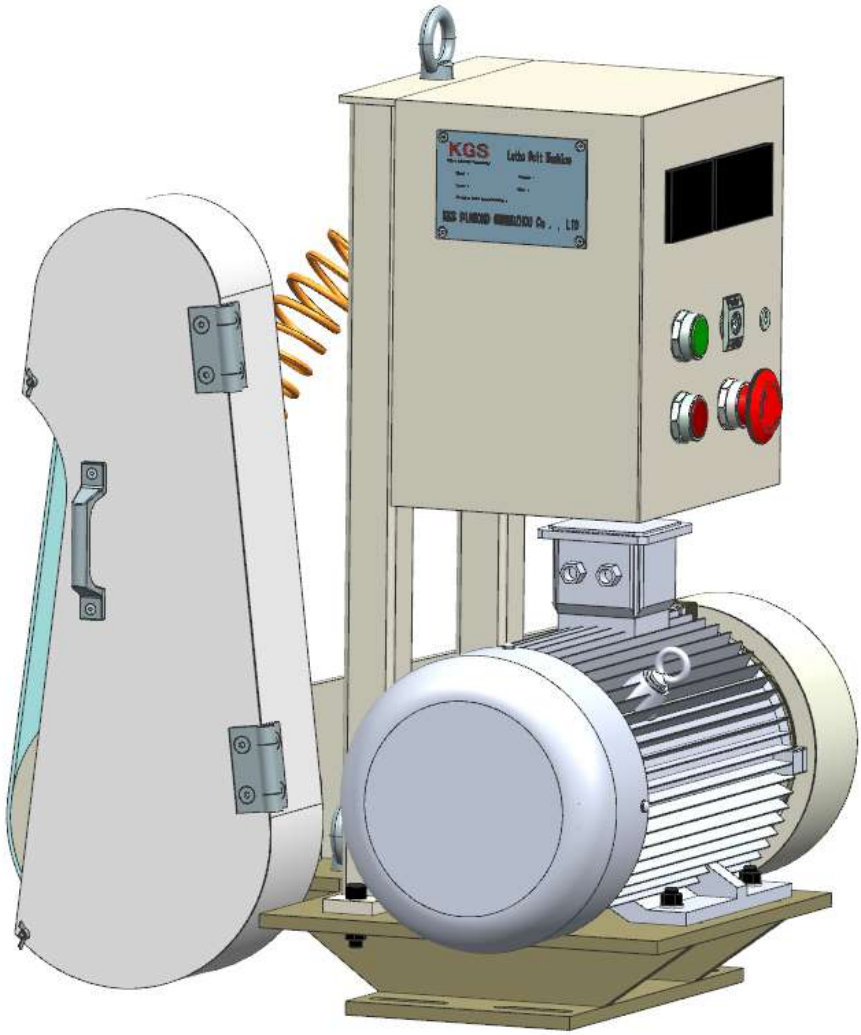
Parts Page Reorder No. XXXX
Effective Jan 2021

Precision Tool Post Grinder
Instruction Manual

Models:
KGS M1-50A
KGS M1-50B

2" Wide x 48" Long Abrasive Belt Machine



ELECTRICAL SAFETY INSTRUCTIONS

Warning: When using electric tools, basic safety precautions should always be followed to reduce the risk of a fire, electric shock, and personal injury, including the following:

1. Keep work area clean and organized. Cluttered areas and benches cause accidents.
2. It is forbidden to use electrical tools in places with flammable liquids, gas or in an explosive environment. The motor of the equipment usually produces sparks, which ignite flammable substances.
3. Be careful of electrical shock, avoid exposed wires, and keep wires away from heat, oil and sharp edges.
4. Use the machine correctly. Do not use tools for unintended purposes beyond their rated capacity.
5. Dress properly. Do not wear loose fitting clothing or jewelry. They can be caught in moving parts. Rubber gloves and non-skid footwear are recommended when working outdoors. Wear protective hair covering to contain long hair.
6. Use safety glasses. Also use face-shield or dust mask if the operation area is dusty.
7. Maintain the machine and tools with care. Keep machine clean for better use and safer performance. Follow instructions for lubricating and changing accessories. Inspect tool cords periodically and if damaged, have them repaired by
   authorized professionals. Inspect extension cords periodically and replace if damaged.
8. The power supply must be disconnected before maintenance. When replacing the belt, bearing, rubber wheel or other accessories, it is strictly forbidden to turn on the switching power supply.
9. Check for damaged parts. Prior to further use of the machine, the damaged guards or other components should be carefully examined to determine whether they are functioning properly and performing the intended function.
10. Replacement parts. When servicing, use only identical replacement parts. When ordering replacement parts, please specify model and serial numbers of your machine.

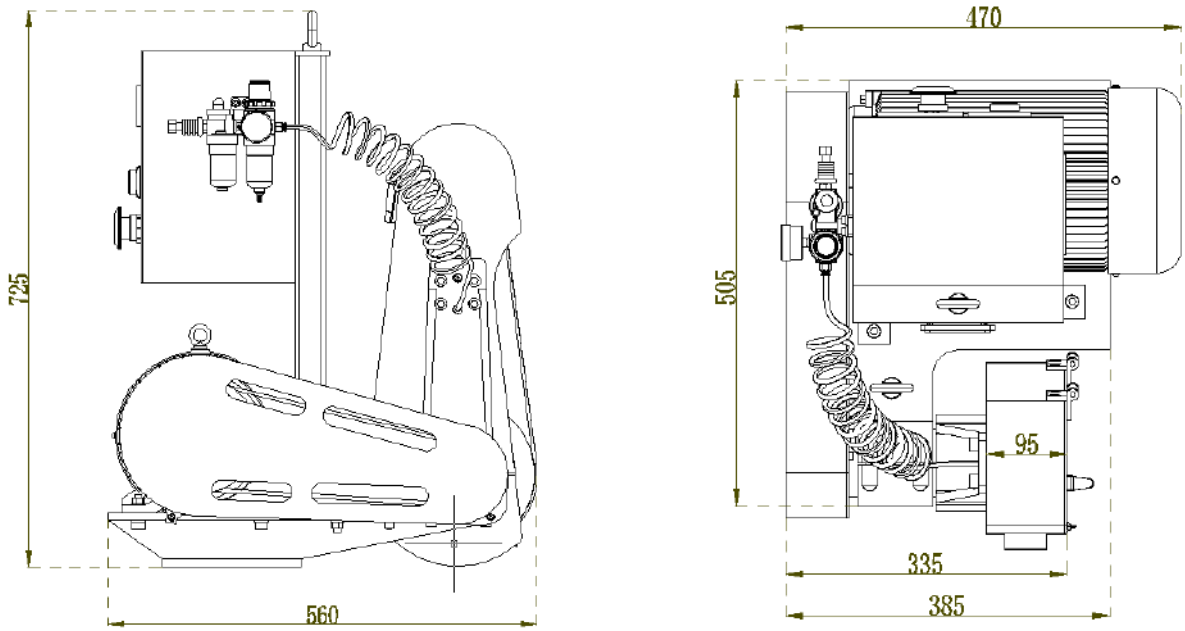
Voltage Warning

Before connecting the machine to a power source (receptacle, outlet, etc.) be sure the voltage supplied is the same as what is specified on the nameplate of the equipment. A power source with higher voltage than specified for the equipment can result in serious injury to the user as well as damage of the equipment. Using a power source with lower voltage than the nameplate rating is harmful to the motor. In case of doubt, do not plug in the equipment.

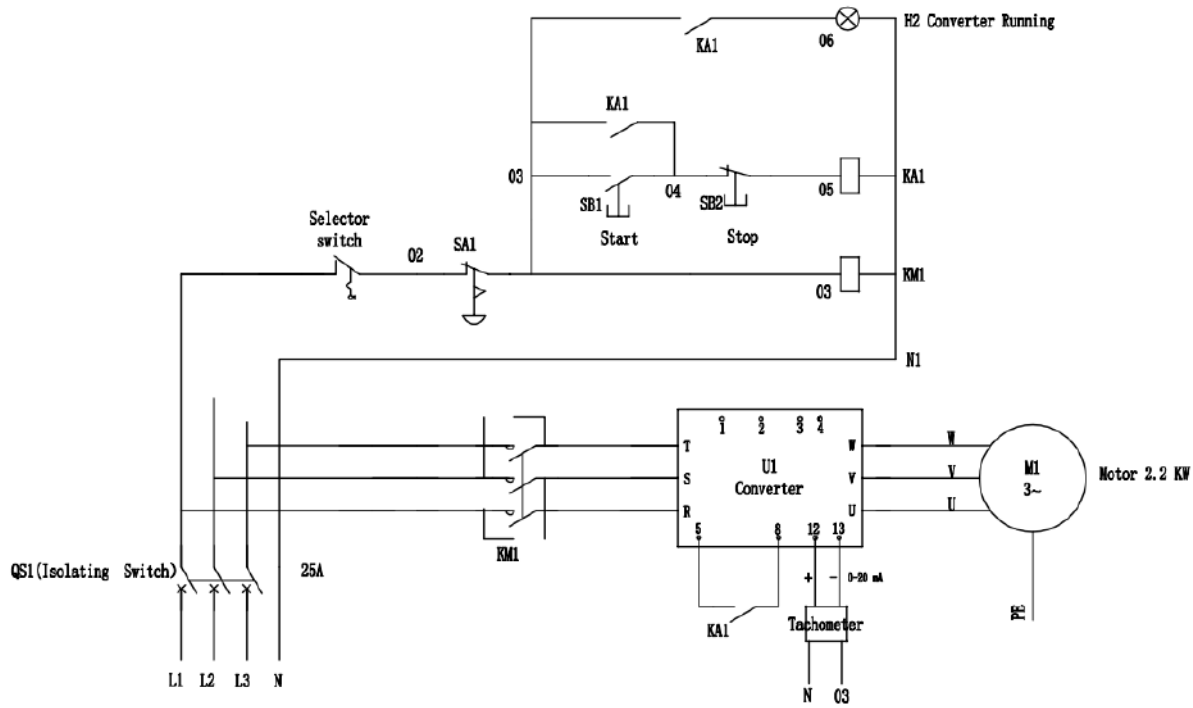
Safety Guidelines

If the following situations occur before starting the machine or in the process of use, the machine should be shut down immediately and find out the cause:
1. The machine has abnormal sound: check whether screws or parts are loose, whether there is collision or interference.
2. Hot or smoking running parts: check whether the tension of the drive belt and/or sanding belt is too high, whether bearings are damaged, etc.
Safety precautions for grinding with contact wheel:
1. Do not use the sanding belt narrower than the width of the contact wheel. The wheel surface outside the sanding belt will be scratched and damaged by the workpiece.
2. The risk of ignition and explosion will occur when dust of different materials is mixed in dry grinding. The machine must be thoroughly cleaned before grinding different materials.

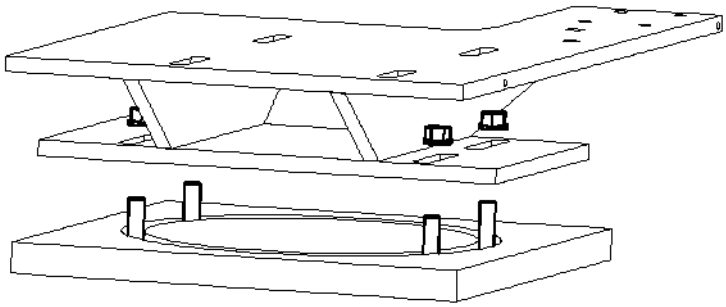
MODEL M1-50A/B DIMENSIONS

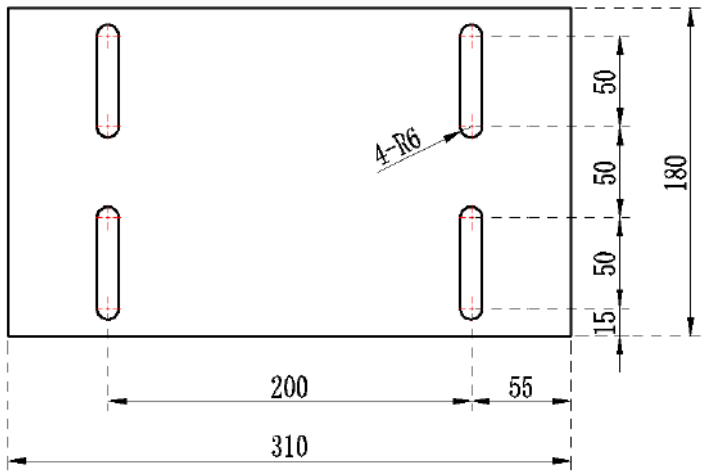


Control Box- Wire Drawing



MOUNTING INSTRUCTIONS





Mounting:

Step 1. Remove the lathe tool rest assembly, keeping the ring groove retaining screw, and clean the center drag plate surface.

Step 2. Lift the TPG onto the middle drag plate, adjust the position of the fixing screw to match through the TPG mounting hole, and initially lock the nut and fix it.

Step 3. Move the machine to make the installation base plate parallel to the middle drag plate, but also ensure that the contact wheel and the workpiece processing surface parallel, lock the fixing nut.

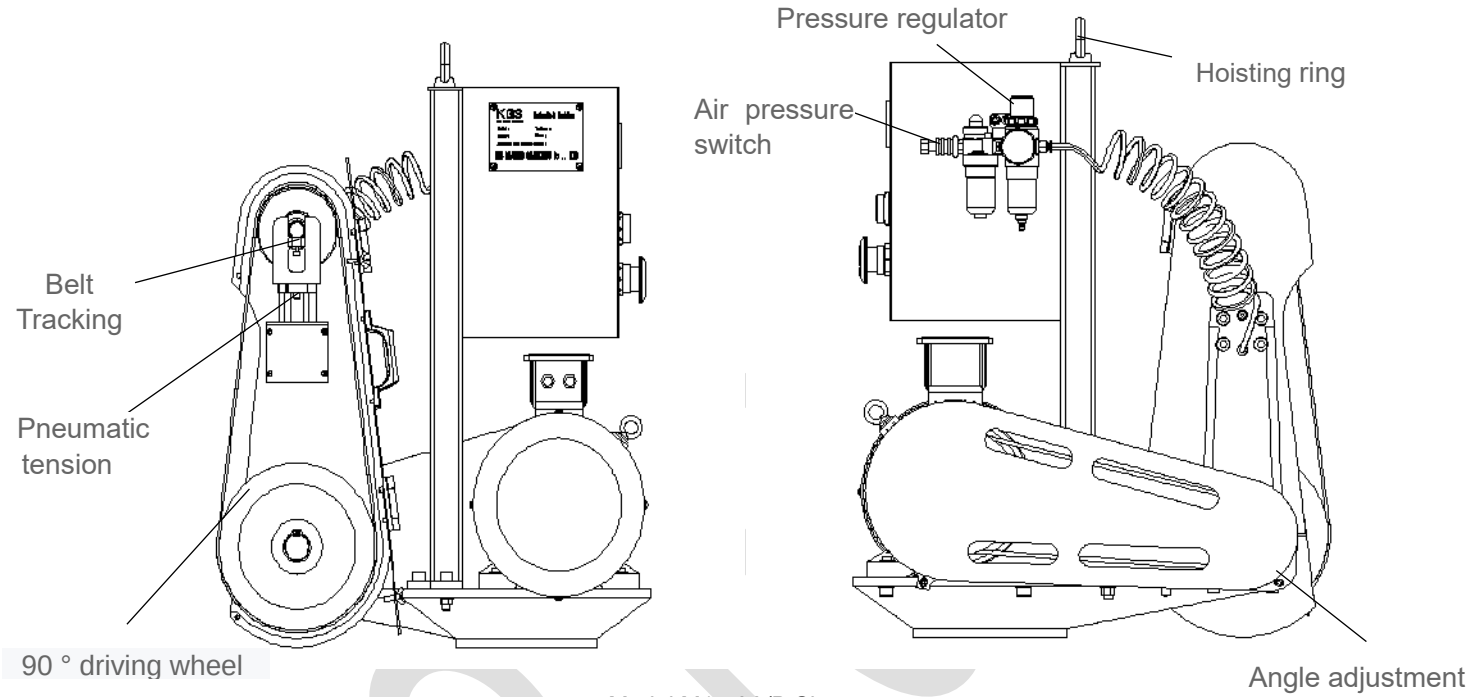
Step 4. Loosen the fixing screw, adjust the support arm to the proper Angle, select the floating grinding or contact wheel grinding method, and then lock the screw.

Machine Specifications

Model	Motor power	Belt Spec.		Motor (rpm)	Belt Speed	Voltage	Phase	Frequency	Weight	Length	Width	Height
		Min	Max									
M1-50A(B)	2.2kw	1180x50	1220x50	1450	0-50m/s	380v	3	50hz	92kg	570mm	470mm	725mm

MACHINE ADJUSTMENTS

The grinding head of the lathe is composed of a sanding belt power driving mechanism, driving gear train, (a sanding belt cylinder tensioning mechanism, supporting mechanism, cylinder floating system, installation parts and so on. The belt tensioning device is composed of a tensioning arm, a cylinder tensioning device, a tensioning wheel train, a deviation rectifying mechanism, etc.



Model M1-50A/B Shown

Belt Change:

1. Open belt guard by loosening the wing nut (item #36)
2. Turn off air supply at valve (item #8). This will retract the air cylinder (item #24) and thus removes tension from the belt.
3. Remove and replace belt.
4. **Important:** With hands clear from moving parts, turn the air supply back on at (item #8). Regulator pressure should be set to 60-90 PSI for proper belt tensioning.
5. Press On-Off（item #15，item #14） quickly，"Jog" motor by turning on momentarily to ensure proper belt tracking. Tracking procedure is described below.
6. Close belt guard and locking wing nut (item #36).

Belt Tracking:

Belt tracking is accomplished by turning the tracking screw (item #57) with hex wrenches（M5）. Turning clockwise moves belt to the left. Turning counter clockwise moves belt to the right.

OPERATION

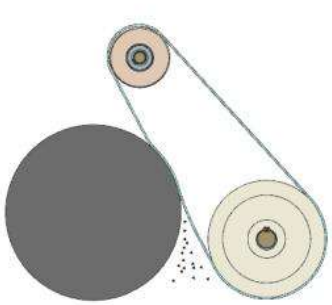
1. Ensure that the rubber contact wheel surface is parallel to the center line of the workpiece. Choose the grinding mode according to different grinding requirements:

   a. Contact wheel grinding: the supporting arm is in the upright position and the contact wheel is used to grind the workpiece. Material removal and high dimensional accuracy can be guaranteed.

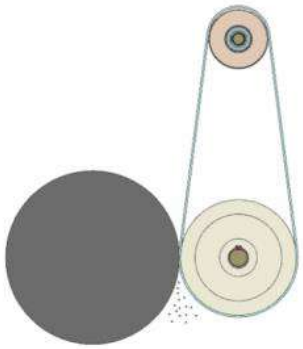
   b. Floating grinding: rotate the supporting arm around the spindle seat toward the workpiece at a certain angle. And polish the unsupported part of the sand belt with very slight material removal.

2. The workpiece is clamped on the chuck and rotated by the main shaft. During grinding, the middle drag plate is used for radial feed, so that the abrasive belt can contact the workpiece for grinding, and the large drag plate is used for axial feed.

3.According to the requirements of the workpiece surface roughness, select the corresponding particle size of the sanding belt. In order to obtain low surface roughness, it is necessary to change the sanding belt with different particle size to grind successively.



Free Running Contact



Fixed Contact

Belt speeds for offhand grinding

Material	Belt Speed m/s (Diamond and CBN belt)
Tungsten carbide	25-35 （When using coarse belts， Fixed）
Tungsten carbide	19（When using fine belts, Free Running）
Aluminum oxide	30-35 （When using coarse belts， Fixed）
Aluminum oxide	20-25（When using fine belts， Free Running）
Silicon	30
Cast steel	33
Titanium	13.5
Stainless steel	16-30（When using fine belts）
Glass	39
Rubber	23
Stone	35

MAINTENANCE

Maintenance is very important for the long-term and stable operation of the equipment. Good housekeeping is essential to insure long life of any machine. By keeping the machine clean and visually inspected for any wear, the machine will provide many years of quality service.

The equipment should be installed in a dry and ventilated place and cleaned regularly. All bearings and moving parts are sealed/shielded and lubricated. Bearings should be cleaned and lubricated once a year.

Electric motor maintenance should be performed as recommended by the motor manufacturer.

Periodically inspect the contact wheels, idler rolls and drive pulley for any signs of wear. Repairing or replacing worn parts early enough will prevent other parts from becoming damaged.

Storage management of the sanding belt : the warehouse stored in the sanding belt should be cool, ventilated, dry and avoid direct sunlight. Warehouse temperature should be maintained between 18 ~ 22℃, relative humidity 55 ~ 65%.Try not to open the packaging before the use of the sanding belt.

WARRANTY

All equipment manufactured by us is guaranteed to be free from defects in workmanship and materials under normal use and service for 1 year. We will repair or replace any defective equipment or parts found by our inspection within one year after delivery to the original owner.

Our obligations depend on the proper use of KGS equipment and tools in accordance with factory recommendations, instructions and safety measures. Not applicable to equipment whose normal performance is affected by misuse, negligence, accident or tampering in any way.

Wear parts, such as bearings, contact wheels, etc., are not covered by this warranty.

No.	Name	Model	Qty
1	Siemens motor	2.2kw - 4	1
2	Cable	/	2
3	Oil-water separator	AirTAC AFC20001	1
4	Pressure gage	/	1
5	Pressure control	/	1
6	Mounting bracket	/	1
7	Container	/	1
8	Pneumatic hand push valve	HSV-08	1
9	Electric box	300*250*170	1
10	Intelligent digital display tachometer	Bolei BHL-571-BA	1
11	Inverter control panel	/	1
12	Jerk button	Schneider	1
13	Electric box lock	/	1
14	Stop running button	LA38	1
15	Start running button	LA38	1
16	Option switch	1	1
17	Retaining ring	STWG30	2
18	Retaining ring	STWG28	2
19	Retaining ring	STWG30	2
20	Retaining ring	STWG32	2
21	Stainless steel handle	A-1080-3	1
22	Flying rings	M12	2
23	Nut	M12	2
24	Air cylinder(TACQ)	TACQ40X20	1
25	Snuffle valve	/	1
26	Deep groove ball bearings	6204DDU	2
27	Deep groove ball bearings	6206DDU	2
28	Aluminium alloy butterfly blots	HHFSP8-6-SST	2
29	Flat key	KES28-30	3
30	Logo	KCS TPC M1-50A(B)	1
31	Drive Pulley	150 mm	1
32	Drive Pulley	90 mm	1
33	Drive Belt	960 mm	1
34	Pipe joint	D5 - 1/8"	1
35	Hose	D5	1
36	Driven shaft wheel	85*20	2
37	Driven shaft wheel	85*20*20	1
38	Spindle	280*20*20	1
39	Spindle shell	130*65*65	1
40	Driven pulley	104*124*66	1
41	Driving Wheel	200*200*50	1
42	Outer shell	575*206*93	1
43	Outer shell stiffener	1154330*60	1
44	Spindle seat	100*108*90	1
45	Bearing seat of driven wheel	60*80*75	1
46	Cylinder holder	80*70*78	1
47	Baseplate	505*70*310	1
48	Electric box fixing frame	275*70*690	1
49	Shell of outer driving box	509*223*2	1
50	Outer driving box	509*223*73	1
51	Outer shell	205*57*2	1
52	Cylinder connecting cover plate	80*70*2	2
53	Flat head screw	M3*6	13
54	Flat head screw	M4*12	2
55	Flat head screw	M6*6	8
56	Inner hexagon screw	M4*70	1
57	Inner hexagon screw	M5*25	1
58	Inner hexagon screw	M5*55	2
59	Inner hexagon screw	M5*16	9
60	Gasket	D-5	10
61	Inner hexagon screw	M8*45	4
62	Inner hexagon screw	M8*25	4
63	Inner hexagon screw	M10*35	6
64	Inner hexagon screw	M10*25	4
65	Nut	M10	6
66	Dowel	D5*12	2
67	Gasket	D-10	6
68	Locknut	M5	1