



# ARBOGA

**Manual**  
**POP 310**  
**Industrial polishing machine**

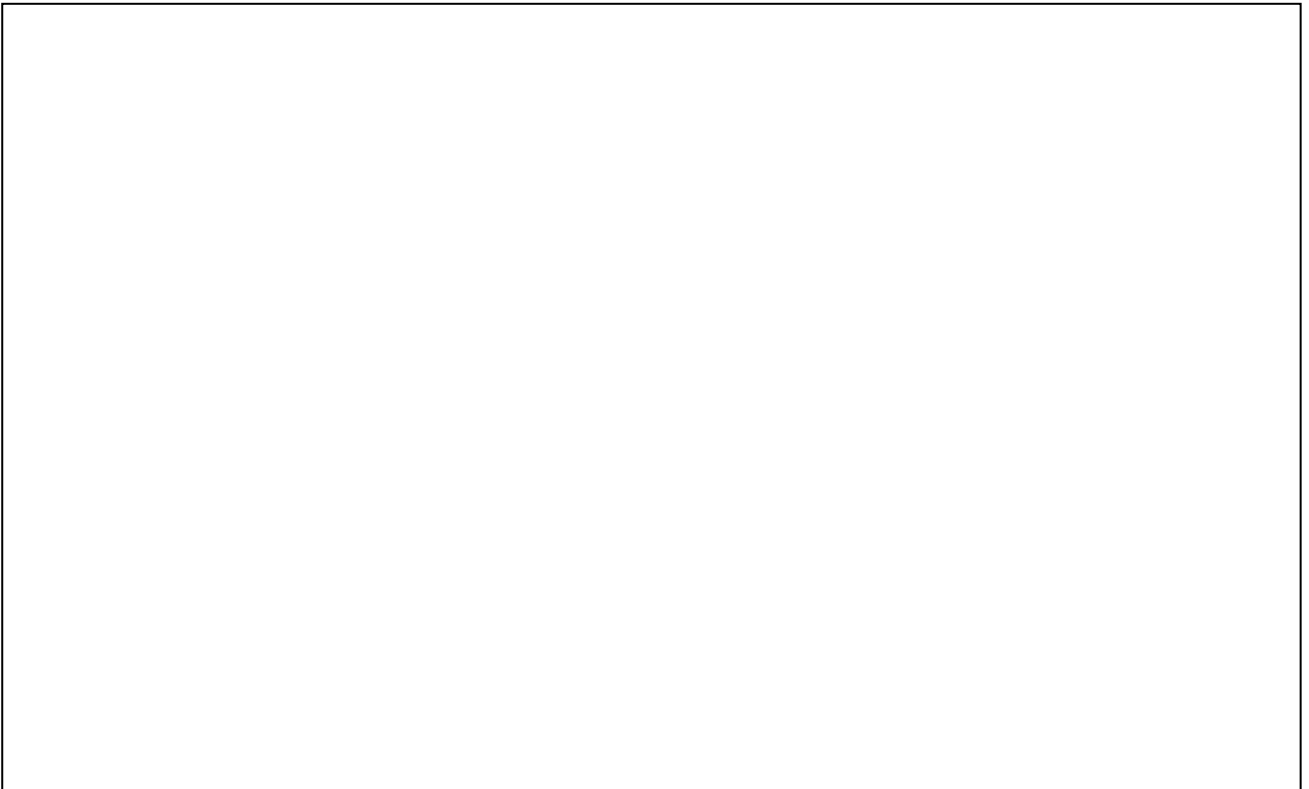


CE

UK



**READ THIS MANUAL BEFORE USE**



## **EU declaration of conformity**

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ARBOGA A/S  
Industrivej 3-9  
DK-9460 Brovst Denmark  
Tel. + 45 98 23 60 88  
Fax: + 45 98 23 61 44

hereby declares that

### **ARBOGA POP 310 Industrial polishing machine**

are manufactured in accordance with the provisions of the European Parliament and Council Directive 2006/42 / EC of 17 May 2006

#### **And also in accordance with:**

- Low Voltage
- EUROPEAN PARLIAMENT AND COUNCIL DIRECTIVE 2014/35 / EU of 26 February 2014
- EMC
- EUROPEAN PARLIAMENT AND COUNCIL DIRECTIVE 2014/30 / EU of 26 February 2014

DK 9460 Brovst



Claus Nielsen,  
Producent

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# 1 Transport and handling

## 1.1 Transport

POP 310 polishing machine is delivered mounted to a pallet packed in protective packing.

## 1.2 Handling

POP 310 polishing machine can easily be ported within the packing it is delivered in. If the polishing machine is mounted to a pedestal, please make sure the pedestal is safely bolted to the pallet.

## 1.3 Placing

Placing of the machine must take place on a firm and level surface. Now secure the polishing machine to the work table or the floor by using the four holes in the base used for mounting the machine to the pallet.

Please wire the machine according to the given voltages stated in this manual and on the motor sign. Please see wiring diagram (see section 7.3).

Check for correct direction of rotation on the motor. All wiring must be performed by an authorized electrician.

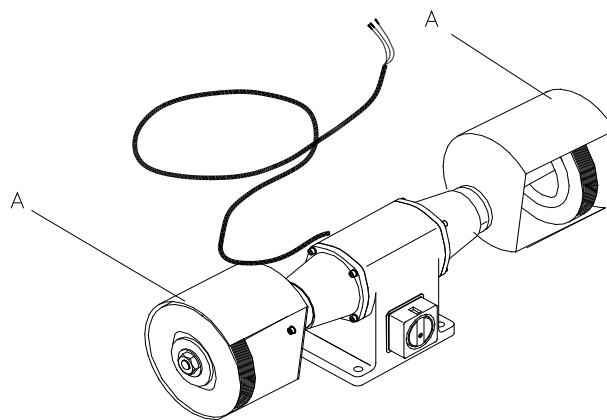


Fig.: 1.1

Before start operating please check if the polishing discs (A)(see *fig.: 1.1*) are firmly secured to the rotor. The polishing disc is mounted when the machine is disconnected. The polishing disc (A) must rotate freely without being loose. Checks and adjustments are only to be performed when the machine is disconnected.

First time the machine is started up please allow it to run at max speed for 5 minutes before use. Make sure to be in a safe distance from the machine while it is running for the first time.

## 2 Operator's manual

### 2.1 Operation

After wiring and adjusting the machine it is now ready for use. Slowly lead the work piece towards the polishing disc and avoid strokes and heavy pressure against the polishing disc. Use a light pressure to avoid destroying the polishing disc and overloading the motor. Let the machine run at max speed before start polishing. Always aim to polish at highest possible speed. If possible secure the work piece with a clamp or a similar device as it is safer than holding the work piece in your hands.

Do not stop the rotation of the polishing disc by pressing a work piece against it. Always let it rotate freely until it stops by itself.

Make sure you always have the workspace illuminated.

### 2.2 Safety regulations for stationary machine tools

Follow these regulations to achieve the best result and to make the best use of your new machine.



Any good craftsman must respect the tool he is working with. He knows they represent a constantly improved design. He also knows that incorrect use of the machine is dangerous.

This is the theme of a new safety programme for use of machine tools. These safety regulations are based on approved practice in the industry and in the workshop.



1. Know your tool. Read the instructions carefully. Familiarise yourself with its use and limitations, as well as the specific potential dangers associated with this tool.

2. Keep the safety guards in place and in good condition.



3. All machine tools equipped with a power plug must be earthed. If you use an adapter to fit a 2-pin socket, the adapter must always be earthed. Never remove the 3rd pin.



4. Remove adjustable spanners and wrenches. Get into the habit of checking that these have been removed before connecting the machine.

5. Keep the workbench tidy. Untidiness can lead to accidents.



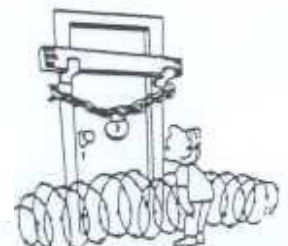
6. Avoid dangerous work environments. Do not use machine tools in damp or wet premises and do not expose them to rain. Make sure you have good working light.



7. Keep children away. All visitors should keep a good distance from the work area.



8. Make your workshop childproof by using a tool lock, a line breaker or by removing start keys.



9. Do not overload the machine. It can carry out the job better and more safely if you use it for the purpose it was designed for.



10. Use the right tool. Do not force the tool or unit to carry out a job it was not designed to do.



12. Always use eye protection and perhaps ear protection. Also use face or dust masks for a dusty job. Ordinary spectacles only function as glass. They are **NOT** adequate eye protection.



11. Wear correct clothing. Do not wear loose clothing, gloves, ties, rings, necklaces or other jewellery that could get caught in the moving parts. Non-slip footwear is recommended. Wear protective headgear.



13. Work safely. Use clamps or vices to hold the material in place. This is safer than using your own hands, and you can then use both hands to operate the tool.

14. Know your reach. Keep your balance and a good foothold all the time.



16. Reduce the risk of starting the machine unintentionally. Make sure the power switch is off.



15. Maintain the tool carefully. The best and safest work is achieved by keeping the tool sharp and clean. Follow the instructions when lubricating and replacing spare parts.



17. Switch off the power to the tool before servicing and when replacing spare parts e.g. grinding wheel, polishing wheel, knives, blades, milling cutters and similar.



18. Use recommended spare parts. Look in the manual for recommended spare parts. Using obsolete spare parts can lead to people being injured.





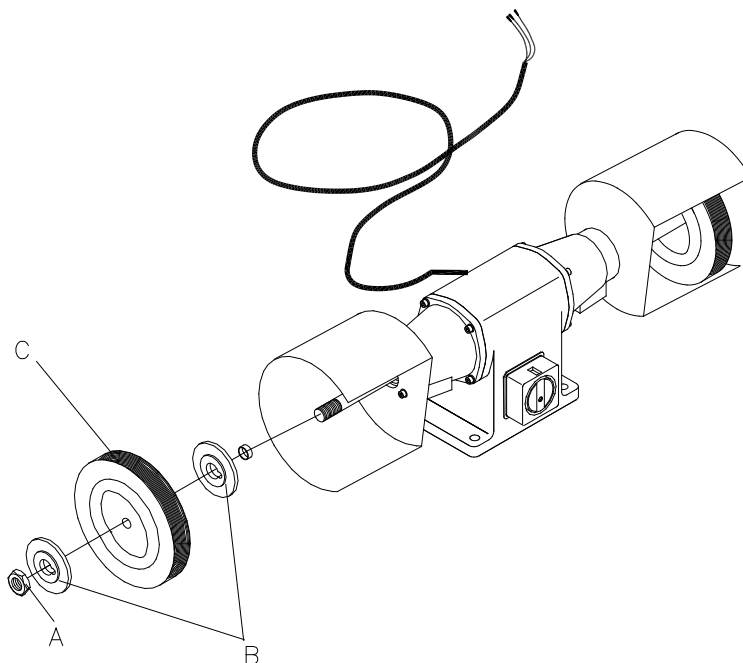


## 2.3 Maintenance

The polishing machine must be placed at a dry spot to make sure the polishing discs do not get wet because of damp or rain.

When the polishing disc must be changed simply unscrew nut (A) (see *fig.: 2.1*) first then dismount the flange (B). Now the polishing disc (C) can be removed.

Mount the new polishing disc to the rotor and the flanges (B) and the nut (A) is mounted and tightened. The nut (A) must be tightened just enough to hold the polishing disc securely to the rotor. Do not tighten excessively to avoid the disc from being interlocked.



*Fig.: 2.1*

## 3 Belt arm

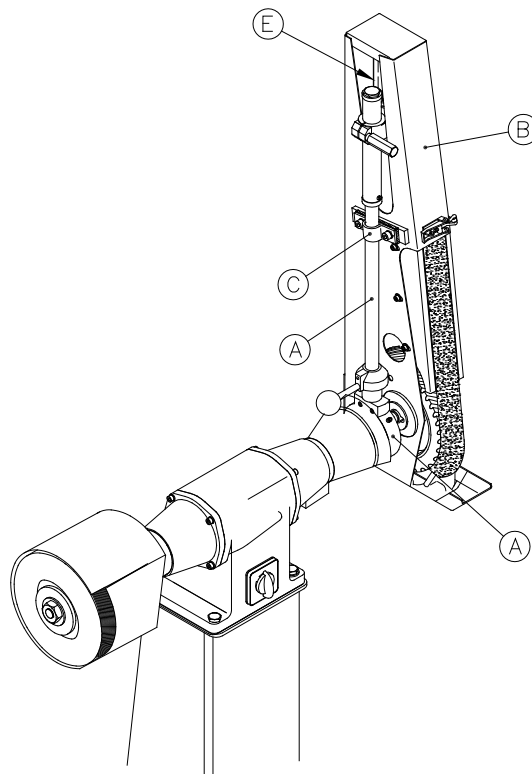
### 3.1 Assembling and mounting the belt arm

Mount the telescope arm (A) to the box cover (B) by using the fittings for the telescope arm (C) and securing the box cover (B) by screwing the screw through the side plate into the holder for the telescope arm (D). The top roller (E) must be inside the box cover (B).

Fig.: 3.1

Do not tighten the fittings for the telescope arm (C) any harder than it is still possible to adjust the running direction of the grinding belt.

The belt arm can be tilted to the desired inclination and then the holder for the telescope arm (D) is secured by tightening the two screws placed in the ring of the holder.



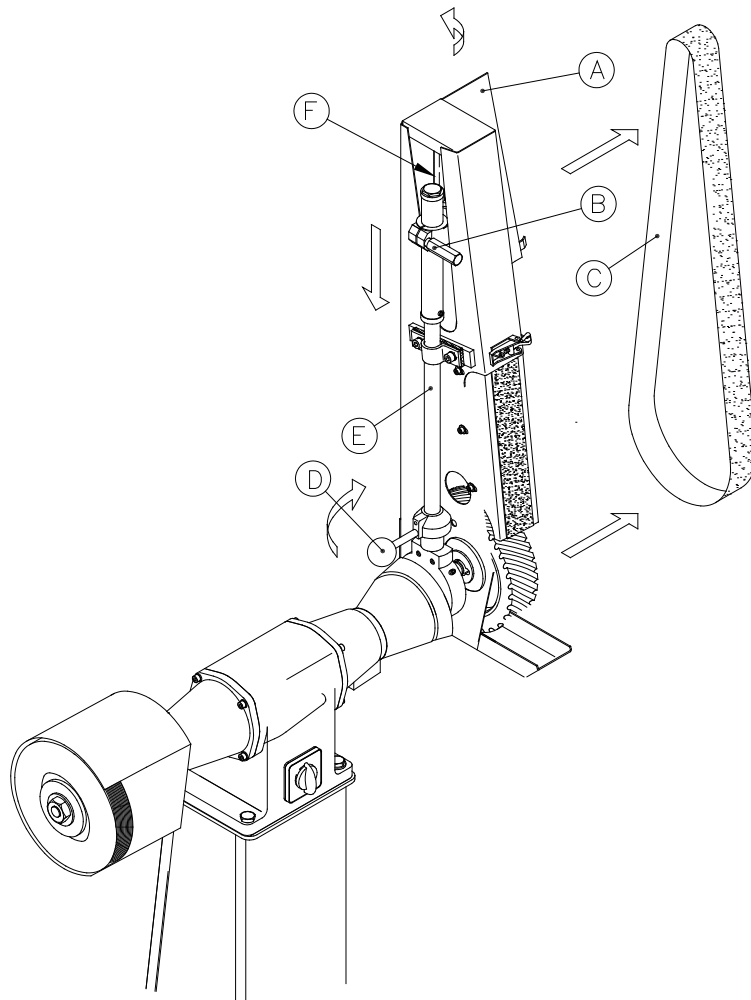
Flanges, contact wheel and reverse nut is mounted (see split drawing for right order). Check that the top roll (E) and the contact wheel are aligned. The position of the contact wheel can be adjusted by means of the distance rings enclosed. The top roll (E) can be loosened and adjusted to the point where it fits the desired grinding belt length. In the same way the grinding belt can be tightened.

### 3.2 Changing the grinding belt

When the grinding belt is worn out it must be replaced which is done as follows: The lid plate (A) (see *fig.: 3.2*) on the box cover is opened and the handle (B) is pulled downwards. This way the tension is released from the grinding belt (C) to be able to dismount it and replace it with a new one to be mounted in reverse order. Check to see if the direction of the arrows on the back of the grinding belt aligns with the rotational direction. When the new grinding belt is mounted it is necessary to check for alignment by the handle (D), which is loosened so the telescope arm (E) and top roll (F) can be turned along until the grinding belt runs straight on the contact wheel. Now tighten the handle (D).

**Only perform this adjustment of the grinding belt by pulling the grinding belt by your hands and NOT with the machine turned ON.**

Fig.: 3.2



There are many kinds of grinding belts. Therefore, it is important to choose the correct belt type and grit. Pay attention to the material the work piece is made of. You can then vary the grit size grinding belt material and glue. In this connection we inform that there are also different contact wheels with various softness and shape for different purposes.

### **3.3 Maintenance of belt arm**

Regularly empty the spark box (A)(see *fig.: 3.3*) to prevent hot sparks in destroying or deforming the grinding belt and contact wheel. If the machine is equipped with a KU-exhaust system, please check if the suction channels need cleaning. The dust bag is emptied or changed whenever necessary. The contact wheel (B) must be replaced if the edges are too rounded, or the rubber is defective. Change the graphite pad (C) on the grinding surface whenever necessary.

*Fig.: 3.3*

When replacing the contact wheel dismount the grinding belt (D) as described above. The nut (E) is unscrewed, and the flange (F) is dismounted with the contact wheel (B). The new contact wheel (B) is mounted in reverse order.

### **3.4 Operating the belt arm**

Grinding at the belt arm can take place at the contact wheel or on the surface grinding table. It is also possible to dismount the grinding surface table and grind on the grinding belt alone. Lead the work piece towards the grinding belt and avoid excessive pressure or strokes. Always use a light but firm pressure to avoid destroying the grinding belt and overloading the motor.

## 4 EX16-exhaust system

### 4.1 Assembling and mounting of EX16-exhaust system

To mount the double ended grinder on the EX-16 exhaust unit, mount the suction hoses (12) to the exhaust pipes (15), cork washers (16) and then to the holes of wheel shields of the machine. Then mount the suction hoses to the other end, on the two top holes of the EX-16 exhaust. Lastly mount the dust bag (10) on the EX-16 exhaust unit.

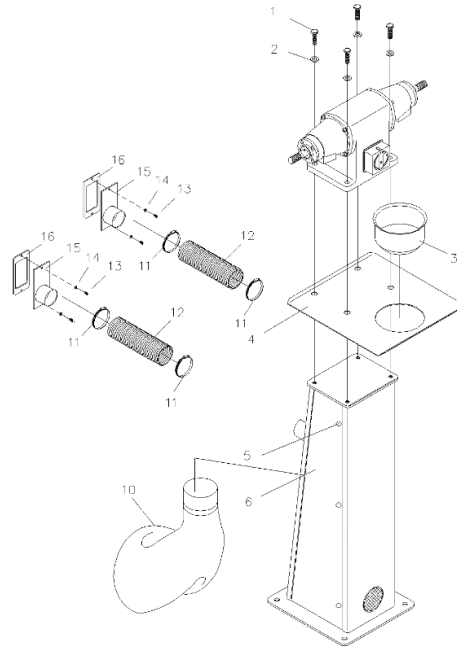


Fig.: 4.1

### 4.2 Maintenance of EX 16-exhaust system

Nothing on the EX 16-exhaust unit needs maintenance besides it is necessary to check if the suction hoses are in good condition and if the suction channels need cleaning.

#### Spare parts list for EX-16-exhaust

Pos. no.	Description	Cover V	Cover H
1	Screw M12x40 Z	0120839	0120839
2	Disc $\varnothing 13 \times 24 \times 2,5$	0105167	0105167
3	Water cup	0771333	0771333
4	Table PSD 10	0771325	0771325
5	Tap-tite M4x8	1242446	1242446
6	Pedestal 3x220/230 PSD10	1022343	1022343
10	Dust bag	0811793	0811793
11	Strips 68/85	1944266	1944266
12	Suction hose	2006713	2006713
13	Screw M8x25 CH Z	0231581	0231581
14	Spring disc Dim 8 Z	0132594	0132594
15	Exhaust pipe	2006718	2006718
16	Cork washer	2006733	2006733
17	Outer Shield	0744182	0744190

## 5 Spare parts list

### 5.1 Split drawing of POP 310 basic model

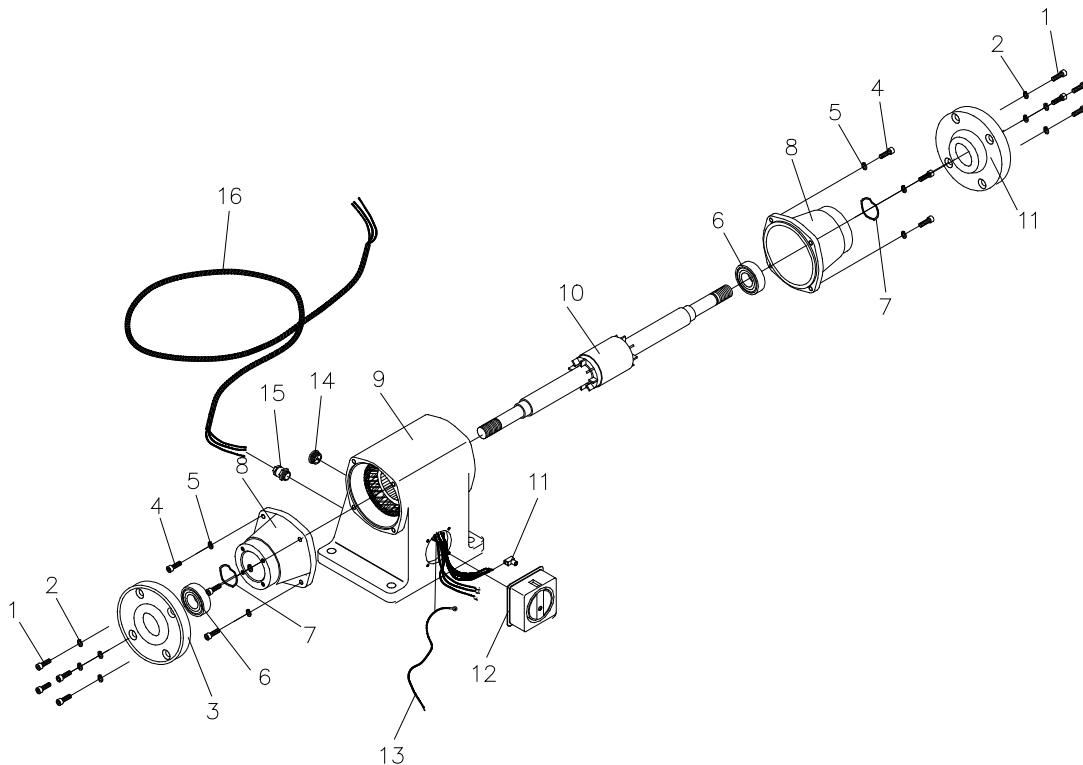


Fig.: 6.2

### 5.2 Spare parts list for POP 310

Pos.no.	Description	Item no.
1	Unbraco bolt M6x20	4345678
2	Spring disc 6mm	1323060
3	End cover POP 310	0747246
4	Unbraco bolt M8x25	0123226
5	Spring disc 8mm	0132594
6	Ball bearing 6206	0135666
7	Wave spring 61x51x0,5	0101427
8	Bearing end shield POP 310	1444654
9	Stator housing	0771066
10	Rotor cpl. 1400 rpm.	1444640
10	Rotor cpl. 2800 rpm.	1444638
11	Connector	0114065
12	*Disa-switch	0188815
13	Grounded cable	1461327
14	Grey -plastic stopper PG 11	0605550
15	Cable lead-through PG 11	0105154
16	Cable 1700-6,78-4G 0,75	0963097

\*By a 1400/2800 rotor a switch (0766720) + end shield (0744490) is used.

### 5.3 Split drawing of POP 310 with polishing mops

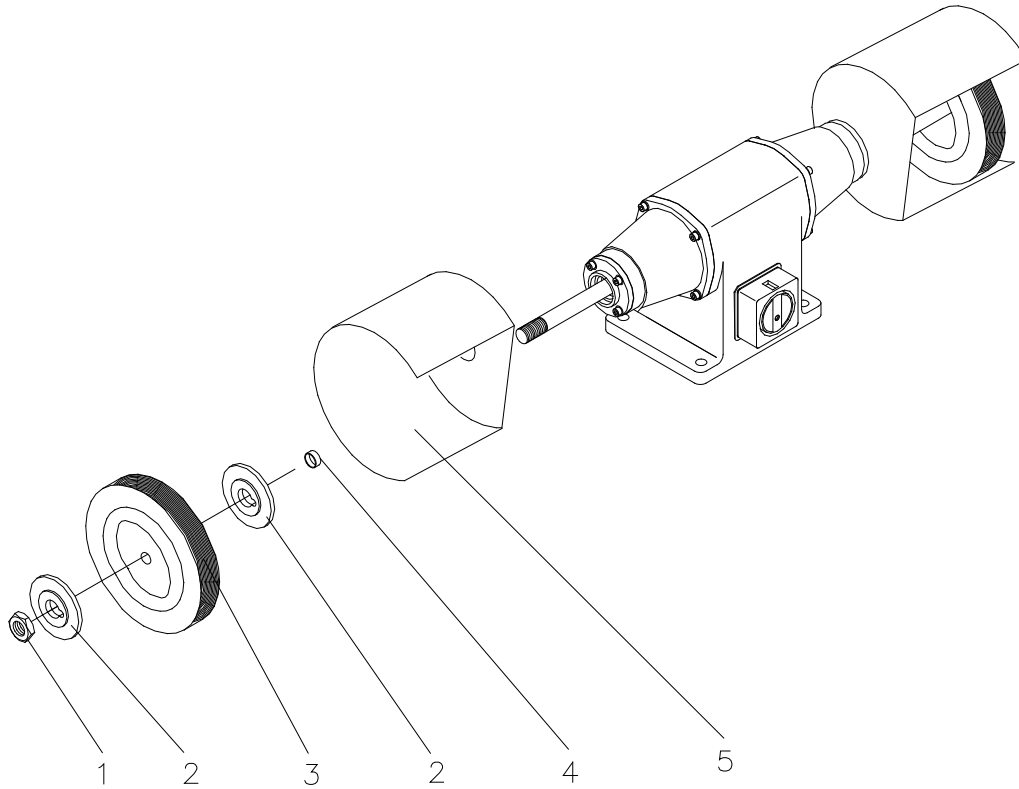


Fig.: 6.4

### 5.4 Spare parts list for POP 310 with polishing mops

Pos.no.	Description	Item no.
1	Nut M20 Right	0932302
1	Nut M20 Left	0932299
2	Flange	1105183
3	Polishing mop $\varnothing 200 \times 20 \times \varnothing 20$	1531506
4	Distance pipe $\varnothing 30 / \varnothing 20 \times 15$	0744530
6	Polishing guard Left	0921413
6	Polishing guard Right	0921412
6	Polishing guard w/exhaust Right	0921410
6	Polishing guard w/exhaust Left	0921411

## 5.5 Split drawing of POP 310 with belt arm

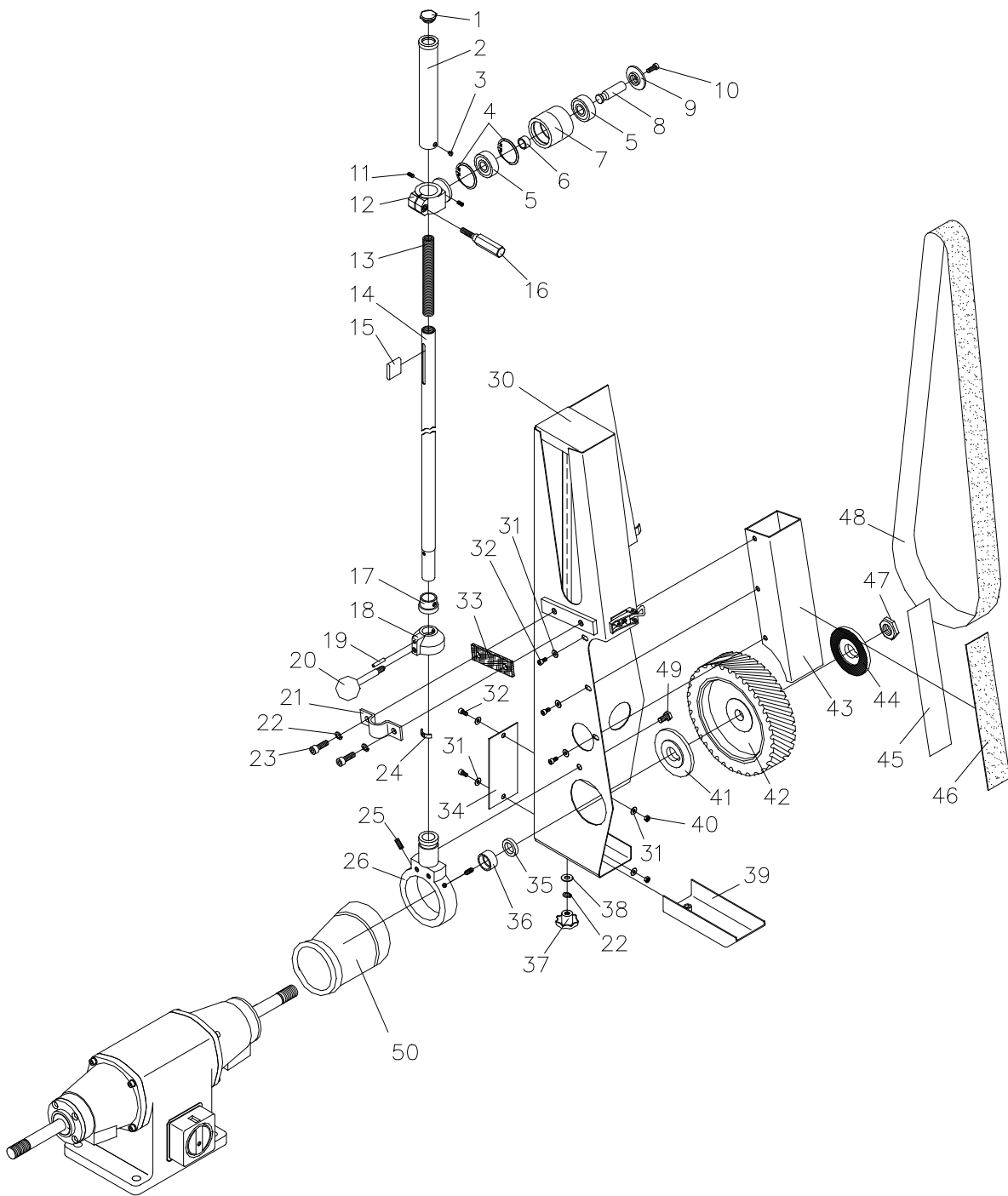


Fig.: 6.5



## 5.6 Spare parts list for POP 310 belt arm

Pos. no.	Description	Item no.	
		RIGHT	LEFT
1	Top screw	2078212	2078212
2	Draw pipe for belt arm	9480687	9480687
3	Machine screw M4x4 Z	0737618	0737618
4	Lock ring DIM 42, DIN 472	7655123	7655123
5	Ball bearings 6302 2Z	1462846	1462846
6	Distance pipe ø22/15x10	2155002	2155002
7	Top roller	9480681	9480681
8	Shaft for top roller	2078200	2078200
9	Disc for top roller	9480693	9480693
10	Screw M6x16 CH Z low head	3316860	3316860
11	Pointed screw M5x10	0737605	0737605
12	Holder for top roller	9480679	9480679
13	Spring for telescope arm	9480694	9480694
14	Pipe for telescope arm	9480682	9480682
15	Spring holder for telescope arm	2078202	2078202
16	Belt release handle M8x30	2078204	2078204
17	Pipe bushing for telescope arm	2078206	2078206
18	Pipe holder for telescope arm	9480692	9480692
19	Pipe split ø5x25	2078208	2078208
20	Handle for belt adjustment	2188010	2188010
21	Fittings for telescope arm	1533813	1533813
22	Spring disc DIM 8 Z	0132594	0132594
23	Unbraco bolt M8x25 CH Z	0123226	0123226
24	Distance piece ring	4318001	4318001
25	Pointed screw M8x16	2078210	2078210
26	Holder for telescope arm	2078211	2078211
27	Tool rest	0744425	0744409
28	Disc 3/8" Z	0101491	0101491
29	Screw M10x30 Z	0120707	0120707
30	Box cover belt arm	1533780	1533781
31	Spring disc DIM 5 Z	0737666	0737666
32	Screw M5x10 CH Z	0120628	0120628
33	Felt washer	1533816	1533816
34	Cover plate	1533812	1533812
35	Distance piece ø30/20x6mm	1551176	1551176
36	Collar bushing PSD 5	0995681	0995681
37	Star handle ø40 M8 DIN 6335	1443593	1443593
38	Auto disc 5/16" Z	5437850	5437850
39	Spark box	1533808	1533808
40	Nut M5 Z	0737623	0737623
41	Flange int.	0921572	0921572
42	Contact wheel 200x50x20mm	1532170	1532170
43	Table	1533807	1533818
44	Flange ext.	1105183	1105183
45	Double sticking tape	2004899	2004899
46	Graphite pad 50x270mm	2004898	2004898
47	Nut M20x1.5	0744824	0744816
48	Grinding belt	-	-
50	Distance piece	0773336	0773336

## 5.7 Split drawing of EX-16 exhaust unit for POP 310

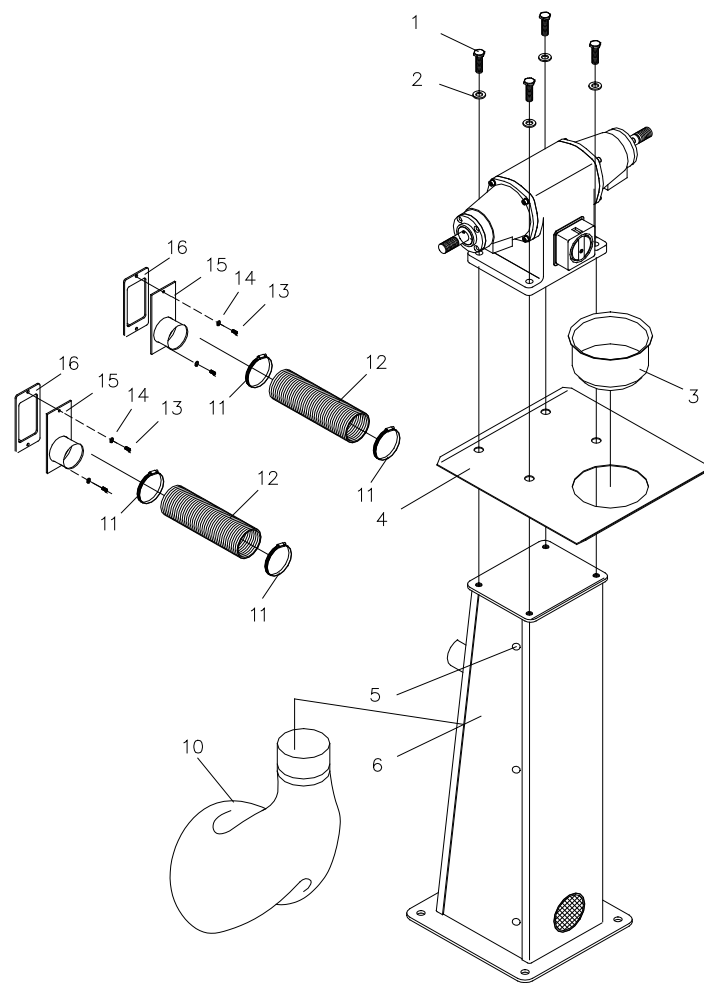


Fig.: 6.7

## 5.8 Spare parts list for EX-16-exhaust unit for POP 310

Pos. No.	Description	Item no.
1	Screw M12x40 Z	7654320
2	Disc $\varnothing 13 \times 24 \times 2,5$	0105167
3	Water cup	0771333
4	Table	0771330
5	Tap-tite M4x8	1242946
6	Pedestal 3x400	1022344
10	Dust bag	0811793
11	Strips 68/85	1944266
12	Suction hose	7891011
13	Screw M8x25 CH Z	7676512
14	Spring disc Dim 8 Z	0132594
15	Exhaust pipe	2006718
16	Cork washer	2006733

## 6 Technical data

### 6.1 Technical specifications

Model	POP 310
Motor output in Watt 1400 rpm	2000
Motor output in Watt 2800 rpm	2200
IP class	54
Class	F
Amp v/ 1400 rpm	4,2/7,3
Amp v/ 2800 rpm	4,8/8,3
Cos φ v/ 1400 rpm	0,83
Cos φ v/ 2800 rpm	0,86
Weight	40

The noise level for these machines have been measured to 76 dB(A) in accordance with the measuring advice in AT notification no. 561 on fixtures technical aids.

### 6.2 Dimensions

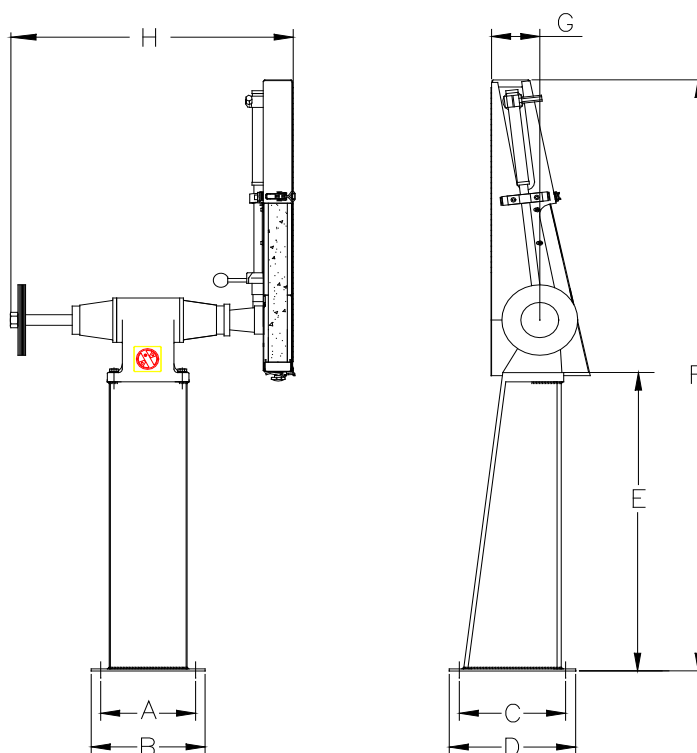


Fig 6.1

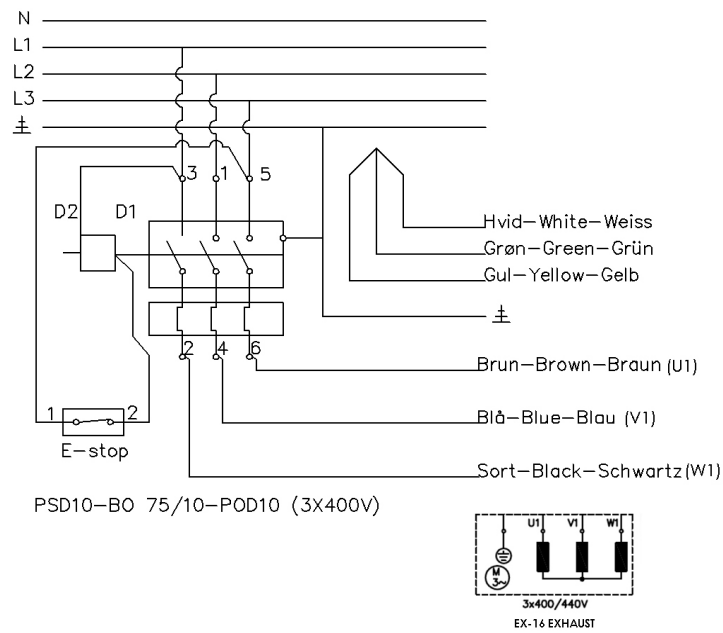
Model	A	B	C	D	E	F	G	H
POP 310	270	400	410	500	860	-	-	-

### 6.3 Wiring diagram

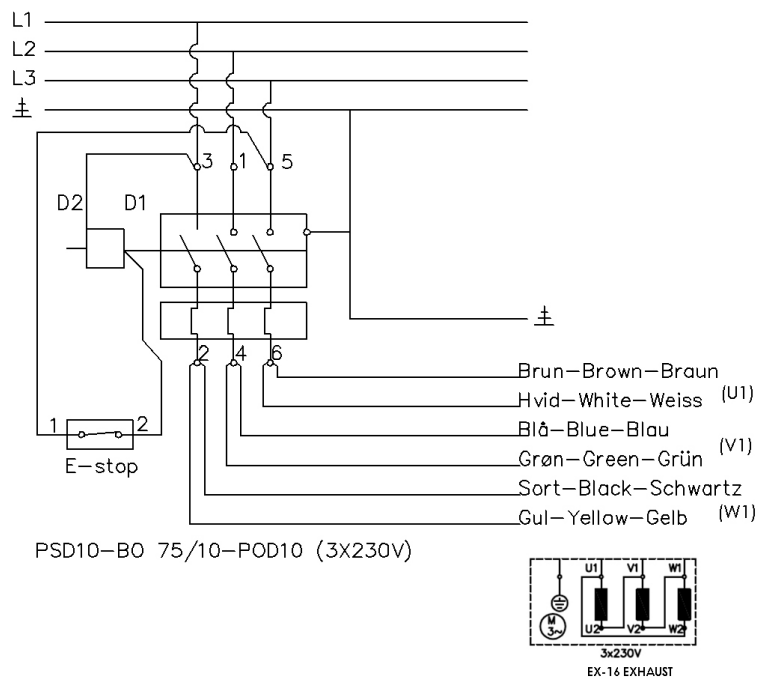
POP 310 polishing machines can be delivered wired as 3 x 400/440V - 50/60 Hz or as 3 x 230V - 60 Hz.

See wiring diagrams below.

#### Max. Voltage



#### Min. Voltage

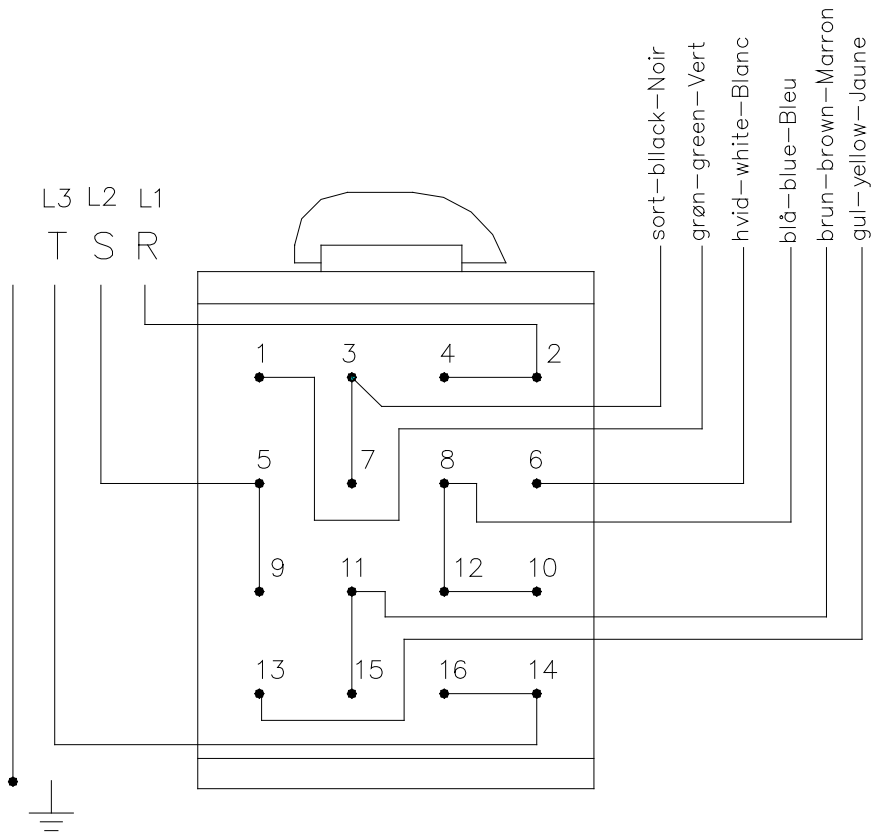


## 6.4 Wiring diagram, the polishing machines

POP 310, polishing machines can also be delivered with two-speed 1400/2800 rpm 3 x 400/440V - 50/60 Hz or 3 x 230V - 50/60 Hz.

See the wiring diagrams below.

Can NOT be re-wired from min. voltage to max. voltage.

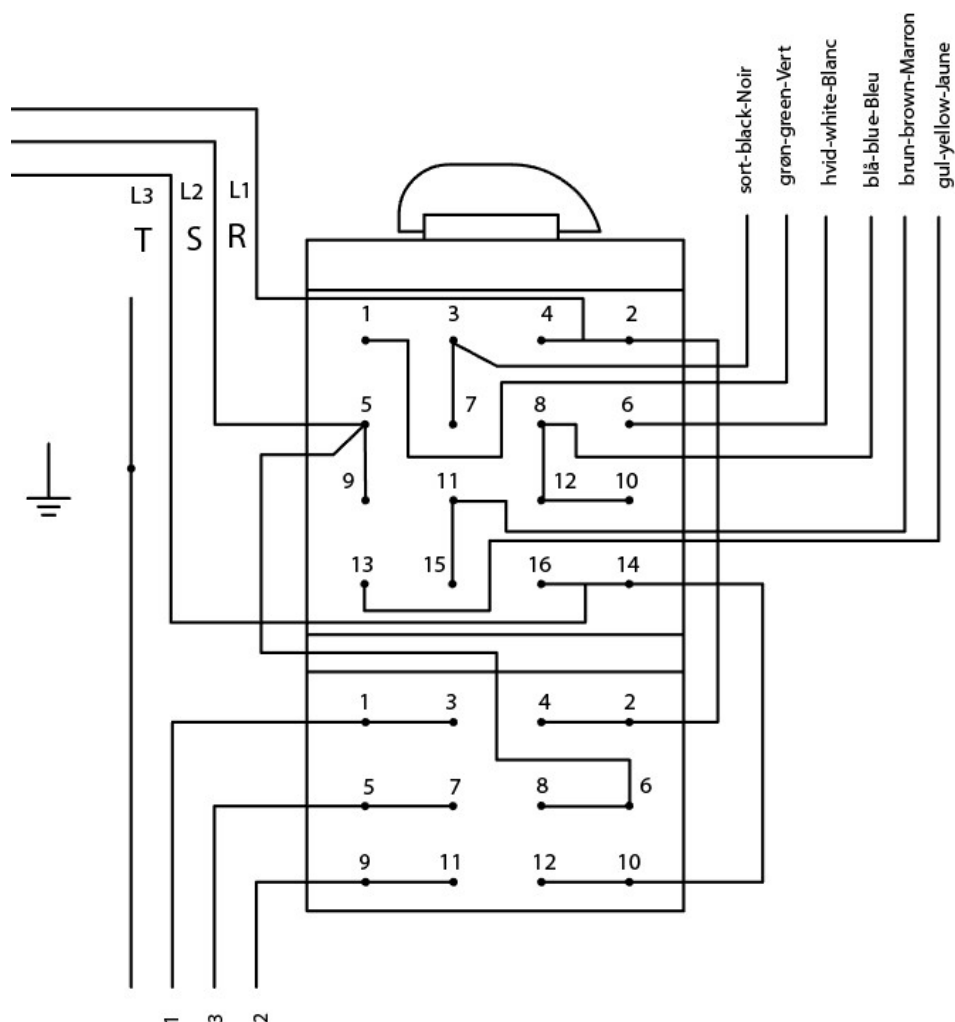


If the voltage supply is switched off it is necessary to turn on the 0-voltage switch (mounted on the back of the machine) by pressing on button 1.

**Also note!** When using the machine for the first time it is also necessary to turn on the 0-voltage switch by pressing on button 1.

## 6.5 Wiring diagram for polishing machines w / EX-16 Exhaust

The polishing machines are supplied with 1400/2800 rpm and an extraction base  
3 x 400/440 V, 50/60 Hz or as 3 x 230 V 50/60 Hz. See the wiring diagrams below. Cannot be switched  
from min. volts to max. Voltage.

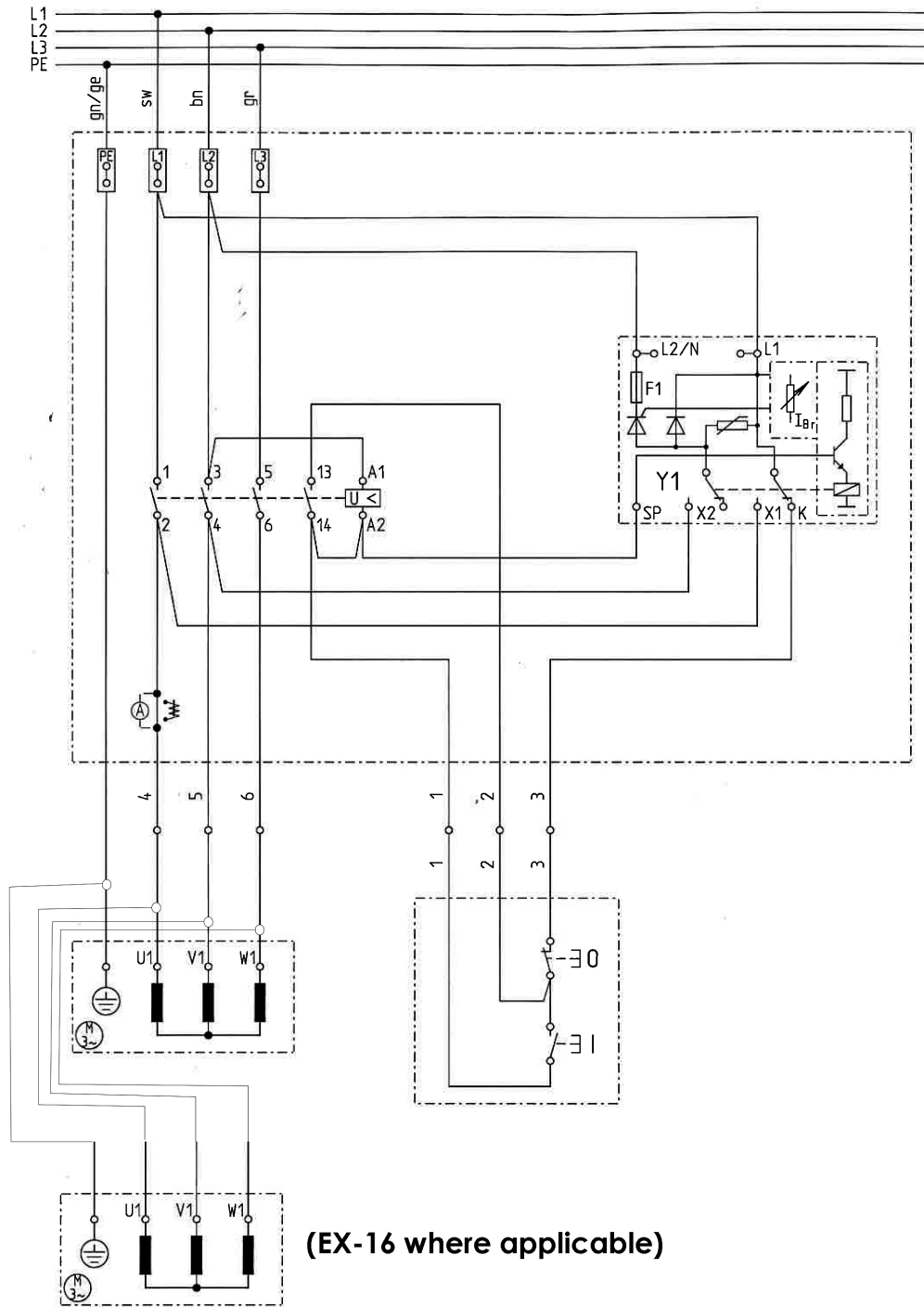


If the supply voltage is interrupted, the o-voltage switch (mounted on the back of the machine) must be activated by pressing button 1.

**Before the machine can start for the first time, the o-voltage switch must be activated.**

# 7 Brake B Circuit diagram

For UA electronic brake and external on-off



## 8 Warranty

If within 2 years of purchase this machine supplied by ARBOGA A/S 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