

Operating Instructions and Parts Manual 45-inch English Wheel

Model: WH-45T





1.0 IMPORTANT SAFETY INSTRUCTIONS

WARNING – To reduce risk of injury:

- Read and understand the entire owner's manual before attempting assembly or operation.
- 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.
- Replace warning labels if they become obscured or removed.
- 4. This English wheel 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 an English wheel, do not use until proper training and knowledge have been obtained.
- Do not use this English wheel 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.
- Always wear approved safety glasses/face shields while using this English wheel. Everyday eyeglasses only have impact resistant lenses; they are not safety glasses.
- Before operating this English wheel, remove tie, rings, watches and other jewelry, and roll sleeves up past the elbows. Remove all loose clothing and confine long hair. Nonslip footwear or anti-skid floor strips are recommended.
- 8. Use steel-toed footwear when handling metal workpieces.
- Do not operate this machine while tired or under the influence of drugs, alcohol or any medication.
- Remove adjusting keys and wrenches. Form a habit of checking to see that keys and adjusting wrenches are removed from the machine before using.
- 11. 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.

- 12. If possible, the English Wheel should be secured to the floor before use.
- 13. 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.
- 14. Provide for adequate space surrounding work area and non-glare, overhead lighting.
- 15. Keep the floor around the machine clean and free of scrap material, oil and grease.
- 16. Keep visitors a safe distance from the work area. **Keep children away.**
- 17. Make your workshop child proof with padlocks, master switches or by removing starter keys.
- 18. Give your work undivided attention. Looking around, carrying on a conversation and "horse-play" are careless acts that can result in serious injury.
- 19. Do not overreach. Keep proper footing and balance at all times.
- 20. Use the right tool at the correct feed rate. 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 more safely.
- 21. Use recommended accessories; improper accessories may be hazardous.
- 22. Maintain tools with care. Keep wheels clean for best performance. Follow instructions for lubricating and changing accessories.
- 23. Use leather gloves when handling steel work pieces.
- 24. Do not stand on the machine. Serious injury could occur if the machine tips over.
- 25. Remove loose items and unnecessary work pieces from the area before using the machine.

⚠ WARNING: This product can expose you to chemicals including lead which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to http://www.p65warnings.ca. gov.

⚠ 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. For more information go to http://www.p65warnings.ca.gov/ and http:// www.p65warnings.ca.gov/ wood.

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 injury or possibly even death.

SAVE THESE INSTRUCTIONS

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The specifications in this manual are given as general information and are not binding. JET reserves the right to effect, at any time and without prior notice, changes or alterations to parts, fittings, and accessory equipment deemed necessary for any reason whatsoever.

3.0 About this manual

This manual is provided by JET, covering the safe operation and maintenance procedures for the JET WH-45T English Wheel. This manual contains instructions on installation, safety precautions, general operating procedures, maintenance instructions and parts breakdown. This machine has been designed and constructed to provide consistent, long-term operation if used in accordance with instructions set forth in this manual. If there are any questions or comments, please contact either your local supplier or JET. JET can also be reached at our web site: www.jettools.com.

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

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

Register your product using the mail-in card provided, or register online: http://www.jettools.com/us/en/service-and-support/warranty/registration/

4.0 Specifications

| Model | |
|-----------------------------------------------------------------------------------------------------------------------|---------------|
| Number of lower wheels provided | |
| Construction: Frame | el 0 |
| Capacities: Mild Steel 16 Gauge (0.06") Aluminum 1/8' Copper 16 Gauge (0.05") | 3" |
| Dimensions: 45' Throat | 5" 3" H |
| Weights: Shipping | |

The specifications in this manual are given as general information and are not binding. JET reserves the right to effect, at any time and without prior notice, changes or alterations to parts, fittings, and accessory equipment deemed necessary for any reason whatsoever.

AWARNING Read and understand all assembly instructions before attempting assembly. Use an assistant when any heavy lifting is required. Failure to comply may cause serious injury.

5.0 Setup and assembly

5.1 Shipping contents

- 1 English wheel
- 10 Lower wheel assemblies
- 4 Upper wheel assemblies
- 1 Operating instructions and parts manual
- 1 Product registration card

5.2 Tools required for assembly

8mm hex key (provided) 21 and 24mm (or adjustable) wrench

5.3 Unpacking and cleanup

- Inspect contents for shipping damage. Report damage, if any, to your distributor. Do not discard shipping materials until machine is installed and running properly.
- 2. Compare contents of shipping carton with the contents list in this manual. Report shortages, if any, to your distributor.
- 3. Remove rust protectant from exposed surfaces, such as shafts and post, with a clean rag and a cleaner/degreaser or kerosene. Apply a light coat of oil on these surfaces to inhibit rust. Do not use gasoline, acetone, or lacquer thinner as these will damage painted surfaces. Do not use an abrasive pad, as it may scratch finished surfaces.

5.4 Location

Locate the machine on a solid, level floor, preferably concrete. Area should have good overhead lighting and ventilation, with enough room for loading and offloading of stock and general maintenance. Although the English Wheel is mobile it is recommended that, once positioned, it be secured to floor using lag screws (not provided) or similar means through provided holes in base.

5.5 **Mobility**

Retractable casters beneath main column and support legs allow machine to be moved by one person. Rotate the square head bolts (Figure 5-1) with a wrench to lower or raise casters.

NOTE: Always retract casters before operating machine.

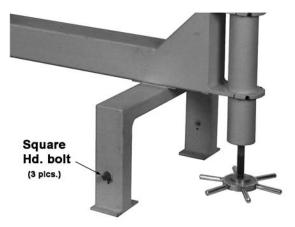


Figure 5-1

6.0 Adjustments

6.1 Installing wheels

The JET English Wheel is provided with 4 upper wheels and 10 lower wheels. Their distinct profiles are shown in *sect.* 13.0. Wipe off any excess oil residue from wheels before operating.

6.1.1 Upper wheel

- 1. Rotate position block (A, Figure 6-1) to release shaft.
- Securely hold upper wheel (B) with one hand, and slide out upper wheel shaft (C).
 Set upper wheel in storage bracket on frame.
- 3. Reverse above procedure to install new upper wheel. Make sure position block (A) is re-engaged to secure shaft.

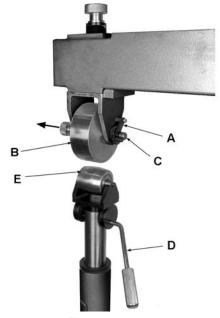


Figure 6-1

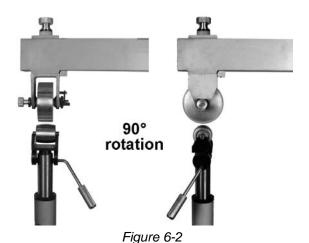
6.1.2 Lower wheel

- Release cam lever (D, Figure 6-1) and remove lower wheel (E). If needed, use adjusting wheel (see F, Figure 8-1) to lower post further for additional clearance.
- Position new wheel in groove and engage cam lever.
- 3. Raise lower wheel assembly using adjusting wheel (F, Figure 8-1).

6.2 Wheel orientation

Upper and lower wheel housings can be rotated 90-degrees to accommodate different sizes of material, and prevent material from contacting machine frame while being worked. See Figure 6-2.

Remove lower wheel to provide clearance for the following steps.



6.2.1 Lower wheel positioning

- 1. Release cam lever (D, Figure 6-3).
- 2. Raise lower wheel housing until knurled screw (G₁) reaches top of slot, as shown.
- Turn lower wheel housing until knurled screw enters opposite slot, and push down until knurled screw hits bottom of opposite slot (G₂).

6.2.2 Upper wheel positioning

- Turn adjustment knob (H, Figure 6-4) counterclockwise until upper wheel housing (J) clears frame block (K).
- 2. Turn upper wheel housing 90-degrees, and raise it by turning adjustment knob (H) clockwise until housing is properly seated.
- 3. Install lower wheel and bring lower wheel assembly into working position.

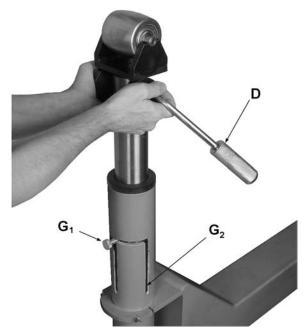
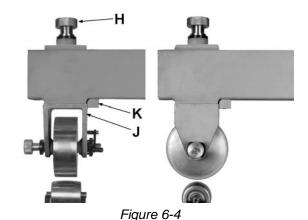


Figure 6-3



6.3 Wheel alignment

If wheels are not centered with one another, alignment can be made as follows.

- 1. Loosen four set screws (L, Figure 6-5).
- Turn adjusting nut (M) outward (counterclockwise) in small incremental steps, and the opposite adjusting nut inward by the same amount, until upper wheel is centered over lower wheel.
- 3. Tighten four setscrews (L).

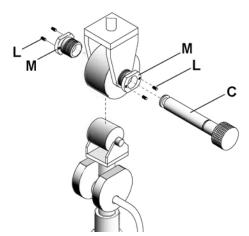


Figure 6-5

7.0 **Operation**

Mear work gloves when handling sheet metal. Keep hands away from wheel contact area during operation.

- Deburr any sharp edges in work material, and ensure that material and wheels are clean and free of obstructions. Make sure material is within working capacity of machine. See sect. 4.0.
- 2. Make sure upper wheel housing is secure against frame, and both wheels are rotated to proper orientation for work piece.
- 3. Tighten cam lever (D, Figure 7-1) to bring lower wheel into working position.

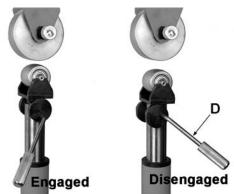


Figure 7-1

- 4. Rest material on lower wheel, and use adjusting wheel (F, Figure 8-1) to bring material into contact with upper wheel. Note: Do not use excessive pressure; use lightest pressure necessary to obtain desired result.
- 5. Move material back and forth to shape it.
- Rotate adjusting wheel (F, Figure 8-1) as needed during operation to maintain proper pressure.

 To remove and re-insert same-gauge material, simply engage or disengage cam lever.

8.0 User-maintenance

8.1 Lubrication

Refer to Figure 8-1.

Periodically apply grease to contact surfaces of upper and lower wheel housings (G1), cams (G2), and adjusting wheel leadscrew (G3).

Periodically apply a light machine oil to upper wheel shaft (O1), lower wheel post (O2), adjusting nut (O3), and position block pivot area (O4). Also apply light coat of oil to wheels before storing them, to inhibit rust.

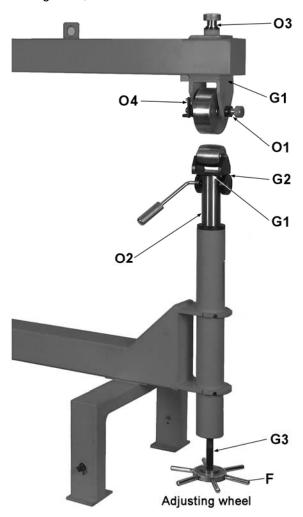


Figure 8-1

8.2 Additional servicing

Any additional servicing should be performed by authorized service personnel.

9.0 Troubleshooting WH-45T English Wheel

Table 1

| Trouble | Probable Cause | Remedy | | |
|-------------------------------------------------------------------|-----------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|--|--|
| | Pressing workpiece too lightly. | Raise lower wheel for better contact. | | |
| Material not being shaped by wheels. | Improper wheel selection. | Use proper wheel combination. Make sure lower wheel has appropriate crown. | | |
| | Sheet metal too thick. | Select material within machine capacity. | | |
| Roll marks or marring of material. | Pressure too tight against workpiece. | Use minimal pressure of wheels against workpiece. | | |
| Upper wheel housing does not seat properly, or shifts during use. | Wheel housing not straight with frame block. | Adjust housing while tightening knob, until housing clears block and seats properly against frame. | | |
| Material has waves instead of smooth curve. | Material unevenly stretched, not being moved properly through wheels. | Feed material evenly back and forth in parallel motions, do not zigzag across workpiece. | | |
| Edge of material uneven or stretched. | Edges of material being run through wheels. | Avoid moving edge of material through wheels. | | |
| Improper crown being formed in material. | Too much crown: Contact surface on lower wheel is too small. | Use different lower wheel with larger flat surface. | | |
| | Not enough crown: Contact surface on lower wheel is too large. | Use different lower wheel with smaller flat surface. | | |
| Cam lever works | Parts are binding. | Lubricate cam/housing contact areas. | | |
| improperly or feels loose. | Set screws loose. | Tighten set screws. Make sure they align with flats on cam lever shaft. | | |

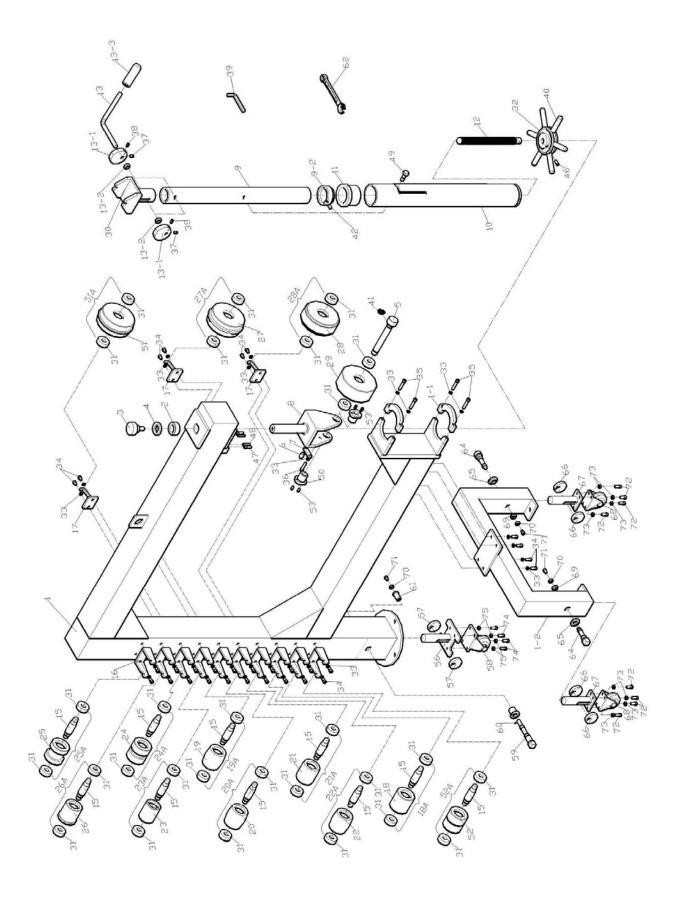
Table 1

10.0 Replacement Parts

Replacement parts are listed on the following pages. To order parts or reach our service department, call 1-800-274-6848 Monday through Friday, 8:00 a.m. to 5:00 p.m. CST. 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.

10.1 WH-45T English Wheel – Exploded View



10.2 WH-45T English Wheel – Parts List

| Index No. | Part No. | Description | Size | Qty |
|-----------|------------|---------------------------------------------|------------|-----|
| | | .Frame | | |
| | | .Post Clamp | | |
| | | .Frame Support Stand | | |
| | | .Collar | | |
| | | .Adjusting Lock Knob | | |
| | | .Washer | | |
| | | .Upper Wheel Shaft | | |
| | | .Short Pin | | |
| | | .Position Block | | |
| | | .Upper Wheel Housing | | |
| | | .Inner Tube Adjusting Post | | |
| | | .Collar | | |
| | | .Outer Post | | |
| | | .Flange Bushing | | |
| | | .Lead Screw | | |
| | | .Lifting Lever | | |
| | | .Cam | | |
| | | .Spacer | | |
| | | .Lifting Lever Handle | | |
| | | .Lower Wheel Shaft | | |
| | | .Lower Wheel Storage Bracket | | |
| 17 | .WH45-17 | .Upper Wheel Storage Bracket | | 3 |
| | | .Lower Wheel 1 Assembly (Index #18, 15, 31) | | |
| | | .Lower Wheel 1 | | |
| | | .Lower Wheel 9 Assembly (Index #19, 15, 31) | | |
| | | .Lower Wheel 9 | | |
| | | .Lower Wheel 7 Assembly (Index #20, 15, 31) | | |
| | | .Lower Wheel 7 | | |
| | | .Lower Wheel 6 Assembly (Index #21, 15, 31) | | |
| | | .Lower Wheel 6 | | |
| | | .Lower Wheel 8 Assembly (Index #22, 15, 31) | | |
| | | .Lower Wheel 8 | | |
| | | .Lower Wheel 4 Assembly (Index #23, 15, 31) | | |
| | | .Lower Wheel 4 | | |
| | | .Lower Wheel 3 Assembly (Index #24, 15, 31) | | |
| | | .Lower Wheel 3 | | |
| 25A | .WH45-25A | .Lower Wheel 2 Assembly (Index #25, 15, 31) | . 1-29/64" | 1 |
| | | .Lower Wheel 2 | | |
| | | .Lower Wheel 5 Assembly (Index #26, 15, 31) | | |
| 26 | .WH45-26 | Lower Wheel 5 | | 1 |
| 27A | .WH45-27A | .Upper Wheel 10 Assembly (Index #27, 31) | . 3/4" | 1 |
| 27 | .WH45-27 | .Upper Wheel 10 | | 1 |
| 28A | .WH45-28A | .Upper Wheel 11 Assembly (Index #28, 31) | . 1-29/64" | 1 |
| 28 | .WH45-28 | .Upper Wheel 11 | | 1 |
| | | .Upper Wheel 12 Assembly (Index #29, 31) | | |
| | | .Upper Wheel 12 | | |
| | | .Lower Wheel Housing | | |
| 31 | .BB-6204ZZ | .Ball Bearing | .6204ZZ | 28 |
| 32 | .WH45-32 | .Adjusting Wheel | | 1 |
| | | .Lock Washer | | |
| | | .Socket Head Cap Screw | | |
| | | .Socket Head Cap Screw | | |
| | | .Socket Head Cap Screw | | |
| | | .Socket Set Screw | | |
| | | Socket Set Screw | | |
| | | .Hex Wrench | | |
| 40 | .WH45-40 | .Wheel Handle | | 6 |

| Index No. Part No. | Description | Size | Qty |
|--------------------|----------------------------------------------|------------|-----|
| 41WH45-41 | Snap Ring | Ø20 | 1 |
| | Socket Set Screw | | |
| 46TS-1523021 | Socket Set Screw | M6x8 | 1 |
| 47TS-1503071 | Socket Head Cap Screw | M6x30 | 2 |
| 48WH45-48 | Spring Pin | Ø5x30 | 2 |
| 49WH45-49 | Adjusting Lock Bolt | | 1 |
| 50WH45-50 | Adjusting Nut | | 2 |
| 51A WH45-51A | Upper Wheel 13 Assembly (Index #51, 31) | 1/4" | 1 |
| 51WH45-51 | Upper Wheel 13 | | 1 |
| 52AWH45-52A | Lower Wheel 14 Assembly (Index #52, 15, 31). | 1/4" | 1 |
| 52WH45-52 | Lower Wheel 14 | | 1 |
| | Socket Set Screw | | |
| | Rear Caster Post | | |
| | Rear Eccentric Wheel | | |
| | Rear Caster | | |
| | Rear Eccentric Wheel Shaft | | |
| | Rear Bushing Shaft | | |
| | Bushing | | |
| | Open End Wrench | | |
| | Front Eccentric Wheel Shaft | | |
| | Front Bushing Shaft | | |
| | Front Eccentric Wheel | | |
| | Front Caster Post | | |
| | Front Caster | | |
| | Shaft Bushing | | |
| | Snap Ring | | |
| | Socket Head Cap Screw | | |
| | Hex Cap Screw | | |
| | Flat Washer | | |
| | Socket Head Cap Screw | | |
| | Flat Washer | | |
| | ID Label, WH-45T (not shown) | | |
| JET-165 | JET Logo (not shown) | 165 x 68mm | 1 |

Note: Upper and Lower Wheels can only be purchased as an assembly.

11.0 Wheel Chart

| Index No. | Wheel | Description | Spec | Index No. | Wheel | Description | Spec |
|-----------|-------|---------------|-------------|-----------|-------|----------------|-----------|
| 18 | | Lower wheel 1 | 1/8" Edge | 25 | | Lower wheel 2 | 1-29/64" |
| 19 | | Lower wheel 9 | 1/2" Ridged | 26 | | Lower wheel 5 | 2-5/8" |
| 20 | | Lower wheel 7 | 1/8" Ridged | 52 | | Lower wheel 14 | 1/4" |
| 21 | | Lower wheel 6 | 1/4" | 27 | | Upper wheel 10 | 3/4" |
| 22 | | Lower wheel 8 | 3/4" | 28 | | Upper wheel 11 | 1-29/64" |
| 23 | | Lower wheel 4 | 2-1/4" | 51 | | Upper wheel 13 | 1/4" |
| 24 | | Lower wheel 3 | 3/4" | 29 | | Upper wheel 12 | 1/8" Edge |

Table 2

To purchase a particular wheel, select the *Index No.* from the column to the left of the wheel and use that number to determine the *Part No.* in the Parts List (preceding pages). Note that the wheel is sold as an *assembly only* that includes the wheel, ball bearings and shaft (lower wheel only). For example, when ordering Lower Wheel 1 (Index 18), order Part Number WH45-18A (Index 18A) from the Parts List in sect. 12.2.

12.0 Warranty and Service

JET warrants every product it sells against manufacturers' defects. If one of our tools needs service or repair, please contact Technical Service by calling 1-800-274-6846, 8AM to 5PM CST, Monday through Friday.

Warranty Period

The general warranty lasts for the time period specified in the literature included with your product or on the official JET branded website.

- JET products carry a limited warranty which varies in duration based upon the product. (See chart below)
- Accessories carry a limited warranty of one year from the date of receipt.
- Consumable items are defined as expendable parts or accessories expected to become inoperable within a reasonable amount of use and are covered by a 90 day limited warranty against manufacturer's defects.

Who is Covered

This warranty covers only the initial purchaser of the product from the date of delivery.

What is Covered

This warranty covers any defects in workmanship or materials subject to the limitations stated below. This warranty does not cover failures due directly or indirectly to misuse, abuse, negligence or accidents, normal wear-and-tear, improper repair, alterations or lack of maintenance. JET woodworking machinery is designed to be used with Wood. Use of these machines in the processing of metal, plastics, or other materials outside recommended guidelines may void the warranty. The exceptions are acrylics and other natural items that are made specifically for wood turning.

Warranty Limitations

Woodworking products with a Five Year Warranty that are used for commercial or industrial purposes default to a Two Year Warranty. Please contact Technical Service at 1-800-274-6846 for further clarification.

How to Get Technical Support

Please contact Technical Service by calling 1-800-274-6846. Please note that you will be asked to provide proof of initial purchase when calling. If a product requires further inspection, the Technical Service representative will explain and assist with any additional action needed. JET has Authorized Service Centers located throughout the United States. For the name of an Authorized Service Center in your area call 1-800-274-6846 or use the Service Center Locator on the JET website.

More Information

JET is constantly adding new products. For complete, up-to-date product information, check with your local distributor or visit the JET website.

How State Law Applies

This warranty gives you specific legal rights, subject to applicable state law.

Limitations on This Warranty

JET LIMITS ALL IMPLIED WARRANTIES TO THE PERIOD OF THE LIMITED WARRANTY FOR EACH PRODUCT. EXCEPT AS STATED HEREIN, ANY IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE EXCLUDED. SOME STATES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS, SO THE ABOVE LIMITATION MAY NOT APPLY TO YOU. JET SHALL IN NO EVENT BE LIABLE FOR DEATH, INJURIES TO PERSONS OR PROPERTY, OR FOR INCIDENTAL, CONTINGENT, SPECIAL, OR CONSEQUENTIAL DAMAGES ARISING FROM THE USE OF OUR PRODUCTS. SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATION OR EXCLUSION MAY NOT APPLY TO YOU.

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Product Listing with Warranty Period

90 Days - Parts; Consumable items

1 Year - Motors; Machine Accessories

2 Year – Metalworking Machinery; Electric Hoists, Electric Hoist Accessories; Woodworking Machinery used for industrial or commercial purposes

5 Year - Woodworking Machinery

Limited Lifetime – JET Parallel clamps; VOLT Series Electric Hoists; Manual Hoists; Manual Hoist Accessories; Shop Tools; Warehouse & Dock products; Hand Tools; Air Tools

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