



Operating Instructions and Parts Manual Metalworking Dust Collection Stand

Model JDCS-505





1.0 IMPORTANT SAFETY INSTRUCTIONS

When using an electrical appliance, basic precautions should always be followed, including the following:

READ ALL INSTRUCTIONS BEFORE USING THIS DUST COLLECTOR.

WARNING – To reduce the risk of fire, electric shock, or injury:

1. Read and understand entire owner's manual before attempting assembly or operation of this dust collector.
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 dust collection stand 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 dust collector, do not use until proper training and knowledge have been obtained.
5. Do not use this dust collection stand 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 wear approved safety glasses/face shield while using this dust collection stand. Everyday eyeglasses only have impact resistant lenses; they are not safety glasses.
7. Keep hair, loose clothing, fingers, and all parts of body away from openings and moving parts.
8. Wear hearing protection (plugs or muffs) during extended periods of operation.
9. Do not operate this machine while tired or under the influence of drugs, alcohol or any medication.
10. Make certain the switch is in the **OFF** position before connecting the machine to the power supply. Turn off all controls before unplugging.
11. Make certain the machine is properly grounded. Connect to a properly grounded outlet only. See Grounding instructions.
12. Make all machine adjustments or maintenance with the machine unplugged from the power source.
13. 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.
14. 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.
15. 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.
16. Provide for adequate space surrounding work area and non-glare, overhead lighting.
17. Keep the floor around the machine clean and free of scrap material, oil and grease.
18. Keep visitors a safe distance from the work area. **Keep children away.**
19. Make your workshop child proof with padlocks, master switches or by removing starter keys.
20. Give your work undivided attention. Looking around, carrying on a conversation and "horse-play" are careless acts that can result in serious injury.
21. The dust collection stand is intended for indoor use. To reduce the risk of electric shock, do not use outdoors or on wet surfaces.
22. Do not use to pick up anything that is burning or smoking, such as cigarettes, matches or hot ashes.
23. Do not use to pick up flammable or combustible liquids such as gasoline, or use in areas where they may be present.
24. Do not pull or carry by cord, use cord as a handle, close a door on cord, or pull cord around sharp edges or corners. Do not run dust collector over cord. Keep cord away from heated surfaces.
25. Do not use this dust collector with a damaged cord or plug. If the unit is not working as it should, has been dropped, damaged, left outdoors, or dropped into water, return it to a service center.
26. Do not unplug by pulling on cord. To unplug, grasp the plug, not the cord.
27. Do not use without dust bag and/or filters in place.

28. Do not handle plug or machine with wet hands.
29. Do not put any objects into the openings. Do not use with any opening blocked; keep free of dust, lint, hair, and anything that may reduce air flow.
30. Do not operate without hose connected to the inlet. Place cap on unused inlet port. Hazardous moving parts inside. Unplug before removing or connecting inlet or inlet guard.
31. Use recommended accessories; improper accessories may be hazardous.
32. Maintain tools with care. Follow instructions for lubricating and changing accessories.
33. Turn off machine and disconnect from power before cleaning. Use a brush or compressed air to remove chips or debris; do not use bare hands.
34. Do not leave the machine when it is plugged in. Unplug from outlet when not in use and before servicing.
35. Do not stand on the machine. Serious injury could occur if the machine tips over.
36. The dust collector is intended for industrial use only.
37. Never mix ferrous and non-ferrous metal dust in the same dust collector. If you are not familiar with the proper and safe usage of metal dust collection systems do not use until proper training has been obtained.

⚠ WARNING: This product can expose you to chemicals including lead and cadmium which are known to the State of California to cause cancer and birth defects or other reproductive harm, and phthalates which are known to the State of California to cause birth defects or other reproductive harm.

⚠ WARNING: Some dust, fumes and gases created by power sanding, sawing, grinding, drilling, welding and other construction activities contain chemicals known to the State of California to cause cancer and 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 dust masks that are specifically designed to filter out microscopic particles.

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



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



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

SAVE THESE INSTRUCTIONS

2.0 About this manual

This manual is provided by JET, covering the safe operation and maintenance procedures for a JET Model JDCS-505 Metalworking Dust Collection Stand. This manual contains instructions on installation, safety precautions, general operating procedures, maintenance instructions and parts breakdown. The dust collector has been designed and constructed to provide consistent, long-term operation if used in accordance with the instructions as set forth in this document.

If there are questions or comments, please contact your local supplier or JET.

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

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4.0 Specifications

Model number JDCS-505
Stock number 414800

Motor and electricals:

Motor type induction, capacitor run
Horsepower 1/2 HP (0.375 kW)
Phase single
Voltage 115V
Cycle 60Hz
Listed FLA (full load amps) 4.5 A
Starting amps 30A
Running amps (no load) 2.4A
Run capacitor 300VAC, 15 μ F C/us listed
On/off switch mushroom style with removable safety key
Motor speed 3450 RPM
Power cord 14 AWG (2.08mm², x 3C, 6 ft. (183cm), SJT, UL listed
Power plug 5-15P, 125V/20A installed
Recommended circuit size ¹ 10A
Sound emission ² 75 dB at 9.84 ft./3m

Performance:

Inlet diameter 5 in. (127 mm)
Inlet adaptor ports, number of 2
Inlet adaptor ports, diameter of 3in. (76.2 mm)
Filter efficiency 90% of 50 micron particles
Air Flow with filters installed 472 CFM (22.65 m³/hr)
Air Velocity 3465 FPM (17.6 m/s)
Static pressure loss (WC) 0.748 inH₂O (19 mmH₂O)
Maximum static pressure loss (WC) 2.44 inH₂O (62 mmH₂O)

Impeller:

Impeller diameter 6.69 in. (170 mm)
Impeller type radial fin
Impeller material steel

Filter:

Filter type 50 micron, non-woven heat-resistant cotton
Filter size (L x W x D) 13-1/2 x 6-7/8 x 2-1/2 in. (343 x 174.6 x 63.5 mm)
Filter surface area 0.25 m² (2.70 ft²)
Filter efficiency 90% of 50 micron particles

Collection drawer:

Capacity 2.29 gal. (3.79 L)
Dimensions 12.2 L x 8.66 W x 5.11 D in. (310 x 220 x 130 mm)
Material steel

Main materials:

Frame 16 ga. steel, 1.6mm thk.
Paint type/finish powder coat

Dimensions:

Footprint 15.5 L x 15.9 W in. (396 x 406 mm)
Top of stand from floor (approximate) 35 in. (889 mm)
Overall dimensions, shipping carton 18.1 L x 18.1 W x 39.8 H in. (460 x 460 x 1010 mm)
Overall dimensions, assembled 15.5 L x 15.9 W x 34.25 H in. (396 x 406 x 870 mm)

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 ports:

Main dust port, outside diameter..... 5 in. (127 mm)
Inlet adaptor ports, outside diameter..... two at 3 in. (76.2 mm)

Weights:

Net weight..... 92.4 lb. (41.9 kg)
Shipping weight..... 110 lb. (50 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.

4.1 Mounting hole dimensions

4.1.1 Dust collection stand

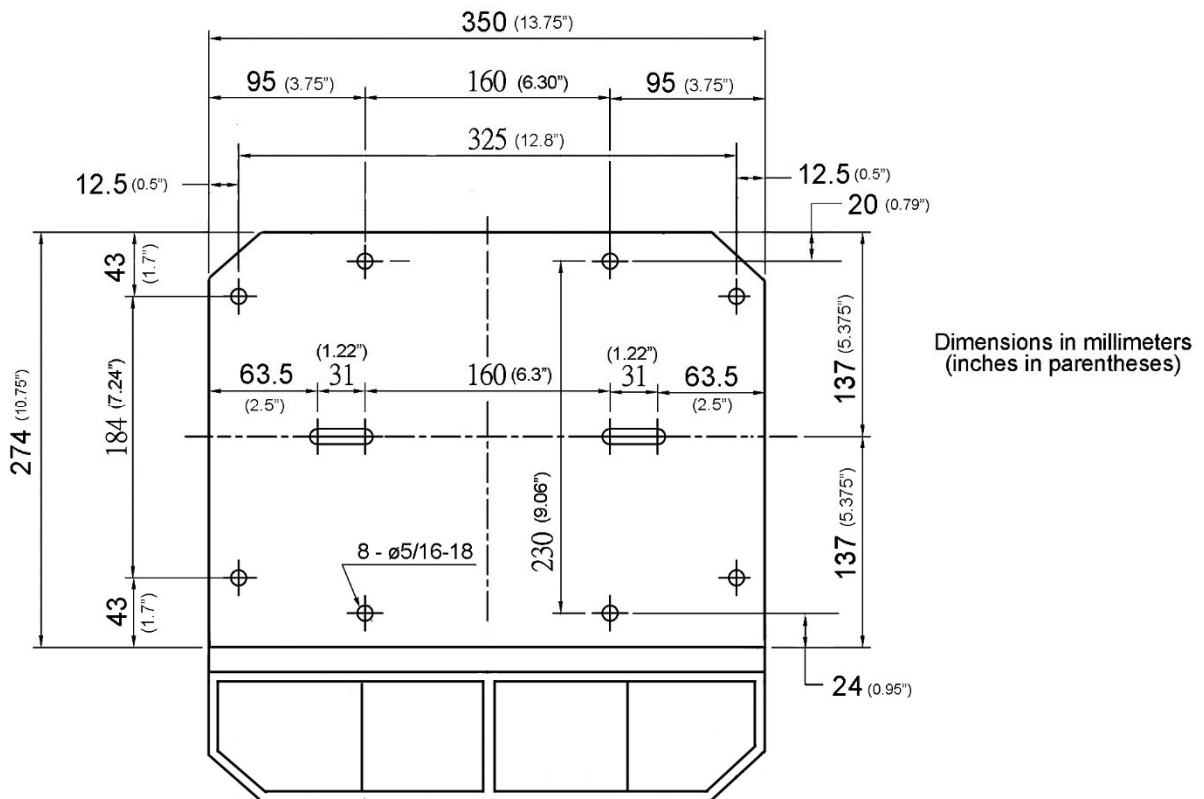


Figure 1: Hole pattern on dust collection stand

4.1.2 Adaptor plate (optional accessory #414830)

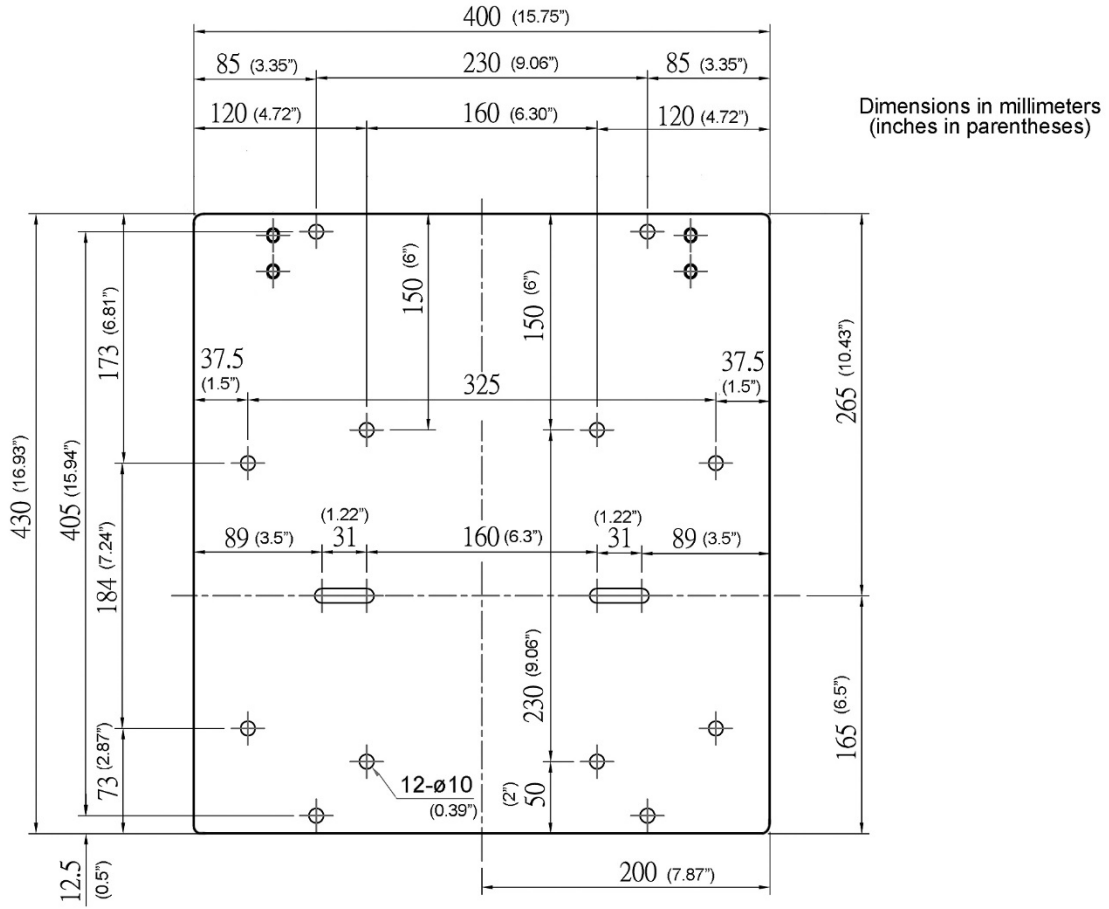


Figure 2: Hole pattern on adaptor plate (OPTIONAL ACCESSORY p/n 414830)

⚠WARNING

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

5.0 Setup and assembly

5.1 Unpacking and cleanup

Remove all contents from shipping carton, and remove accessories from drawer inside stand. Compare parts to the contents list in this manual. If shipping damage or any part shortages are identified, contact your distributor. Do not discard carton or packing material until dust collector is assembled and running satisfactorily.

5.2 Shipping contents

Carton contents (see Figure 2)

- 1 Grinder stand
- 2 Water trays (L and R)
- 1 Inlet adaptor assembly
- 4 Foot pads
- 1 Open end wrench 10/12 mm

5.3 Tools required for assembly:

10/12mm wrench – provided

5.4 Assembly

1. Install foot pads beneath corners of stand. Rotate pads to adjust height at each corner until stand is level.
2. Install inlet adaptor onto dust port and secure with screw (A, Figure 3).

⚠WARNING

Inlet adaptor should be installed before plugging in or operating dust collector.

3. Place water trays (left and right version) into the recesses on front of stand.

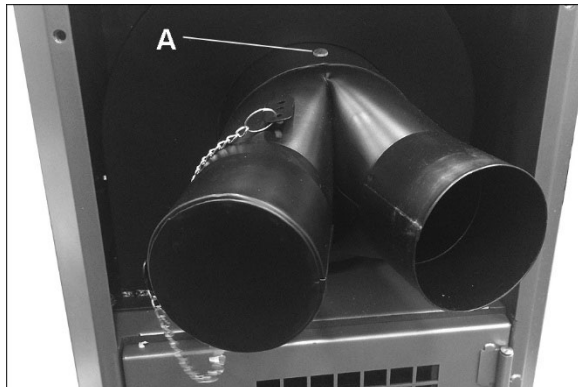


Figure 3

5.5 Mounting a tool

Position tool, such as grinder or sander (not provided) atop stand and secure with fasteners through the hole/slot pattern. Connect 3-inch dust hose (optional accessory) to inlet adaptor port and tool, and secure with hose clamps.

IMPORTANT: An inlet port that is not used during operation should be capped. An open port will diminish the efficiency of the dust collector and may present a safety hazard.

5.6 Adaptor plate (optional)

An adaptor plate kit (optional accessory, p/n #414830) is available, and will accept tools with different mounting hole patterns.

To install adaptor plate kit:

1. Install left and right supports (A, Figure 13) to stand with 1/4 in. screws.
2. Install adaptor plate (B) to supports with 1/4 in. screws, and secure to top of stand with 5/16 in. screws.
3. Mount tool to adaptor plate, and secure with appropriate fasteners.

Table 1 shows JET machines that will mount to either the stand or the adaptor plate.

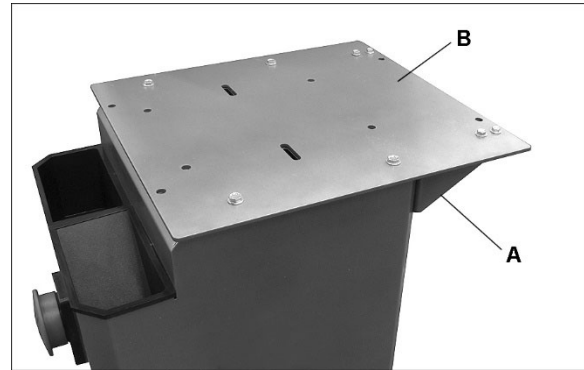


Figure 4

JET Tool	stock no.	mounts to:
IBG-8 Grinder*	578008	Stand
IBG-10 Grinder*	578010	Stand
JBG-6A Grinder	577101	Stand
JBG-8A Grinder	577102	Stand
JBG-10A Grinder	577103	Stand

*Connect IBG Bench grinders to stand using 414811 hose and 414825 reducer.

Table 1

6.0 Electrical connections

⚠WARNING All electrical connections must be done by a qualified electrician in compliance with all local codes and ordinances. Failure to comply may result in serious injury.

This appliance is rated more than 15 Amp. The dust collection stand comes with a plug designed for use on a circuit with a *grounded outlet* that looks like the one pictured in Figure 5.

IMPORTANT: Due to high starting current demands, it is not recommended to use this plug for belt style grinders.

Keep in mind that a circuit being used by other machines, tools, lights, heaters, etc., at the same time will add to the electrical load. A dedicated circuit to the dust collection stand will offer best results since dust collectors are generally used while other tools are running.

Before connecting to power source, be sure switch is in *off* position.

It is recommended that the dust collection stand be connected to a dedicated 20 amp circuit with circuit breaker or fuse. If connected to a circuit protected by fuses, use time delay fuse marked "D". **Local codes take precedence over recommendations.**

6.1 GROUNDING INSTRUCTIONS

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

⚠WARNING Improper connection of the equipment-grounding conductor can result in a risk of electric shock. Check with a qualified electrician or service person if you are in doubt as to whether the outlet is properly grounded. Do not modify the plug provided with the appliance – if it will not fit the outlet, have a proper outlet installed by a qualified electrician.

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.

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.

This appliance is rated more than 15 A and is for use on a circuit having a nominal rating of 120 V. It is factory-equipped with a specific electric cord and plug to permit connection to a proper electric circuit. Make sure that the appliance is connected to an outlet having the same configuration as the plug. No adaptor should be used with this appliance. If the appliance must be reconnected for use on a different type of electric circuit, the reconnection should be made by qualified service personnel.

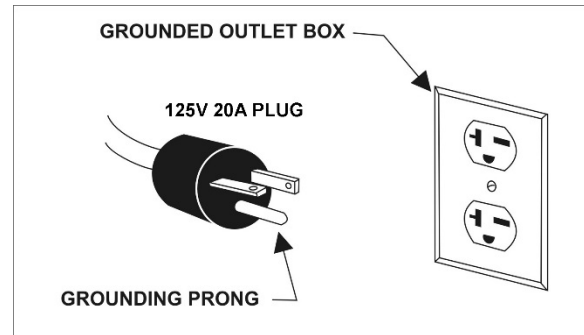


Figure 5

6.2 Extension cords

The use of extension cords is discouraged; try to position machines near the power source. If an extension cord is necessary, make sure it 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 2 shows correct size to use depending on cord length and nameplate ampere rating. If in doubt, use the next heavier gauge. The smaller the gauge number, the heavier the cord.

Amp Rating		Volts	Total length of cord in feet			
More Than	Not More Than	120	25	50	100	150
		240	50	100	200	300
		AWG				
0	6		18	16	16	14
6	10		18	16	14	12
10	12		16	16	14	12
12	16		14	12	Not Recommended	

Table 2: Extension cord recommendations

7.0 Operations

⚠WARNING Do not mix ferrous and non-ferrous metal dust in the same dust collector. Failure to comply will result in increased risk of fire.

7.1 Main switch

Pull out on switch (A, Figure 6) to start machine. Green power indicator lamp (B) will illuminate.

Push switch in to stop machine. (Power indicator lamp will turn off.)

7.2 Safety key

The safety key (C, Figure 6) prevents unauthorized use of machine. Remove key to deactivate switch. Key must be reinserted to start machine – press until it snaps back in.



Figure 6

7.3 Thermal relay

The dust collector has a thermal relay which shuts off the machine to prevent damage to the motor if there is an excessive current inrush or the motor is overloaded.

If the machine shuts off due to overload, push the stop switch. Allow machine to cool for a few moments, then press the breaker reset button located near the power cord entry on right side of machine. Pull out start button to restart machine.

10.0 Replacement Parts

Replacement parts are listed on the following pages. To order parts or reach our service department. Having the Model Number and Serial Number of your machine available when you call will allow us to serve you quickly and accurately.

Non-proprietary parts, such as fasteners, can be found at local hardware stores, or may be ordered from JET.

Some parts are shown for reference only, and may not be available individually.

8.0 User-maintenance

⚠WARNING Always disconnect power to the machine before performing maintenance. Failure to do this may result in serious personal injury.

Keep dust collection stand clean. Brush away chips and debris after use.

Periodically empty collection drawer and clean out interior of dust collector stand.

Replace filter after maximum 800 hours of use.

Inspect power cord; have damaged or worn cord replaced before operating dust collector.

Any other servicing should be performed by an authorized service representative.

9.0 Optional accessories

The following accessories are available for the JDCS-505 Dust Collection Stand, and are ordered separately.

414830 Adaptor Plate Kit

414815 Reducer, 3 in. to 1.5 in.

414820 Reducer, 3 in. to 2 in.

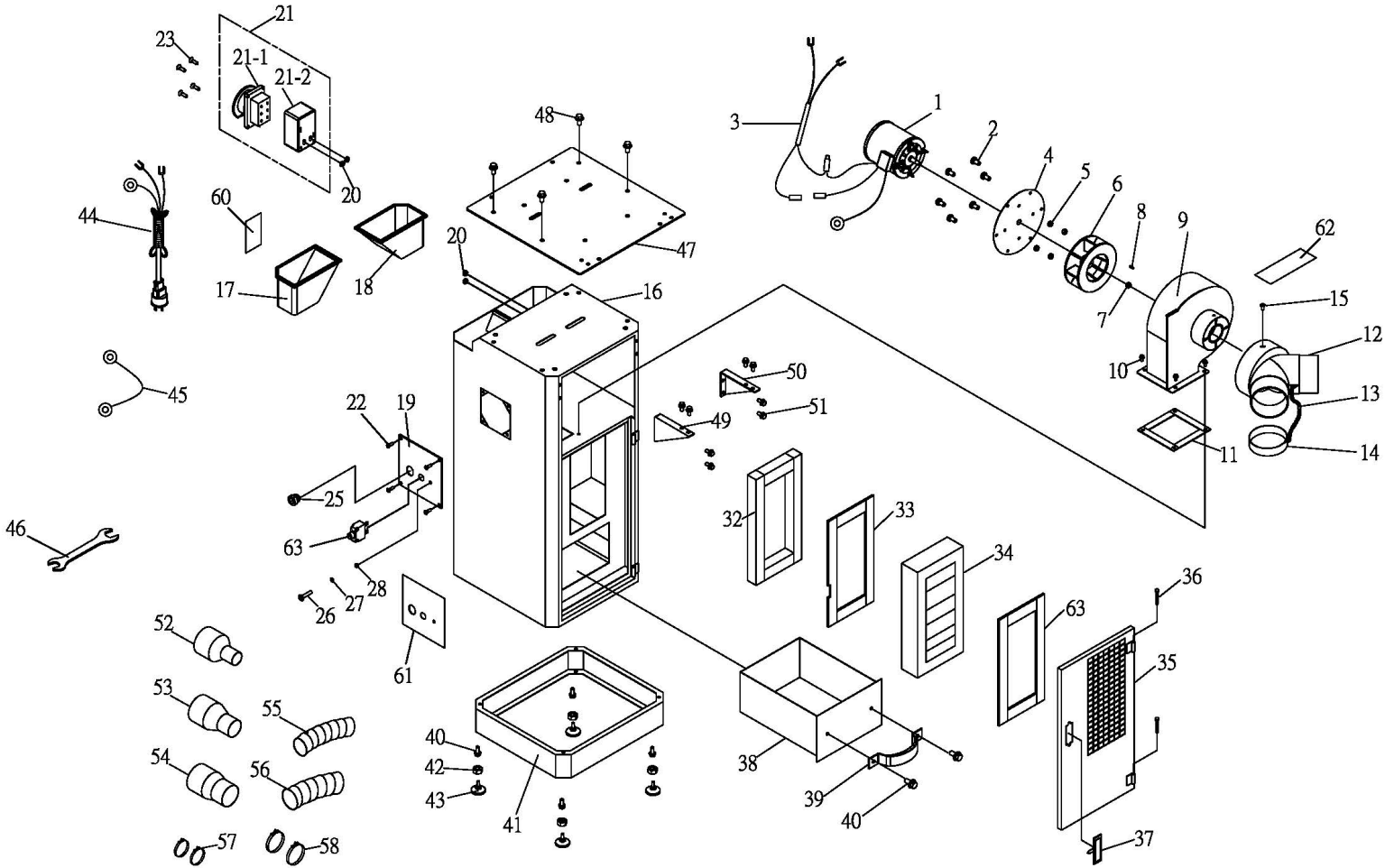
414825 Reducer, 3 in. to 2.5 in.

414811 0.6M Hose, Heat Resistant, \varnothing 2.5 x 24.4 in.

414812 0.6M Hose, Heat Resistant, \varnothing 2 x 24.4 in.

414813 0.6M Hose, Heat Resistant, \varnothing 3 x 24.4 in.

10.1.1 JDCS-505 Grinder Stand – Exploded View



10.1.2 JDCS-505 Grinder Stand – Parts List

Index No	Part No	Description	Size	Qty
1	JDCS505-01	Motor	1/2 HP	1
	JDCS505-RC	Run Capacitor	300VAC 15 μ F	1
2	F000299	Phillips Pan Head Screw	1/4 x 1/2 in.	6
3	JDCS505-03	Motor Cord		1
4	JDCS505-04	Motor Plate	\varnothing 215 x 3t mm	1
5	F001692	Lock Nut	M4	4
6	JDCS505-06	Impeller		1
7	F001698	Lock Nut	M10-1.5	1
8	EGH1880-1-A07	Key	4x4x20 mm	1
9	JDCS505-09	Impeller Housing		1
10	F012430	Hex Flange Screw	1/4 x 1/2 in.	4
11	JDCS505-11	Gasket		1
	JDCS505-12A	Inlet Adaptor Assembly (includes #12,13,14)		1
12	JDCS505-12	Inlet Adaptor	\varnothing 3 in.(x2)	1
13	JDCS505-13	Chain		1
14	414835	End Cap	\varnothing 3 in	1
15	F008319	Hex Cap Bolt	#10-24 x 3/8 in.	1
16	JDCS505-16	Main Body		1
17	JDCS505-17	Right Tray		1
18	JDCS505-18	Left Tray		1
19	JDCS505-19	Plate		1
20	JDCS505-20	Bushing		4
21	JDCS505-21	Switch Assembly (includes # 21-1, 21-2, 21-3)		1
21-1	JDCS505-21-1	Switch Base		1
21-2	JDCS505-21-2	Switch Cover		1
21-3	JDC-500022-SC	Safety Key (not shown)		1
22	F000652	Phillips Flange Head Screw	3/16 x 3/8 in.	2
23	JDCS505-23	Phillips Head Sheet Metal Screw	M3x12	4
25	JDCS505-25	Strain Relief	8R-1	1
26	F000233	Phillips Pan Head Screw	3/16 x 1/2 in.	1
27	F001977	Lock Washer External Tooth	#10-24 in.	1
28	F002973	Hex Nut	#10-24 in.	1
32	JDCS505-32	Foam Strip	1/2 in. W	1
33	JDCS505-33	Foam Strip	7/8 in. W	1
34	414840	Filter	340x172x60mm/50 μ	1
35	JDCS505-35	Door		1
36	JDCS505-36	Bolt		1
37	JDCS505-37	Door Latch		1
38	JDCS505-38	Drawer		1
39	JDCS505-39	Handle		1
40	F012439	Hex Flange Screw	5/16 x 1/2 in.	6
41	JDCS505-41	Base	450x450x1.6t	1
42	F002957	Hex Nut	3/8 in.	4
43	JDCS505-43	Foot Pad	3/8 x 2 in.	4
44	JDCS505-44N	Power Cord	5-50P / 2.08mm ²	1
45	JDCS505-45	Ground Wire		1
46	GH1340A-TBCP-16-04	Open-end Wrench	10/12 mm	1
59	JET-165	JET Logo with Adhesive (not shown)	165x68mm	1
60	LM000083	ID/Warning Label, JDCS-505		1
61	LM000084N	Caution Label		1
62	LM000085	Caution Label – Adaptor		1
63	JDCS505-63	Thermal Control Relay	10A	1

Optional parts:

..... 414830	Adaptor Plate Kit * (incl. #47 thru 51)	1
47	Adaptor Plate *	1
48 F012439	Hex Flange Screw * 5/16 x 1/2 in.	4
49 JDCS505-49.....	Left Support *	1
50 JDCS505-50.....	Right Support *	1
51 F012430	Hex Flange Screw * 1/4 x 1/2 in.	8
52 414815	Reducer *	3 to 1.5 in. 1
53 414820	Reducer *	3 to 2 in. 1
54 414825	Reducer *	3 to 2.5 in. 1
55 414812	0.6M Hose, Heat Resistant *	Ø2 x 24.4 in. 1
56 414813	0.6M Hose, Heat Resistant *	Ø3 x 24.4 in. 1
57 605417	Wire Hose Clamp *	Ø2 in. 2
58 JDCS505-58.....	Wire Hose Clamp *	Ø3 in. 2
59 414811	0.6M Hose, Heat Resistant * (not shown)	Ø2.5 x 24.4 in. 1

Parts with asterisk (*) are optional and ordered separately.

Some parts may be shown for reference only, and not available individually.

11.0 Electrical Connections for JDCS-505

