

EN Operating Instructions (Original)

1.0 About this Manual

This manual is provided by PROMAC, covering the safe operation and maintenance procedures for a **PROMAC Model JDG-0332 Drill Grinder**. This manual contains instructions on safety precautions, general operating procedures, maintenance instructions and parts breakdown. The machine has been designed and constructed to provide consistent, long-term operation if used in accordance with the instructions as set forth in this document.

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

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3.0 IMPORTANT SAFETY INSTRUCTIONS

READ ALL INSTRUCTIONS BEFORE USING THIS GRINDER.



- To reduce risk of injury:

1. Read and understand entire owner's manual before attempting assembly or operation of this machine.
2. Read and understand the warnings posted on the machine and in this manual.
3. Replace warning labels if they become obscured or removed.
4. This machine 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 metal lathe, do not use until proper training and knowledge have been obtained.
5. Do not use this machine for other than its intended use. If used for other purposes, PROMAC disclaims any real or implied warranty and holds itself harmless from any injury that may result from that use.
6. Always wear approved safety glasses or face shield while using this machine. (Everyday eyeglasses only have impact resistant lenses; they are *not* safety glasses.)
7. Before operating this machine, remove tie, rings, watches and other jewellery, and roll sleeves up past the elbows. Remove loose clothing and confine long hair. Non-slip footwear or anti-skid floor strips are recommended. Do **not** wear gloves.
8. Wear hearing protection (plugs or muffs) during extended periods of operation.
9. Some dust created by sawing may contain chemicals known to cause cancer, birth defects or other reproductive harm. Some examples of these chemicals are:
 - Lead from lead based paint.
 - Crystalline silica from bricks, cement and other masonry products.
 - Arsenic and chromium from chemically treated lumber.Your risk of exposure varies, depending on how often you do this type of work. To reduce your exposure to these chemicals, work in a well-ventilated area and work with approved safety equipment, such as face or dust masks that are specifically designed to filter out microscopic particles.
10. Do not operate this machine while tired or under the influence of drugs, alcohol or any medication.
11. Make certain the switch is in the **OFF** position before connecting the machine to the power supply. Turn off all controls before unplugging.
12. Make certain the machine is properly grounded. Connect to a properly grounded outlet only. See Grounding instructions.
13. Make all machine adjustments or maintenance with the machine unplugged from the power source.
14. 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.
15. 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 maintenance is complete.
16. 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.
17. Provide for adequate space surrounding work area and non-glare, overhead lighting.
18. Keep the floor around the machine clean and free of scrap material, oil and grease.
19. Keep visitors a safe distance from the work area. **Keep children away.**
20. Make your workshop child proof with padlocks, master switches or by removing starter keys.
21. Give your work undivided attention. Looking around, carrying on a conversation and "horse-play" are careless acts that can result in serious injury.
22. Keep an ergonomic body position. Maintain a balanced stance at all times so that you do not fall or lean against the moving parts. Do not overreach or use excessive force to perform any machine operation.
23. Do not force a tool or attachment to do a job for which it was not designed. The right tool will do the job better and safer.
24. The machine is intended for indoor use. To reduce the risk of electric shock, do not use outdoors or on wet surfaces.
25. Do not handle plug or machine with wet hands.
26. Use recommended accessories; improper accessories may be hazardous.
27. Maintain tools with care. Keep tools sharp and clean for the best and safest performance. Follow instructions for lubricating and changing accessories.
28. Turn off machine and disconnect from power before cleaning.
29. Never leave the machine running unattended. Turn the power off and do not leave the machine until it comes to a complete stop.
30. Remove loose items and unnecessary work pieces from the area before starting the machine.
31. Pull the mains plug if the machine is not in use.
32. Make sure the workpiece is securely clamped.

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



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



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

SAVE THESE INSTRUCTIONS



WARNING:

These symbols below advise that you follow the correct safety procedures when using this machine.



Read and understand the entire user manual before attempting assembly or machine operation.



Do not operate this machine under the influence of drugs, alcohol or medication



Always wear approved working outfit
Wear safety goggles.
Wear ear protection.



Do not wear gloves while operating this machine



Always wear the approved working outfit
Wear safety shoes.
Remove tie, rings, watches, jewellery.
Roll up sleeves above elbows.
Remove all loose clothing and confine long hair



Connection and repair work on the electrical installation may be carried out by a qualified electrician only.



Make all machine adjustments or maintenance with the machine unplugged from the power source.



Never reach into the machine while it is operating or running down.

4.0 Specifications

Model number JDG-0332
Stock number JDG-0332

Motor and electricals:

Motor type.....	DC-motor
Motor power.....	0.25 kW
Motor speed.....	4,400 rpm
Power supply.....	1~230V, PE, 50Hz

Grinding wheels:

CBN diamond grinding wheel.....	for HSS
SDC diamond grinding wheel (optional)	for Carbide

Collets:

ER20.....	11 collets, Ø3 to Ø13
Optional ER20	4 collets, Ø2.5, Ø3.5, Ø4.5, Ø5.5
ER40.....	13 collets, Ø14 to Ø26
Optional ER40	6 collets, Ø27, Ø28, Ø29, Ø30, Ø31, Ø32
Optional collet holder.....	2 sets, Ø31, Ø32

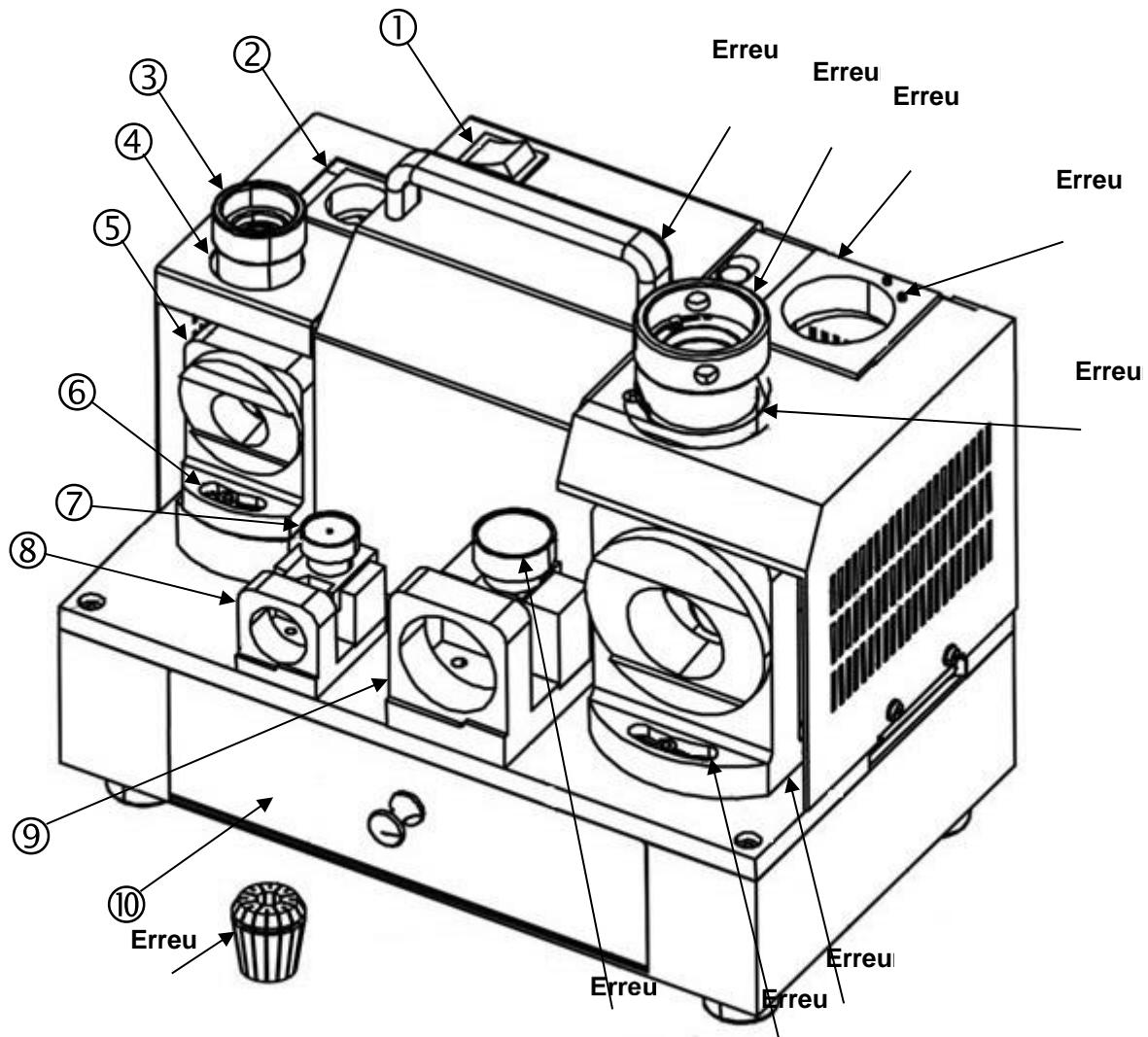
Dimensions and Weights:

Overall dimensions, assembled (L x W x H)	355 x 215 x 300 mm
Shipping dimensions (W x D x H).....	400 x 280 x 330 mm
Net weight (approximate)	34 kg
Shipping weight (approximate)	36 kg

L = length; W = width; H= height; D= depth

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

5.0 Machine Description



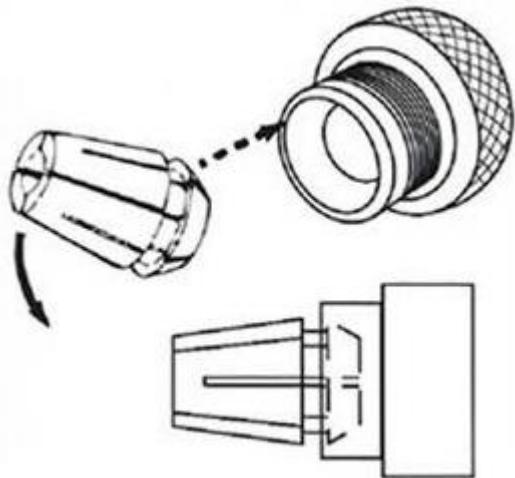
- | | |
|--|------------------------------|
| 1. Motor switch | 10. Drawer for collets |
| 2. Lip relief angle shelf A | 11. Collet |
| 3. Collet chuck A | 12. Adjustment scale B |
| 4. Point splitting shelf A | 13. Point angle adjustment B |
| 5. Point angle shelf A | 14. Point angle shelf B |
| 6. Point angle adjustment A | 15. Point splitting shelf B |
| 7. Adjustment scale A | 16. Pin |
| 8. Alignment base A
($\phi 2\text{mm} - \phi 12\text{mm}$) | 17. Lip relief angle shelf B |
| 9. Alignment base B
($\phi 12.1\text{mm} - \phi 32\text{mm}$) | 18. Collet chuck B |
| | 19. Handle |

6.0 OPERATIONS

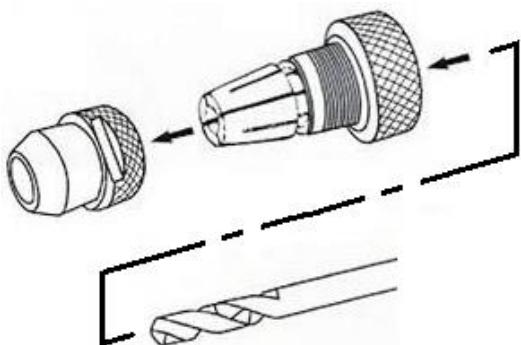
6.1. Setup the drill bit to the ER collet chuck

*Please follow step 6.1.1 and 6.1.2 to set up the drill bit to the chuck (without tightening)

- 6.1.1. Determine diameter of your drill bit, and then select the proper collet and collet chuck.
- 6.1.2. Insert collet into collet chuck by 45° angle, and tighten the nut slightly.

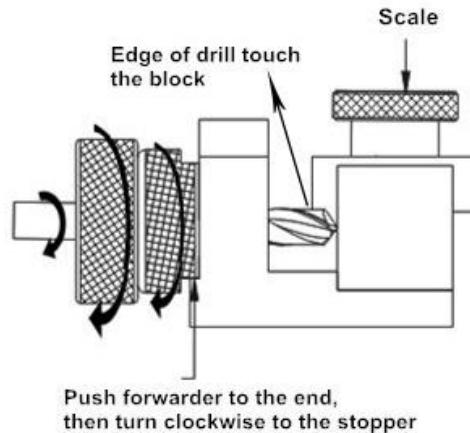


- 6.1.3. Insert drill bit into collet chuck and nuts out 35mm or so from the collet chuck, but do not tightened the drill too tight.

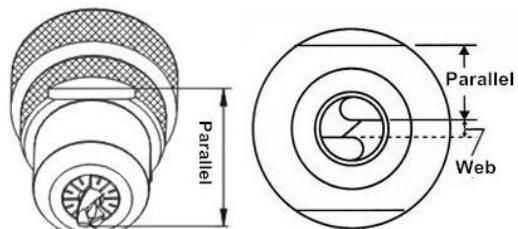


6.2. Align drill bit

- 6.1.4. Reset the scale ring: turn the ring all the way clockwise, and then turn it anti-clockwise to the number same as the drill's size.
- 6.1.5. Insert the chuck set into the web adjustment shelf. Then connect it tightly. Turn it clockwise to the end.
- 6.1.6. Plug the drill to the end and turn it clockwise to the end.
- 6.1.7. Turn the chuck set clockwise to the end and tighten it.
- 6.1.8. Turn the chuck set a little to the anti-clockwise and taking it out gently.



*Make sure the cutting lip of drill is parallel with the slot of clamping nut before grinding job started. If it is not parallel, adjust it again.



Attention: If the cutting lip is downward, must increase the scale of web adjustment shelf. If it is upward, please decrease the scale of the web adjustment shelf.

When the flute length of a drill becomes shorter, the web thickness of a drill would become thicker. So, for the same diameter of drills, the shorter length of a drill, the higher scale of web adjustment shelf need to be increased.

6.3. Grind the point angle

Turn the power switch on and wait until the motor rotation is stable (about 10 seconds), put the chuck set into the point angle grinding shelf.

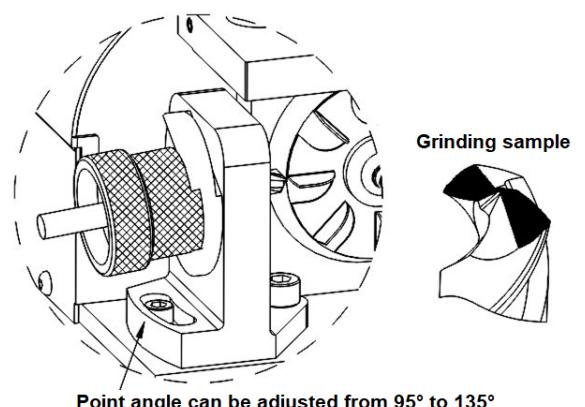
The slot of clamping nut must fit with the two pins of the grinding shelf. Insert the drill gently into grinding shelf until reach the grinding wheel.

Grind the drill by moving left and right until the grinding sound disappears. And then turn to the other side, do the same to grind the drill.

* The grinding size of drill is 2mm-13mm(15mm)

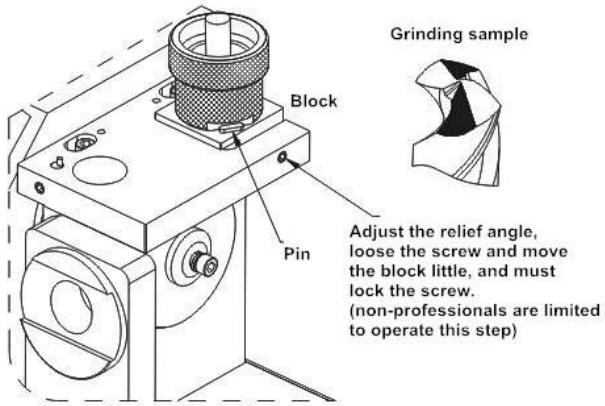
* The point angle of drill is from 95° to 135° .

* While grinding, don't hold the stem of drill, it will affect the accuracy.



6.4. Grind the lip relief angle

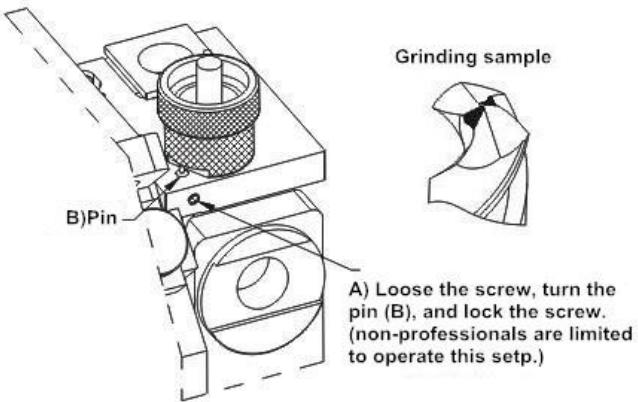
Put the chuck set into the lip relief angle grinding shelf. The slot of clamping nut must fit with the pin of the grinding shelf. Insert the drill gently into grinding shelf until reach the grinding wheel. Grind the drill by moving left and right until the grinding sound disappears. And then turn to the other side, do the same to grind the drill.



6.5. Point grinding point splitting

Put the chuck set into the point splitting shelf. The slot of clamping nut must fit with the pin(B) of the grinding shelf. Insert the drill gently into grinding shelf until reach the grinding wheel. Grind the drill by moving left and right until the grinding sound disappears. Turn back to the center of pin(B) and take out, then turn to the other side, do the same to grind the drill.

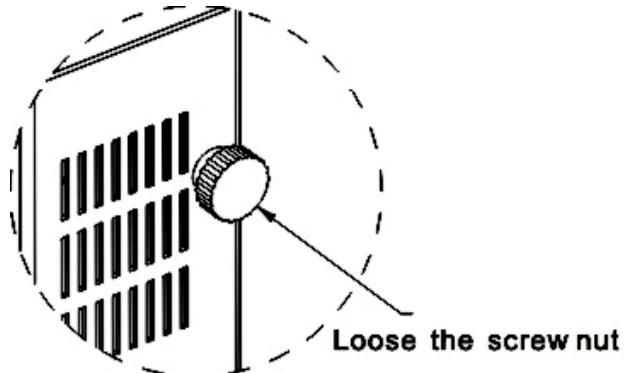
Notice: Use the 3mm wrench to do the step A if it is necessary. The nearer to the grinding wheel, the more grinding will be, and the pin far away from the wheel, the less grinding will be.



8.0 REPLACING THE WHEEL

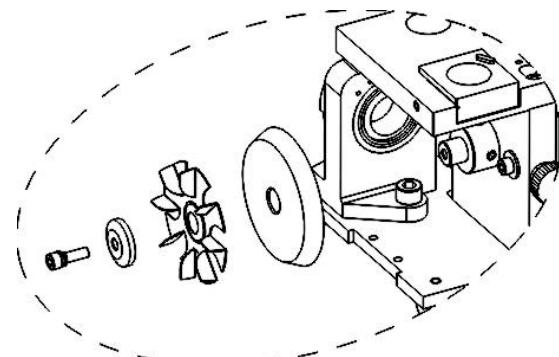
8.1. Open the wheel cover

- 8.1.1. Make sure it is safe that the power cord is unplugged.
- 8.1.2. Then use the 4mm hex wrench to lose the screw to open the cover.



8.2. Take out the grinding wheel

- 8.2.1. Use the brush to clean the machine, then use dry cloth to clean the surface.
- 8.2.2. If you just use the machine, please wait 3 minutes after the grinding temperature is fall.
- 8.2.3. Use the left hand to hold the wheel, then use the 4mm hex wrench to lose the screw counter-clockwise by right hand.



- 8.2.4. Take out the diamond grinding wheel on the machine.
- 8.2.5. Replace the new grinding wheel.
- 8.2.6. Put the wheel into the principal axis of motor, and tighten the screw and the wheel cover to complete.

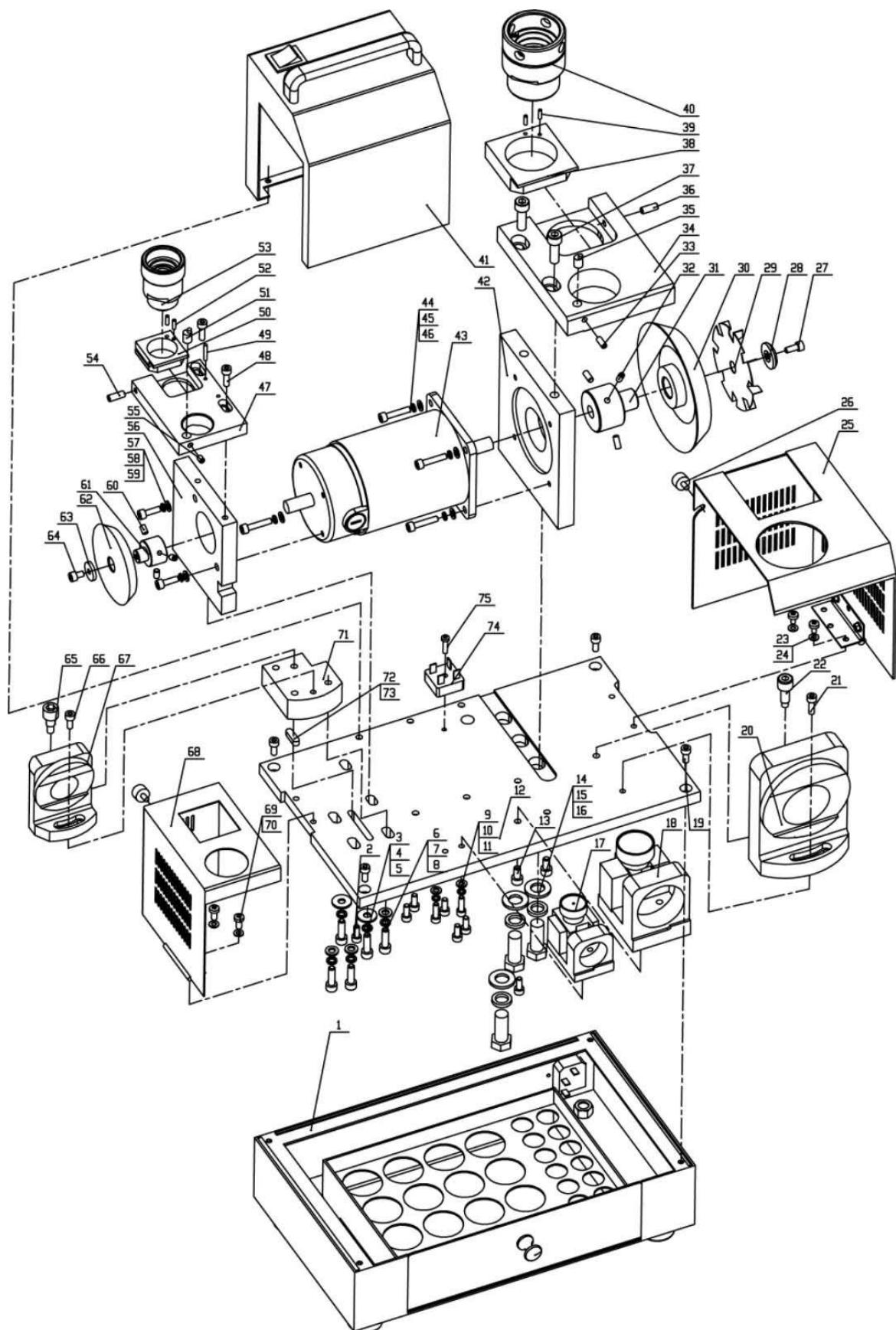
Notice: motor principal axis is very precise, if wrong work may be leading to the damage, thus affecting grinding wheel position.

7.0 CLEAN AND MAINTENANCE

Please clean the whole unit with an air blow gun, especially the holes before and after use.

9.0 Replacement Parts

JDG-0332 Assembly Breakdown -1

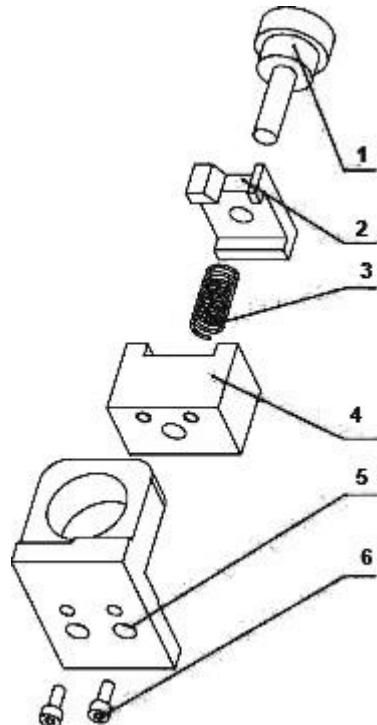


JDG-0332 Parts List for Breakdown -1

Index	Part			
No.	No.	Description	Size	Qty.
1	JDG0332-101	Bottom Shell Assembly		1
2	GB70108-0516	HEX-SKT-HD BOLT	M5x16	6
3	GB96102-06	PLAIN WASHER (BIG)	6	2
4	GB9387-06	SPRING WASHER	6	2
5	GB70108-0620	HEX-SKT-HD BOLT	M6x20	2
6	GB9502-06	PLAIN WASHER	6	3
7	GB9387-06	SPRING WASHER	6	3
8	GB70108-0620	HEX-SKT-HD BOLT	M6x20	3
9	GB9502-04	PLAIN WASHER	4	2
10	GB9387-04	SPRING WASHER	4	2
11	GB70108-0412	HEX-SKT-HD BOLT	M4x12	2
12	JDG0332-112	BACK PLATE		1
13	GB70108-0612	HEX-SKT-HD BOLT	M6x12	2
14	GB96202-06	PLAIN WASHER (BIG)	12	3
15	GB9387-12	SPRING WASHER	12	3
16	GB578116-1230	HEX BOLT	M12x30	3
17	JDG0332-117	Alignment Base	Ø2-12mm	1
18	JDG0332-118	Alignment Base	Ø12.1-32mm	1
19	GB70108-0512	HEX-SKT-HD BOLT	M5x12	4
20	JDG0332-120	Point Angle Shelf	Ø12.1-32mm	1
21	GB70108-0516	HEX-SKT-HD BOLT	M5x16	1
22	JDG0332-122	Grinding Block Screw		1
23	GB81816-0510	CROSS RD CAP BOLT	M5x10	2
24	GB9502-05	PLAIN WASHER	5	2
25	JDG0332-125	Grinding Wheel Cover	Ø12.1-32mm	1
26	JDG0332-126	Grinding Wheel Cover Screw		2
27	GB70108-0516	HEX-SKT-HD BOLT	M5x16	1
28	JDG0332-128	Grinding Wheel Gasket		1
29	JDG0332-129	Heat Dissipation Blade		1
30	JDG0332-130	Grinding Wheel		1
31	JDG0332-131	Aluminum Core		1
32	GB8007-0512	HEX-SKT SET SCREW W CUP POINT	M5x12	3
33	GB8007-0512	HEX-SKT SET SCREW W CUP POINT	M5x12	1
34	JDG0332-134	Double Hole Plate		1
35	JDG0332-135	Eccentric Pin		1
36	GB7707-0616	HEX-SKT SET SCREW W FLAT POINT	M6x16	1
37	GB70108-0825	HEX-SKT-HD BOLT	M8x25	2
38	JDG0332-138	Slider		1
39	GB879100-0310	SPRING PIN	3x10	2
40	JDG0332-140	Collet Chuck	Ø12.1-32mm	1
41	JDG0332-141	Main Shell Assembly		1
42	JDG0332-142	Motor Board		1
43	JDG0332-143	Motor		1
44	GB9502-05	PLAIN WASHER	5	4
45	GB9387-05	SPRING WASHER	5	4
46	GB70108-0525	HEX-SKT-HD BOLT	M5x25	4
47	JDG0332-147	Left Double Hole Plate		1
48	GB70108-0516	HEX-SKT-HD BOLT	M5x16	2
49	GB119100-0320	PARALLEL PIN	3X20	1
50	JDG0332-150	Left Slider		1
51	JDG0332-151	Eccentric Pin		1
52	GB879100-0310	SPRING PIN	3x10	2
53	JDG0332-153	Collet Chuck	Ø2-12mm	1
54	GB7707-0516	HEX-SKT SET SCREW W FLAT POINT	M5x16	1
55	GB8007-0506	HEX-SKT SET SCREW W CUP POINT	M5x6	1

56 -----	JDG0332-156	Left Motor Board	1
57 -----	GB9502-05.....	PLAIN WASHER	5..... 2
58 -----	GB9387-05.....	SPRING WASHER.....	5..... 2
59 -----	GB70108-0525	HEX-SKT-HD BOLT	M5x25..... 2
60 -----	GB8007-0508	HEX-SKT SET SCREW W CUP POINT	M5x8..... 3
61 -----	JDG0332-161	Left Aluminum Core.....	
62 -----	JDG0332-162	Grinding Wheel	1
63 -----	JDG0332-163	Grinding Wheel Gasket.....	1
64 -----	GB70108L-0512	HEX-SKT-HD BOLT (LEFT HAND THREAD).....	M5x12..... 1
65 -----	JDG0332-165	Point Angle Shelf Screw	1
66 -----	GB70108-0516	HEX-SKT-HD BOLT	M5x16..... 1
67 -----	JDG0332-167	Point Angle Shelf Assembly.....	Ø2-12mm..... 1
68 -----	JDG0332-168	Left Grinding Wheel Cover.....	1
69 -----	GB81816-0510	CROSS RD CAP BOLT	M5x10..... 2
70 -----	GB9502-05.....	PLAIN WASHER	5..... 2
71 -----	JDG0332-171	Left Plate	1
72 -----	GB109603-0620	Key ..	6x20..... 1
73 -----	GB879100-0310	SPRING PIN	3x10..... 1
74 -----	JDG0332-174	Bridge Rectifier	1
75 -----	GB81816-0418	CROSS RD CAP BOLT	M4x18..... 1

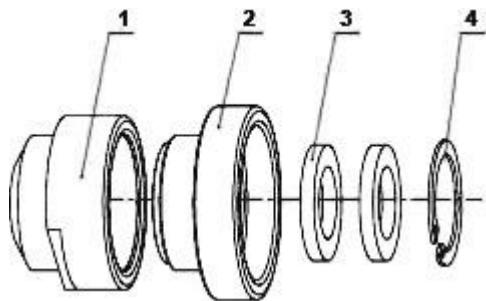
JDG-0332 Assembly Breakdown -2



JDG-0332 Parts List for Breakdown -2

Index No.	Part No.	Description	Size	Qty.
1.....	JDG0332-201	Tool Setting Screw		1
2.....	JDG0332-202	Side Block of Tool Setting Seat		1
3.....	JDG0332-203	Tool Spring	1.1x10x10x25mm	1
4.....	JDG0332-204	Center Block of Tool Setting Seat		1
5.....	JDG0332-205	Tool Setting Seat		1
6.....	GB70108-0412	HEX-SKT-HD BOLT	M4x12	2

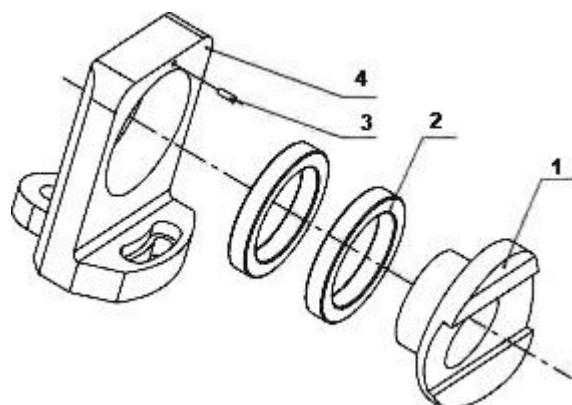
JDG-0332 Assembly Breakdown -3



JDG-0332 Parts List for Breakdown -3

Index No.	Part No.	Description	Size	Qty.
1.....	JDG0332-207	Chuck		1
2.....	JDG0332-208	Lock Chuck.....		1
3.....	DGBB6802RS	Bearing	6802.....	2
4.....	GB893186-24.....	Clip Spring for Hole	24.....	1

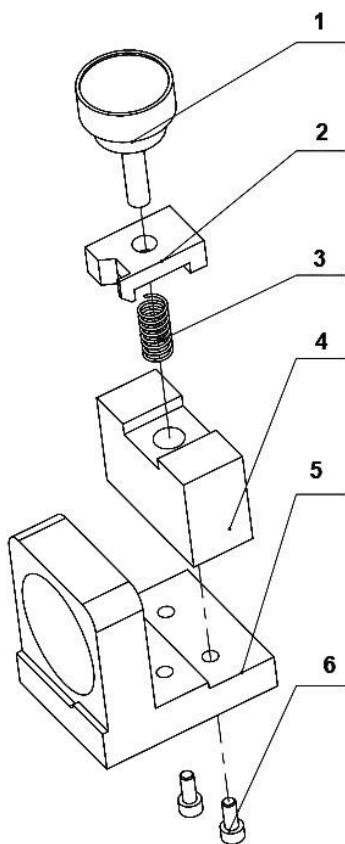
JDG-0332 Assembly Breakdown -4



JDG-0332 Parts List for Breakdown -4

Index	Part No.	Description	Size	Qty.
1	JDG0332-211	Eccentric Sleeve		1
2	DGBB6807RS	Bearing	6807RS	2
3	GB879100-0412	SPRING PIN	4x12	1
4	JDG0332-214	Grinding Base		1

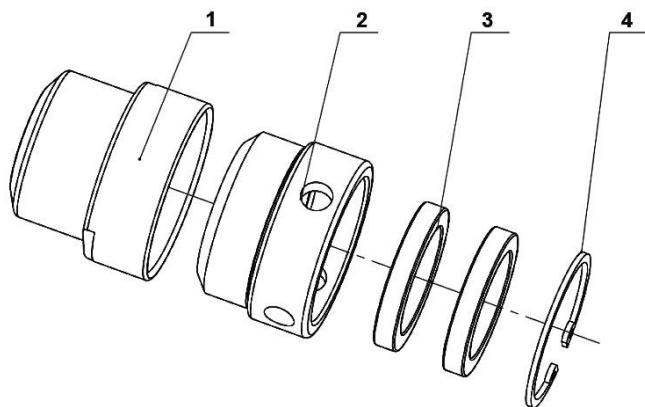
JDG-0332 Assembly Breakdown -5



JDG-0332 Parts List for Breakdown -5

Index No.	Part No.	Description	Size	Qty.
1.....	JDG0332-215	Tool Setting Screw		1
2.....	JDG0332-216	Side Block of Tool Setting Seat		1
3.....	JDG0332-217	Tool Spring	1.1x10x10x25mm	1
4.....	JDG0332-218	Center Block of Tool Setting Seat		1
5.....	JDG0332-219	Tool Setting Seat.....		1
6.....	GB70108-0512.....	HEX-SKT-HD BOLT.....	M5x12.....	2

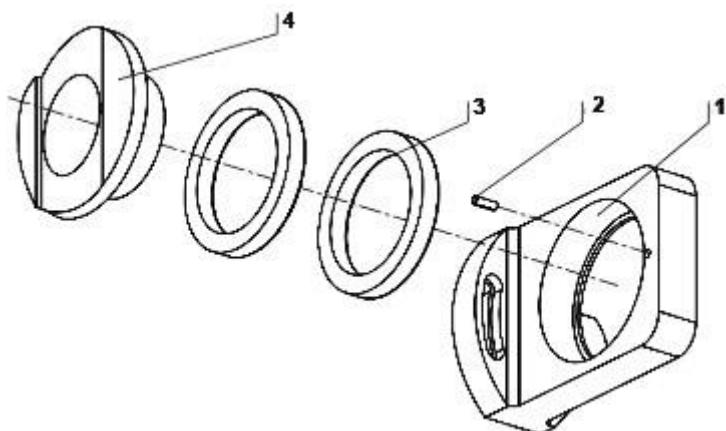
JDG-0332 Assembly Breakdown -6



JDG-0332 Parts List for Breakdown -6

Index	Part		Description	Size	Qty.
No.	No.				
1.....	JDG0332-221	Chuck .....	.....	.....	1
2.....	JDG0332-222	Lock Chuck.....	.....	.....	1
3.....	DGBB6807RS	Bearing .....	.....	6807RS.....	2
4.....	GB893186-47.....	Clip Spring for Hole.....	.....	47.....	1

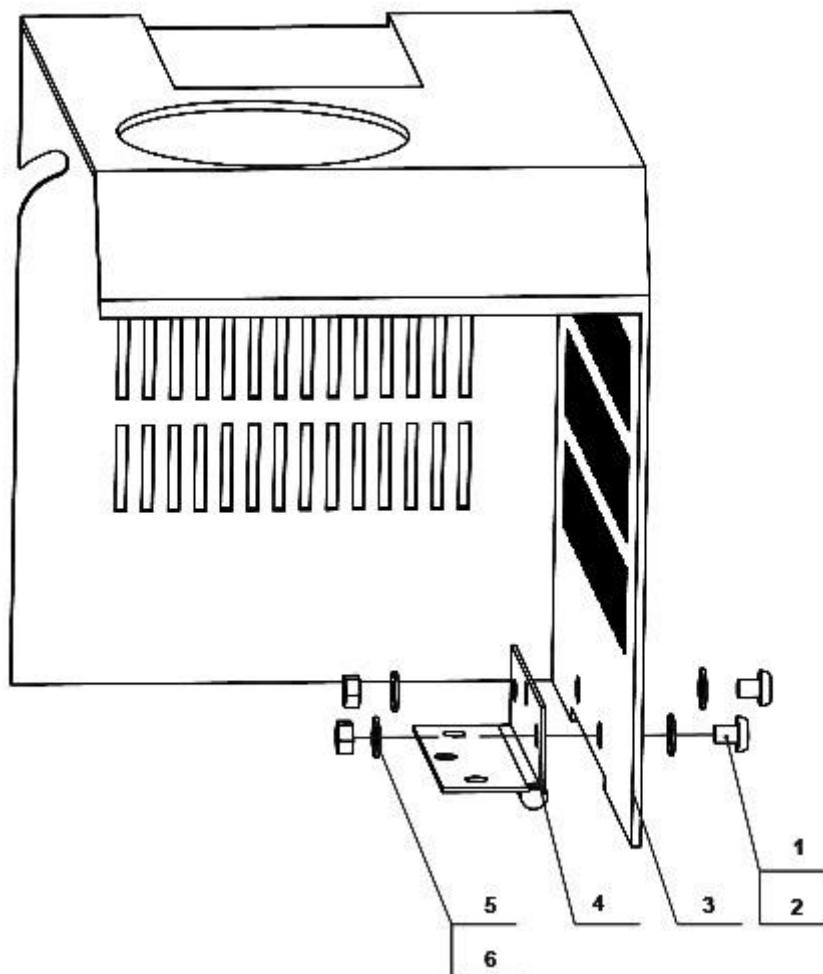
JDG-0332 Assembly Breakdown -7



JDG-0332 Parts List for Breakdown -7

Index	Part No.	Description	Size	Qty.
1.....	JDG0332-225	Grinding Base		1
2.....	GB879100-0412	SPRING PIN.....	.4x12	1
3.....	DGBB6812RS	Bearing	6812RS.....	2
4.....	JDG0332-228	Eccentric Sleeve.....		1

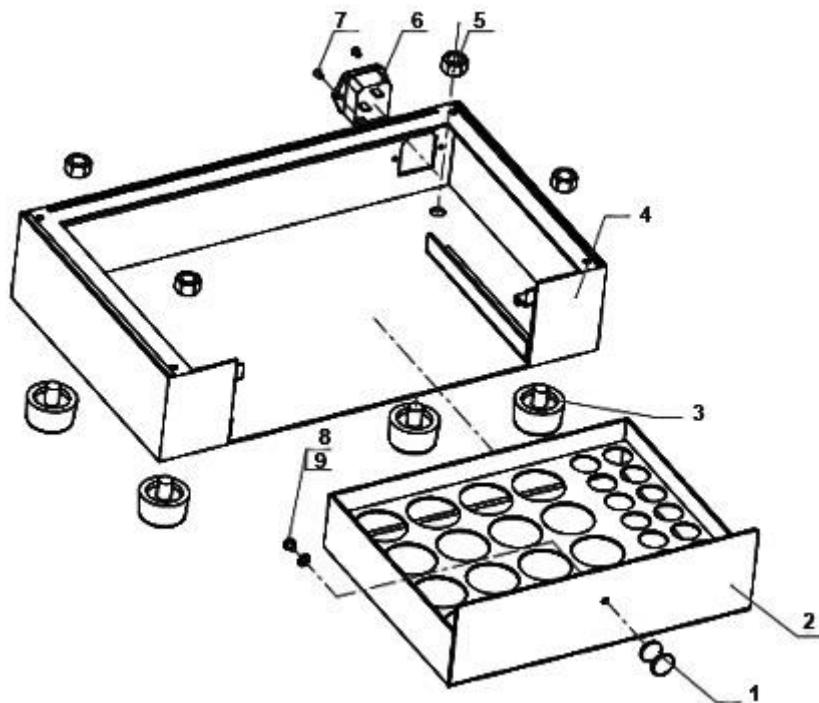
JDG-0332 Assembly Breakdown -8



JDG-0332 Parts List for Breakdown -8

Index No.	Part No.	Description	Size	Qty.
1.....	GB70215-0408.....	HEX-SKT-HD RD CAP BOLT	M4x8.....	2
2.....	GB9502-04.....	PLAIN WASHER .....	.4.....	2
3.....	JDG0332-303	Grinding Wheel Cover.....		1
4.....	JDG0332-304	Hinge		1
5.....	GB9502-04.....	PLAIN WASHER .....	.4.....	2
6.....	GB617000-04.....	HEX Nut	M4	2

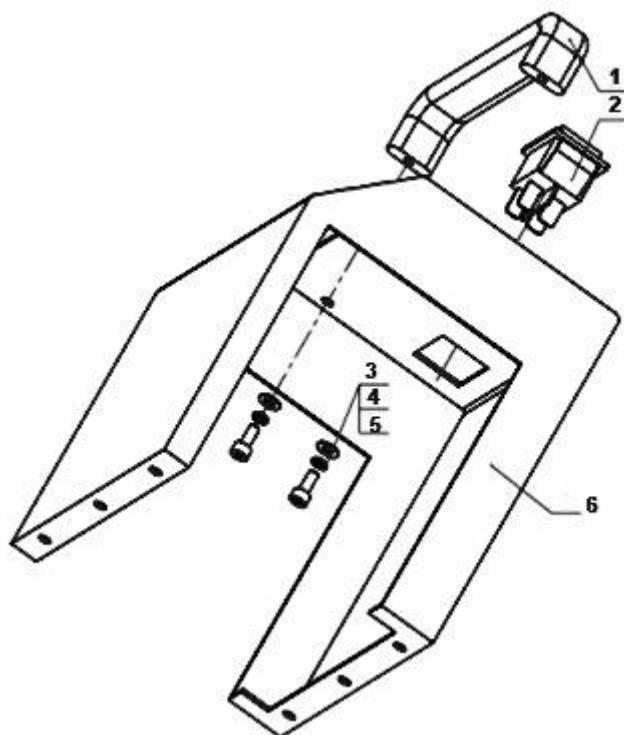
JDG-0332 Assembly Breakdown -9



JDG-0332 Parts List for Breakdown -9

Index No.	Part No.	Description	Size	Qty.
1	JDG0332-307	Drawer Handle		1
2	JDG0332-308	Drawer		1
3	JDG0332-309	Foot Pad		4
4	JDG0332-310	Bottom Shell		1
5	GB617000-10	HEX Nut	M10	4
6	JDG0332-312	Power Plug in Module		1
7	GB819116-0305	CROSS COUNTERSUNK FLAT HD BOLT	M3x5	2
8	GB70215-0408	HEX-SKT-HD RD CAP BOLT	M4x8	1
9	GB9502-04	PLAIN WASHER		4

JDG-0332 Assembly Breakdown -10



JDG-0332 Parts List for Breakdown -10

Index No.	Part No.	Part Description	Size	Qty.
1	JDG0332-316	Handle		1
2	JDG0332-317	Switch		1
3	GB9502-04	PLAIN WASHER	.4	2
4	GB9387-04	SPRING WASHER	.4	2
5	GB70108-0412	HEX-SKT-HD BOLT	M4x12	2
6	JDG0332-321	Main Shell		1

10.0 Wiring Diagrams

JDG-0332.....1~230V, PE, 50Hz

