIS MANUAL IS A CUSTOM GENERATED DOCUMENT. IT INCLUDES ALL REVISIONS RELATIVE TO THIS SPECIFIC BUEHLER ITEM AS OF THE DATE SHOWN BELOW.

OPERATION AND MAINTENANCE INSTRUCTIONS

BUEHLER®

METASERV® 2000

GRINDER POLISHER



Table of Contents

METASERV® 2000 Grinder Polisher	5
Warranty	5
Unpacking.....	5
Safety Information.....	6
Machine Use and Care	6
Installation.....	7
Water Connections.....	7
Electrical Installation	7
Operation	8
Front Panel Controls	8
METASERV® 2000Variable Speed Front Panel.....	8
METASERV® 2000Constant Speed Front Panel	9
Start up.....	10
Over load protection	10
Maintenance	11
Drive Belt Adjustment.....	11
Recommended Spare Parts.....	12
Variable Speed Units	12
Fixed Speed Units	12

METASERV® 2000 Grinder Polisher

The METASERV® 2000 series of grinder/polishers offers a combination of performance, economy, and reliability for microstructural analysis applications. Designed for both manual grinding and polishing as well as for semi-automatic polishing when combined with AUTOPOL polishing attachments.

Warranty

This unit is guaranteed against defective material and workmanship for a period of two (2) years / 2000 hours from the date of receipt by the customer. The warranty is void if inspection shows evidence of abuse, misuse, unsafe use, or unauthorized repair. This warranty covers all Buehler costs associated with the replacement of defective materials (e.g., parts, labor, and travel).

If for any reason this unit must be returned to Buehler Ltd. for warranty service, please apply for prior authorization with shipping instructions. Please include the following information:

- Customer Purchase Order Number
- Buehler Invoice Number and Date
- Serial Number
- Reason for return

Unpacking

The METASERV® 2000 has been carefully packaged to protect it during transit from the factory to your location. Carefully unpack and check contents. If any components are missing or damaged, save the packing list and materials and advise the carrier and Buehler, Ltd. of the discrepancy.



WARNING! Equipment Damage. The METASERV® 2000 weighs is heavy and two persons are required to safely lift the unit from the shipping carton.

The METASERV® 2000 is bolted to a plywood base for protection during shipping. Open areas are provided at the corners of the base for ease of lifting. Lift the METASERV® 2000 out of the carton and position it on a table so it overhangs on the edge. Remove the four 1/2-inch hex head bolts securing the METASERV® 2000 to the plywood base.

Model	Weight	Height	Width	Depth
Twin 8-inch Constant Speed	44 lbs (20 kg)	12.8 inches (326 mm)	13.3 inches (339 mm)	25.8 inches (656 mm)
Twin 10-inch Constant Speed	44 lbs (20 kg)	12.8 inches (326 mm)	13.3 inches (339 mm)	25.8 inches (656 mm)
Twin 8-inch Variable Speed	70 lbs (32 kg)	12.8 inches (326 mm)	17 inches (430 mm)	28.8 inches (731 mm)
Twin 10-inch Variable Speed	70 lbs (32 kg)	12.8 inches (326 mm)	17 inches (430 mm)	28.8 inches (731 mm)
Single 8-inch Constant Speed	75 lbs (34kg)	12.8 inches (326 mm)	25.6 inches (650 mm)	25.8 inches (656 mm)
Single 10-inch Constant Speed	75 lbs (34kg)	12.8 inches (326 mm)	25.6 inches (650 mm)	25.8 inches (656 mm)
Single 8-inch Variable Speed	75 lbs (34kg)	12.8 inches (326 mm)	25.6 inches (650 mm)	25.8 inches (656 mm)
Single 10-inch Variable Speed	75 lbs (34kg)	12.8 inches (326 mm)	25.6 inches (650 mm)	25.8 inches (656 mm)

Safety Information

The METASERV® 2000 is designed for polishing and grinding metallurgical samples for microstructural analysis applications.

For safe installation and operation of this equipment, carefully read and understand the contents of this manual. Improper operation, handling, or maintenance can result in severe personal injury and equipment damage.

The METASERV® 2000 is designed for use in dry, indoor laboratory and workshop environments away from strong electromagnetic fields and with normal temperature ranges (41° F to 104° F / 5° C to 40° C) and non-condensing humidity ranges (30-90%).

Machine Use and Care

Dress properly. Protective equipment should be worn to handle samples, which may be sharp or hot.

Always use safety glasses. Flying debris and liquids can cause severe eye injury.

Maintain the METASERV® 2000 with care. Properly maintained machines are less likely to bind and are easier to control. Any alteration or modification is a misuse and may result in a dangerous situation.

Only qualified repair personnel must perform machine service. Service or maintenance performed by unqualified personnel could result in a risk of injury.

Replace damaged or defective parts immediately and use only identical replacement parts. Use of unauthorized parts or failure to follow maintenance instructions may create a risk of electrical shock or injury.

Check for misalignment or binding of moving parts, breakage of parts, and any other condition that may affect the machine operation. If damaged, have the machine serviced before using. Poorly maintained machines cause many accidents.

Do not abuse the power cord. Never use the cord to cart the machine or pull the plug from an outlet. Keep the cord away from heat, oil, sharp edges, or moving parts. Replace damage cords immediately. Damaged cords increase the risk of electrical shock.

Use of extension cords is not recommended for Buehler machines and equipment.

Installation



CAUTION! Equipment Damage. Follow approved procedures and safety practices when lifting and installing this machine. Improper lifting can result in machine damage.

Select a location for your METASERV® 2000 that provides adequate working space, a power source, water hook up, and a drain.

Water Connections

The water supply hose and drain hose must be connected and checked for any leaks before any electrical connections are made.

The recommended cooling water flow is a minimum of .5 gallons/min (2 liters/min) with a pressure between 1-2 bar (14-28 psi).

1. Connect the drain hose from the back of the METASERV® 2000 to a drain. Adjust the drain hose and rotate the elbow connection for proper drainage.
2. Connect the water supply hose from the back of the METASERV® 2000 to a water supply source.
3. Check for any leaks.

Electrical Installation

The Specification Plate is located on the back of the METASERV® 2000.

Check that Specification Plate values for voltage, current, and power consumption are compatible with the intended electrical supply before installation.

Due to the close proximity of open water outlets, it is recommended that the METASERV® 2000 power supply be protected by a GFI (Ground Fault Interrupt), an Earth Leakage Current Breaker (ELCB), or a Residual Current Device (RCD).

Make sure the voltage selector is set correctly for variable speed units and that fixed speed units match the electrical supply.

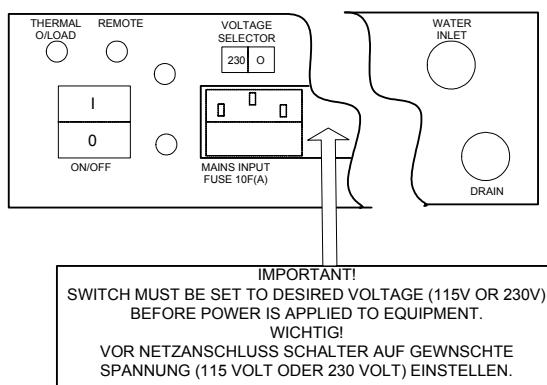


Figure 1 Voltage Selector Switch



WARNING! Electrical Shock Hazard. A qualified electrical technician should perform electrical maintenance.

- **Disconnect the power supply before making any electrical adjustments.**
- **Capacitors inside the machine may retain a charge even if the machine is disconnected from the power supply.**
- Installation of the METASERV® 2000 must comply with local electrical standards or codes of practice.
- Make sure that the supply voltage and frequency is correct. See the Specification Plate.

Voltage Range	Voltage Frequency
100-120V	50/60Hz
200 – 240V	50Hz

1. Plug the power cable into the back of the METASERV® 2000 unit.
2. Plug the other end of the power cable into a power supply outlet.
3. The METASERV® 2000 is now ready to use.

Operation

The main power switch is located on the back of the METASERV® 2000 in the left corner.

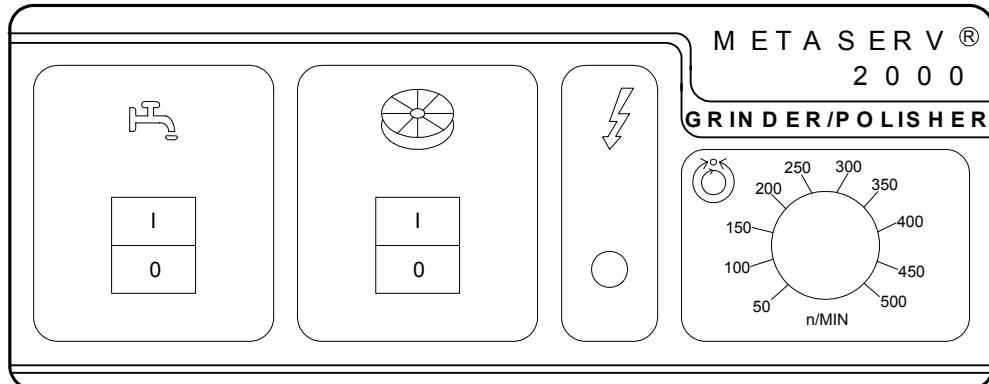
1. Flip the switch to the up position to activate power to the METASERV® 2000.

Front Panel Controls

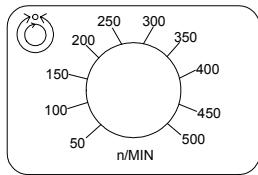
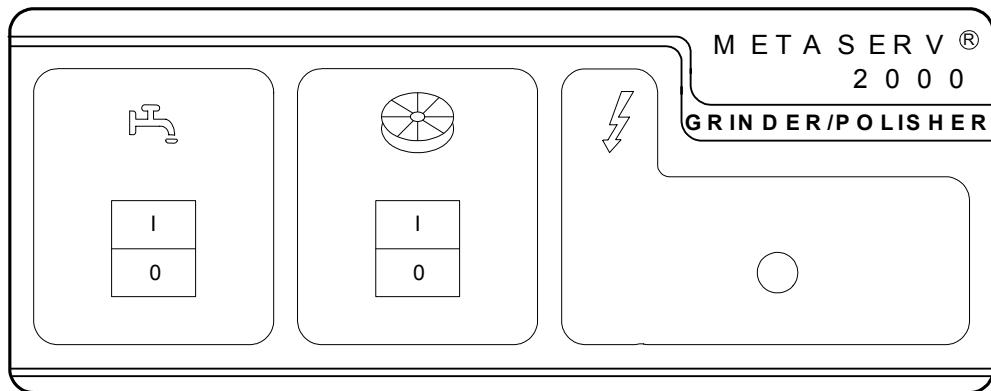


WARNING! Electrical Shock Hazard. Do not operate the power switch or front panel controls with wet hands.

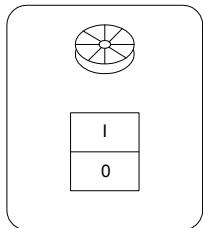
METASERV® 2000 Variable Speed Front Panel



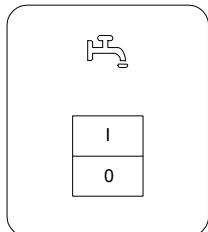
METASERV® 2000 Constant Speed Front Panel



Speed Control: (Variable speed models only.) Controls the speed of the platen between 50 – 500 rpm's.



Platen Control: Rotates the platen and sends a signal to an abrasive dispenser (if installed).



Water: Activates the water flow. The tap on the side of the bowl controls the water flow. Wash down water will flow while the water is on.



Power Indicator: Is an indicator light indicating power has been activated to the METASERV® 2000.

Start up

Before beginning any grinding/polishing procedure, make sure the wheel guard is in place at all times.

1. Clean the grinding/polishing area and guard to remove debris.
2. Check that the drain hose is clear of any obstructions and the liquid can freely drain away from the polishing bowl.
3. Adjust the water/lubricant supply so it is contained within the polishing bowl. Also adjust the water/lubricant supply to prevent excess spraying on the unit or on other machines close by.
 - If water does enter the METASERV® 2000 disconnect all electrical supply and contact your service agent for assistance.
4. METASERV® 2000 motors are adequately rated and can run for long periods of time without harming their performance. A slight rise in temperature of the cabinet is normal.

Over load protection

The METASERV® 2000 has a thermal overload protector on the back panel above the power switch. If the motor becomes overloaded the overload button will pop out and all electrical power to the motor will be disconnected.

After a short delay press the button to reset the overload protector. The METASERV® 2000 will be ready for use.

Maintenance

The METASERV® 2000 will continue to perform at optimum levels with proper care, daily cleaning, and general maintenance.



WARNING! Electrical Shock Hazard. A qualified electrical technician should perform electrical maintenance. Disconnect the power supply before making any electrical adjustments.

- Keep the polishing bowl clean and do not allow large pieces of debris to fall into the drain outlet.
- Check that the bowl drains freely before each use and switch covers are free from holes or splits.

Drive Belt Adjustment

If the heavy duty drive belt needs to be adjusted:

1. Disconnect the power supply.
2. Remove the four rubber feet.
3. Remove the pulley cover.
4. Loosen the four motor mounting nuts.
5. Slide the motor plate to tighten or give slack to the belt.

To remove the belt (if replacement is necessary)

- Pull the belt over the large pulley and rotate the pulley until the belt is removed.
- Replace the new belt over the large pulley and rotate the pulley until the belt is in the correct position and secure.

6. Tighten the motor plate mounting nuts.
7. Replace the pulley cover and rubber feet.

Recommended Spare Parts

Variable Speed Units

Description	Part Number
5 Amp Fuse	B158126
1 Amp Fuse	B158110
Switch Cover	2801S031
Switch Cover Clamp	2801S032
Switch Seal.....	2801S0333

Fixed Speed Units

Description	Part Number
4 Amp Fuse	B158122
1 Amp Fuse	B158110
Switch Cover	2801S031
Switch Cover Clamp	2801S032
Switch Seal.....	2801S0333

METASERV® 2000 Drawings

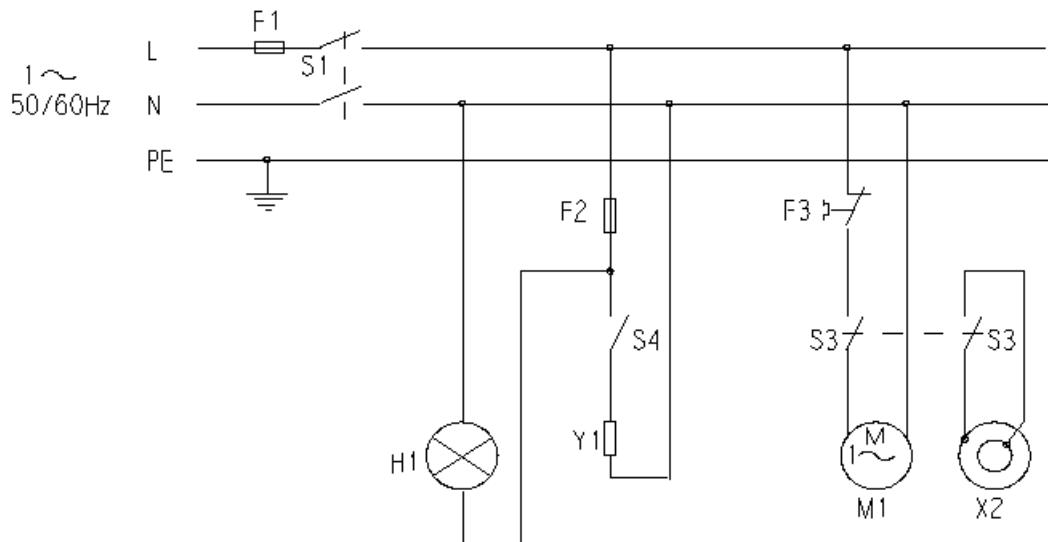


Figure 2 METASERV® 2000 Single Circuit Diagram

METASERV® 2000 Drawings

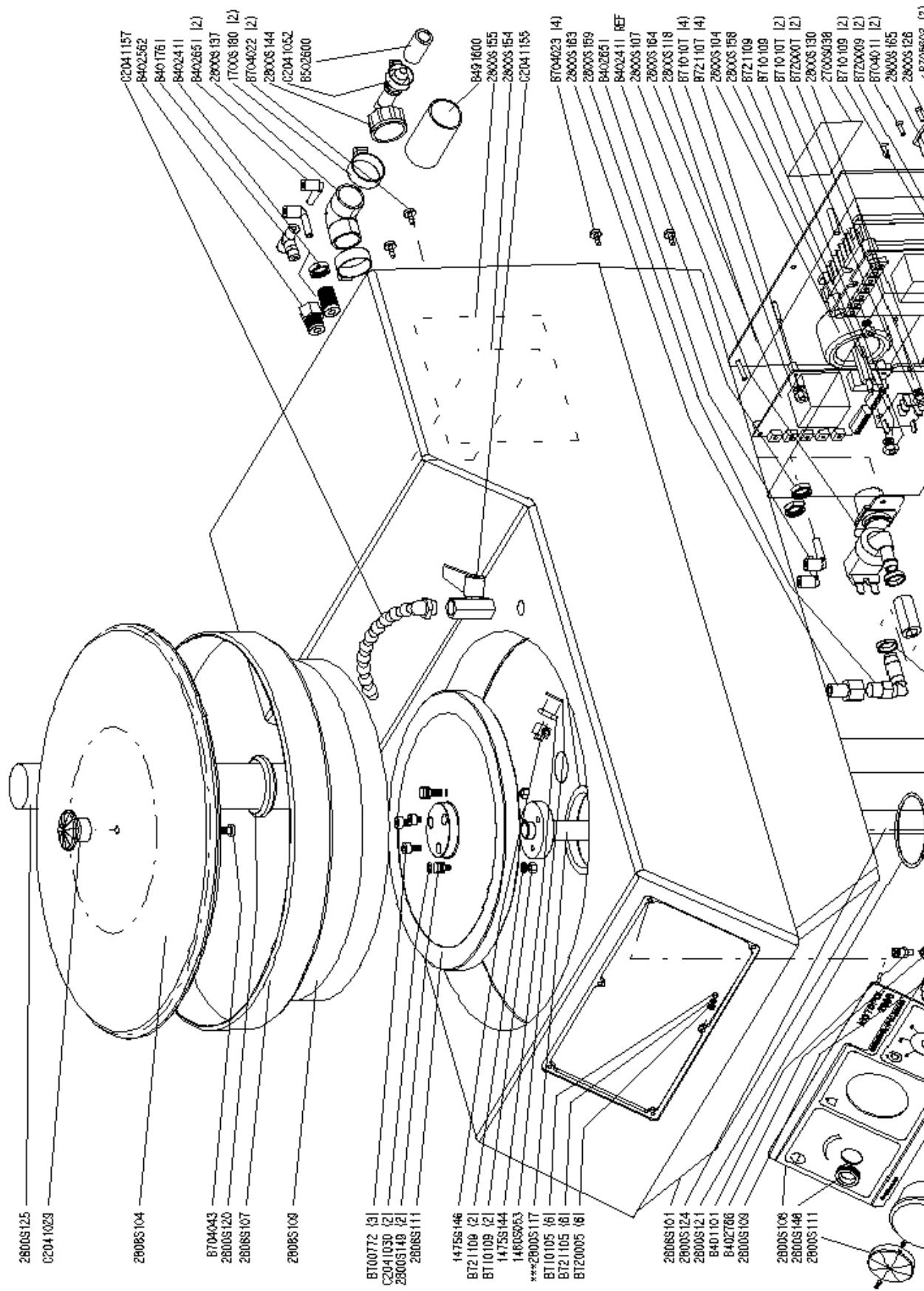
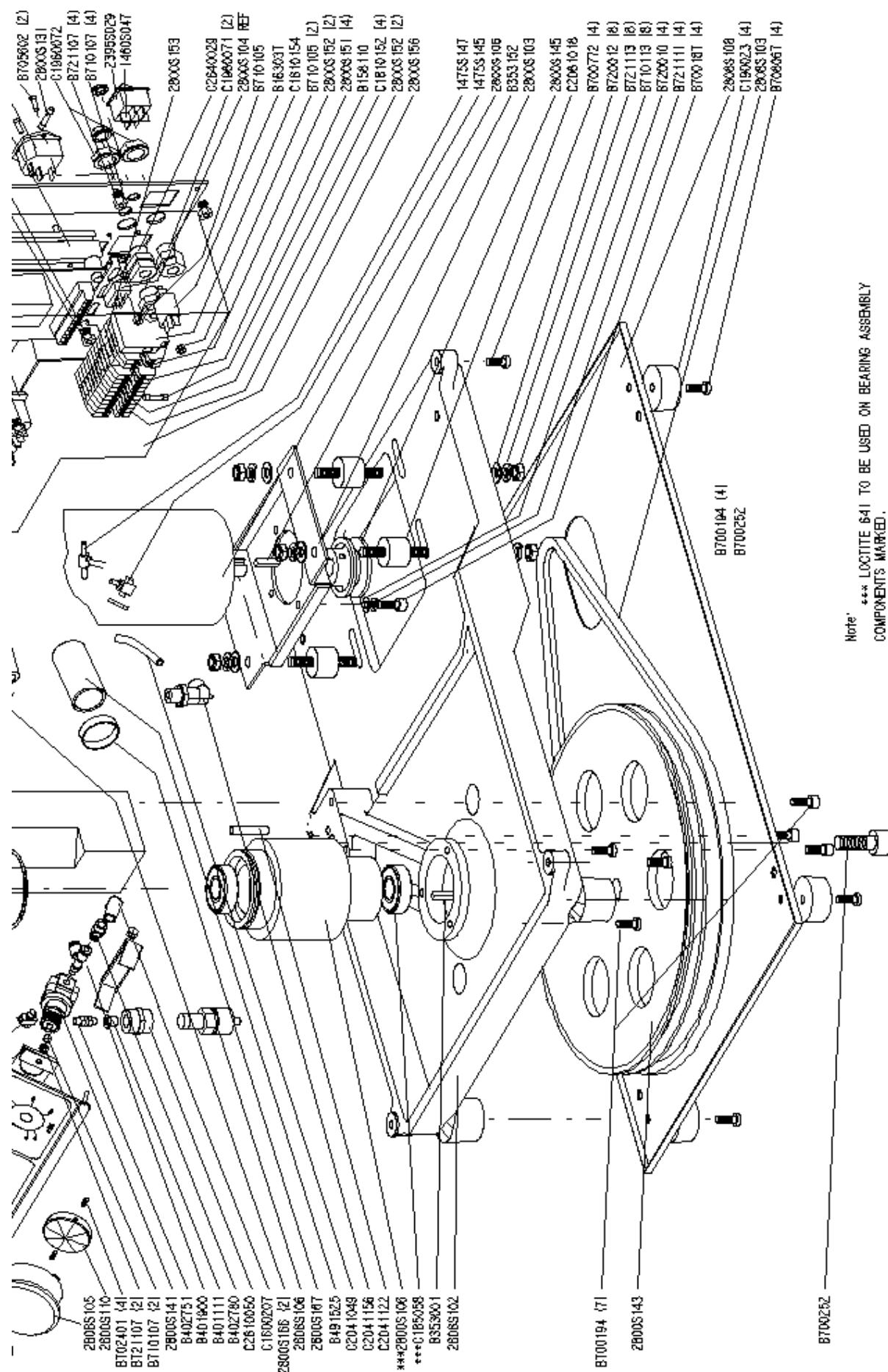


Figure 3 METASERV® 2000 Single Grinder/Polisher Assembly Diagram

METASERV® 2000 Drawings



Note: *** LOCTITE 641 TO BE USED ON BEARING ASSEMBLY
COMPONENTS MARKED.

METASERV® 2000 Drawings

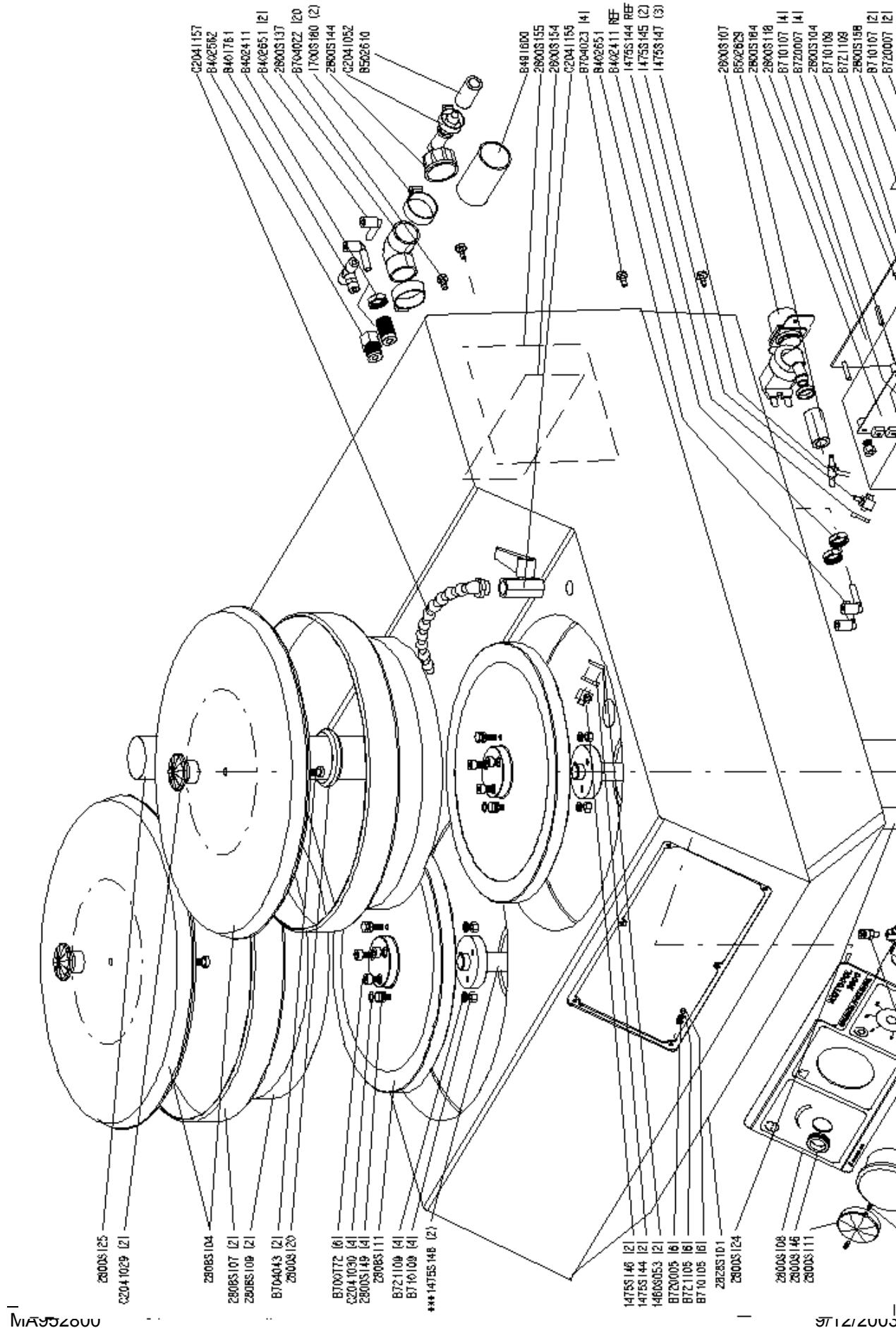
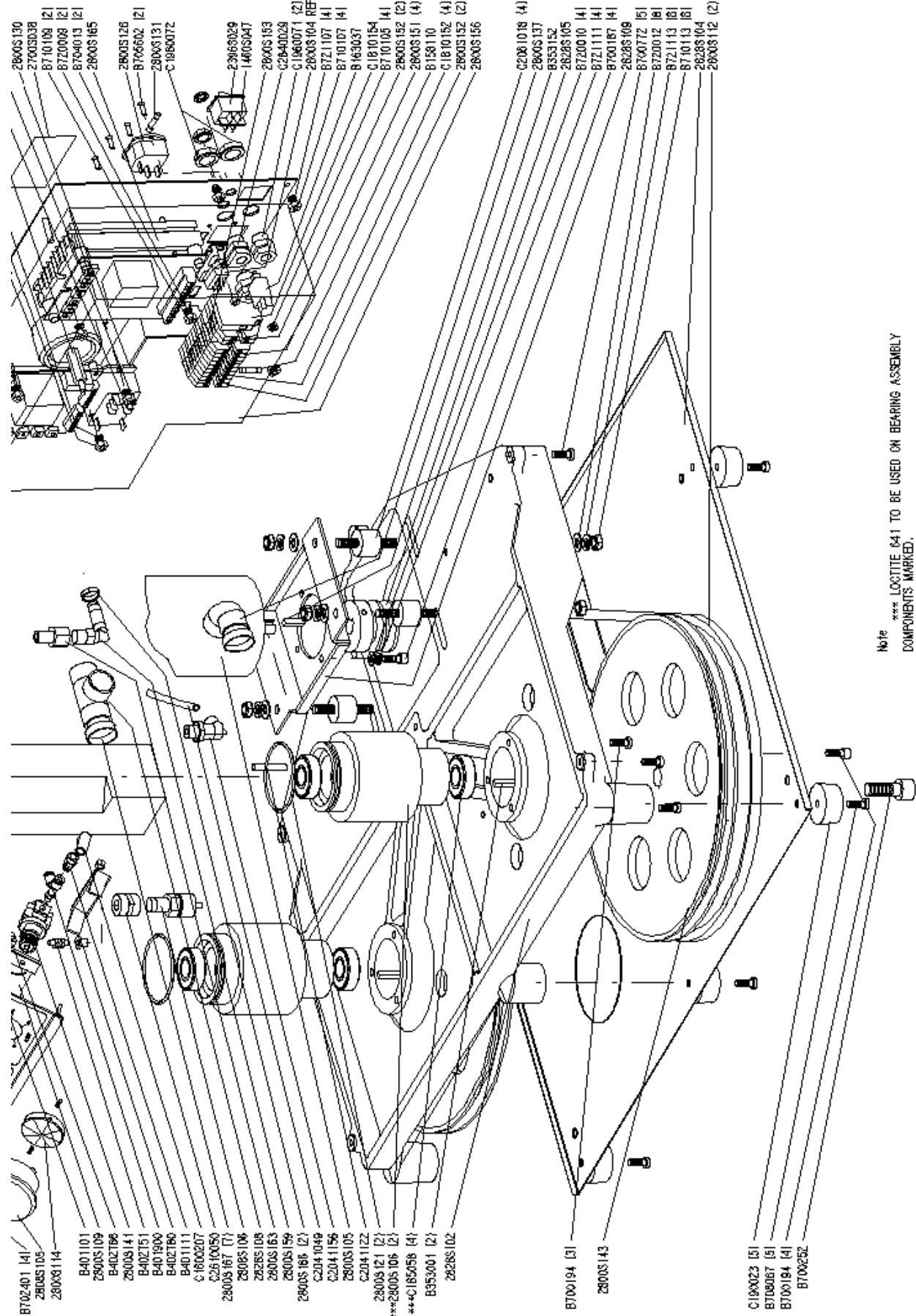


Figure 4 METASERV® 2000 Twin Grinder/Polisher Assembly Diagram

METASERV® 2000 Drawings



Note *** LOCTITE 641 TO BE USED ON BEARING ASSEMBLY
COMPONENTS MARKED.

METASERV® 2000 Drawings

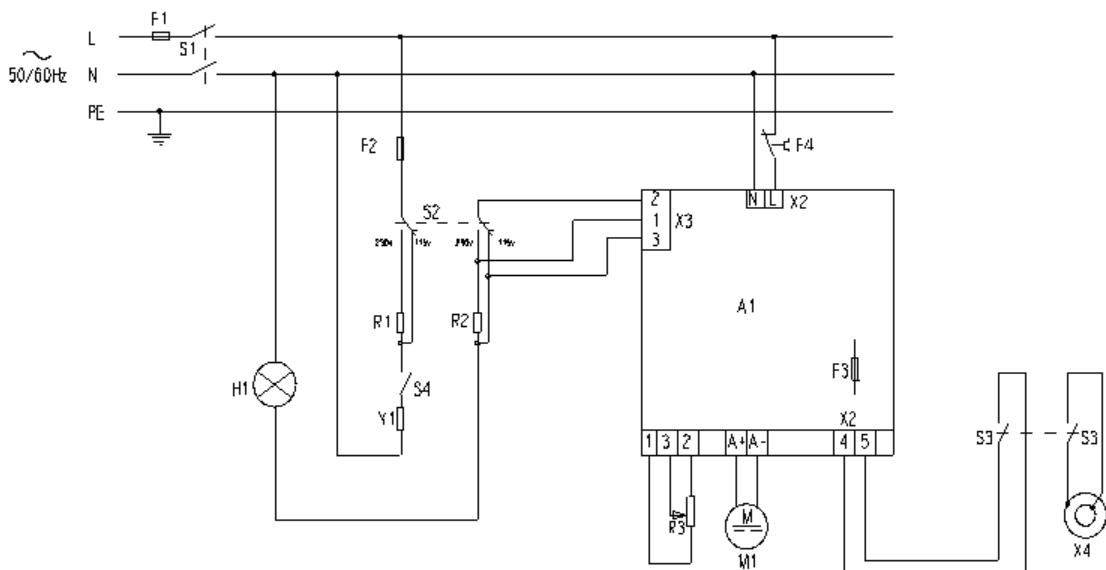


Figure 5 METASERV® 2000 Twin Circuit Diagram

METASERV® 2000 Common Parts List

Part Number	Description	Qty
B158110	FUSE 20X5 1, 0 AMP F.....	1
B353001	KEY, 5X5X20.....	2
B353152	KEY, 4X4X20.....	1
B491500	TUBING Ø25 ID.....	1
B502600	TUBING Ø10 ID.....	1
B700194	SCREW SOCKET HEAD CAP M6X25	8
B700769	SCREW SOCKET HEAD CAP M5X12	13
B700771	SCREW SOCKET HEAD CAP SS M5X20.....	7
B702401	SCREW, SOCKET SET KNURL CAP M3X5	4
B704011	SCREW RECESSED PAN HEAD SS M3X8.....	4
B704022	SCREW RECESSED PAN HEAD M4X10	2
B705602	SCREW RECESSED C/SK HEAD M3X12	2
B708067	SCREW RECESSED PAN HEAD M6X16 TAPTITE	4
B710105	NUT HEX M3.....	10
B710107	NUT FULL HEX SS M4	9
B710109	NUT, HEX SS M5	7
B710113	NUT HEX SS M8	8
B720005	WASHER, PLAIN Ø3	10
B720007	WASHER PLAIN A SS Ø4	5
B720010	WASHER, PLAIN Ø6	4
B720012	WASHER PLAIN A SS M8	8
B721105	WASHER, S/C SPRING Ø3	10
B721107	WASHER S/C SPRING SS Ø4	9
B721109	WASHER S/C SPRING SS Ø5	4
B721113	WASHER S/C SPRING SS Ø8	8
C1810154	END STOP RAIL MTG	1
C185058	BALL BEARING.....	2
C190023	FEET (RUBBER).....	4
C2041029	KNOB.....	1
C2041030	'O' RING SEAL	2
C2041049	TUBE, NYLON 6MM O/D	1
C2041052	CLIP JUBILEE SIZE 16	1
C2041122	PIN, SPIRAL 6X30	1
C2041155	VALVE BALL	1
C2041156	STUD ELBOW MALE	1
C2041157	HOSE, NOZZLE AND NIPPLE	1
C2061018	MOUNTING, ANTI-VIBRATION	4
C2640029	SOCKET JACK 2 POLE	1
1460S047	TERMINAL BARRIER	1
1460S053	'O' RING.....	1
1475S144	BULKHEAD FITTING 10-32	1
1475S145	BANJO FITTING 1/8" TUBE X 10-32	1
1475S146	BANJO FITTING 1/16" TUBE X 10-32	1
1475S147	T FITTING 1/8" TUBE	1
1700S180	CLIP, HOSE WORM DRIVE SIZE 40	2
2395S029	SWITCH, POWER.....	3
2800S106	HOUSING, BEARING - BASE	1
2800S117	SPINDLE	1
2800S121	'O' RING	1

METASERV® 2000 Common Parts List

Part Number	Description	Qty
2800S126	SOCKET, IEC INC FUSE HOLDER.....	1
2800S137	ELBOW, PLASTIC 20-½"X 90°	1
2800S144	HOSE TAIL 10 DIAMETER + SEAL WASHER.....	1
2800S149	STUD DRIVE.....	2
2800S151	4 WAY RECEPTACLE	4
2800S152	EARTH TERMINAL	4
2800S153	FUSE HOLDER	1
2800S156	COVER, ELECTRICAL.....	1
2800S158	SPACER M5X30	2
2800S166	O CLIP DIAMETER 15-17	3
2800S167	O CLIP DIAMETER 30-33	3
2801S016	GROMMET.....	1
2801S020	PLUG	2
2801S023	PLUG, PLASTIC.....	2
2801S031	SWITCH COVER.....	3
2801S032	SWITCH COVER.....	3
2801S033	SWITCH SEAL	3
2809S014	PLATE, ELECTRICAL	1
2810S016	LIGHT NEON GREEN (110V CONSTANT & VARIABLE).....	1
2810S015	LIGHT NEON GREEN (250V CONSTANT ONLY).....	1

METASERV® 2000 Single 8-inch Constant Speed Parts List

Part Number	Description	Qty
B158122	FUSE 240V.....	1
B158126	FUSE 110V.....	1
B163015	CIRCUIT BREAKER 240V	1
B163025	CIRCUIT BREAKER 110V	1
B704024	SCREW, RECESSED PAN HEAD M4X12	4
C1810154	END STOP RAIL MOUNTING	1
2395S120	VALVE, WATER 240V.....	1
2395S121	VALVE, WATER 110V.....	1
2800S103	PLATE, MOTOR MOUNTING.....	1
2801S015	PULLEY	1
2808S101	HOUSING	1
2808S102	CASTING, BASE	1
2808S104	COVER, BOWL	1
2808S108	COVER, PULLEY	1
2808S110	WHEEL, POLISHING	1
2808S111	FACEPLATE.....	1
2809S013	GUARD, BOWL	1
2810S011	MOTOR 240V.....	1
2810S014	FASCIA.....	1
2810S015	LIGHT, NEON GREEN 240V	1
2810S016	LIGHT, NEON GREEN 110V	1
2810S017	MOTOR 110V.....	1
2810S019	PULLEY	1
2810S020	BELT, VEE	1
2810S021	LABEL, INTERNAL CONNECTIONS.....	1
2810S022	LABEL, EXTERNAL CONNECTIONS.....	1
2810S023	COVER PLATE	1
2810S104	WIRING KIT.....	1

METASERV® 2000 Single 10-inch Constant Speed Parts List

Part Number	Description	Qty
B158122	FUSE, 240V.....	1
B158126	FUSE, 110V.....	1
B163015	CIRCUIT BREAKER 240V	1
B163025	CIRCUIT BREAKER 110V	1
B704024	SCREW, RECESSED PAN HEAD M4X12	4
2395S120	VALVE, WATER 240V.....	1
2395S121	VALVE, WATER 110V.....	1
2800S103	PLATE, MOTOR MOUNTING	1
2800S150	FACEPLATE.....	1
2801S015	PULLEY	1
2801S023	COVER PLATE	1
2808S101	HOUSING.....	1
2808S102	CASTING, BASE	1
2808S104	COVER, BOWL	1
2808S107	GUARD, BOWL	1
2808S108	COVER, PULLEY	1
2810S011	MOTOR 240V	1
2810S014	FASCIA.....	1
2810S015	LIGHT, NEON GREEN 240V	1
2810S016	LIGHT, NEON GREEN 110V	1
2810S017	MOTOR 110V	1
2810S019	PULLEY	1
2810S020	BELT, VEE	1
2810S021	LABEL, INTERNAL CONNECTIONS.....	1
2810S022	LABEL, EXTERNAL CONNECTIONS.....	1
2810S104	WIRING KIT.....	1
95-2823	WHEEL, POLISHING	1

METASERV® 2000 Single 8-inch Variable Speed Parts List

Part Number	Description	Qty
B158126	FUSE	1
B163025	CIRCUIT BREAKER.....	1
B704024	SCREW, RECESSED PAN HEAD M4X12	4
C1810154	END STOP RAIL MOUNTING	1
C2041090	CLAMP BAND	1
2395S121	VALVE, WATER	1
2800S103	PLATE, MOTOR MOUNTING	1
2800S110	KNOB, SPEED	1
2801S011	MOTOR	1
2801S013	FASCIA.....	1
2801S015	PULLEY	1
2801S024	LABEL, INTERNAL CONNECTIONS.....	1
2801S025	LABEL, EXTERNAL CONNECTIONS.....	1
2801S026	MOTOR CONTROLLER.....	1
2801S028	TIE WRAP	2
2801S029	RETAINING STRAP.....	1
2801S104	WIRING KIT.....	1
2808S101	HOUSING	1
2808S102	CASTING, BASE	1
2808S104	COVER, BOWL	1
2808S108	COVER, PULLEY	1
2808S110	WHEEL POLISHING	1
2808S111	FACEPLATE.....	1
2809S013	GUARD, BOWL	1
2810S012	PULLEY	1
2829S012	BELT, VEE	1
30-2008	PAPER HOLDING BAND	1

METASERV® 2000 Single 10-inch Variable Speed Parts List

Part Number	Description	Qty
B158126	FUSE	1
B163025	CIRCUIT BREAKER.....	1
B704024	SCREW, RECESSED PAN HEAD M4X12	4
C1810154	END STOP RAIL MOUNTING	1
2395S121	VALVE, WATER	1
2800S103	PLATE, MOTOR MOUNTING	1
2800S110	KNOB, SPEED	1
2800S150	FACEPLATE.....	1
2801S011	MOTOR	1
2801S013	FASCIA.....	1
2801S015	PULLEY	1
2801S024	LABEL, INTERNAL CONNECTIONS.....	1
2801S025	LABEL, EXTERNAL CONNECTIONS.....	1
2801S026	MOTOR CONTROLLER.....	1
2801S028	TIE WRAP	2
2801S029	RETAINING STRAP.....	1
2801S104	WIRING KIT.....	1
2808S101	HOUSING	1
2808S102	CASTING, BASE	1
2808S104	COVER, BOWL	1
2808S107	GUARD, BOWL	1
2808S108	COVER, PULLEY	1
2810S012	PULLEY	1
2829S102	BELT, VEE	1
95-2823	WHEEL, POLISHING	1
95-2825	PAPER HOLDING BAND 10".....	1
95-2826	CLOTH CLAMP 10".....	1

METASERV® 2000 Single 12-inch Variable Speed Parts List

Part Number	Description	Qty
B158126	FUSE	1
B163025	CIRCUIT BREAKER.....	1
B704024	SCREW, RECESSED PAN HEAD M4X12	4
C1810154	END STOP RAIL MOUNTING	1
C2061089B	WHEEL POLISHING	1
2395S121	VALVE, WATER	1
2800S101	HOUSING 12" BASE.....	1
2800S102	CASTING 12" BASE.....	1
2800S103	PLATE, MOTOR MOUNTING.....	1
2800S110	KNOB, SPEED	1
2800S133	COVER PULLEY	1
2800S138	COVER BOWL	1
2800S150	FACEPLATE.....	1
2801S011	MOTOR	1
2801S013	FASCIA.....	1
2801S015	PULLEY	1
2801S019	GUARD BOWL	1
2801S022	BELT VEE	1
2801S024	LABEL, INTERNAL CONNECTIONS.....	1
2801S025	LABEL, EXTERNAL CONNECTIONS.....	1
2801S026	MOTOR CONTROLLER.....	1
2801S028	TIE WRAP	2
2801S029	RETAINING STRAP	1
2801S104	WIRING KIT.....	1
2810S012	PULLEY	1
46-2013	PAPER HOLDING BAND 12".....	1
95-C2659	CLOTH CLAMP 12".....	1

METASERV® 2000 Twin 8-inch Constant Speed Parts List

Part Number	Description	Qty
B158122	FUSE 240V.....	1
B158126	FUSE 110V.....	1
B163015	CIRCUIT BREAKER 240V	1
B163025	CIRCUIT BREAKER 110V	1
B353001	KEY 5X5X20.....	1
B700194	SCREW, SOCKET HEAD CAP M6X25	3
B700772	SCREW, SOCKET HEAD CAP M5X25	3
B704024	SCREW, RECESSED PAN HEAD M4X12	4
B708067	SCREW, RECESSED PAN HEAD M6 X 16 TAPTITE	1
C1850058	BALL BEARING.....	2
C190023	FEET (RUBBER).....	1
C2041029	KNOB.....	1
C2041030	O RING.....	1
C2041090	CLAMP BAND	1
C2041155	VALVE BALL	1
C2041156	STUD ELBOW.....	1
C2041157	NOZZLE ASSEMBLY	1
1475S145	BANJO FITTING.....	1
1475S146	BANJO FITTING.....	1
1475S148	O RING	1
2395S120	VALVE WATER 240V.....	1
2395S121	VALVE WATER 110V.....	1
2800S106	HOUSING BEARING.....	1
2800S117	SPINDLE	1
2800S149	STUD DRIVE.....	2
2800S163	FITTING P/IN.....	1
2808S104	COVER, BOWL	2
2808S110	WHEEL, POLISHING	2
2808S111	FACEPLATE.....	2
2809S013	GUARD, BOWL	2
2810S011	MOTOR 240V.....	1
2810S012	PULLEY	2
2810S014	FASCIA.....	1
2810S017	MOTOR 110V.....	1
2810S023	COVER PLATE	1
2810S104	WIRING KIT.....	1
2828S101	HOUSING	1
2828S102	CASTING, BASE	1
2828S104	COVER, PULLEY	1
2828S105	PULLEY	1
2828S107	WIRING KIT, EARTH	1
2828S108	TEE PIECE, PLASTIC.....	1
2828S109	PLATE, MOTOR MOUNTING	1
2830S014	BELT, VEE	1
2830S015	BELT, VEE	1
30-2008	PAPER HOLDING BAND	2

METASERV® 2000 Twin 10-inch Constant Speed Parts List

Part Number	Description	Qty
B158122	FUSE, 240V.....	1
B158126	FUSE, 110V.....	1
B163015	CIRCUIT BREAKER 240V	1
B163025	CIRCUIT BREAKER 110V	1
B353001	KEY 5X5X20.....	1
B700194	SCREW, SOCKET HEAD CAP M6X25	3
B700772	SCREW, SOCKET HEAD CAP M5X25	3
B704024	SCREW, RECESSED PAN HEAD M4X12	4
B708067	SCREW, RECESSED PAN HEAD M6X16 TAPTITE	1
C1810154	END STOP RAIL MOUNTING	1
C185058	BALL BEARING.....	2
C190023	FEET (RUBBER).....	1
C2041029	KNOB.....	1
C2041030	O RING	2
C2041155	VALVE BALL	1
C2041156	STUD ELBOW.....	1
C2041157	NOZZLE ASSEMBLY	1
1475S145	BANJO FITTING.....	1
1475S146	BANJO FITTING.....	1
1475S148	'O' RING	2
2395S120	VALVE, WATER 250V.....	1
2395S121	VALVE, WATER 110V.....	1
2800S106	HOUSING BEARING BASE	1
2800S117	SPINDLE	1
2800S121	O RING	1
2800S149	STUD DRIVE.....	2
2800S150	FACEPLATE.....	2
2800S163	FITTING P/IN.....	1
2808S104	COVER, BOWL	2
2808S107	GUARD, BOWL	2
2810S011	MOTOR 240V.....	1
2810S012	PULLEY	2
2810S014	FASCIA.....	1
2810S017	MOTOR 110V.....	1
2810S023	COVER PLATE	1
2810S104	WIRING KIT.....	1
2828S101	HOUSING	1
2828S102	CASTING, BASE	1
2828S104	COVER, PULLEY	1
2828S105	PULLEY	1
2828S107	WIRING KIT, EARTH	1
2828S108	TEE PIECE. PLASTIC.....	1
2828S109	PLATE, MOTOR MOUNTING	1
2830S014	BELT, VEE	1
2830S015	BELT, VEE	1
95-2823	WHEEL, POLISHING	2
95-2825	PAPER HOLDING CLAMP	2
95-2826	CLOTH CLAMP	2

METASERV® 2000 Twin 8-inch Variable Speed Parts List

Part Number	Description	Qty
B158126	FUSE	1
B163025	CIRCUIT BREAKER.....	1
B353001	KEY.....	1
B700194	SCREW, SOCKET HEAD CAP M6X25	3
B700771	SCREW, SOCKET HEAD CAP M5X20	3
B704043	SCREW RECESSED PAN HEAD M6X12	1
B708067	SCREW RECESSED PAN HEAD M6X16 TAPTITE	1
C1810154	END STOP RAIL MOUNTING	1
C185058	BALL BEARING.....	2
C190023	FEET (RUBBER).....	1
C2041029	KNOB.....	1
C2041030	O RING	2
C2041090	CLAMP BAND	2
C2041155	VALVE BALL	1
C2041156	STUD ELBOW	1
C2041157	NOZZLE ASSEMBLY	1
1475S145	BANJO FITTING.....	1
1475S146	BANJO FITTING.....	1
1475S148	O RING	1
2395S121	VALVE WATER 110V.....	1
2800S106	HOUSING BEARING.....	1
2800S110	KNOB, SPEED	1
2800S117	SPINDLE	1
2800S121	O RING	2
2800S149	STUD DRIVE.....	2
2801S011	MOTOR VARIABLE SPEED	1
2801S013	FASCIA.....	1
2801S022	BELT, VEE	1
2801S024	LABEL, INTERNAL CONNECTIONS.....	1
2801S025	LABEL, EXTERNAL CONNECTIONS.....	1
2801S026	MOTOR CONTROLLER.....	1
2801S028	TIE WRAP	2
2801S029	RETAINING STRAP	1
2801S104	WIRING KIT.....	1
2808S104	COVER, BOWL	2
2808S110	WHEEL, POLISHING	2
2808S111	FACEPLATE.....	2
2809S013	GUARD, BOWL	2
2810S012	PULLEY	2
2828S101	HOUSING	1
2828S102	CASTING, BASE	1
2828S104	COVER, PULLEY	1
2828S107	WIRING KIT, EARTH	1
2828S108	TEE PIECE, PLASTIC	1
2828S109	PLATE, MOTOR MOUNTING	1
2829S014	PULLEY TWIN.....	1
2829S015	BELT, VEE	1
30-2008	PAPER HOLDING BAND	2

METASERV® 2000 Twin 10-inch Variable Speed Parts List

Part Number	Description	Qty
B158126	FUSE	1
B163025	CIRCUIT BREAKER.....	1
B353001	KEY.....	1
B700194	SCREW, SOCKET HEAD CAP M6X25	3
B700771	SCREW, SOCKET HEAD CAP M5X20	3
B704043	SCREW RECESSED PAN HEAD M6X12	1
B708067	SCREW RECESSED PAN H HEAD D M6X16 TAPTRITE	1
C1810154	END STOP RAIL MOUNTING	1
C185058	BALL BEARING.....	2
C190023	FEET (RUBBER).....	1
C2041029	KNOB.....	1
C2041030	O RING	2
C2041155	VALVE BALL	1
C2041156	STUD ELBOW.....	1
C2041157	NOZZLE ASSEMBLY	1
1475S145	BANJO FITTING.....	1
1475S146	BANJO FITTING.....	1
1475S148	O RING	1
2395S121	VALVE WATER 110V	1
2800S106	HOUSING BEARING.....	1
2800S110	KNOB, SPEED	1
2800S117	SPINDLE	1
2800S121	O RING	2
2800S149	STUD DRIVE.....	2
2800S150	FACE PLATE.....	2
2801S011	MOTOR VARIABLE SPEED	1
2801S013	FASCIA.....	1
2801S022	BELT, VEE	1
2801S024	LABEL, INTERNAL CONNECTIONS.....	1
2801S025	LABEL, EXTERNAL CONNECTIONS.....	1
2801S026	MOTOR CONTROLLER.....	1
2801S028	TIE WRAP	2
2801S029	RETAINING STRAP	1
2801S104	WIRING KIT	1
2808S104	COVER, BOWL	2
2808S107	GUARD, BOWL	2
2810S012	PULLEY	2
2828S101	HOUSING	1
2828S102	CASTING, BASE	1
2828S104	COVER, PULLEY	1
2828S107	WIRING KIT, EARTH	1
2828S108	TEE PIECE, PLASTIC.....	1
2828S109	PLATE, MOTOR MOUNTING	1
2829S014	PULLEY TWIN.....	1
2829S015	BELT, VEE	1
95-2823	POLISHING WHEEL	2
95-2825	PAPER HOLDING BAND	2
95-2826	CLOTH CLAMP	2

Buehler Office Addresses World Wide

Buehler Ltd.

41 Waukegan Road
Lake Bluff, IL 60044
USA
Tel: (847) 295 6500
Fax: (847) 295 7979
Service Fax: (847) 295 7954
www.service@buehler.com

Buehler UK

Saturn Building
101, Lockhurst Lane
Coventry, CV6 5SF
England
Tel: (011) (+44) (0) 24 7658 2158
Fax: (011) (+44) (0) 24 7658 2159
E-mail: service@buehler.co.uk

Buehler GmbH

In der Steel2 / Am Schönenkamp
D-40599 Düsseldorf
Germany
Tel: (49) (211) 974 1010
Fax: (49) (211) 974 1079
E-mail: service@buehler-met.de

Buehler S.A.R.L.

ZAC Sans Souci
Mini-Parc de Dardilly
Batiment 0-3, chemin du Jubin
69570 DARDILLY
France
Tel: (+33) (4) 37 59 81 20
Fax: (+33) (4) 37 59 81 29
Service Fax: (+33) (4) 3759 8125
www.sar@buehler.fr

Buehler Canada

9999 Highway 48
Markham
Ontario L3P 3J3
Canada
Tel: (905) 201 4686
Fax: (905) 201 4683

Buehler South Asia / Pacific

5/F Vogue Centre, Room 3
696 Castle Peak Road
Lai Chi Kok
Kowloon
Hong Kong
SAR
Peoples Republic of China
Tel: (852) 2307 0909
Fax: (852) 2307 0223
E-mail: info@buehler.com.hk

Notes
