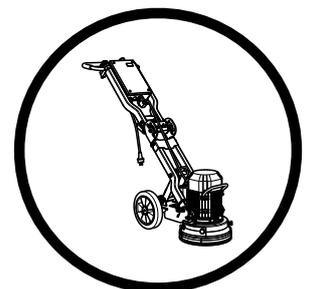




Workshop manual

PG 280

PG 400



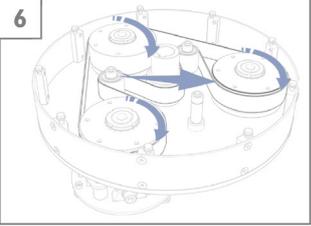
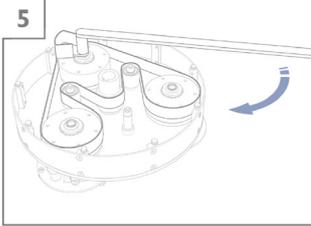
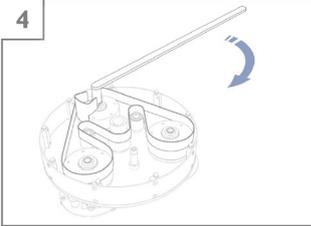
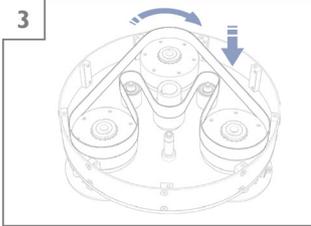
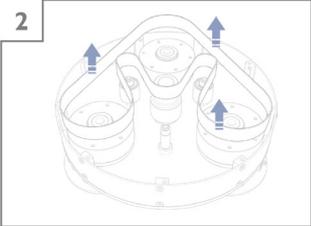
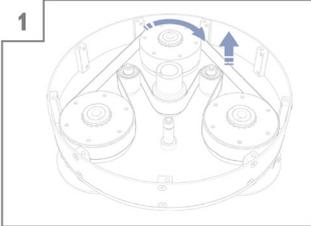
LEGEND

Clicking the title will bring you to the beginning of that chapter.

Clicking a blue circle will bring you to 3D illustration view.

11

REPAIR INSTRUCTIONS



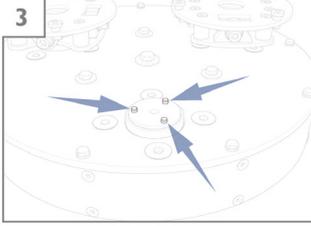
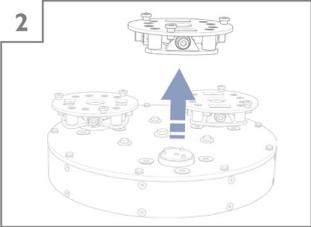
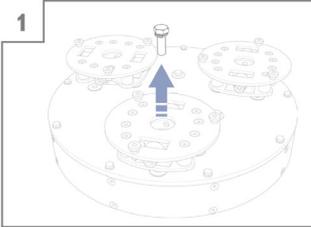
Replace the lower belt.



First see **Remove motor and grinding head from frame (p. 19)**, **Remove motor from grinding head (p. 19)**, **Remove upper belt (p. 20)**, **Open grinding head (p. 21)**

1. Pull the belt upwards in parallel with turning the wheels by hand.
2. Remove the belt.
3. Thread the belt according to picture.
4. Use the Installation Tool to mount the belt.
5. Turn the lever and press the belt downwards.
6. Continue to roll on the belt until it is below the rim on all wheels. Varningsymbol/text. The yellow side of the belt should be faced in

i Information!
Also replace bearings and sealings while replacing the lower belt.



Remove satellites



1. Turn the grinding house upside down and put it on two pieces of 2x4 boards. Then unscrew the centre bolt of the satellite.
2. Lift off the satellite.
3. Make sure to recover the three pegs.

Reverse steps for assembly

22

Alt + Left arrow = Back
Ctrl + L = Fullscreen

Clicking a black circle will bring you to the Tools section.

3. Literature

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5. Tools and Special Tools

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8. Repair Instructions

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8.1. Motor

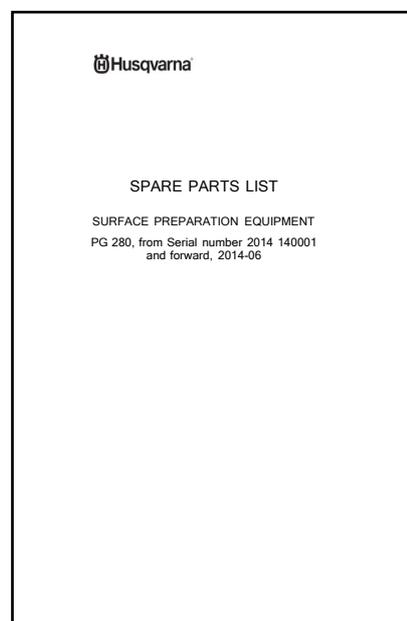
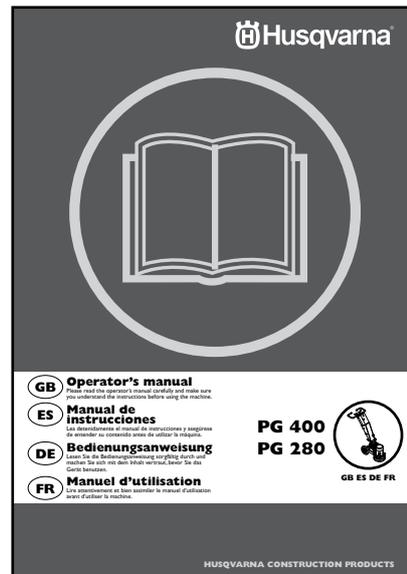
Remove motor and grinding head from frame 20
 Seperate motor and grinding head 20
 Exploded view of the PG 280 / PG 400 tool holder 22

8.2. Motor Winding Check

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 Motor winding inductance values for single phase motors 24

9. Wiring Diagram

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3. LITERATURE

Workshop Manual

The workshop manual covers all workshop maintenance for the PG 280/PG 400. Some very simple and obvious repair work has been omitted.

The manual is divided into numbered chapters as well as chapter headings that are specified in bold at the top of each page.

The table of contents at the beginning of the manual also has a page reference to the beginning of each chapter.

Operator's Manual

The operator's manual describes how the machine is to be used, the functions of the machine, and the maintenance the operator normally carries out.

This manual also contains important instructions for the safe handling of the machine.

It is extremely important that service personnel are well acquainted with how the machine is used and follow the instructions given in the manual.

Spare Parts Catalog

These catalogs include all the spares for Husqvarna PG 280/PG 400.

The catalogs contain complete exploded drawings for each product and the location, spare part number, and appearance of each component is easy to identify.

Documentation:
<http://support.husqvarnacp.com>

4. SAFETY INSTRUCTIONS

General

- No one may repair the PG 280/PG 400 unless they have read and understood the contents of this workshop manual.
- This workshop manual is written for personnel with general knowledge about the repair and service of.
- The workshop where the PG 280/PG 400 is to be repaired must be equipped with safety equipment in accordance with local bylaws.
- The machine is tested and approved only with equipment originally provided or recommended by the manufacturer.
- It is the responsibility of the user of this workshop manual to ensure that the service and repairs are carried out according to legal requirements to protect the health and safety of the personnel undertaking the work.
- Always read the warning label on the packaging for Loctite and oil, and act according to its instructions.
- Always stop the PG 280/PG 400 before carrying out any service or repairs.
- When using compressed air, do not direct the jet towards the body. Air can penetrate into the blood circulation system, which could be fatal.
- Observe local waste regulations.
- Electric shock could cause injury. Do not touch the wires while the PG 280/PG 400 is on or plugged in.
- Always make sure all nuts and bolts are correctly tightened.
- Wear personal protective equipment.
- Never carry the machine by holding the cable and never pull the plug by pulling the cable.
- Check that the cables are intact and in good condition. Use cables intended for outdoor use.
- Never use the machine if any cable is damaged.

Warning and Information



Warning!

The warning box indicates there is a risk of personal injury if the instructions are not followed.



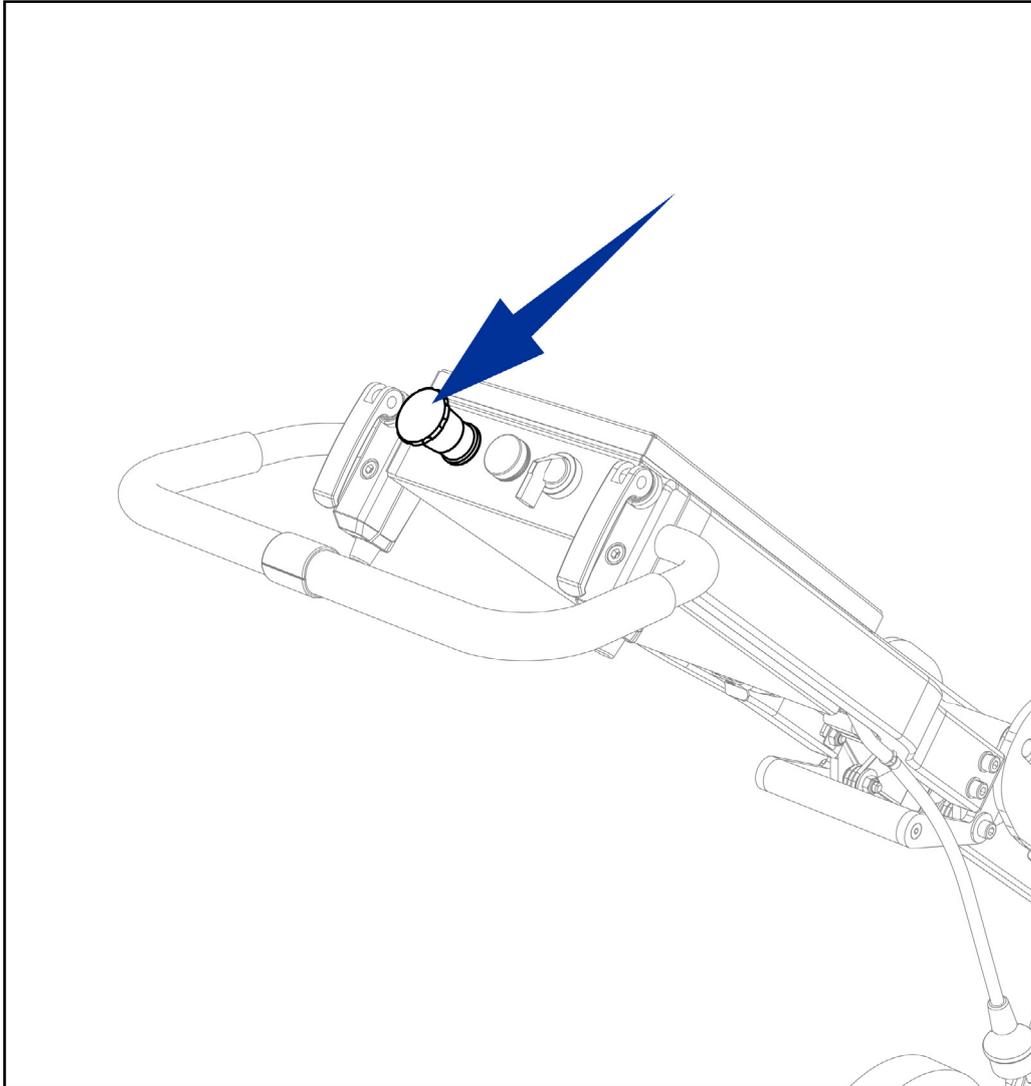
Information!

The information box provides instructions for the reader.

Emergency Stop Button

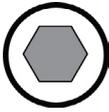
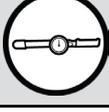
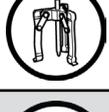
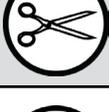
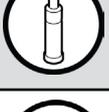
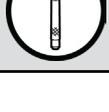
The PG 280/PG 400 is equipped with an emergency stop button which will quickly shut down the power to the motor.

Note that voltage will still be present inside the PG 280/PG 400 unit after activating this button.



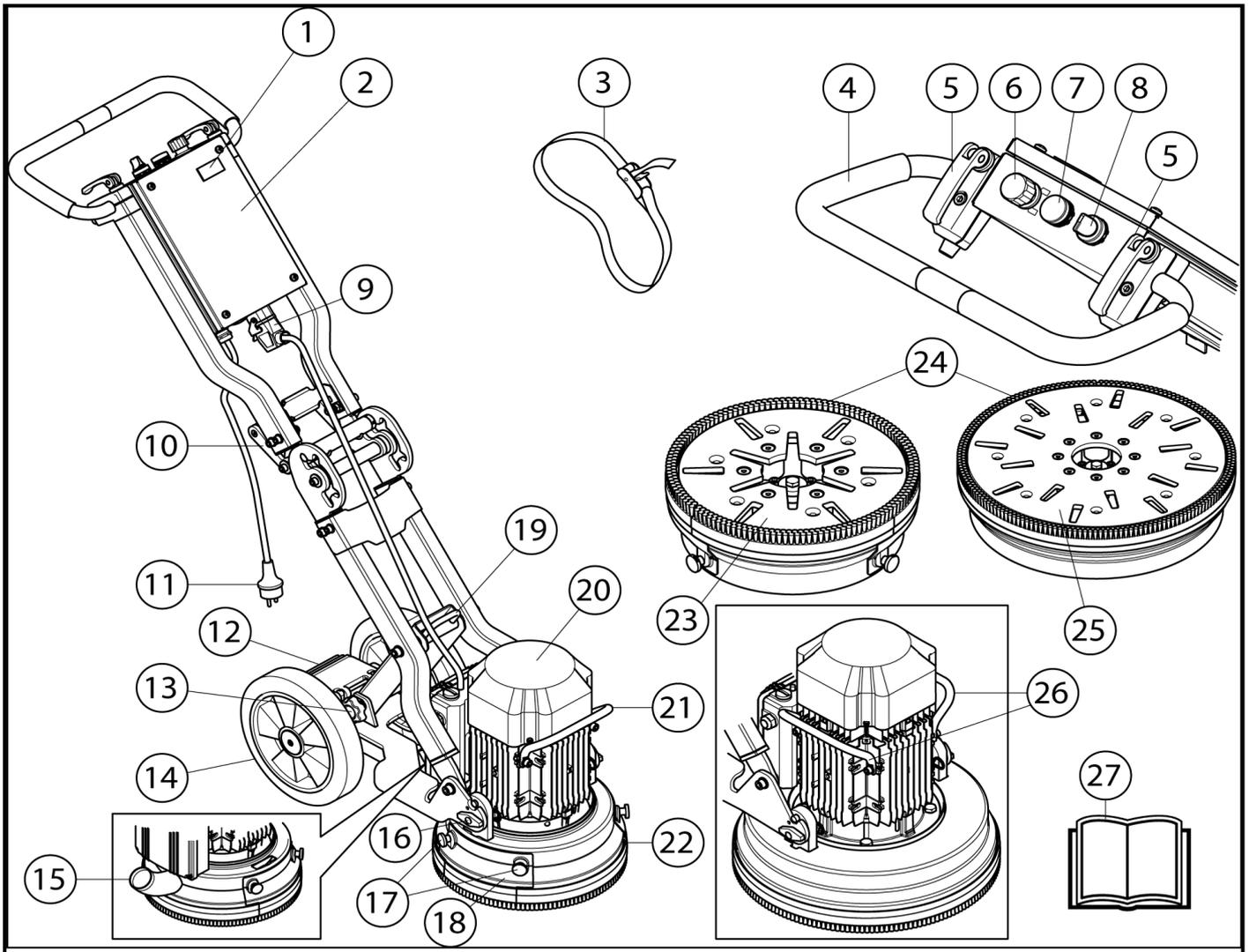
5. TOOLS AND SPECIAL TOOLS

Tools

Tool	Tool no.	Description
	525 45 52-01	Allen Key, Kit 2.5 - 10 mm
	531 11 95-32	Ratchet Wrench
		Sockets 8 - 18mm
		Torque Wrenches covering the range 30 - 100 Nm
		Screwdriver
		Loctite 243
		Universal inner puller E.g. Kukko Baureihe 202
		Scissors (for trimming the brush list length when assembling)
	581 54 15-01	Multimeter with possibility to measure capacitance and inductance e.g. Amprobe 37XR-A
		Grease
		Impact wrench
		Pin Punch Tool

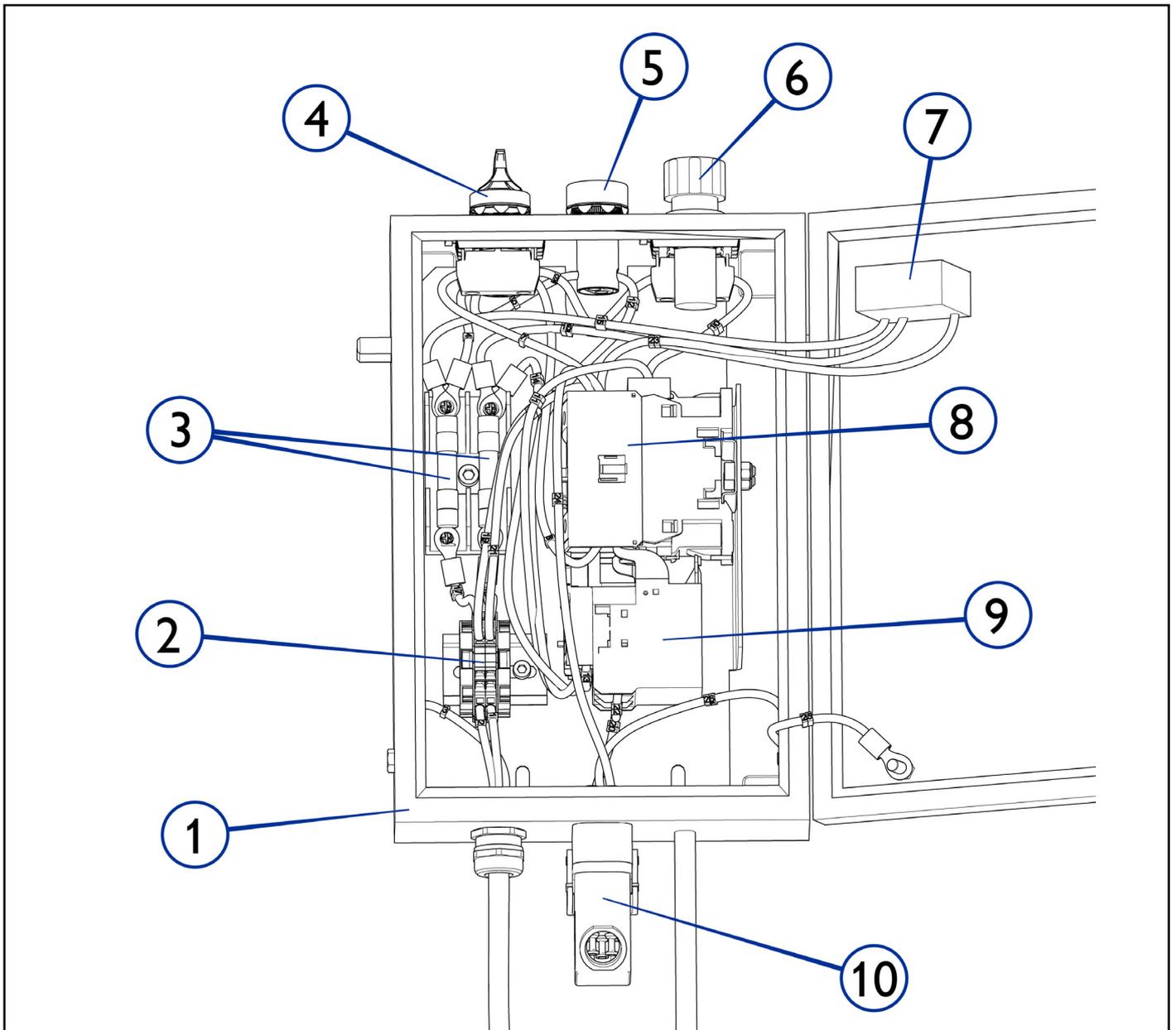
6. COMPONENTS - NAVIGATION

PG 280/PG 400



- | | |
|---|--|
| 1. Hour counter | 15. Connection, vacuum hose |
| 2. Electrical cabinet | 16. Attachment for motor/grinding head |
| 3. Tensioning straps | 17. Screws for edge grinding hatch - PG280 |
| 4. Handle / handlebar | 18. Hatch, edge grinding - PG280 |
| 5. Locking lever for handlebar adjustment | 19. Lifting eye |
| 6. Emergency stop | 20. Electric motor |
| 7. Overload lamp | 21. Lift handle, motor - PG280 |
| 8. Stop/run switch | 22. Floating cover |
| 9. Connection, quick connection for motor cable | 23. Tool plate - PG280 |
| 10. Handle for angle joint | 24. Brush list |
| 11. Plug | 25. Tool plate - PG400 |
| 12. Foot pedal -PG280 | 26. Lift handle, motor - PG400 |
| 13. Locking knob | 27. Operator's manual Connection |
| 14. Rubber wheels | |

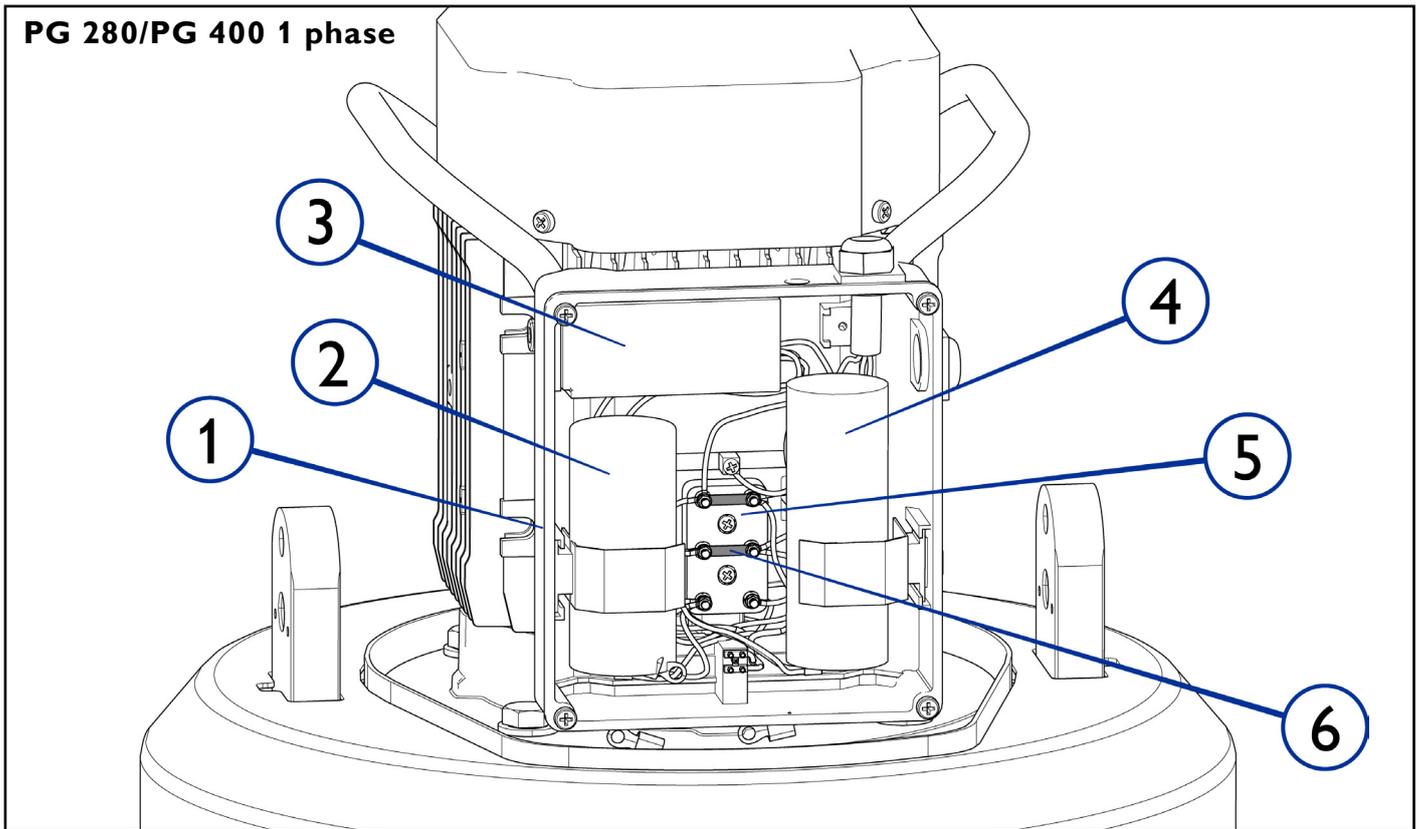
Electrical Cabinet



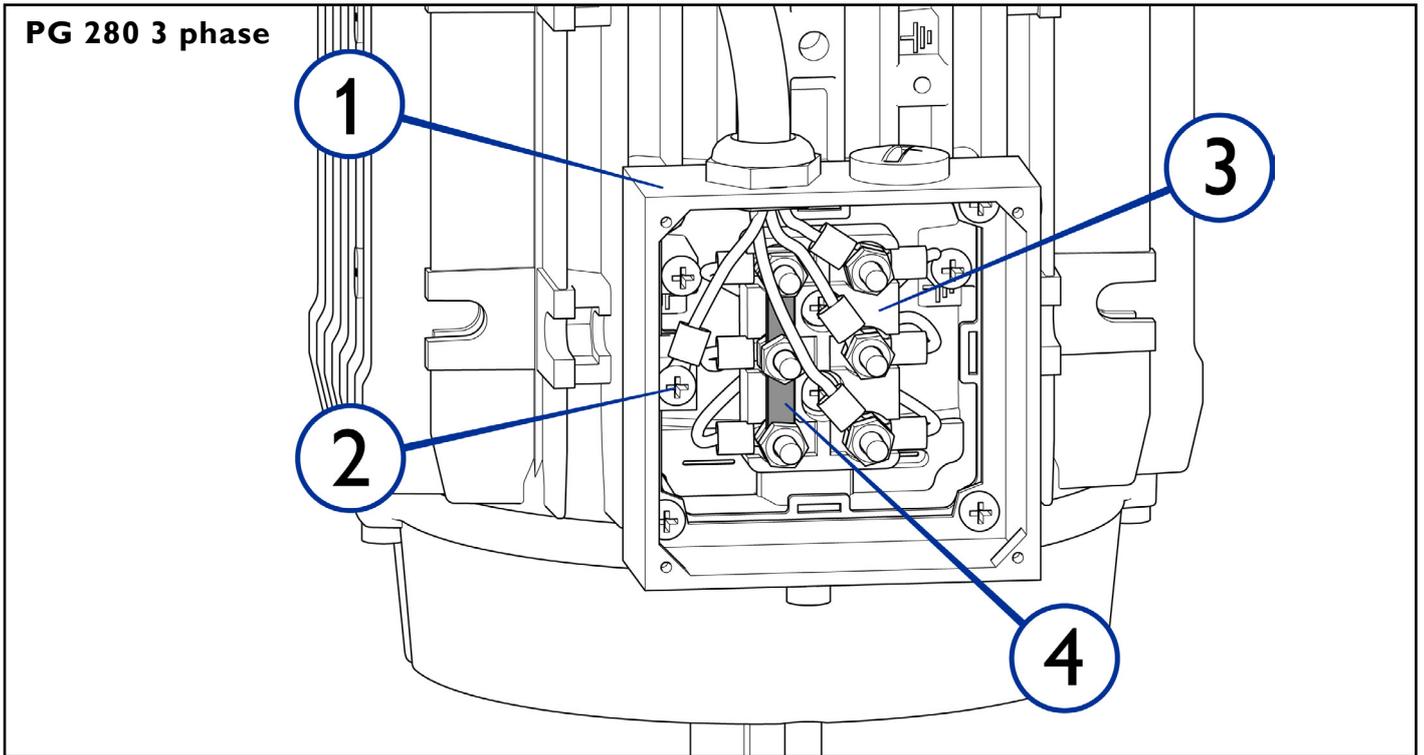
- | | |
|---|---------------------------|
| 1. Electrical cabinet | 6. Emergency stop button |
| 2. Connection blocks for incoming cable | 7. Hour counter |
| 3. Cabinet fuses | 8. Contactor |
| 4. Stop/run switch | 9. Overload protection |
| 5. Overload lamp | 10. Motor cable connector |

Motor Connection Box

PG 280/PG 400 1 phase

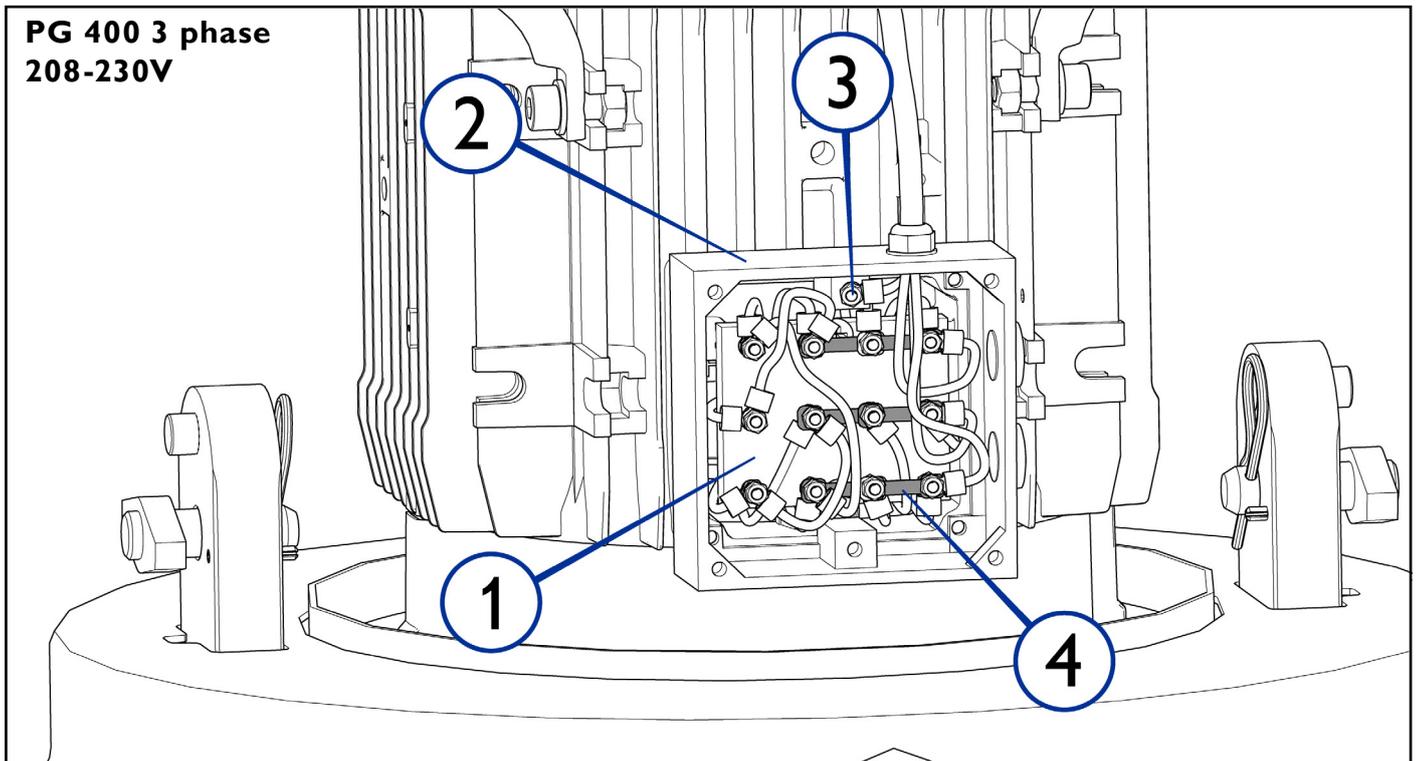


1. Motor connection box
2. Motor starting capacitor
3. Electronic motor starter switch
4. Motor running capacitor
5. Motor connection block
6. Connection bridge



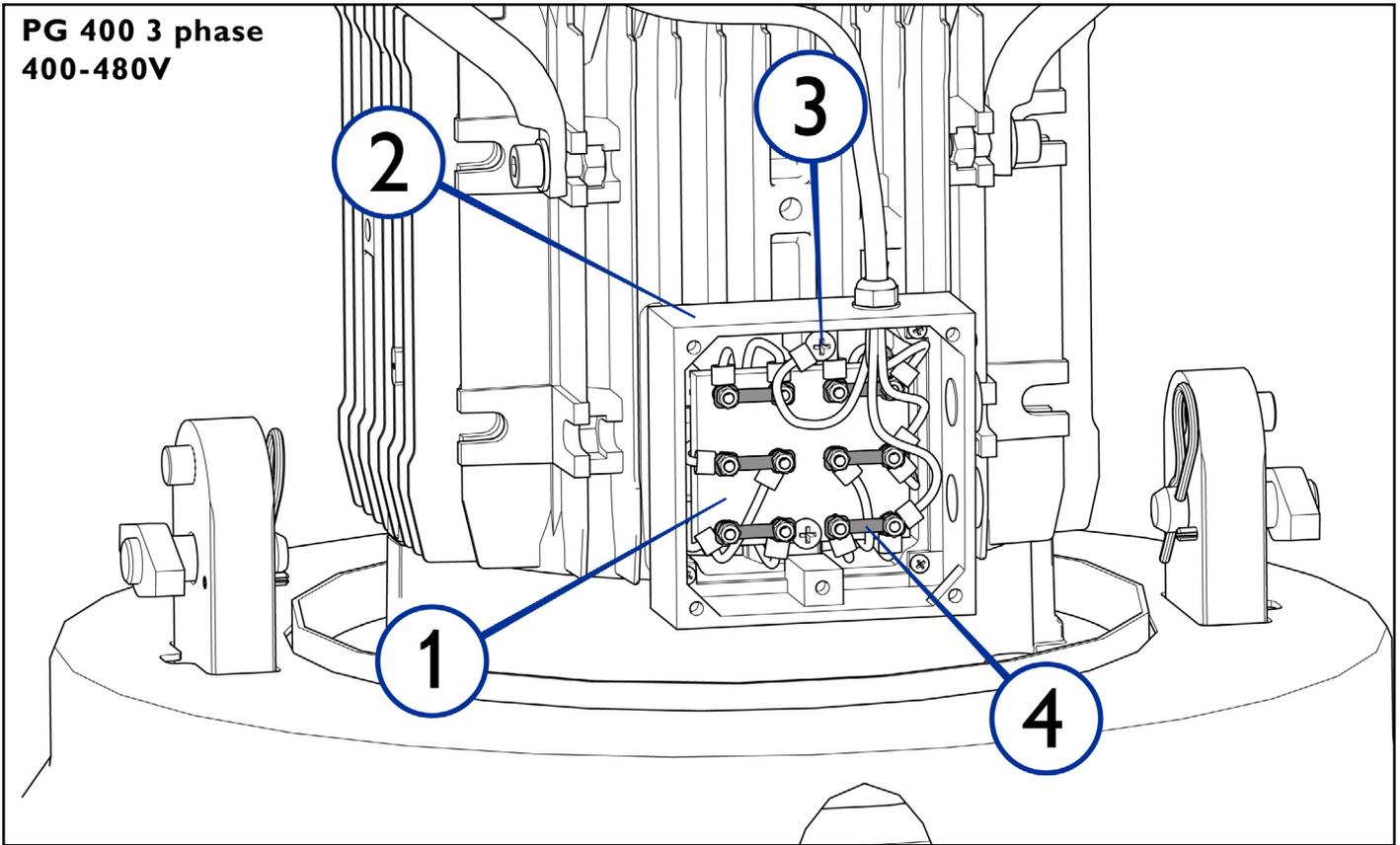
- 1. Motor connection box
- 2. Ground point

- 3. Motor connection block
- 4. Connection bridge



- 1. Motor connection block
- 2. Motor connection box

- 3. Ground point
- 4. Connection bridge



1. Motor connection block

3. Ground point

2. Motor connection box

4. Connection bridge

Electrical Specifications

	Motor Article	Market	Power [kW]	Voltage [V]	Frequency [Hz]	Phases	RPM motor	Overload protection setting [A]	Start capacitor [μ F/V]	Run capacitor [μ F/V]
PG280	585 30 19-01	EU/AUS	2.2	230	50	1	1410	13	150/250	55/450
	585 26 39-01	EU	3	400	50	3	2915	6	NA	NA
	585 30 21-01	UK/JP	1.5	110	50	1	940	20	800/150	140/250
	585 30 19-02	US/BR	2.2	208-230	60	1	1730	13	300/250	55/450
	585 30 21-02	US/JP	1.5	110-115	60	1	1150	19	800/150	140/250
PG400	585 26 40-01	AUS	4	400-480	50	3	1445	9	NA	NA
	585 26 40-01	JP	4	208-230	50/60	3	1445/1730	15	NA	NA
	585 26 40-01	US	4	208-230	60	3	1730	15	NA	NA
	585 26 40-01	US	4	400-480	60	3	1730	9	NA	NA
	585 30 22-02	US/BR	3	208-230	60	1	1140	18	250/250	45/450

7. FAULT TRACING



Information!

These tests help to reveal the current condition of the electrical system, motor and grinding head. The results of these tests will help you to determine what course of action to take.

Function Test

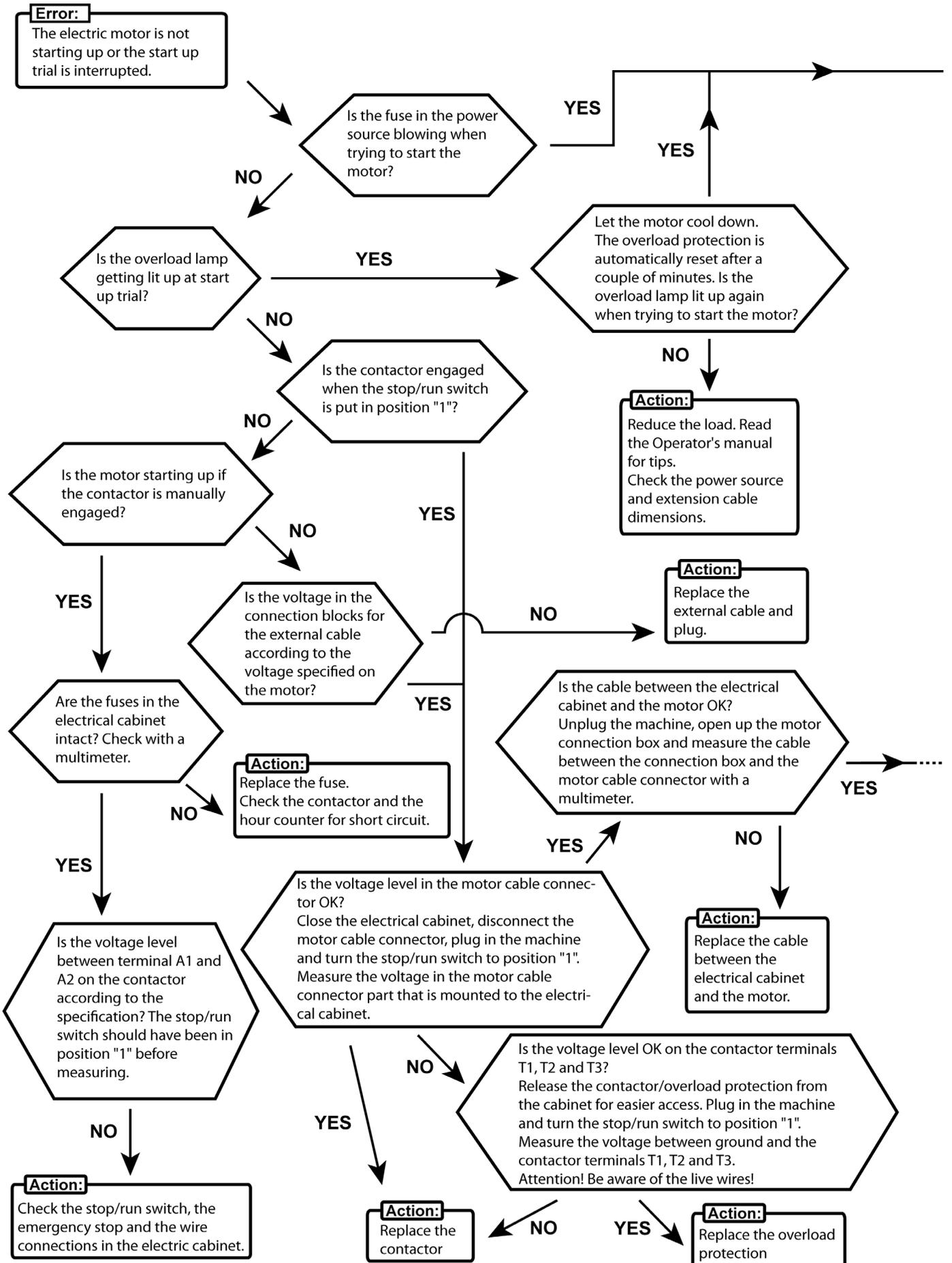
1. Put the PG 280/PG 400 on its back to be able to make a visual inspection of the grinding disc.
2. Rotate the grinding disc by hand to make sure it is not wobbling, can rotate freely and without friction and noise.
3. Look for damages and cracks in the metal and rubber components.
4. Examine the brush list.
5. Put the PG 280/PG 400 back on the ground in operating position and inspect the external cable, plug and connectors.
6. Connect the PG 280/PG 400 to a power outlet with the correct voltage and fusing and make sure the hour counter is showing the running time.
7. Make sure the emergency stop button is not pressed down.
8. Release the pressure between the grinding head and the floor by pressing down the handle but make sure the grinding head is still in contact with the floor. Then start the motor by turning the stop/run switch to position “1”. The motor should then reach its operating speed within approx. 5 seconds.
9. Control the PG 280/PG 400 for unexpected noise and vibrations while the motor is running.
10. Let the motor run for approximately 1 minute to make sure the hour counter is counting the running time.
11. Make sure the motor stops when the emergency stop button is pressed down.
12. Start up the motor again and stop it by turning the stop/run switch to position “0”.

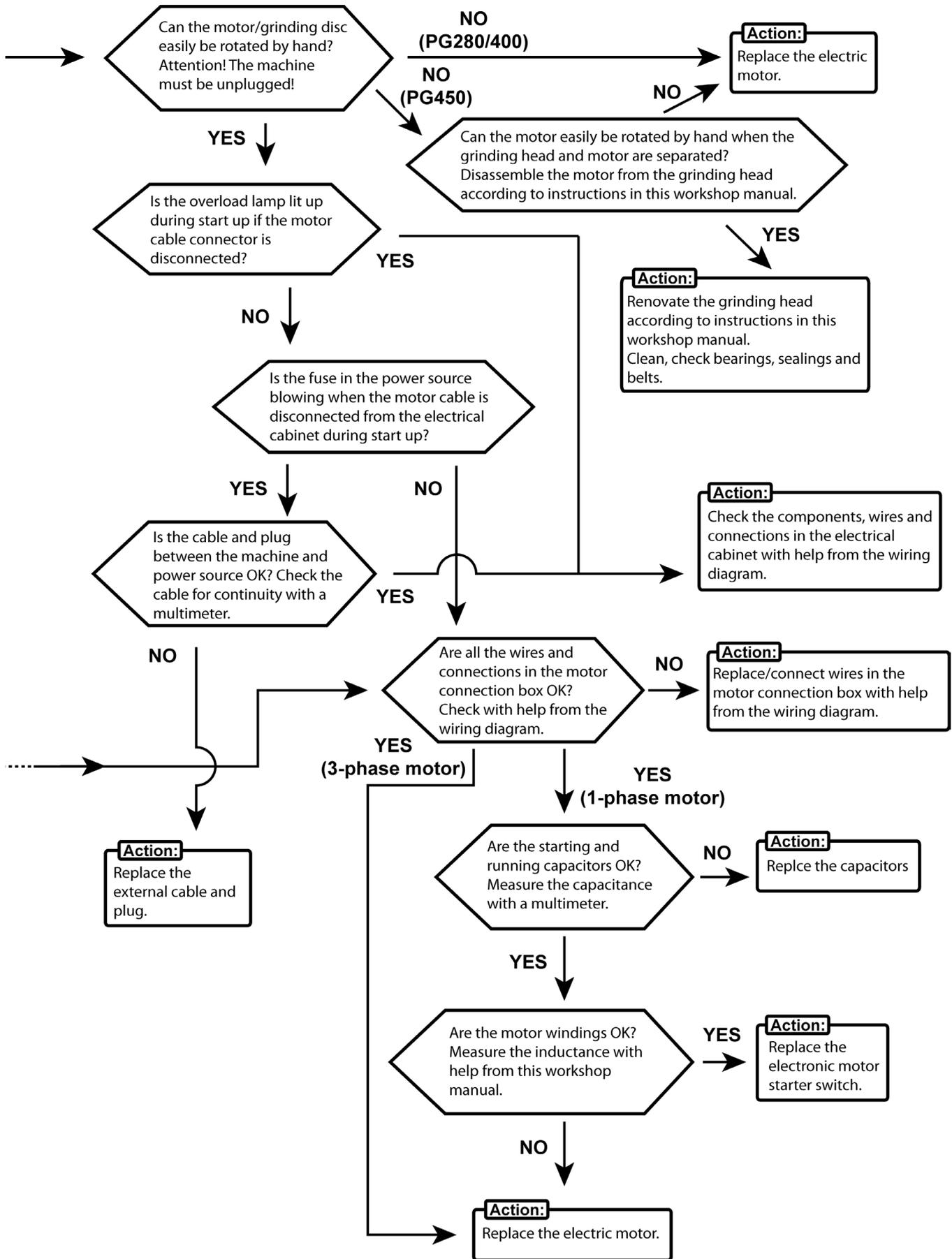
Fault Tracing, Prerequisites

Before starting to use the fault tracing guide on the coming pages, first make sure that:

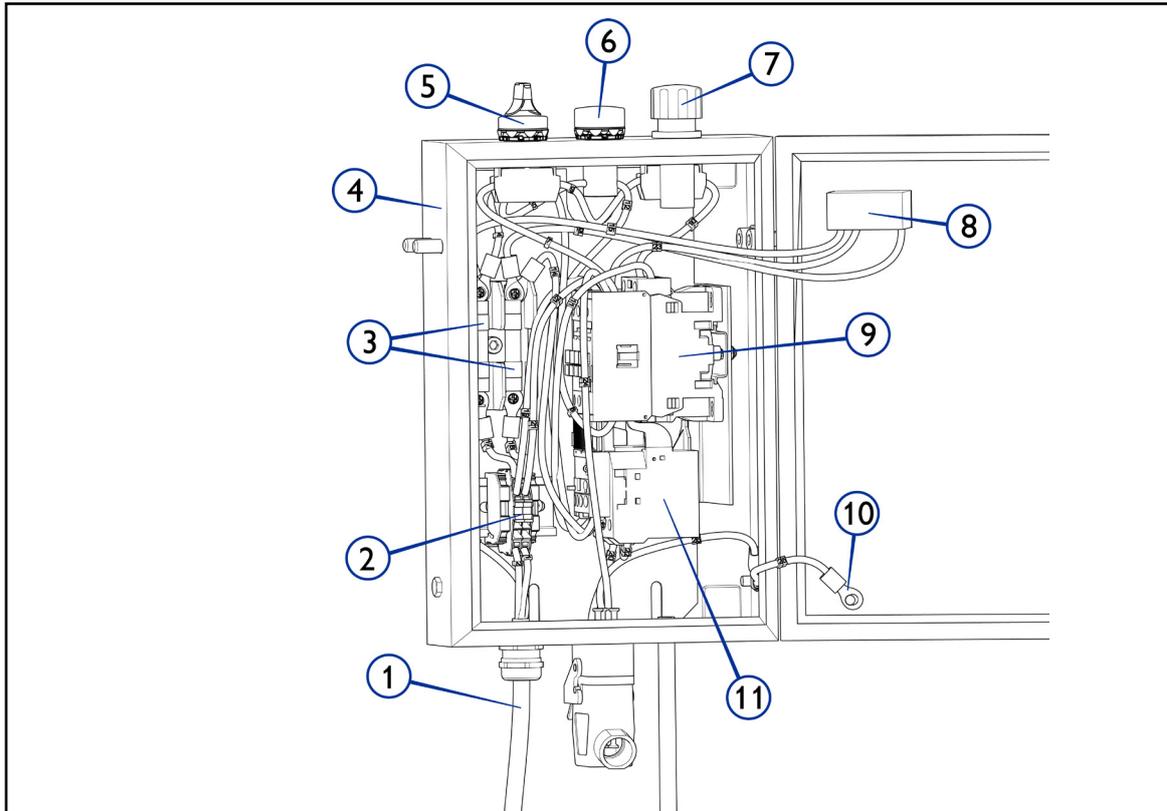
- The emergency stop button is not activated.
- The pressure between the grinding head and the ground is released when trying to start the motor.
- The fuse, voltage and frequency in the power source is according to the product specification.
See the Operator’s Manual.
- The extension cables are in good condition, not too long or having a too small gage.
- The power plug and connectors between the cabinet and the motor are in good condition.
- The overload protection is set to “Auto” and adjusted to the same current as stated on the motor ID tag (also see table [Electrical Specifications \(p. 12\)](#)).
- All wires in the cabinet and in the motor connection box are properly connected.

The motor does not start up, Fault Tracing

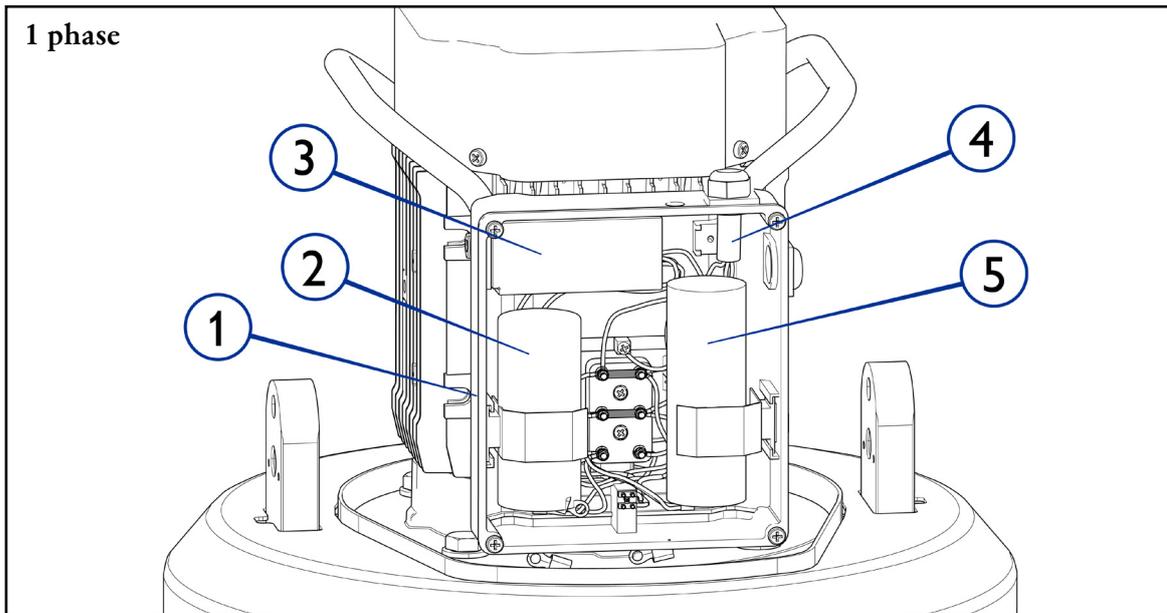




The motor does not start up, Navigation

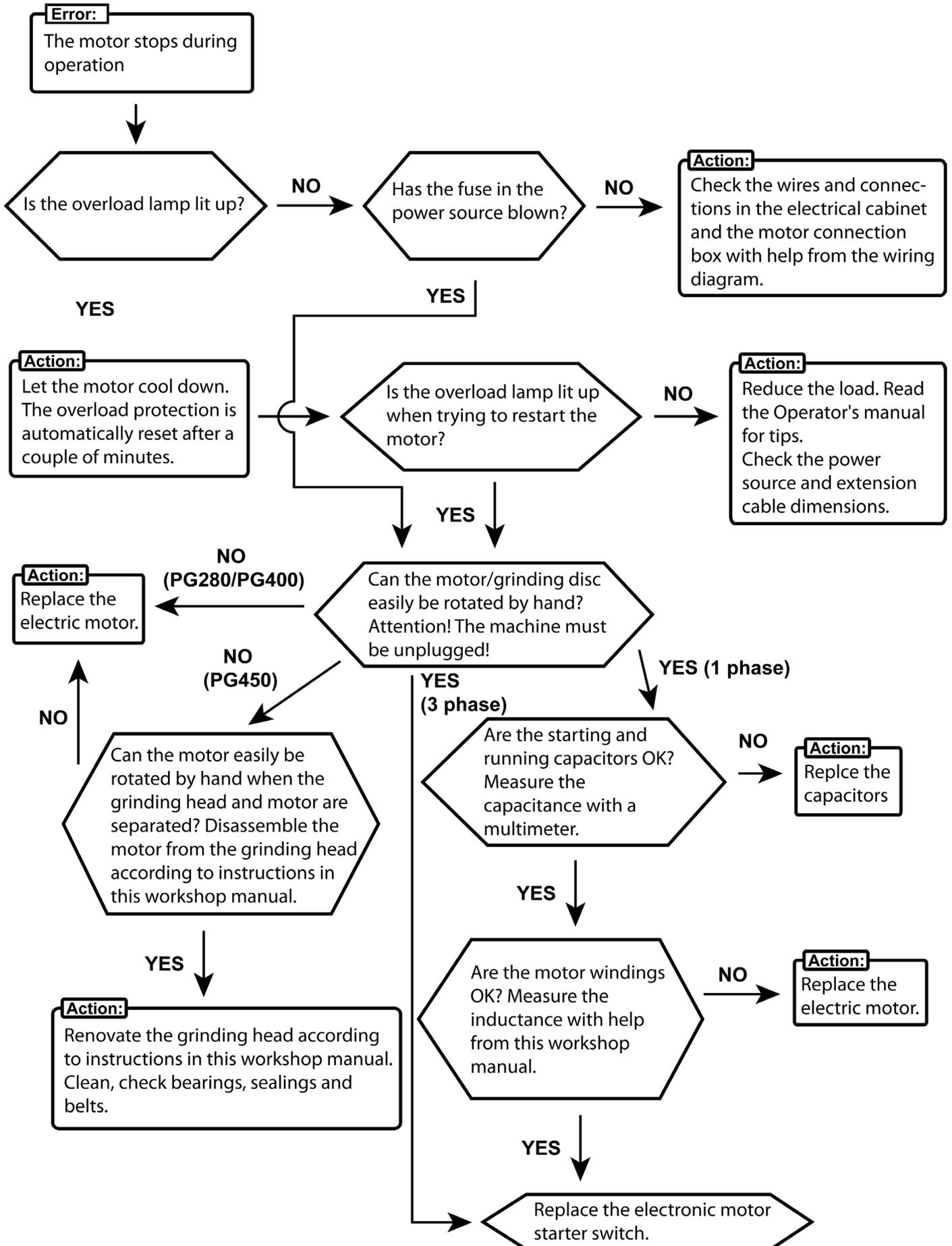


- | | | |
|---|--------------------------|-------------------------|
| 1. External cable | 4. Electrical cabinet | 8. Hour counter |
| 2. Connection blocks for external cable | 5. Stop/run switch | 9. Contactor |
| 3. Cabinet fuses | 6. Overload lamp | 10. Ground connection |
| | 7. Emergency stop button | 11. Overload protection |

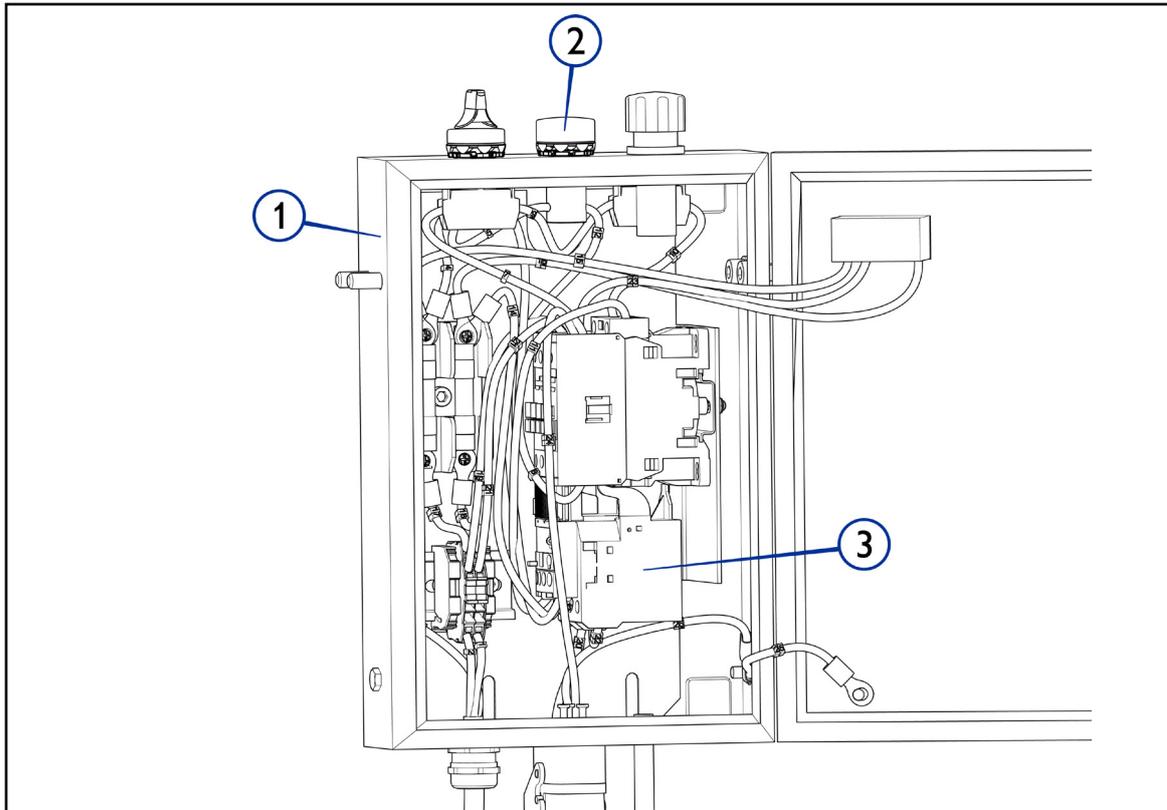


- | | |
|------------------------------------|---|
| 1. Motor connection box | 4. Cable between electrical cabinet and motor |
| 2. Motor starting capacitor | 5. Motor running capacitor |
| 3. Electronic motor starter switch | |

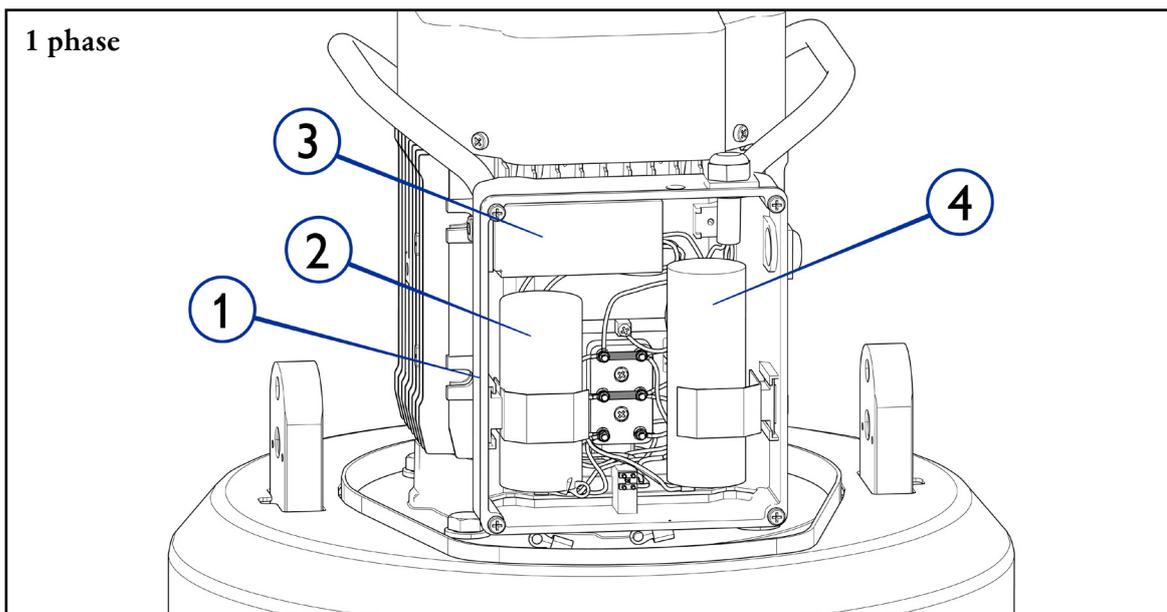
The motor stops during operation, Fault Tracing



The motor stops during operation, Navigation



1. Electrical cabinet
2. Overload lamp
3. Overload protection



1. Motor connection box
2. Motor starting capacitor
3. Electronic motor starter switch
4. Motor running capacitor

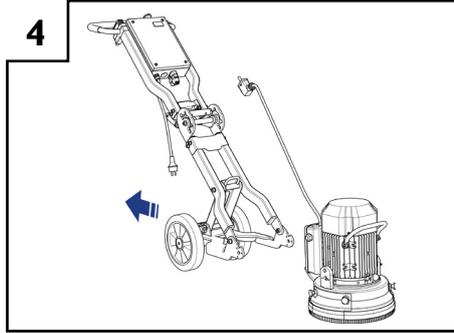
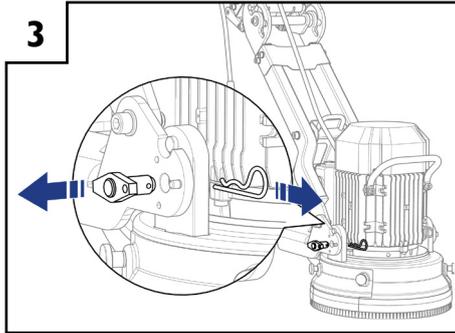
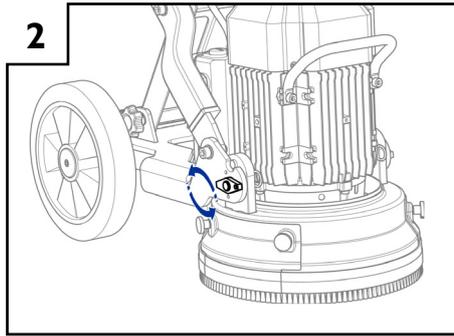
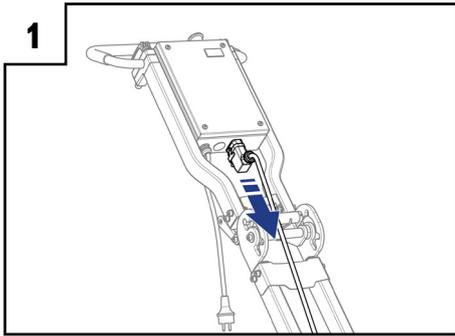
8. REPAIR INSTRUCTIONS

This Workshop Manual is written for personnel with general knowledge about the repair and service of PG 280/PG 400.

Always discuss with the customer before carrying out any service or repairs, what needs to be done and make sure an agreement is reached. The following repair instructions are described in this workshop manual:

Content

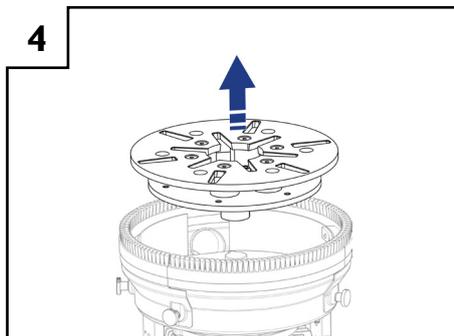
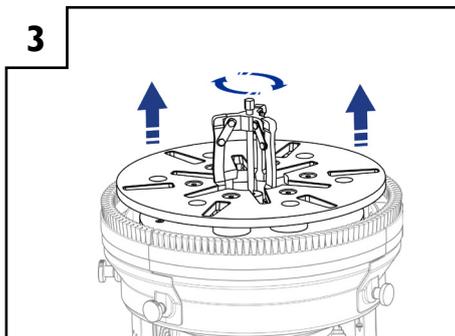
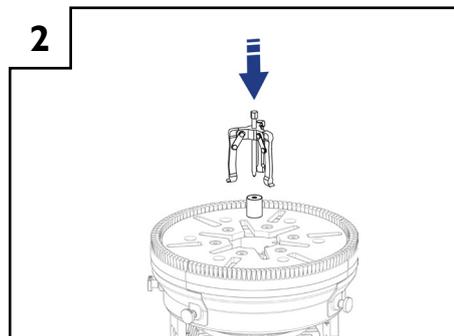
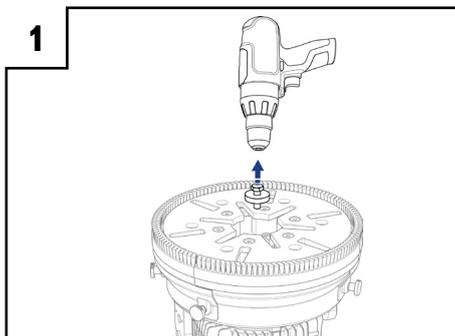
Motor	Page
Remove motor and grinding head from frame	20
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Exploded view of the PG 400 tool holder	22
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Motor winding inductance values for single phase motors	24
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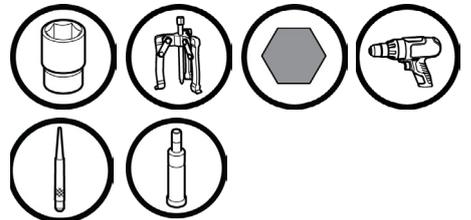
8.1. MOTOR

Remove motor and grinding head from frame

1. Disengage the cable from the cabinet.
2. Loosen the tension on the hair pin cotter by unscrewing the nut a few turns.
3. Remove the hair pin cotter and the clevis pin.
4. Separate the motor/grinding head from the frame

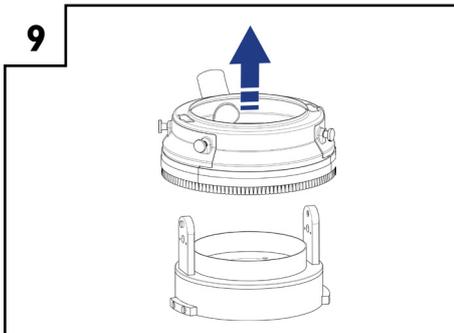
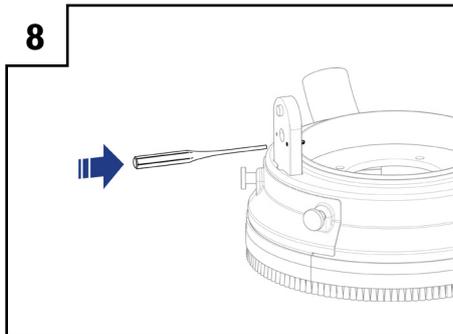
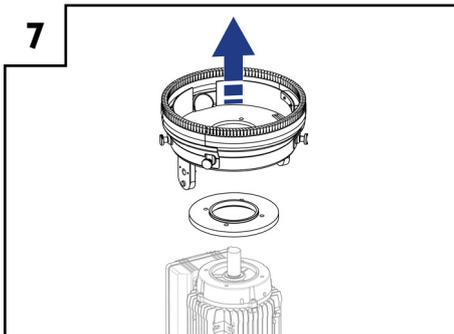
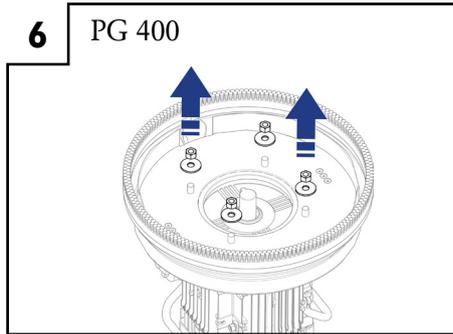
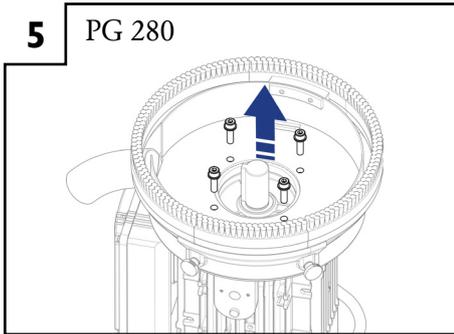


Separate motor and grinding head



First see [Remove motor and grinding head from frame \(p. 20\)](#)

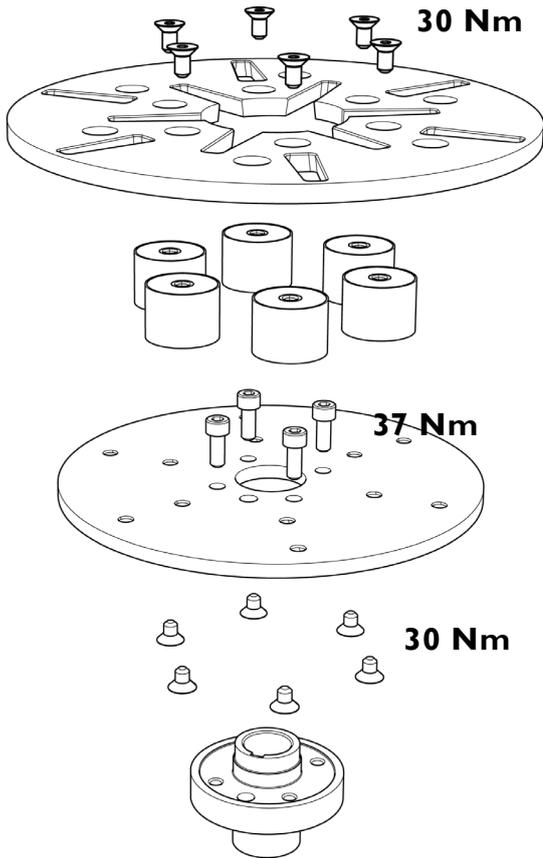
1. Remove the screw holding the tool holder to the motor shaft by using an impact wrench. (Apply Loctite 243 and torque 51 Nm when assembling).
2. Place a inner puller under the tool holder disc and use a punch to press against the motor shaft.
3. Slowly pull off the tool holder without damaging the rubber dampers.
4. Lift off the discs and the hub including the rubber dampers. (Apply grease on motor shaft when assembling.)



5. PG 280: Remove the four screws holding the dust cover and the spacer to the motor. (Apply Loctite 243 and torque 31 Nm when assembling).
 6. PG 400: Remove the four nuts/screws holding the dust cover and the spacer to the motor. (Apply Loctite 243 and torque 87 Nm when assembling).
 7. Lift off the dust cover and the spacer.
 8. Use a pin punch tool to remove the spring pins in the grinding head brackets.
- Lift the dust cover off from the motor bracket.

Reverse steps for reassembly

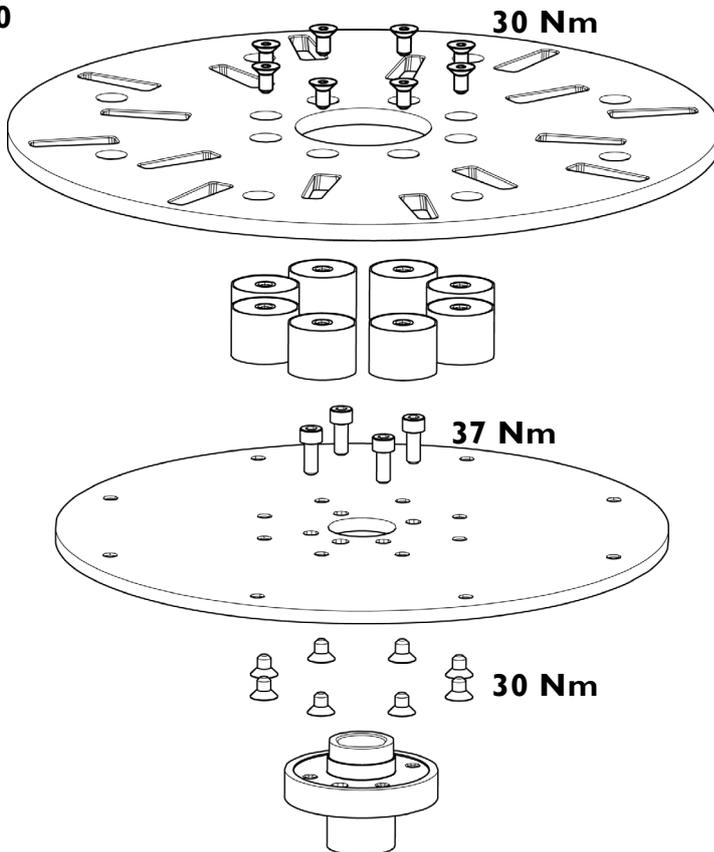
PG280



Exploded view of the PG 280 tool holder

Apply Loctite 243 and the torque specified in the picture when assembling.

PG400



Exploded view of the PG 400 tool holder

Apply Loctite 243 and the torque specified in the picture when assembling.

8.2. MOTOR WINDING CHECK

1 Phase Motor winding inductance measuring

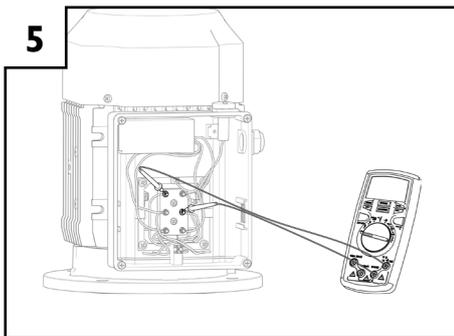
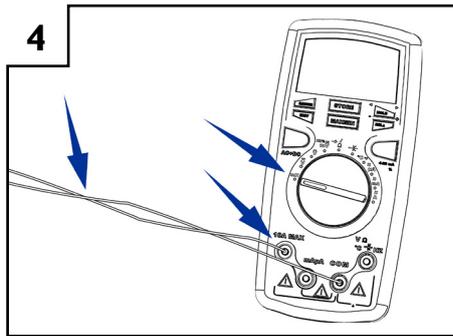
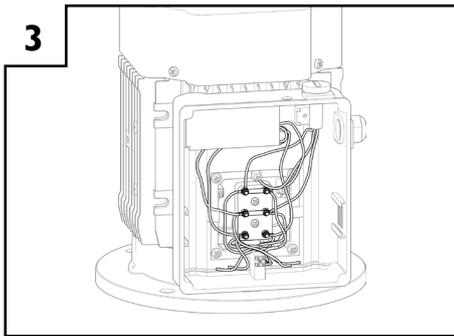
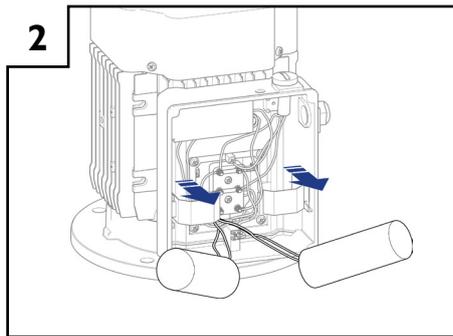
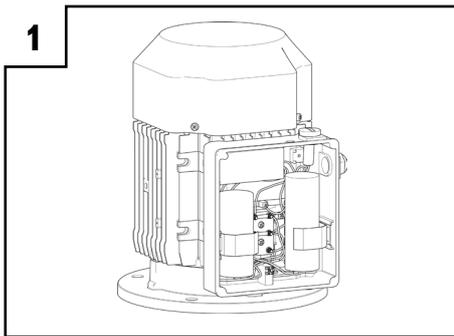
(Only applicable for single phase motors.)



First see [Remove motor and grinding head from frame \(p. 20\)](#)

1. Open the connection box on the motor.
2. Lift out the capacitors from the box to get more space (the capacitors can be left connected).
3. Identify the four wires that goes from the connection block to the motor windings inside the motor. Remove all other wires from the terminals that those wires are connected to.
4. Set the multimeter to measure “mH” and connect the probe wires to the “H” and “COM” channels. Also twist the multimeter probe wires.
5. Connect the two multimeter probe wires to the two wires with identical colors located in step 3. Wait a few seconds and then read the value in the multimeter. Repeat this measurement with the two wires with the different color located in step 3.

Replace the motor if any of the values measured in step 5 is outside the values stated in, [Motor winding inductance values for single phase motors \(p. 24\)](#)

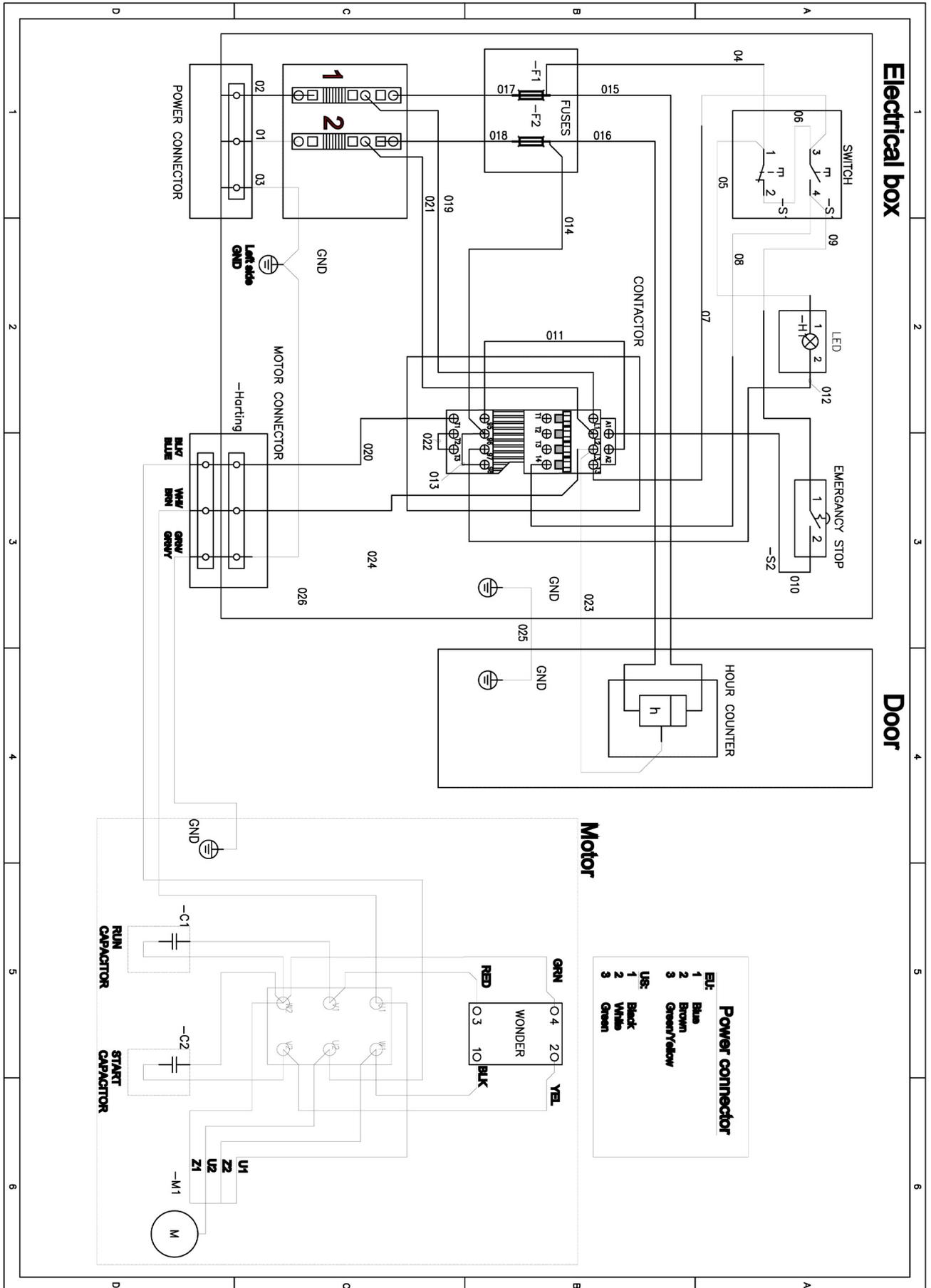


Motor winding inductance values for single phase motors

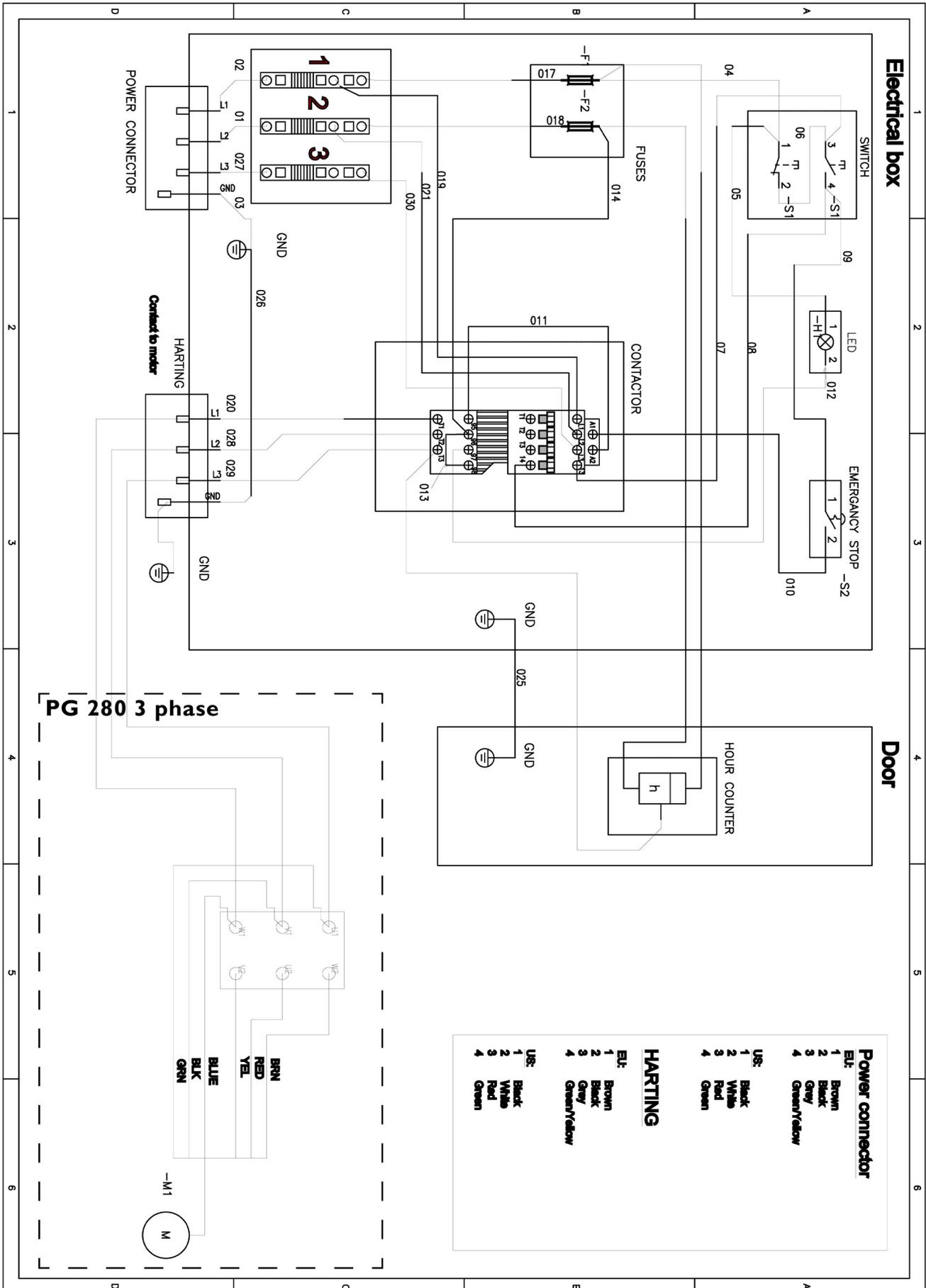
Motor p/n	Model	Market	Voltage [V]	Frequency [Hz]	Power [kW]	Phases	Induction value cable pair 1		Induction value cable pair 2	
							Wire color	Inductance [mH]	Wire color	Value (mH)
5853019-01	PG 280	EU/AUS	230	50	2.2	1	Black-black	8.2 mH ± 1 mH	Yellow-yellow	13.2 mH ± 1.5 mH
5853019-02	PG 280	US/BR	208-230	60	2.2	1	Black-black	7.5 mH ± 1 mH	Yellow-yellow	7.8 mH ± 1 mH
5853021-01	PG 280	UK/JP	110-115	50	1.5	1	Black-black	3.1 mH ± 0.5 mH	Yellow-yellow	6.4 mH ± 1 mH
5853021-02	PG 280	US/JP	110-115	60	1.5	1	Black-black	2.4 mH ± 0.5 mH	Yellow-yellow	4.4 mH ± 1 mH
5853022-01	PG 400	EU/AUS	230	50	3	1	Black-black	6.3 mH ± 1 mH	Yellow-yellow	14.0 mH ± 1.5 mH
5853022-02	PG 400	US/BR	208-230	60	3	1	Black-black	5.7 mH ± 1 mH	Yellow-yellow	11.6 mH ± 1 mH

9. WIRING DIAGRAM

Wiring Diagram 1Phase PG280/PG400



Wiring Diagram 3Phase PG280/PG400





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