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**MODEL SG3
BELT GRINDING
MACHINE**

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Manual

Model SG3

Belt Grinding Machine



OCTOBER 2024



EU/UL/CSA declaration of conformity

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hereby declares that

SG3 Belt Grinding Machine is manufactured with UL/CSA electronic components & cables and in accordance with the provisions of the COUNCIL DIRECTIVE of 17. May 2006 (2006/42/EC) – The Machinery Directive (order no. 561 of 25 June 1994 with subsequent amendments)

2006/42/EC:	Directive on machinery-safety
2004/108/EC:	Directive on Electromagnetic Compatibility
2006/95/EC:	Low Voltage Equipment Safety directive

Also, on accordance with:

- The council directive of 19 February 1973 (73/23/EEC) – The Low Voltage Directive – with later amendments (order no. 797 of 30 August 1994)**
- The council directive of 3 May 1989 (89/336/EEC) – The EMC Directive – with later amendments (order no. 796 of 5 December 1991 with subsequent amendments)**

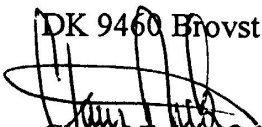
DK 9460 Brovst

Claus Nielsen,
Producent

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1. Transport & Handling

1.1 Transport

The SG3 belt grinding machine is packed in wooden box.

1.2 Handling

The machine can easily be transported on the pallet on which it is delivered.

1.3 Placing

Mounting of the belt grinder must take place on a firm and level ground. The machine must be fastened to the ground by means of the four fittings which are used to fasten the belt grinder to the pallet.

The electrical connections should be made by an authorized electrician. The machine is provided with no-volt release protection switch and must be connected to the correct voltage. It is important that the motor is wired so that they are in the correct direction or rotation. Please see the arrow on the motor.

Eye shield, suction hose and (if equipped) dust bag must be mounted before use. The clamps for mounting the suction hose are placed in the dust bag. The eye shields (A) must be mounted into the eye shield fitting (see Figure 1.1). You can also refer to Figure 3.1 which may be helpful as it is an exploded view of the machine.

The tool rest (B) must be mounted at minimum 2 mm from the belt, and the handle (C) must be fastened. Turn the contact wheel by hand and adjust the belt tracking by means of the handle (D) until it runs true on the contact wheel. Also, the spark box (F) must be adjusted properly and fastened securely. The working height can be adjusted by the adjustment handle (G) located at the base of the machine.

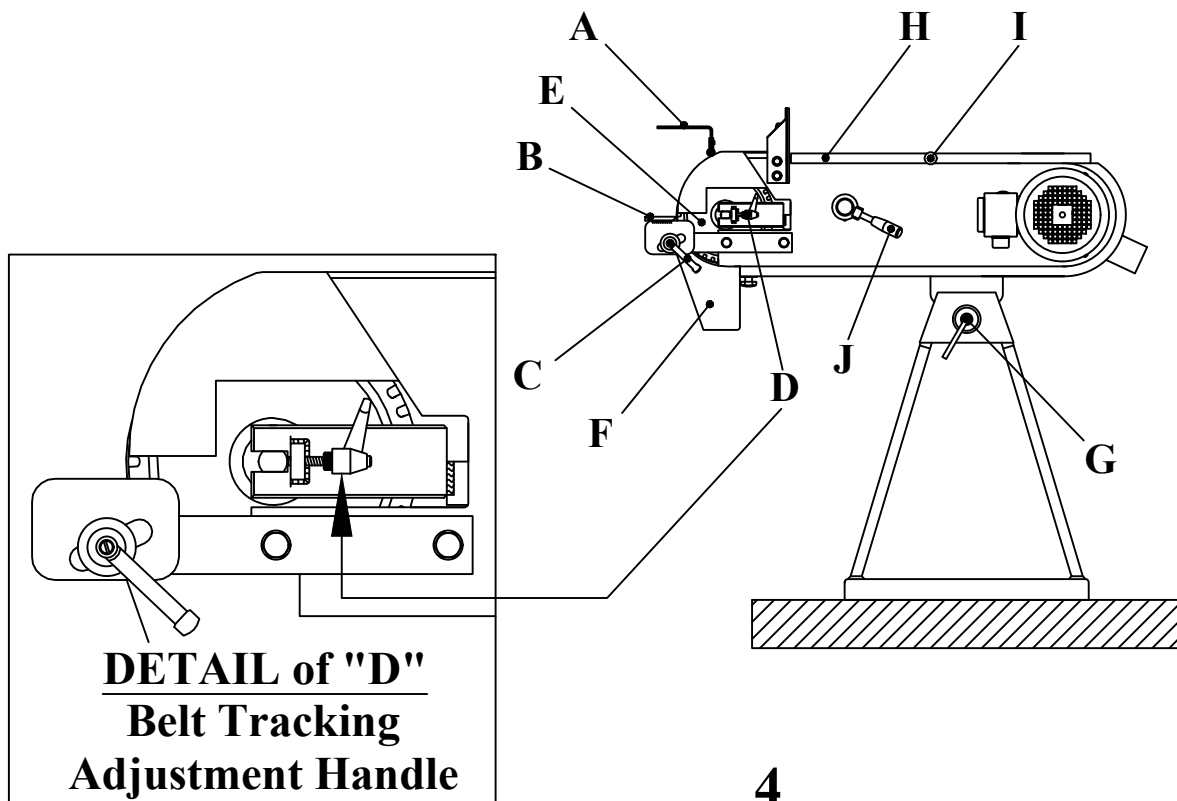


FIGURE 1.1

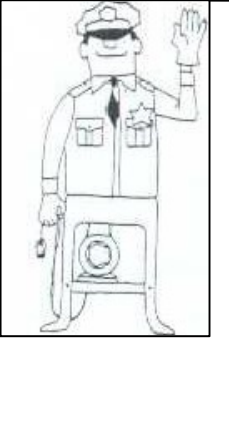
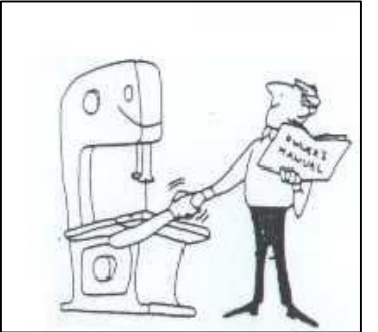


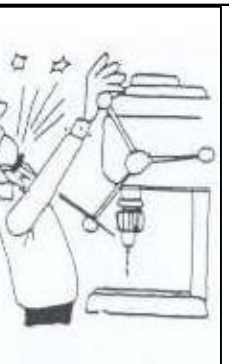



2. Directions

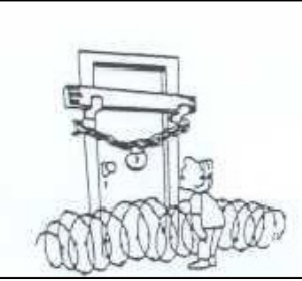

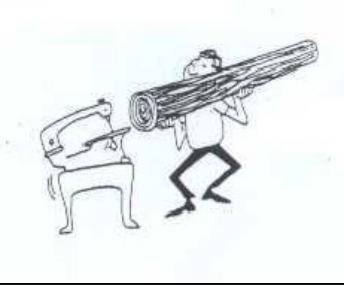



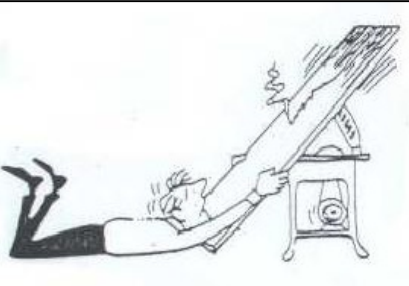



2.1 Operation

After adjustment and connection, the belt grinding machine is ready for use. The grinding can take place by the contact wheel or on the surface grinding table by opening the cover (H) (see Figure 1.1). By lifting the ball handle (I) the cover (H) can be opened and make grinding of long materials possible. The life of a new belt can be extended if a person starts grinding by using light pressure.

2.2 Safety rules for stationary power tools.

Follow them to achieve best results and full benefit from your new machine.

<p>The good craftsman respects the tools with which he works. He knows they represent years of constantly improved design. He also knows that they are dangerous if misused. This is the theme of a new safe-use program for stationary power tools. The safety rules are based on approved practices in industrial and home shops</p>		<p>1. Know your power tool. Read the owner's manual carefully. Learn its applications and limitations, as well as the specific potential hazards peculiar to this tool.</p> 
<p>2. Keep guard in place and in working order.</p>		<p>3. Ground all tools. If tool is equipped with three-prong plug, it should be plugged into a three-hole electrical receptacle. If an adapter is used to accommodate a two-prong receptacle, the adapter wire must be attached to a known ground. Never remove the third prong.</p> 
<p>4. Remove adjusting keys and wrenches. Form habit of checking to see that keys and adjusting wrenches is removed before turning it on.</p>		<p>5. Cluttered areas and benches invite accidents.</p> 
<p>6. Avoid dangerous environment. Don't use power tools in damp or wet locations or expose them to rain. Keep your work area well lighted.</p>		<p>7. Keep children away. All visitors should be kept in a safe distance from work area.</p> 

<p>8. Make workshop kidproof with padlocks, master switches, or by removing starter keys.</p>		<p>9. Don't force tool. It will do the job better and be safer at the rate for which it was designed.</p>	
<p>10. Use right tool. Don't force tool or attachment to do a job it was not designed for.</p>		<p>11. Wear proper apparel. Wear no loose clothing, gloves, neckties, rings, bracelets, or other jewelry which may get caught in moving parts. Non-slip footwear is recommended. Wear protective hair covering to contain long hair.</p>	
<p>12. Always use safety glasses. Also use face or dust mask if cutting operation is dusty. Everyday eyeglasses only have impact resistant lenses. They are NOT safety glasses.</p>		<p>13. Secure workpiece. Use clamps or vise to hold workpiece, when practical. It's safer than using your hands and it frees both hands to operate tool.</p>	
<p>14. Don't overreach. Keep proper footing and balance at all times.</p>		<p>15. Maintain tools with care. Keep tools sharp and clean for best and safest performance. Follow instructions for lubricating and changing accessories.</p>	
<p>16. Disconnect tools before servicing and when changing accessories such as grinding wheels, polishing mops, grinding belts, blades, bits, cutters, etc.</p>		<p>17. Reduce the risk of unintentional starting. Make sure switch is in off position before plugging in.</p>	
<p>18. Use recommended accessories. Consult owner's manual for recommended accessories. Use of improper accessories may cause risk of injury to persons.</p>			

2.3 Maintenance

Empty the spark box with regular intervals and check the suction canals to see if they need cleaning. The dust bin must be emptied after use. The wheels the belt rides on should be replaced when the edges have been worn round or the surface has been damaged. The graphite pad on the surface grinding table should be changed as required.

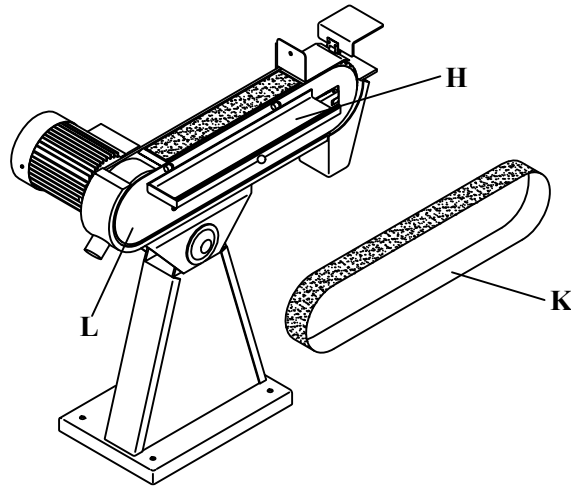


FIGURE 2.1

When changing the belt, it is released by turning the belt release handle (J) in a counterclockwise direction (See Figure 1.1). Note that the handle can be somewhat difficult to turn. Open the cover (H). The side plate (L) is open all around the outside for belt removal. The worn-down belt (K) is removed by driving the belt against the direction of rotation, the belt is removed from the machine by the drive wheel. Then the new belt can be installed. You must make sure that the direction of the arrows on the back side of the belt correspond to the direction of rotation. Turn back the belt release handle (J) to apply tension to the belt (See Figure 1.1). Bring belt into alignment with the handle (D). (See "Detail of D" on page 4)

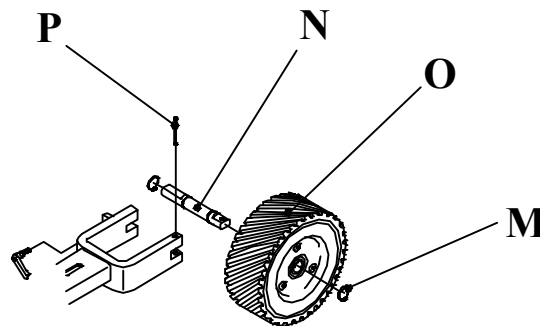


FIGURE 2.2

To change the contact wheel, remove the grinding belt, tool rest and spark arrester. Use a 6 mm mandrel to hammer out the pin (P). Now the contact wheel with axle and bearings can be taken out. Remove one of the lock rings (M) and the axle (N) can be taken out. The new contact wheel (O) is fitted in reverse order.

3. Spare Parts List

3.1 Drawing of Belt Grinding Machine SG3

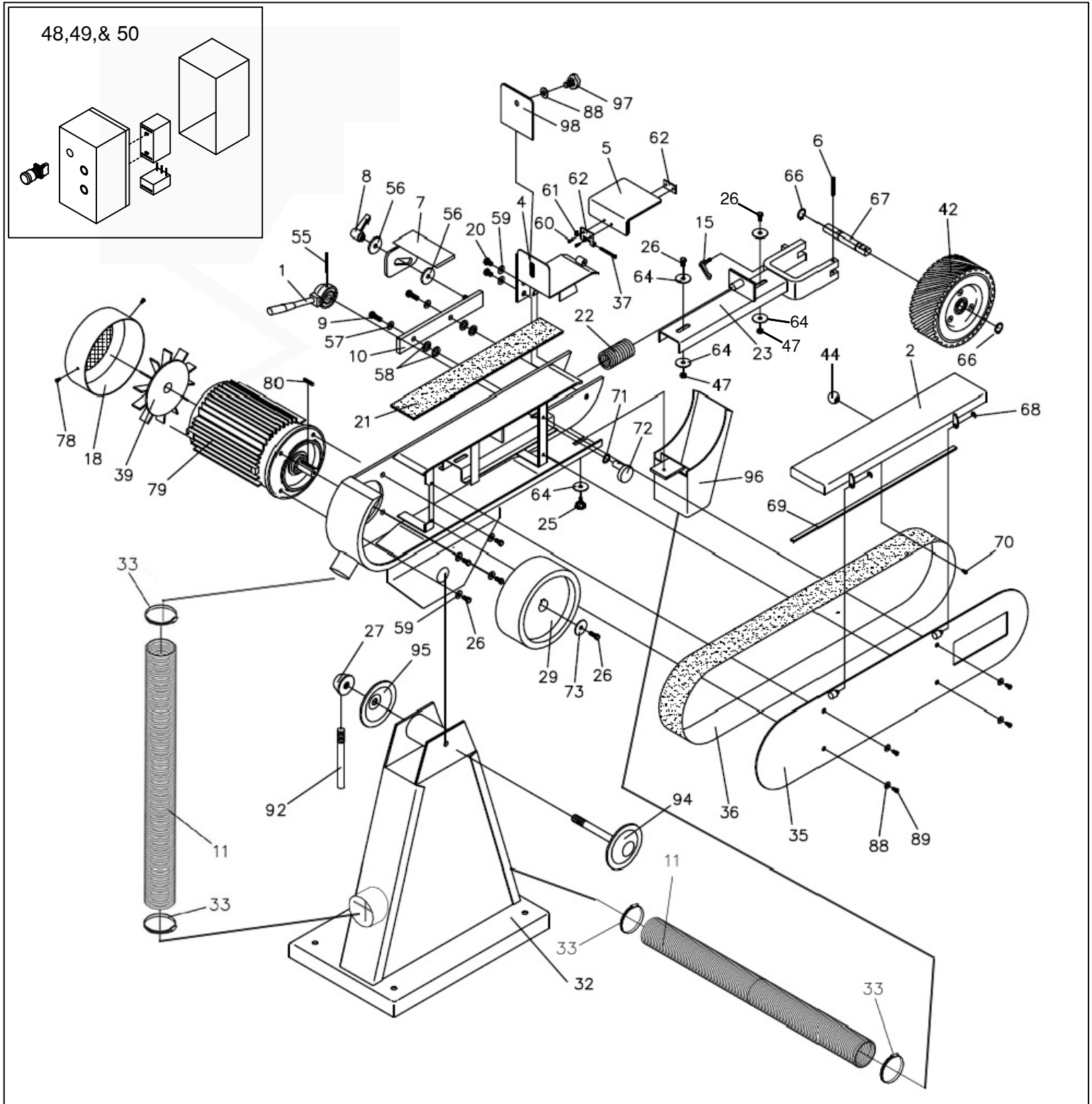


FIGURE 3.1

3.2 Spare Parts List for Belt Grinding Machine SG3

When ordering spare parts please state machine type and serial number together with item number and description of the part according to this list.

Item No.	Description	Part Number
		SG3
1	Belt release handle	0102267
2	Belt guard	0239202
4	Grinding stop/Cover Blue	0880002
5	Eye shield	0233605
6	Split pin ø6x50 mm	0233050
7	Tool rest	0233207
8	Handle for tool rest	0233808
9	Bolt M10x25	0300134
10	Support for tool rest	0104373
11	Exhaust hose	7891011
15	Handle M6x25	0233025
18	Fan cover for motor	2031017
20	Screw M8x12	0300144
21	Graphite pad	0233221
22	Spring 5,5x43x125x11 mm	0102265
23	Fork for Contact Wheel	0110223
25	Star handle Ø32 M6x16	0233806
26	Screw M8x20	0233020
27	Knub handle for base	0233034
29	Drive wheel	7520024P
32	Base without exhaust system	0100224
33	Hose band 50-70mm	0233058
35	Side plate	6549081
36	Grinding belt	SEE PAGE 12 - SECTION 6 FOR BELTS
37	Screw M6x45 CH	0950614
39	Fan wheel for motor	2031016
42	Contact wheel with bearings	1535005
44	Ball handle M6xØ25	0331662
47	Lock nut M8	0928644
48	Switch Box w/ E-Stop 230V 1Ph	0188837-1
49	Switch Box w/ E-Stop 230V 3Ph	0188836
50	Switch Box w/ E-Stop 460V 3Ph	0188838
55	Split pin Ø4x50 mm	3454351
56	10x45x4 Washer	0860327
57	10mm Washer	0101491
58	10mm Washer	2323212
59	8mm Washer	5437850
60	Screw M4x8	0100425
61	Lock nut M6	0951406
62	Hinge mounting for eye shields	0921475
64	8mm Washer	6540981
66	Lock ring Ø20	0311262
67	Shaft	0233251
68	Lock ring Ø7	0915720
69	Rubber Strip	1055860
70	Screw M6x12	0930612
71	Wave spring 14x0.3x21	0102268
72	Eccentric for 8 mm motor sheet	0752262
73	8mm Washer	6540981
78	Screw M4x5	0737620
79	Motor 230/460V 3 Phase	2030041
79A	Motor 230V 1 Phase	2030005
80	Parallel key	-
88	6mm Washer	0737631
89	Screw M6x10	0110089
92	Handle for base	0233032
94	Axle with disc for base	0233038
95	Disc for base	0233036
96	Spark box	0101224
97	Star M6	0233807
98	Rest for surface grinding	1055680

4. Technical Data

4.1 Technical Specifications

Model	SG3	
Grinding belt	3" x 79"	
Motor	4.1 HP	
Voltages	3PH 220v or 3PH 440v or 1PH 220v 60Hz	
Class	IEC 34-1	
IP Class	54	
r/min.	2860	
Amp	3PH 220V-10.6	3PH 440V-6.0
Cos φ	0.91	
Belt speed	30/34 m/s	
Contact wheel	Ø200x75	
Weight in kg. (lbs.)	80 (177)	

The noise level for SG3 belt grinding machine has been measured to 80 dB(A) according to the measuring instruction in the note 561 from the Work Inspection Department on device of technical aids.

4.2 Dimensions in mm

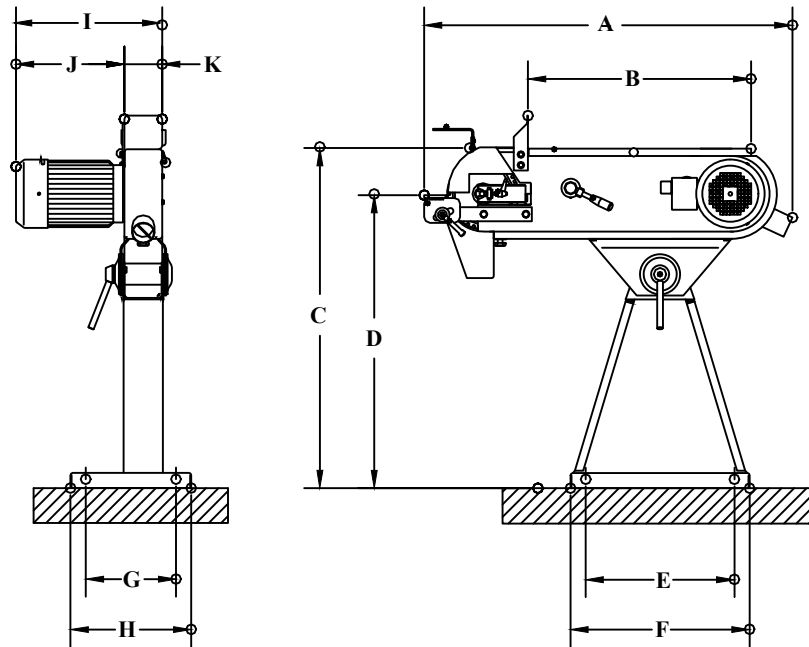


FIGURE 4.2

Model	A	B	C	D	E	F	J	G	H	I	K
SG3	995	660	835	780-1070	420	506	306	255	340	199	107

4.3 Circuit Diagrams

SG3 belt grinding machine can be configured to either 230v 3PH 60 Hz or 440v 3PH 60 Hz. Check the voltage data tag to confirm what voltage the machine is before connecting to power.

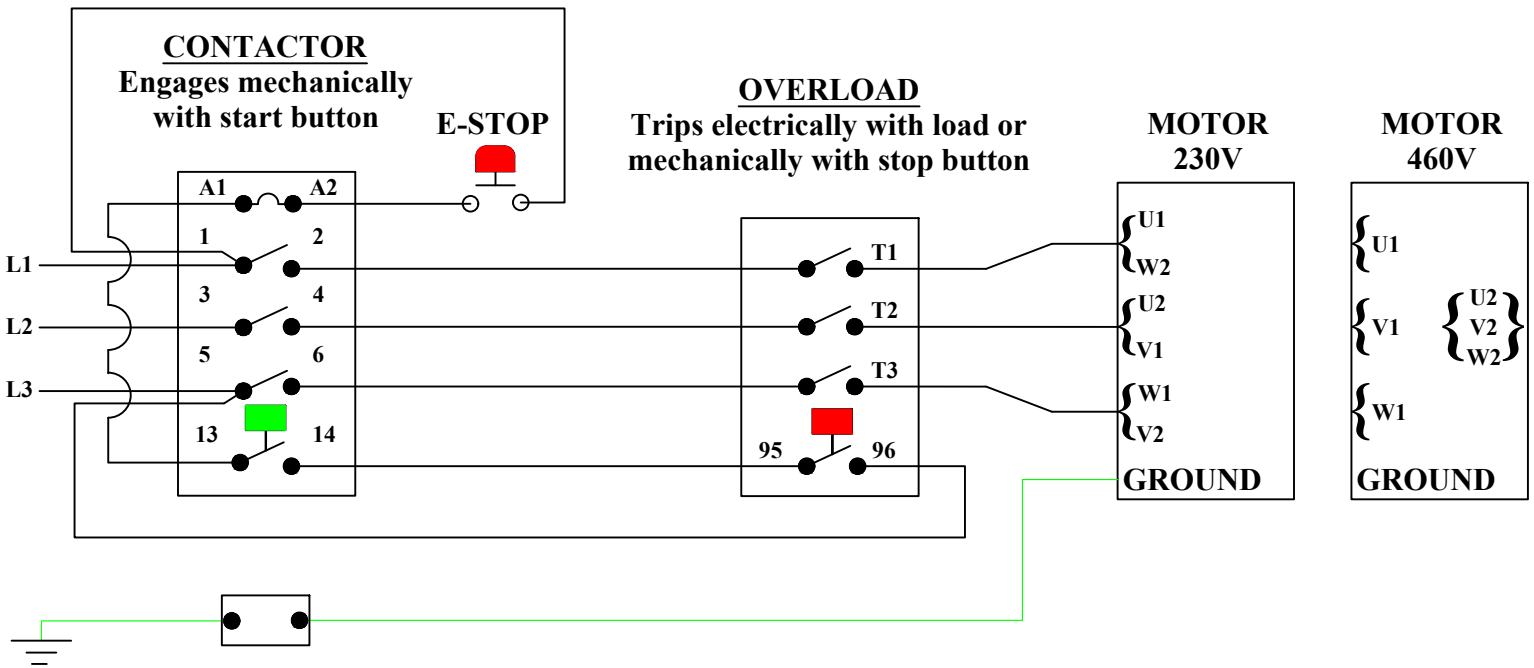


Figure 4.3.3 - Diagram of belt grinder

5. Warranty

5.1 Guarantee

If within 3 years of purchase this machine supplied by Scotchman becomes defective due to faulty materials or workmanship, we guarantee to repair or replace the machine or defective part or parts free of charge provided that:

1. The product is returned complete to one of our Service Branches or Official Service Agents.
2. The product has not been misused or carelessly handled and has not been used in a manner contrary to the operating instructions.
3. Repairs have not been made or attempted by other than our own Service Staff or the staff of our Official Service Agents.
4. Documentary proof of purchase date is produced when the goods are handed in or sent for repair.
5. Wear parts are not covered by the warranty

6. SG3 Available Belts

NOTE: 60 Grit Belt Come Standard With Machine

<u>Part #</u>	<u>Description</u>
0217040	75 X 2000mm 40 GRIT GRINDING BELT
0217060	75 X 2000mm 60 GRIT GRINDING BELT
0217080	75 X 2000mm 80 GRIT GRINDING BELT
0217120	75 X 2000mm 120 GRIT GRINDING BELT

ALL BELTS ARE PACKAGED IN A QTY. OF 10

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