JET

IBG-8
IBG-10
IBG-12

BENCH GRINDER

Original:
GB
Operating Instructions

EAC

JPW Tool Group Hong Kong Limited
98 Granville Road, Tsimshatsui East, Kowloon, Hong Kong, PRC
www.jettools.com

Импортёр в РФ: ООО «ИТА Технолоджи»
105082, Москва, Переведеновский пер., д. 17
www.jettools.ru

Made in Taiwan / Сделано на Тайване

M-578010-RU 2022-09

3.0 **Safety warnings**

1. Read and understand the entire owner's manual before attempting assembly or operation.
2. Read and understand the warnings posted on the machine and in this manual. Failure to comply with all of these warnings may cause serious injury.
3. Replace warning labels if they become obscured or removed.
4. This bench grinder is designed and intended for use by properly trained and experienced personnel only. If you are not familiar with the proper and safe operation of a bench grinder, do not use until proper training and knowledge have been obtained.
5. Do not use this bench grinder for other than its intended use. If used for other purposes, JET disclaims any real or implied warranty and holds itself harmless from any injury that may result from that use.
6. Always use safety glasses. Use the grinder's eye shields and spark guards. (*Everyday eyeglasses only have impact resistant lenses; they are NOT safety glasses.)* Also use face or dust mask if cutting operation is dusty.
7. Wear proper apparel. Do not wear loose clothing, 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.
8. Wear protective clothing such as apron or safety shoes, where the grinding activity presents a hazard to the operator.
9. Wear ear protectors (plugs or muffs) if the particular work requires it.
10. **WARNING**: Drilling, sawing, sanding or machining wood products generates wood dust and other substances known to the State of California to cause cancer. Avoid inhaling dust generated from wood products or use a dust mask or other safeguards to avoid inhaling dust generated from wood products.
11. Wood products emit chemicals known to the State of California to cause birth defects or other reproductive harm (California Health and Safety Code Section 25249.6).
12. Do not operate this machine while tired or under the influence of drugs, alcohol or any medication.
13. Make certain the switch is in the OFF position before connecting the machine to the power supply.
14. Make certain the machine is properly grounded.
15. Make all machine adjustments or maintenance with the machine unplugged from the power source.
16. Remove adjusting keys and wrenches. Form a habit of checking to see that keys and adjusting wrenches are removed from the machine before turning it on.
17. Keep safety guards in place at all times when the machine is in use. If removed for maintenance purposes, use extreme caution and replace the guards immediately after completion of maintenance.
18. Check damaged parts. Before further use of the machine, a guard or other part that is damaged should be carefully checked to determine that it will operate properly and perform its intended function. Check for alignment of moving parts, binding of moving parts, breakage of parts, mounting and any other conditions that may affect its operation. A guard or other part that is damaged should be properly repaired or replaced.
19. Provide for adequate space surrounding work area and non-glare, overhead lighting.
20. Keep the floor around the machine clean and free of scrap material, oil and grease.
21. Keep visitors a safe distance from the work area. Keep children away.
22. Make your workshop child proof with padlocks, master switches or by removing starter keys.
23. Give your work undivided attention. Looking around, carrying on a conversation and "horse-play" are careless acts that can result in serious injury.
24. Keep proper footing and balance at all times so that you do not fall into or lean against the grinding wheel or other moving parts. Do not overreach or use excessive force to perform any machine operation.
25. Disconnect grinder before servicing and when changing abrasive wheels.
26. Use recommended accessories. The use of improper accessories may cause risk of injury to persons.
27. Turn off the machine before cleaning. Use a brush to remove chips or debris — do not use your hands.
28. Never leave the grinder running unattended. Turn power off and do not leave machine until wheels come to a complete stop.
29. Remove loose items and unnecessary work pieces from the area before starting the grinder.
30. Don't use in dangerous environment. Don't use power tools in damp or wet location, or expose them to rain. Don't use this grinder in a flammable environment. Keep work area well lighted.
31. Keep work area clean. Cluttered areas and benches invite accidents.

32. Use right tool. Don't force tool or attachment to do a job for which it was not designed.
33. Use proper extension cord. Make sure your extension cord is in good condition. When using an extension cord, be sure to use one heavy enough to carry the current your product will draw. An undersized cord will cause a drop in line voltage resulting in loss of power and overheating. Table 1 *(see sect. 7.2)* shows the correct size to use depending on cord length and nameplate ampere rating. If in doubt, use the next heavier gage. The smaller the gage number, the heavier the cord.
34. Secure work. Use clamps or a vise to hold work when practical. It's safer than using your hand and it frees both hands to operate tool.
35. Maintain tools with care. Keep tools sharp and clean for best and safest performance. Follow instructions for lubricating and changing accessories.
36. Never stand on tool. Serious injury could occur if the tool is tipped or if the cutting tool is unintentionally contacted.
37. Direction of feed. Feed work into a blade or cutter against the direction of rotation of the blade or cutter only.
38. Do not overtighten wheel nut.
39. Frequently clean grinding dust from beneath grinder.
40. Use grinding wheel suitable for speed of grinder.
41. Inspect abrasive wheels for cracks or other forms of damage. Perform a "ring test" to check wheel integrity. Do not use a faulty or damaged wheel.
42. Verify that maximum RPM of abrasive wheels is compatible with speed of grinder. Do not remove the blotter (label) from either side of a grinding wheel.
43. Allow abrasive wheels to reach full RPM before starting the grinding operation.
44. Do not crowd the work so that the wheels slow.
45. Tool rests should be adjusted to approximately 1/16" from wheel surface.
46. Do not grind on the side of a wheel; do all work on the grinding face or edge near the tool rest.
47. Do not grind aluminum or magnesium, as these may pose a fire hazard.
48. Use only the flanges that are furnished with the grinder.

Familiarize yourself with the following safety notices used in this manual:

⚠CAUTION This means that if precautions are not heeded, it may result in minor injury and/or possible machine damage.

⚠WARNING This means that if precautions are not heeded, it may result in serious, or possibly even fatal, injury.

4.0 About this manual

This manual is provided by JET, covering the safe operation and maintenance procedures for a JET IBG Series Industrial Grinder. This manual contains instructions on installation, safety precautions, general operating procedures, maintenance instructions and parts breakdown. Your grinder has been designed and constructed to provide consistent, long-term operation if used in accordance with the instructions set forth in this document.

The operator is encouraged to familiarize himself/herself with ANSI B7.1 – *Safety Requirements for Use, Care and Protection of Abrasive Wheels.*

If there are questions or comments, please contact your local supplier or JET. JET can also be reached at our web site: www.jettools.com.

Retain this manual for future reference. If the grinder transfers ownership, the manual should accompany it.

⚠WARNING Read and understand the entire contents of this manual before attempting assembly or operation! Failure to comply may cause serious injury!

5.0 **Specifications**

Model	**IBG-8**	**IBG-10**	**IBG-12**
Stock Number	578008M	578010-RU/3RU	578012-3RU

Motor and electricals:

Motor type	induction		
Horsepower (true output)	0.75kW	1.1kW	1.5kW
Phase	single	single/three	three
Voltage	230V	230V/400V	400V
Cycle	50Hz	50Hz	50Hz
Listed FLA (full load amps)	6 A	7.5A/3.5 A	3.8 A
On/off switch	Magnetic	Magnetic	Magnetic
Motor speed	2800 RPM	1480 RPM	1480 RPM
Start capacitor	200MFD 125VAC	400MFD 125VAC / NA	
Run capacitor	35μF 350V	45μF 350V / NA	
Power cable size	3G x 1.0mm²	3G/4G x 1.0mm²	4G x 1.0mm²
Power cable length	182cm	182cm	182cm
Power plug installed	250V	250V/400V	400V
Recommended circuit size[1]	15A	15A	15A
Sound emission (without load) [2]	75Db at 1M.	75Db at 1M	80Db at 1M

Arbor and grinding wheels:

Arbor diameter	16mm	25.4mm w/ 32mm bushing	32mm
Wheel size (dia. X width)	200 x 25mm	250 x 25mm	305 x 50mm
Wheel bore	16mm	32mm	32mm
Wheel material	Aluminum Oxide	Aluminum Oxide	NA
Wheel grits	36 and 60	36 and 60	NA
Wheel flange diameter	85mm	105mm	105mm
Wheel speed	2800 RPM	1480 RPM	1480 RPM
Arbor nut max. tightening torque	270kgf-cm	270kgf-cm	270kgf-cm
Toolrest distance to wheel	adjustable	adjustable	adjustable

Materials:

Arbor	steel	steel	steel
Base	cast iron	cast iron	cast iron
Body	cast iron	cast iron	cast iron
Inner wheel guard	cast iron	cast iron	cast iron
Outer wheel guard	aluminum	aluminum	aluminum
Wheel flanges	cast iron	cast iron	cast iron
Tool rests	cast iron	cast iron	cast iron
Eye shields	clear polycarbonate	clear polycarbonate	clear acrylic
Spark guards	steel	steel	steel
Knobs	polymide	polymide	polymide
Connect hose	ABS	ABS	ABS
T-fitting	ABS	ABS	ABS

Dimensions:

Mounting hole centers	215mm	222mm	222mm
Mounting hole diameters	11mm	11mm	11mm
Footprint (width x depth)	241.6x206.6mm	255.5x245.5mm	255.5x245.5mm
Dimensions, assembled (LxWxH):			
	534 x 350 x 353mm	630 x 424 x 404mm	700 x 460 x 460mm
Shipping dimensions (LxWxH):			
	575 x 340 x 370mm	660 x 430 x 425mm	745 x 540 x 540mm
Packaging	carton	carton	wood crate

[1] subject to local/national electrical codes.

[2] The specified values are emission levels and are not necessarily to be seen as safe operating levels. As workplace conditions vary, this information is intended to allow the user to make a better estimation of the hazards and risks involved only.

Dust/swarf collection:

Dust port outside diameter	63.5mm	63.5mm	63.5mm
Recommended min. extraction volume	350 CFM	350 CFM	350 CFM

Weights:

Net	29.20 kg	51.50 kg	64 kg
Shipping	31.73 kg	56.60 kg	74 kg

The specifications in this manual were current at time of publication, but because of our policy of continuous improvement, JET reserves the right to change specifications at any time and without prior notice, without incurring obligations.

5.1 Mounting hole dimensions

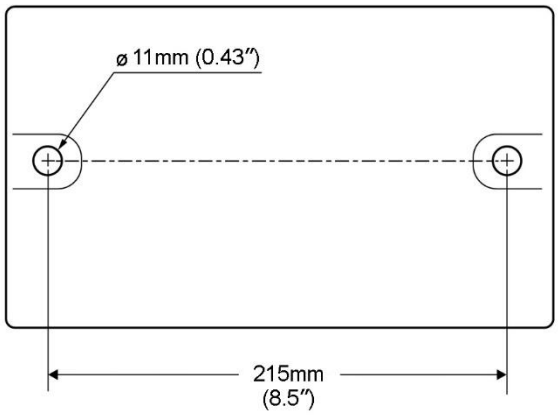


*Figure 1: **IBG-8** hole centers*

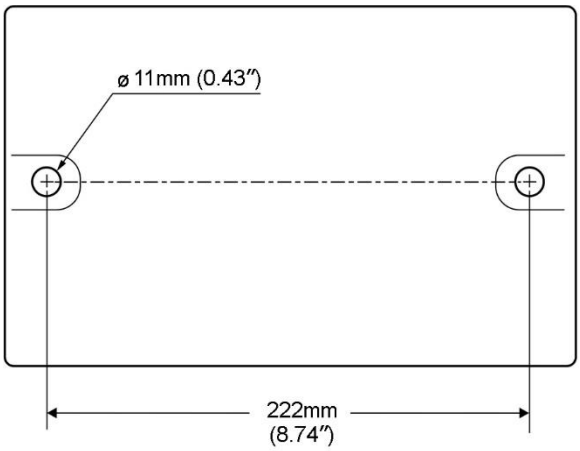


*Figure 2: **IBG-10** hole centers*

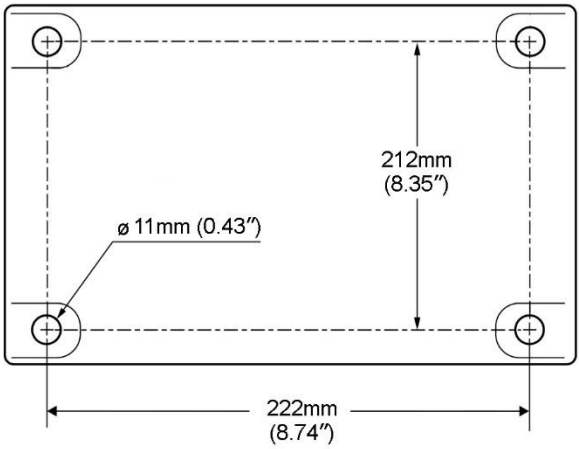


*Figure 3: **IBG-12** hole centers*

6.0 Setup and assembly

6.1 Unpacking

Separate all parts from the packing material. Check each part against *sect. 6.2, Carton contents,* and make certain that all items are accounted for before discarding any packing material. (Check grinder first to verify if any parts have been pre-mounted.)

6.2 Carton contents

Refer to Figure 4.

1 ea Grinder *(not shown)*
1 ea Dust hose with T-connector *(not shown)*
1 ea Spark guard – Left (A)
2 ea Lock knob (B)
1 ea Spark guard – Right €
1 ea Eye shield bracket – Left (D)
2 ea Flat washer, 1/4" €
1 ea Eye shield bracket – Right (F)
2 ea Eye shield plate (G)
4 ea Truss head screw, 3/16 x 1/2" (H)
4 ea Hex cap screw, 3/8 x 3/4" (J)
4 ea Hex cap screw, 3/8 x 1/2" (K)
8 ea Flat washer 3/8" (L)
1 ea Tool rest – Left (M)
1 ea Tool rest – Right (N)
2 ea Eye shield (O)
1 ea Wheel dresser (P)

6.3 Tools required for assembly

Cross-point (Phillips) screwdriver
14mm (or adjustable) wrench

The IBG series bench grinder requires only the assembly of the eye shields and tool rests. Additional tools may be needed for fastening the grinder to a workbench or stand. For your safety, do not plug the grinder into a power source until all assembly and adjustments are complete.

⚠WARNING Be sure that the bench grinder is unplugged and the power switch is in the OFF position. Do not plug in the grinder to power until it is inspected for shipping damage, fully assembled, and moved to its permanent location. Failure to comply may cause serious injury.

⚠WARNING Do not operate this grinder without all guards and shields in place and in working order. Failure to comply may cause serious injury.

⚠WARNING Chipped or cracked wheels can break up and cause serious damage to the grinder and/or severe injury to the operator. Regularly inspect wheels for damage.

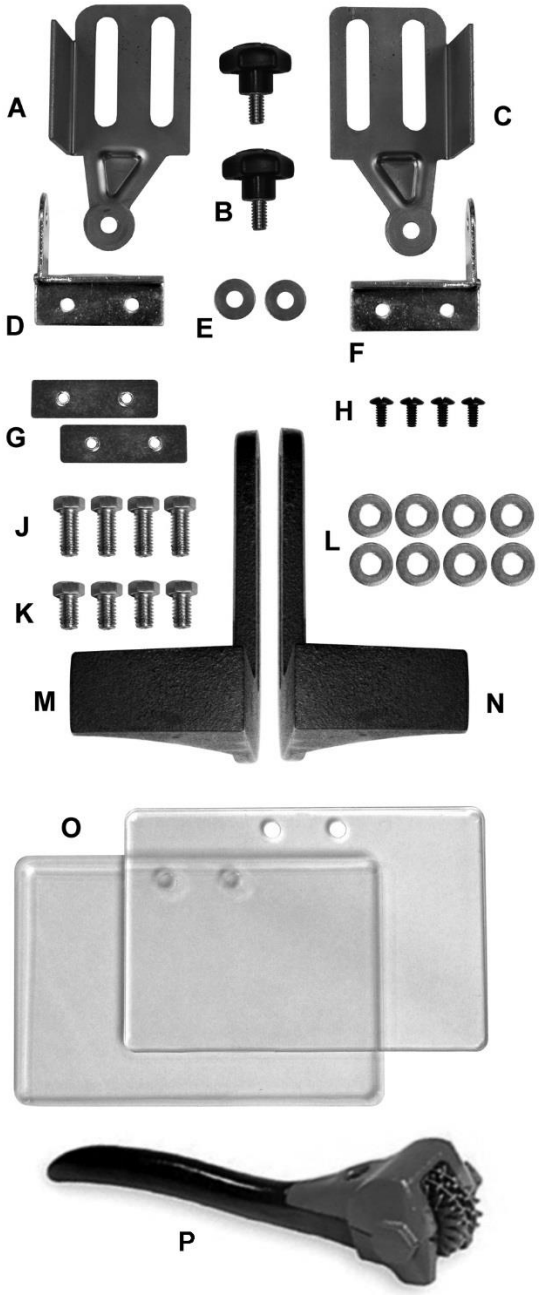


Figure 4: Carton contents

6.4 Securing the grinder

To prevent the grinder from moving during operation, it should be securely mounted to a work surface or grinder stand. Fasteners for mounting are not included with the grinder.

1. Align the mounting holes on the grinder with predrilled holes in a bench or grinder stand. Figures 1,2,3 show hole centers for mounting.
2. Insert M8 (or 5/16") bolts through the holes and tighten, using washers and nuts.

An optional pedestal stand (not included) is available from JET for your grinder. See *sect. 12.0.*

6.5 Assembling eye shield brackets to spark guards

Refer to Figure 5.

Note: Spark guards (A) and eye shield brackets (D) are marked **L** for left side assembly and **R** for right side assembly.

1. Assemble the left spark guard and eye shield bracket using Figure 1 as a guide. Make sure spark guard and bracket are both marked **L**.
2. Install the right assembly in the same manner.

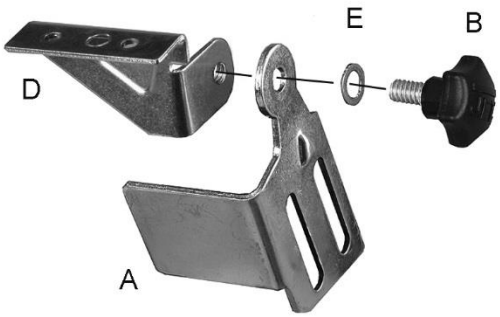


Figure 5: brackets to spark guards

6.6 Installing spark guards/brackets

Refer to Figure 6.

1. Install the left spark guard and mounting bracket assembly to the left wheel housing with two 3/8 x 1/2" hex cap screws (K) and two 3/8" flat washers (L).
2. Install the right spark guard and mounting bracket in the same manner.
3. The spark guards (A_1) should be adjusted to within 1/16" of the grinding wheel surface or other accessory being used. As the wheel wears down, the spark guards must be re-adjusted to maintain this 1/16" distance.

6.7 Eye shields

Refer to Figure 6.

The eye shields (O) are identical and will fit on either side of the grinder.

1. Insert two 3/16" x 1/2" truss head screws (H) through the bracket, eye shield (O), and plate (G) which contains threaded mounting holes.
2. Tighten the screws (H).

6.8 Tool rests

Refer to Figure 6.

Note: There is a *left* and a *right* tool rest. Refer to Figure 6 for proper orientation.

4. Install the left tool rest (M) by inserting two 3/8" x 3/4" hex cap screws (J) through two 3/8" flat washers (L), through the tool rest (M), into the wheel housing.
3. Install the right tool rest in the same manner.
4. The tool rests should be adjusted to within 1/16" of the grinding wheel or other accessories being used. As the wheel wears down, the tool rest must be readjusted to maintain a 1/16" clearance.

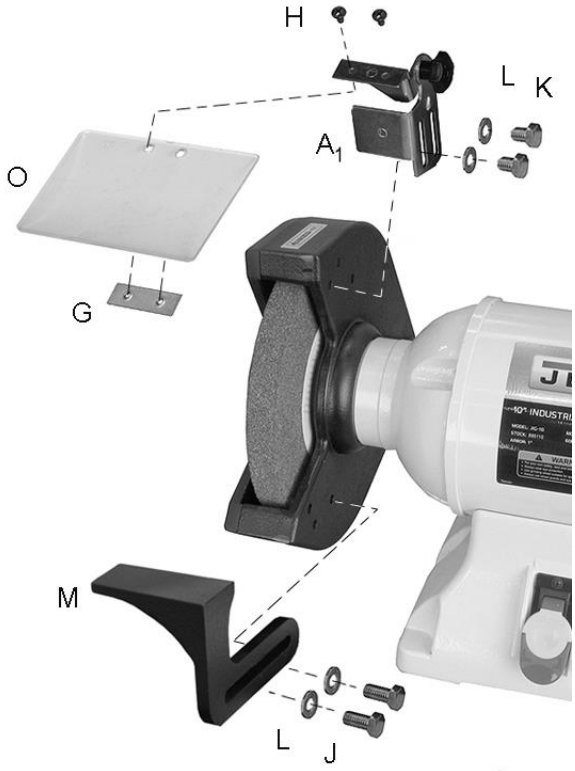


Figure 6: guards and tool rests

6.9 Dust hose

Refer to Figure 7.

Slide the hose ends onto the T-connector, and the opposite hose ends onto the flanges of the wheel guards. The T-connector has a 2-1/2" outside diameter port for attaching a dust collection system.

Figure 7: dust hose

7.0 **Electrical connections**

7.1 **Grounding instructions**

1. All Grounded, Cord-connected Tools:

In the event of a malfunction or breakdown, grounding provides a path of least resistance for electric current to reduce the risk of electric shock. This tool is equipped with an electric cord having an equipment-grounding conductor and a grounding plug. The plug must be plugged into a matching outlet that is properly installed and grounded in accordance with all local codes and ordinances.

Do not modify the plug provided – if it will not fit the outlet, have the proper outlet installed by a qualified electrician.

Improper connection of the equipment-grounding conductor can result in a risk of electric shock. The conductor with insulation having an outer surface that is green with or without yellow stripes is the equipment-grounding conductor. If repair or replacement of the electric cord or plug is necessary, do not connect the equipment-grounding conductor to a live terminal.

⚠WARNING **Check with a qualified electrician or service personnel if the grounding instructions are not completely understood, or if in doubt as to whether the tool is properly grounded. Failure to comply may cause serious or fatal injury.**

Use only 3-wire extension cords that have 3-prong grounding plugs and 3-pole receptacles that accept the tool's plug.

Repair or replace damaged or worn cord immediately.

Make sure the tool is connected to an outlet having the same configuration as the plug. No adapter is available or should be used with this tool. If the tool must be reconnected for use on a different type of electric circuit, the reconnection should be made by qualified service personnel; and after reconnection, the tool should comply with all local codes and ordinances.

8.0 **Operation**

A bench grinder is designed for hand-grinding operations such as sharpening chisels, screwdrivers, drill bits, removing excess metal, and smoothing metal surfaces.

A *Medium Grain Abrasive Grinding Wheel* is suitable for rough grinding where a considerable amount of metal must be removed or when obtaining a smooth finish is not important.

A *Fine Grain Abrasive Grinding Wheel* should be used for sharpening tools or grinding to close size tolerances because it removes metal more gradually for precision grinding and achieves a smoother finish.

⚠WARNING **Always use approved safety glasses or face shield while operating grinder. Failure to comply may cause serious injury.**

8.1 **On/Off Switch**

IBG-12 / IBG-10: Push green button to start grinder. Push red button to stop.

⚠CAUTION **On all models, when the stop button is pushed, the wheels may take a few moments to completely stop.**

Note: After extended operation, the grinder housing may be warm to the touch.

8.2 **Precautions**

1. Before starting the grinder, turn the wheels by hand to verify that they are clear of obstructions and they turn freely. The tool rests and spark guards should not touch the wheel.
2. Keep tool rests and spark guards to within 2mm of the grinding wheel.
3. Turn on the grinder and allow it to reach full running speed before starting to grind.
4. Adjust the eye shields as needed.
5. Keep a steady, moderate pressure on the workpiece and keep it moving at an even pace for smooth grinding. Pressing too hard overheats the motor and prematurely wears the grinding wheels. Note the original bevel angle on the item to be sharpened and try to maintain the same shape. The grinding wheel should rotate into the object being sharpened.
6. If grinding a narrow workpiece, slide it laterally across the width of the wheel. Using the full width of the wheel will help prevent a groove from forming at one place on the wheel.
7. Keep the water pot filled with water and dip your work into it regularly to prevent overheating. Overheating can weaken metals. Do not apply water directly to the grinding wheels.
8. Do not use the side of the grinding wheel; this puts dangerous stress on the wheel.
9. When the wheel becomes loaded or dull, use an approved grinding wheel dresser and dress the wheel face.

9.0 **Adjustments**

9.1 **Eye Shield Tilt Adjustment**

1. Loosen lock knob (A_1, Figure 10).
2. Adjust eye shield (A_2) to the desired tilt angle.

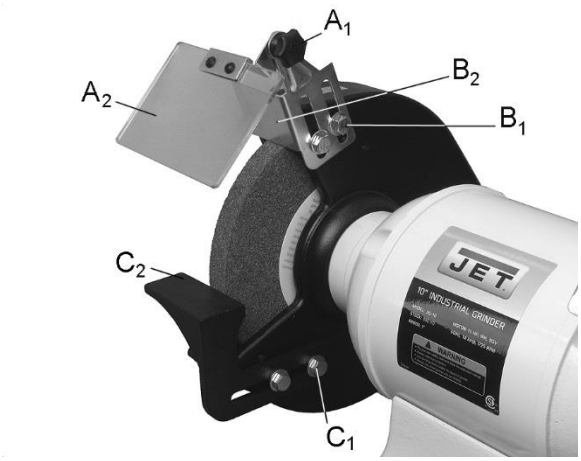


Figure 10: eye shield adjustment

25.4 **Spark Guard**

As the wheel wears down, the spark guards must be re-adjusted to maintain a 1/16" distance.

Refer to Figure 10.

1. Loosen two hex cap screws (B_1) with a 14mm wrench.
2. Slide the spark guard (B_2) to 1/16" distance from the grinding wheel surface.
3. Tighten screws (B_1).

25.4 **Tool Rest**

As the wheel wears down, the tool rests must be re-adjusted to maintain a 2mm distance.

Refer to Figure 10.

1. Loosen two hex cap screws (C_1) with a 14mm wrench.
2. Slide the tool rest (C_2) to a distance of 2mm from the grinding wheel.
3. Tighten screws (C_1).

10.0 **Maintenance**

For safety, turn the switch to OFF and remove plug from the power source outlet before adjusting and maintaining the bench grinder. If the power cord is worn, cut or damaged in any way, have it replaced immediately.

10.1 **Ring Test**

Before replacing a grinding wheel, perform this simple test on the replacement wheel:

1. Loop a piece of string through the grinding wheel hole and suspend the wheel by holding up the string.
2. Tap the wheel with a piece of scrap wood or a wooden dowel.
3. A good wheel will "ring"; a defective wheel will "thud". Discard any wheel that does not "ring".

An internal defect may not be apparent by visual inspection alone. The ring test may identify an internal crack or void.

10.2 **Care of Grinding Wheels**

In normal use, grinding wheels may become cracked, grooved, rounded at the edges, chipped, out of true or loaded with foreign material.

Cracked wheels should be replaced IMMEDIATELY. The other conditions can be remedied with a dressing tool. New wheels sometimes require dressing to make them round. See *sect. 10.5.*

10.3 **Changing Wheels**

The JET Series bench grinders come equipped with general purpose grinding wheels. Wheels vary according to types of abrasive, hardness, grit size, and structure. Contact your local distributor for the proper grinding wheel or wire wheel brush for your application.

If you replace a wheel, obtain one with a safe rated speed at least as high as the *NO LOAD RPM* marked on the grinder's nameplate. Refer to Table 2 to determine correct dimensions for the replacement wheel.

Model	Wheel Diameter	Maximum Width	Center Hole
IBG-8	200 mm	25 mm	16 mm
IBG-10	250 mm	25 mm	32 mm
IBG-12	305 mm	50 mm	32 mm

Table 2

Your bench grinder will accept most polishing and buffing wheels available at dealers and hardware stores.

⚠WARNING The use of any other accessory is not recommended and may result in serious injury!

To change a wheel *(see Figure 11)*:

1. Disconnect grinder from power source.
2. Loosen spark guard (B) and tool rest (C) and move them away from the wheel.

3. Remove wheel guard using a cross-point or flathead screwdriver.
4. Stabilize wheel by holding opposite wheel firmly, or placing a wood wedge between wheel and tool rest.

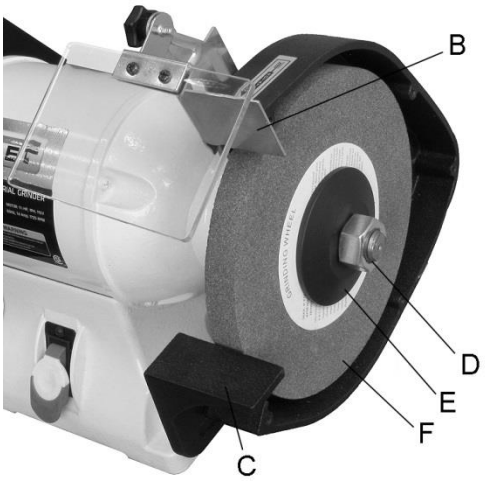


Figure 11: wheel replacement

5. Unscrew arbor nut (D) with a wrench.

   Note: Turn the nut on the right-hand wheel *counterclockwise* to loosen. Turn the nut on the left-hand wheel *clockwise* to loosen.
6. Remove outer flange (E), wheel (F), and inner flange.
7. Clean flanges. Check the flanges to make sure they are flat. Wheel flanges that are not flat will cause the wheel to wobble.
8. Inspect the new grinding wheel and perform a "ring test". Do not install a damaged wheel.
9. Install inner flange, wheel (F), outer flange (E) and nut (D) on the shaft. Tighten nut.

   ⚠CAUTION Do not over tighten nut; this may cause the wheel to crack.
10. *Note for IBG-12 model only:* The inner flanges have a larger (1-1/4") diameter hole than the outer flanges. Install them in their proper places.
11. Reinstall guard cover. Adjust spark guards and tool rests to 1/16" clearance from wheel.

10.4 Wheel balancing

With the grinder **unplugged from the power source**, and arbor nuts snugged down, rotate wheels by hand and observe their motion.

A grinding wheel has proper balance when:

1. The wheel's outside face spins true and round; that is, its circumference rotates concentric to the arbor.
2. There is no side-to-side wobble.

The operator who takes time to patiently perform needed adjustments will be rewarded by wheels running true, and accurate grinding of work pieces.

10.4.1 Adjusting concentricity

If the outside face is not rotating concentric to arbor, try shifting the wheel closer to arbor centerline before tightening the nut.

Another method of achieving concentricity is the use of a wheel dresser. "Dressing" is the removal of the current layer of abrasive to expose a fresh surface. A wheel dresser is also used to "true" a wheel; that is, to make the grinding surface parallel to the tool rest, so the entire wheel face presents an even surface to the work piece. Proper use of a wheel dresser will eliminate high spots and result in concentric rotation about the arbor, as well as minimize vibration. See *sect. 10.5*.

10.4.2 Correcting side-to-side wobble

The IBG series grinders have large, machined flanges, making wobble unlikely if a good quality grinding wheel is used. Should a wheel exhibit need for adjustment:

1. Loosen nut and rotate the outer flange a little. Snug the nut and spin the wheel by hand to check.
2. If wobble still exists, continue repeating step 1, rotating outer flange incrementally in the same direction. See Figure 12. Make sure to keep the wheel in the same position each time.
3. If complete rotation of outer flange has proved ineffective, remove nut, outer flange, and wheel (keep wheel in same orientation by placing a pencil mark on it somewhere for reference). Then rotate inner flange about 90° and repeat the above steps for the outer flange.
4. Continue this combination of flange movements until the wobble is eliminated.

If required, a shim made of paper or card stock may be placed between flange and wheel side.

Figure 12: wheel balancing

NOTE: Very slight wobble may still exist at spin-up and spin-down, but will not affect normal speed operation.

10.5 **Dressing the wheels**

Below is a general procedure for dressing a grinding wheel. Always consult the wheel dresser manufacturer's instructions for specific information pertaining to the tool.

⚠CAUTION Use safety glasses or face shield during dressing operations.

1. Back off the tool rest enough to allow the dresser to hook over its inside edge (Figure 13). Tighten tool rest in position.
2. Turn on grinder and allow it to reach operating speed.
3. Set the wheel dresser on the rest and bring it into contact with the wheel by raising its handle. Hold the dresser firmly.

   Note: If sparks appear, increase the pressure of the dresser discs against the wheel.
4. Move the dresser evenly left and right across the wheel face until the wheel looks clean and is square to the tool rest.
5. Remove the dresser, and adjust the tool rest to 1/16" away from the newly dressed wheel.

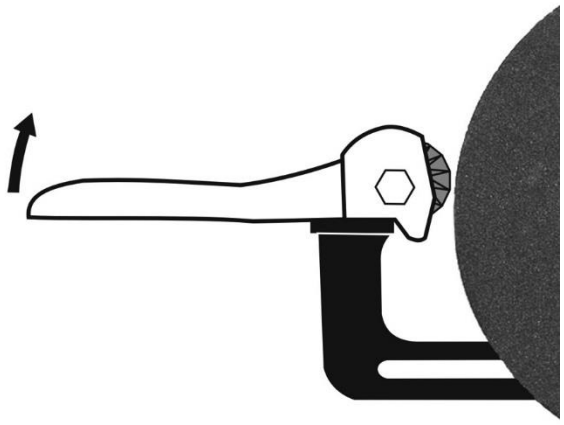


Figure 13: wheel dressing

10.6 **Wire wheel brushes**

Wire brushing provides a fast way to remove rust scale, burrs, and paint from metal. Use coarse wire brushes for hard cleaning jobs. Use fine wire brushes for polishing and finish work. When the brush tips become dull, reverse the brush on the grinder.

10.7 **Cleaning**

⚠CAUTION Metal shavings may still be hot from recent grinding operations. Make sure shavings and debris are cold before cleaning the grinder.

Brush all shavings from the motor housing, tool rests, and wheel guards. Check grinding wheels for cracks and chips. Replace if damaged.

⚠CAUTION Avoid use of the following cleaning chemicals or solvents: gasoline, carbon tetrachloride, chlorinated solvents, ammonia and household detergents containing ammonia.

10.8 **Lubrication**

All motor bearings are permanently lubricated and sealed at the factory and require no additional lubrication.

11.0 **Troubleshooting the IBG series Bench Grinders**

Table 3

Symptom	Possible Cause	Correction *
Motor will not start.	Not connected to power source.	Verify that plug is properly inserted into receptacle.
	Switch in Off position.	Make sure safety key is inserted.
	Motor cord cut or abraded.	Replace with new cord.
	Wheels cannot rotate because of obstruction.	Unplug and turn grinding wheel by hand to ensure free movement. Restart.
	Plug on cord is faulty.	Replace with new plug.
	Low line voltage.	Check power line for proper voltage.
	Fuse blown or circuit breaker open.	Re-set. May be too many machines on one line.
	Faulty switch.	Replace switch.
	Faulty capacitor.	Replace capacitor.
	Open circuit in motor or loose connection.	Inspect all lead connections on motor for loose or open connections.
	Motor faulty.	Contact JET technical service.
Motor will not start; fuses blow or circuit breakers trip.	Too many electrical machines running on same circuit.	Turn off other machines and try again.
	Incorrect fuse.	Try time delay fuse, or go to circuit with higher rated fuse of circuit breaker.
	Wheels cannot rotate because of obstruction.	Unplug and turn grinding wheel by hand to ensure free movement. Clear any obstructions and restart.
	Undersized extension cord.	Use correct size extension cord.
	Short circuit in line cord or plug.	Inspect cord or plug for damaged insulation and shorted wires.
	Short circuit in motor or loose connections.	Inspect all connections on motor for loose or shorted terminals or worn insulation.
Motor fails to develop full power.	Low line voltage.	Check power line for proper voltage.
	Faulty motor or capacitor	Contact JET technical service.
Motor overheats.	Motor overloaded.	Reduce pressure against wheel. Make sure grit size is appropriate for the job.
Motor stalls, resulting in blown fuses or tripped circuit.	Motor overloaded.	Reduce load on motor; do not press so hard.
	Capacitor failure.	Contact JET technical service.
	Short circuit in motor or loose connections.	Inspect connections on motor for loose or shorted terminals or worn insulation.
	Low voltage.	Correct the low voltage conditions.
	Incorrect fuses or circuit breakers in power line.	Install correct fuses or circuit breakers.

Symptom	Possible Cause	Correction *
Motor slows.	Motor overloaded.	Reduce load to motor; do not press so hard.
	Low line voltage.	Check power line for proper voltage.
	Loose connections.	Inspect connections.
Frequent fuse or circuit breaker failure.	Motor overload.	Reduce load to motor; do not press so hard.
	Electrical circuit overload; too many electrical machines running on same circuit.	Turn off other machines and try again.
	Incorrect fuse or circuit breaker	Have electrician upgrade service to outlet.
Excessive vibration.	Wheel(s) out of balance; wobbling or not rotating concentric to arbor.	Dress wheel or replace it. Adjust wobble by rotating flange as needed.
	Improper mounting.	Secure grinder firmly to bench or stand.

* **WARNING:** Some corrections may required a qualified electrician.

12.0 Optional accessories

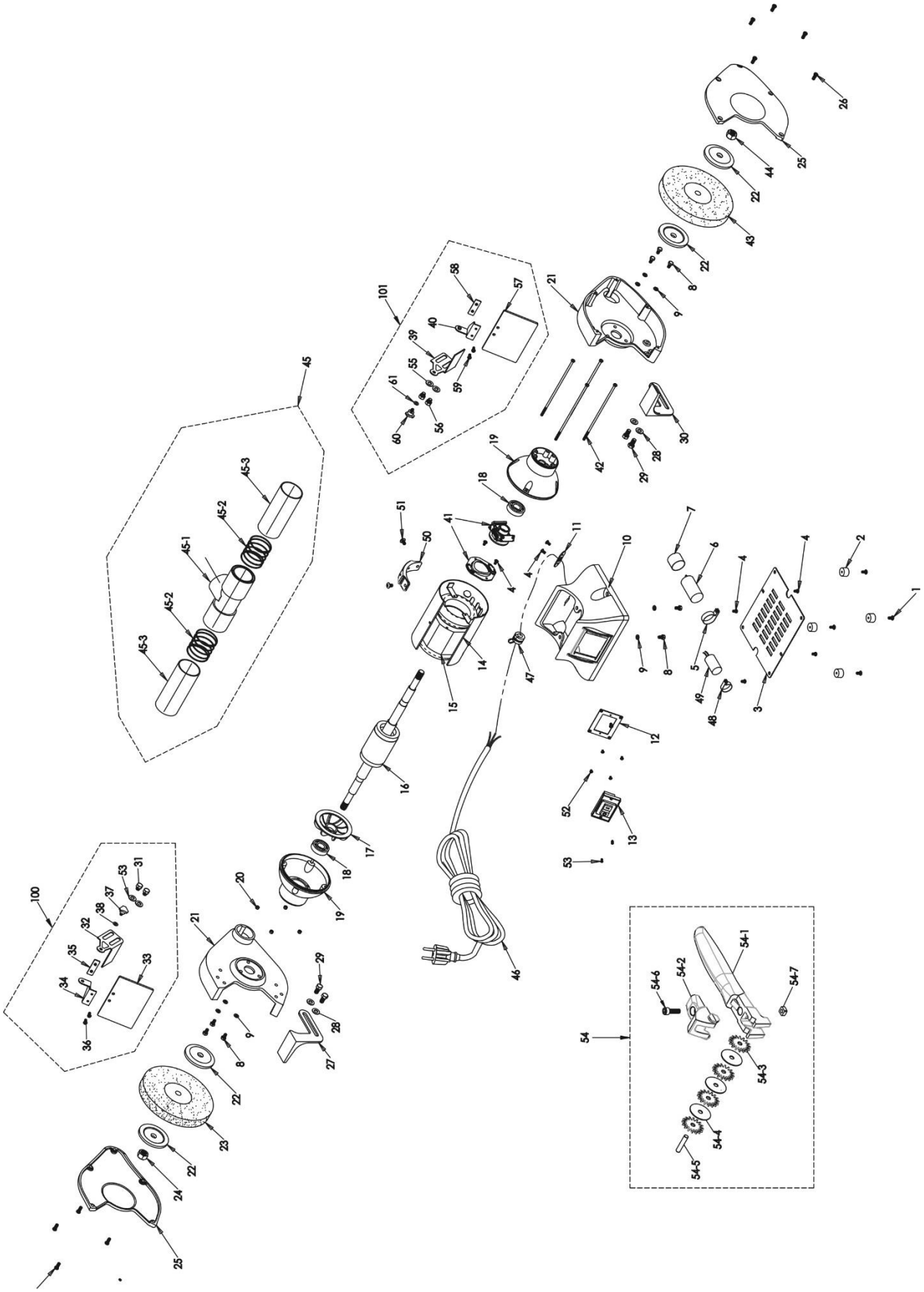
These accessory items, purchased separately, are available for your JET bench grinder.
Contact your dealer to order, or call JET at the phone number on the cover.

578172
Stand for Grinders

578173
Deluxe Stand for Grinders

578100
Flexible LED Lamp (3W)

12.1.1 **IBG-8 Grinder – Exploded View**

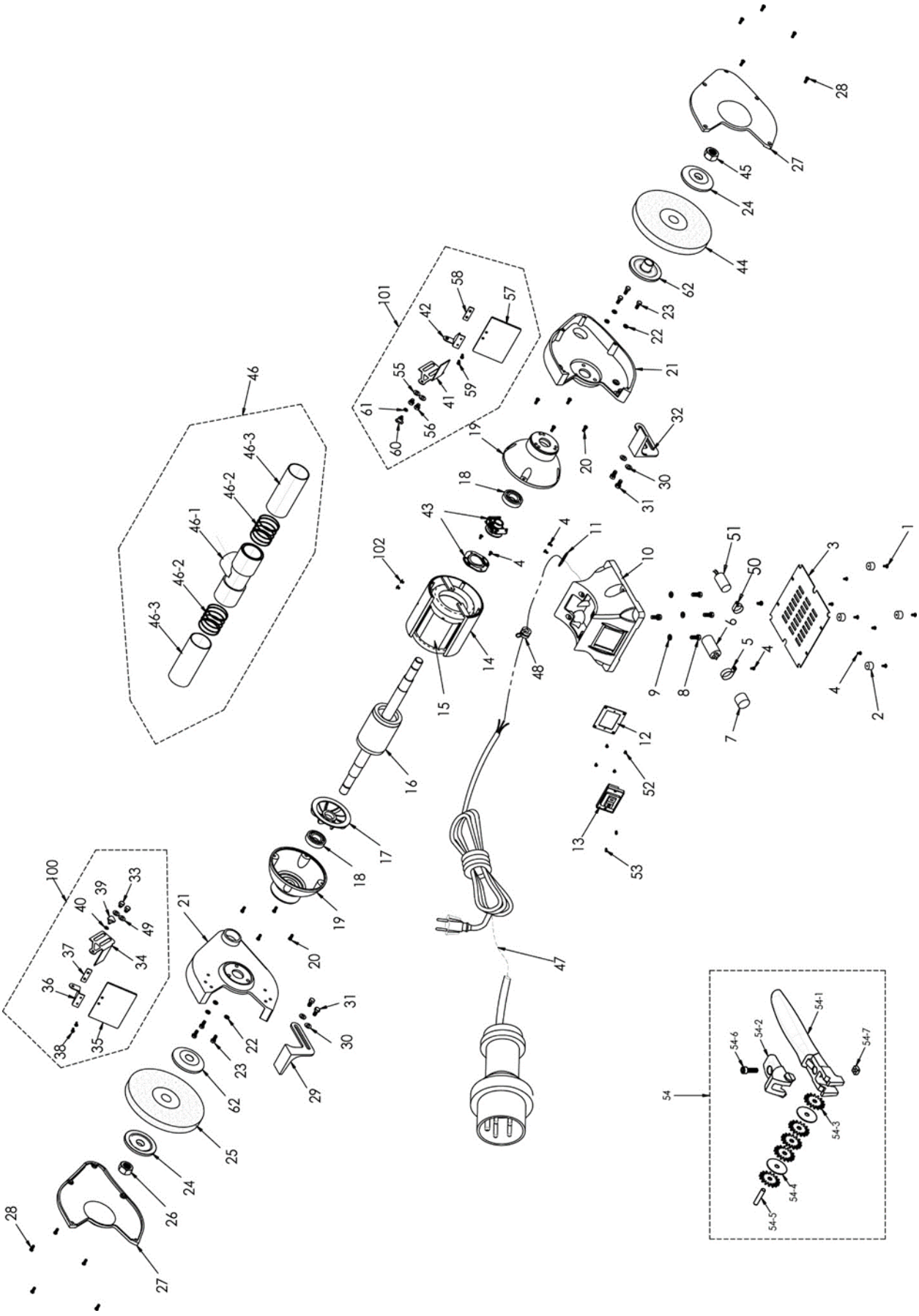


12.1.2 **IBG-8 Grinder – Parts List**

Index No	Part No	Description	Size	Qty
1	IBG8-01	Truss Head Screw	3/16”-24 x 1/4”	4
2	IBG8-02	Rubber Pad		4
3	IBG8-03	Base Plate		1
4	IBG8-04	Truss Head Screw	3/16”-24 x 3/8”	10
5	IBG8-05	Capacitor Bracket		1
6	IBG8-06	Start Capacitor	200MFD, 125VAC	1
7	IBG8-07	Capacitor Cover		1
8	TS-0050021	Hex Cap Screw	1/4”-20 x 5/8”	8
9	TS-0720071	Lock Washer	1/4”	8
10	IBG8-10	Base		1
11	IBG8-11	Cord Plate		1
12	IBG8-12E	Switch Plate		1
13	IBG8-13E	Magnetic Switch		1
14	IBG8-14	Motor Housing		1
15	IBG8-15E	Stator		1
16	IBG8-16EB	Rotor	Shaft 16mm	1
17	IBG8-17	Motor Fan		1
18	BB-6204ZZ	Ball Bearing	6204ZZ	2
19	IBG8-19	End Bell		2
20	TS-1540031	Hex Nut	M5	4
21	IBG8-21	Wheel Guard		2
22	IBG8-22RU	Wheel Flange	Bore 16mm	4
23	IBG8-23RU	Grinding Wheel	#36 Grit, 200x25x16	1
24	IBG8-24	Hex Nut (Left Hand Thread)	5/8”-11UNC	1
25	IBG8-25	Wheel Cover		2
26	IBG8-26	Truss Head Screw	1/4”-20 x 3/4”	10
27	IBG8-27	Tool Rest-Left		1
28	TS-0680041	Flat Washer	3/8”	4
29	IBG8-29	Hex Cap Screw	3/8”-16 x 5/8”	4
30	IBG8-30	Tool Rest-Right		1
31	TS-0060011	Hex Cap Screw	3/8”-16 x 1/2”	2
32	IBG8-32	Spark Guard – Left		1
33	IBG8-33	Eye Shield		1
34	IBG8-34	Eye Shield Bracket -Left		1
35	IBG8-35	Eye Shield Plate		1
36	IBG8-36	Truss Head Screw	3/16”-24 x 1/2”	2
37	IBG8-37	Knob		1
38	TS-0680021	Flat Washer	1/4”	1
39	IBG8-39	Spark Guard – Right		1
40	IBG8-40	Eye Shield Bracket – Right		1
41	IBG8-41E	Centrifugal Switch Assembly		1
42	IBG8-42	Screw	M5 x 0.8 x 205	4
43	IBG8-43RU	Grinder Wheel	#60 Grit, 200x25x16	1
44	IBG8-44	Hex Nut (Right Hand Thread)	5/8”-11UNC	1
45	IBG8-45B	Dust Port Assembly		1
45-1	IBG8-45-1	T Fitting		1
45-2	IBG8-45-2	Spring		2
45-3	IBG8-45-3	Connector Sleeve		2
46	IBG8-46E	Power Cord w/ Plug	1.0mm² x 3G	1
47	IBG8-47	Strain Relief		1
48	IBG8-48	Capacitor Bracket		1
49	IBG8-49	Running Capacitor	35μF, 250V	1
50	IBG8-50	Lamp Fixed Bracket		1
51	TS-081F031	Flat Head Cross Screw	1/4” x 1/2”	2
53	TS-0680041	Flat Washer	3/8”	2
54	IBG8-54	Dresser Assembly	Dia. 1-1/4	1
54-1	IBG8-54-1	Body		1
54-2	IBG8-54-2	Hood		1
54-3	IBG8-54-3	Cutter		4
54-4	IBG8-54-4	Cutter Washer		2

Index No	Part No	Description	Size	Qty
54-5	IBG8-54-5	Pin	6mm	1
54-6	TS-1503051	Socket Head Cap Screw	M6 x 20	1
54-7	IBG8-54-7	Square Nut	M6	1
55	TS-0680041	Flat Washer	3/8”	2
56	TS-0060011	Hex Cap Screw	3/8”-16 x 1/2”	2
57	IBG8-33	Eye Shield		1
58	IBG8-35	Eye Shield Plate		1
59	IBG8-36	Truss Head Screw	3/16”-24 x 1/2”	2
60	IBG8-37	Knob		1
61	TS-0680021	Flat Washer	1/4”	1
100	IBG8-100	Eye Shield Assembly – Left (includes 31-38,53)		1
101	IBG8-101	Eye Shield Assembly – Right (includes 39,40,55-61)		1

13.2.1 **IBG-10 Grinder – Exploded View**

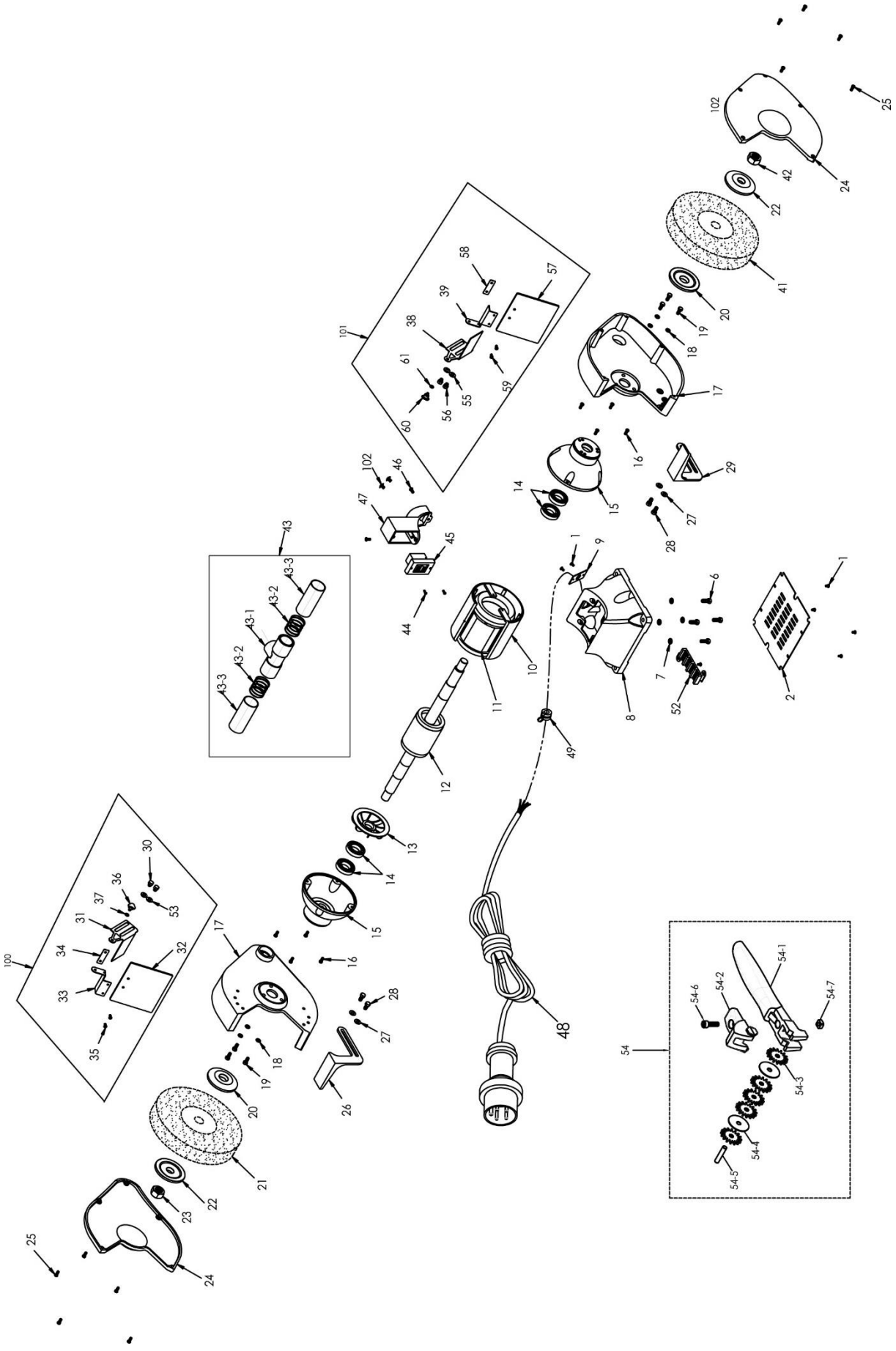


13.2.2 **IBG-10 Grinder – Parts List**

Index No	Part No	Description	Size	Qty
1	IBG8-01	Truss Head Screw	3/16”-24 x 1/4”	4
2	IBG10-02	Rubber Pad		4
3	IBG10-03	Base Plate		1
4	IBG8-04	Truss Head Screw	3/16”-24 x 3/8”	11
5	IBG10-05	Capacitor Bracket (for 230V)		1
6	IBG10-06	Start Capacitor (for 230V)	400MFD, 125VAC	1
7	IBG10-07	Capacitor Cover (for 230V)		1
8	TS-0060051	Hex Cap Screw	3/8”-16 x 1”	4
9	TS-0720091	Lock Washer	3/8”	4
10	IBG10-10	Base		1
11	IBG8-11	Cord Plate		1
12	IBG10-12E	Switch Plate		1
13	IBG10-13E	Magnetic Switch	KJD-12 / 230V	1
	IBG12-45AE	Magnetic Switch	KJD-18 / 400V	1
14	IBG10-14	Motor Housing		1
15	IBG10-15E	Stator	230V / 1Ph	1
	IBG10-15AE	Stator	400V / 3Ph	1
16	IBG10-16E	Rotor	230V / 1Ph	1
	IBG10-16AE	Rotor	400V / 1Ph	1
17	IBG10-17	Motor Fan		1
18	BB-6206ZZ	Ball Bearing	6206ZZ	2
19	IBG10-19B	End Bell		2
20	IBG8-26	Truss Head Screw	1/4”-20 x 3/4”	8
21	IBG10-21	Wheel Guard		2
22	TS-0680031	Flat Washer	5/16”	6
23	TS-0051021	Hex Cap Screw	5/16”-18 x 5/8”	6
24	IBG10-24	Wheel Flange	Ø1” hole	2
25	IBG10-25RU	Grinding Wheel	#36 Grit, 250x25x32	1
26	IBG8-24	Hex Nut (Left Hand Thread)	5/8”	1
27	IBG10-27	Wheel Cover		2
28	IBG8-26	Truss Head Screw	1/4”-20 x 3/4”	10
29	IBG10-29	Tool Rest – Left		1
30	TS-0680041	Flat Washer	3/8”	4
31	TS-0060031	Hex Cap Screw	3/8”-16 x 3/4”	4
32	IBG10-32	Tool Rest – Right		1
33	TS-0060011	Hex Cap Screw	3/8”-16 x 1/2”	2
34	IBG10-34	Spark Guard – Left		1
35	IBG8-33	Eye Shield		1
36	IBG8-34	Eye Shield Bracket – Left		1
37	IBG8-35	Eye Shield Plate		1
38	IBG8-36	Truss Head Screw	3/16”-24 x 1/2”	2
39	IBG8-37	Knob		1
40	TS-0680021	Flat Washer	1/4”	1
41	IBG10-41	Spark Guard – Right		1
42	IBG8-40	Eye Shield Bracket – Right		1
43	IBG10-43E	Centrifugal Switch Assembly		1
44	IBG10-44RU	Grinding Wheel	#60 Grit, 250x25x32	1
45	IBG8-44	Hex Nut (Right Hand Thread)	5/8”	1
46	IBG10-46C	Dust Port Assembly		1
46-1	IBG8-45-1	T Fitting		1
46-2	IBG8-45-2	Spring		2
46-3	IBG10-46-3	Connector Sleeve		2
47	IBG10-47E	Power Cord w/ Plug	1.0mm² x 3G	1
	IBG12-48AE	Power Cord w/ Plug	1.0mm² x 4G	1
48	IBG10-48	Strain Relief		1
49	TS-0680041	Flat Washer	3/8”	2
50	IBG10-50	Capacitor Bracket (for 230V)		1
51	IBG10-51	Running Capacitor (for 230V)	45μF, 350VAC	1
52	TS-2284061	Flat Head Screw	M4 x 6	4
53	IBG10-53E	Pan Head Screw	5/32” x 1/2”	2

54	IBG8-54	Dresser Assembly	Dia. 1-1/4	1
54-1	IBG8-54-1	Body		1
54-2	IBG8-54-2	Hood		1
54-3	IBG8-54-3	Cutter		4
54-4	IBG8-54-4	Cutter Washer		2
54-5	IBG8-54-5	Pin	6mm	1
54-6	TS-1503051	Socket Head Cap Screw	M6 x 20	1
54-7	IBG8-54-7	Square Nut	M6	1
55	TS-0680041	Flat Washer	3/8”	2
56	TS-0060011	Hex Cap Screw	3/8”-16 x 1/2”	2
57	IBG8-33	Eye Shield		1
58	IBG8-35	Eye Shield Plate		1
59	IBG8-36	Truss Head Screw	3/16”-24 x 1/2”	2
60	IBG8-37	Knob		1
61	TS-0680021	Flat Washer	1/4”	1
62	IBG10-62RU	Wheel Flange w/ Bushing	32mm	2
100	IBG10-100	Eye Shield Assembly – Left (includes 33-40,49)		1
101	IBG10-101	Eye Shield Assembly – Right (includes 41,42,55-61)		1
102	IBG10-102	Pan Head Screw	1/4” x 1/4”	2

13.3.1 **IBG-12 Grinder – Exploded View**

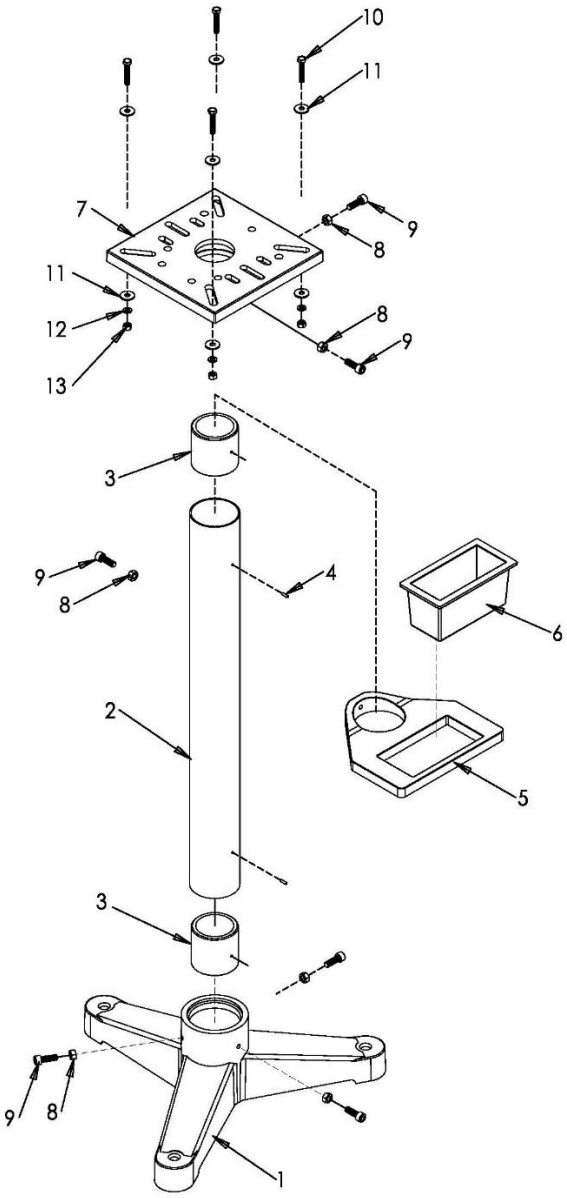


13.3.2 **IBG-12 Grinder – Parts List**

Index No	Part No	Description	Size	Qty
1	IBG8-04	Truss Head Screw	3/16”-24 x 3/8”	13
2	IBG10-03	Base Plate		1
3	IBG10-06	Start Capacitor	400MFD, 125VAC	1
4	IBG12-04	Capacitor Bracket		1
5	IBG12-05	Capacitor Cover		1
6	TS-0060051	Hex Cap Screw	3/8”-16 x 1”	4
7	TS-0720091	Lock Washer	3/8”	4
8	IBG12-08	Base		1
9	IBG12-09	Cord Plate		1
10	IBG12-10	Motor Housing		1
11	IBG12-11RU	Stator	400V / 3Ph	1
12	IBG12-12BRU	Rotor		1
13	IBG12-13	Motor Fan		1
14	BB-6007ZZ	Ball Bearing	6007ZZ	4
15	IBG10-19B	End Bell		2
16	IBG8-26	Truss Head Screw	1/4”-20 x 3/4”	8
17	IBG12-17	Wheel Guard		2
18	TS-0680031	Flat Washer	5/16”	6
19	TS-0051021	Hex Cap Screw	5/16”-18 x 5/8”	6
20	IBG12-20	Wheel Flange	Ø1-1/4” hole	2
21		Grinding Wheel (option)		1
22	IBG10-24	Wheel Flange	Ø1” hole	2
23	IBG8-24	Hex Nut (Left Hand Thread)	5/8”	1
24	IBG12-24	Wheel Cover		2
25	IBG8-26	Truss Head Screw	1/4”-20 x 3/4”	10
26	IBG12-26	Tool Rest – Left		1
27	TS-0680041	Flat Washer	3/8”	4
28	TS-0060031	Hex Cap Screw	3/8”-16 x 3/4”	4
29	IBG12-29	Tool Rest – Right		1
30	TS-0060011	Hex Cap Screw	3/8”-16 x 1/2”	2
31	IBG12-31	Spark Guard – Left		1
32	IBG12-32	Eye Shield		1
33	IBG12-33	Eye Shield Bracket – Left		1
34	IBG12-34	Eye Shield Plate		1
35	IBG8-36	Truss Head Screw	3/16”-24 x 1/2”	1
36	IBG8-37	Knob		1
37	TS-0680021	Flat Washer	1/4”	1
38	IBG12-38	Spark Guard – Right		1
39	IBG12-39	Eye Shield Bracket – Right		1
40	IBG12-40	Centrifugal Switch Assembly		1
41		Grinding Wheel (option)		1
42	IBG8-44	Hex Nut (Right Hand Thread)	5/8”	1
43	IBG10-46C	Dust Port Assembly		1
43-1	IBG8-45-1	T Fitting		1
43-2	IBG8-45-2	Spring		2
43-3	IBG10-46-3	Connector Sleeve		2
44	IBG12-44	Truss Head Screw	M4 x 1/2”	2
45	IBG12-45AE	Magnetic Switch	KJD18 / 400V	1
46	IBG12-46	Truss Head Screw	1/4”-20 x 1/2”	2
47	IBG12-47	Switch Bracket		1
48	IBG12-48AE	Power Cord w/ Plug	1.0mm² x 4G	1
49	IBG12-49	Strain Relief		1
50	IBG12-50	Capacitor Bracket		1
51	IBG12-51	Running Capacitor	20μF/350V	1
52	IBG12-52	Electrical Terminal		1
53	TS-0680041	Flat Washer	3/8”	2
54	IBG8-54	Dresser Assembly	Dia. 1-1/4	1
54-1	IBG8-54-1	Body		1
54-2	IBG8-54-2	Hood		1
54-3	IBG8-54-3	Cutter		4

Index No	Part No	Description	Size	Qty
54-4	IBG8-54-4	Cutter Washer		2
54-5	IBG8-54-5	Pin	6mm	1
54-6	TS-1503051	Socket Head Cap Screw	M6 x 20	1
54-7	IBG8-54-7	Square Nut	M6	1
55	TS-0680041	Flat Washer	3/8”	2
56	TS-0060011	Hex Cap Screw	3/8”-16 x 1/2”	2
57	IBG12-32	Eye Shield		1
58	IBG12-34	Eye Shield Plate		1
59	IBG8-36	Truss Head Screw	3/16”-24 x 1/2”	1
60	IBG8-37	Knob		1
61	TS-0680021	Flat Washer	1/4”	1
100	IBG12-100	Eye Shield Assembly – Left (includes 30-37,53)		1
101	IBG12-101	Eye Shield Assembly – Right (includes 38,39,55-61)		1
102	IBG10-102	Pan Head Screw	1/4” x 1/4”	2

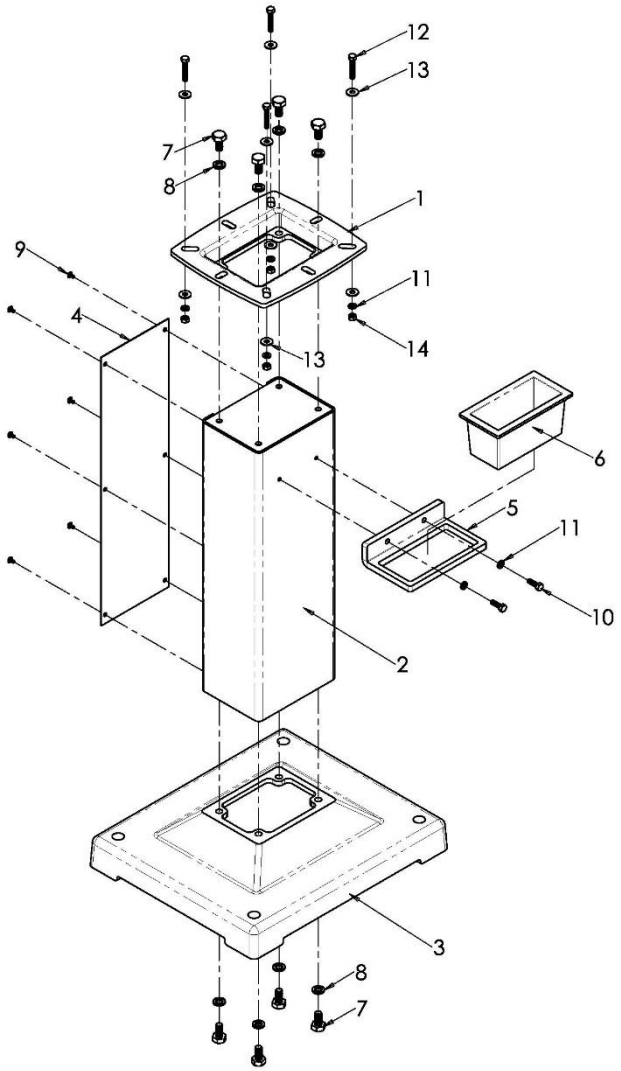
13.4.1 **IBG-Stand Assembly (OPTIONAL) – Exploded View**



13.4.2 **IBG-Stand Assembly (OPTIONAL) – Parts List**

Index No.	Part No.	Description	Size	Qty
	578172	IBG-Stand for Bench Grinders (#1 thru 13)		1
1	IBGS-01	Base		1
2	IBGS-02	Post (includes #3 and #4)		1
3	IBGS-03	Insert Ring		2
4	IBGS-04	Pin	Ø4 x 14	2
5	IBGS-05	Water Pot Holder		1
6	IBGS-06	Water Pot		1
7	IBGS-07	Platform		1
8	TS-1540071	Hex Nut	M10	6
9	TS-1505041	Socket Head Cap Screw	M10 X 30	6
10	TS-1490071	Hex Cap Screw	M8 x 40	4
11	TS-1550061	Flat Washer	M8	8
12	TS-2361081	Lock Washer	M8	4
13	TS-1540061	Hex Nut	M8	4

13.5.1 **DBG-Stand Assembly (OPTIONAL) – Exploded View**



13.5.2 **DBG-Stand Assembly (OPTIONAL) – Parts List**

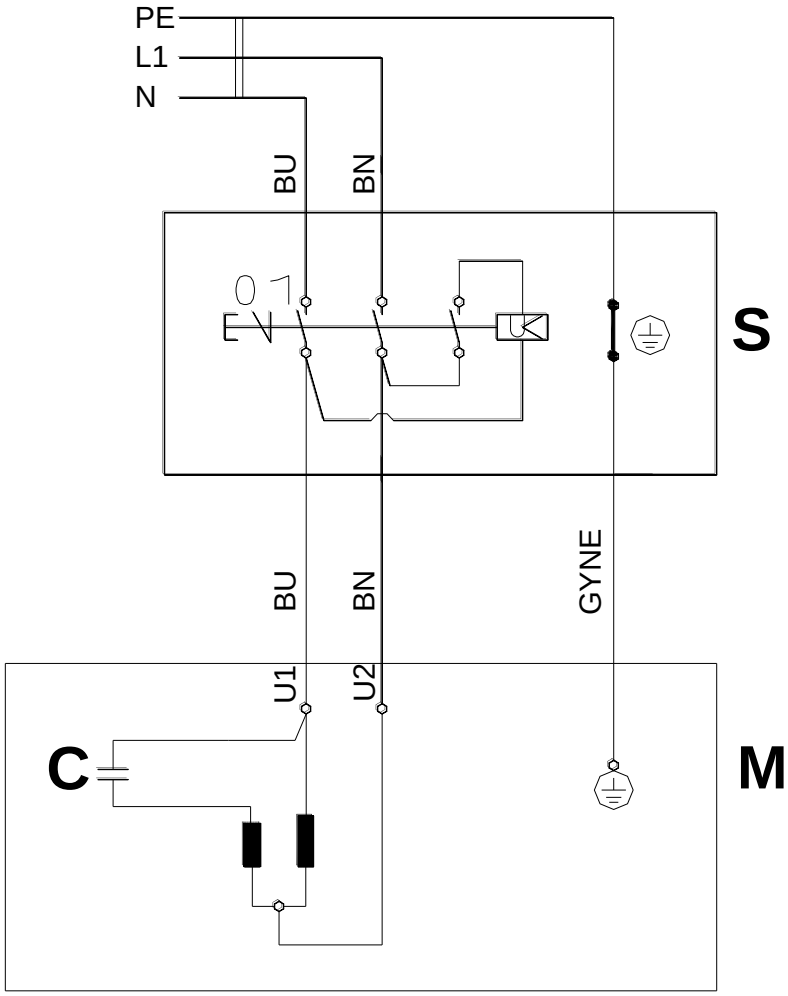
Index No.	Part No.	Description	Size	Qty
	578173	DBG-Stand for Bench Grinders (#1 thru 14)		1
1	DBGS-01	Platform		1
2	DBGS-02	Stamped Stand Front		1
3	DBGS-03	Base		1
4	DBGS-04	Stamped Stand Cover		1
5	DBGS-05	Water Pot Holder		1
6	IBGS-06	Water Pot		1
7	TS-0070011	Hex Cap Screw	1/2”-13 x 1”	8
8	TS-0720111	Lock Washer	1/2”	8
9	TS-081F032	Pan Head Machine Screw	1/4”-20 x 3/8”	6
10	TS-0051051	Hex Cap Screw	5/16”-18 x 1”	2
11	TS-0720081	Lock Washer	5/16”	6
12	TS-1490071	Hex Cap Screw	M8 x 40	4
13	TS-2361081	Lock Washer	M8	8
14	TS-2311081	Hex Nut	M8	4

IBG-8 / IBG-10
578008M / 578010-RU

230/50/1

	colour of strands	Litzenfarben	couleur des cordons
BK	black	schwarz	noir
WH	white	weiß	blanc
BU	blue	blau	bleu
YE	yellow	gelb	jaune
RD	red	rot	rouge
BN	brown	braun	brun
GY	grey	grau	gris
GNYE	green-yellow	grün-gelb	vert-jaune
OG	orange	orange	orange
VT	violet	violett	violet

	meaning of symbol	Bedeutung der Zeichen	interprétation
M	motor	Motor	moteur
S	switch	Schalter	interrupteur
C	condenser	Kondensator	condensateur
E	electronic unit	Elektronik Einheit	unité électronique
F	fuse	Sicherung	fusible
RS	reversing switch	Drehrichtungsschalter	commu. droite/gauche
CS	centrifugal switch	Fliehkraftschalter	déclencheur centrifuge
OL	overload cut-off	Überlastschutzschalter	déclencheur surcharge
LS	limit switch	Positionsendschalter	micro



IBG-10 / IBG-12
578010-3RU / 578012-3RU

400/50/3

	colour of strands	Litzenfarben	couleur des cordons
BK	black	schwarz	noir
WH	white	weiß	blanc
BU	blue	blau	bleu
YE	yellow	gelb	jaune
RD	red	rot	rouge
BN	brown	braun	brun
GY	grey	grau	gris
GNYE	green-yellow	grün-gelb	vert-jaune
OG	orange	orange	orange
VT	violet	violett	violet

	meaning of symbol	Bedeutung der Zeichen	interprétation
M	motor	Motor	moteur
S	switch	Schalter	interrupteur
C	condenser	Kondensator	condensateur
E	electronic unit	Elektronik Einheit	unité électronique
F	fuse	Sicherung	fusible
RS	reversing switch	Drehrichtungsschalter	commu. droite/gauche
CS	centrifugal switch	Fliehkraftschalter	déclencheur centrifuge
OL	overload cut-off	Überlastschutzschalter	déclencheur surcharge
LS	limit switch	Positionsendschalter	micro