

KOZYVACU®

Vacuum Pump

User Guide

Model: TA 350
TA 350G
TA 450
TA 500
TA 500G
TA 800
TA 1200



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SAFETY PRECAUTIONS



WARNING! To prevent personal injury,

Wear goggles when working with refrigerants. Contact with refrigerants may cause injury.



Incorrect use or connections may cause electrical shock hazards. Read and follow the instructions carefully. Take precautions to avoid electrical shock hazards. Confirm that all associated devices are grounded correctly before energizing circuits.

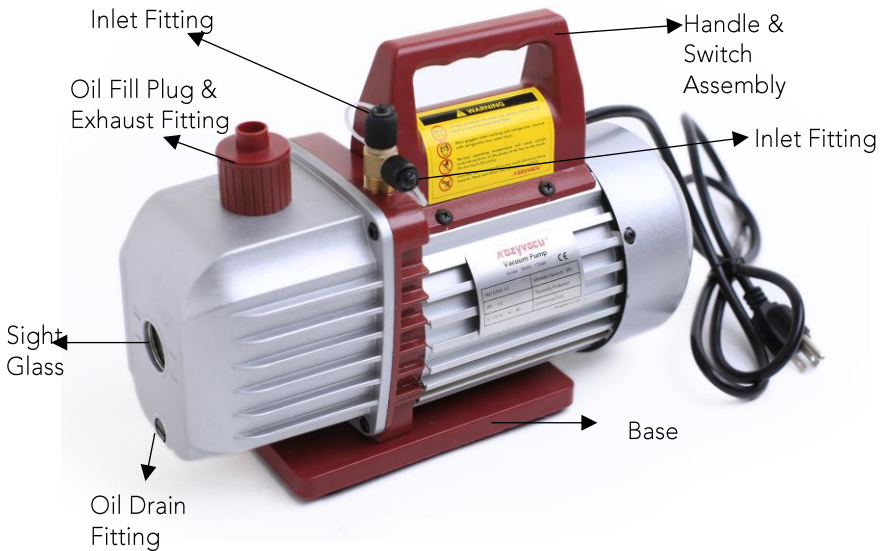


Normal operating temperature will cause certain external portions of the pump to be hot to the touch. Do not touch the pump housing or motor during operation.



Kozyvacu[®] High Performance Vacuum Pumps

	<p>Congratulations on purchasing one of Kozyvacu[®] top quality vacuum pumps. Your pump has been engineered for air conditioning, refrigeration service, vacuum packaging, and wine vacuum sealing,</p> <p>You'll appreciate these key features . . .</p>
High Vacuum Rating	A rotary vane design provides powerful, yet quiet, high vacuum capability and ensures moisture removal. Meanwhile, the high pumping capacity ensures reduced evacuation time
Sure-Grip Handle	The one-piece, molded ABS handle makes the product easy to carry to and from job sites. Additionally, the handle stays cool to the touch during operation.
Compact Design	Aluminum housing and rotary vanes keep pump weight low, and make the pump easy to carry.
Thermally Protected	The Motor is thermally protected to ensure reliability.
Built with top quality Material	The product material is well selected and manufactured, as the aluminum oil-tank and motor protection shield are both lightweight.



Attention: The picture above only represents Kozyvacu TA450 model– other models will have slight different exterior design.

TA800 and TA1200 have a 3/8" SAE connector that is not shown up in the above picture.

Some models of Kozyvacu with vacuum gauge is different with the above picture. The vacuum gauge range is from 0 to 30 inches Hg.


Before using your vacuum pump . . .

Note about Motor Voltage Connections:

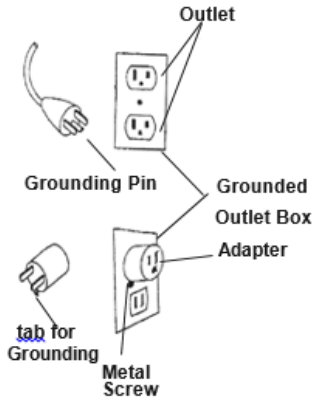
In all cases, motors are designed for operating with voltages above or below 10% of the normal rating (see *Pump Specifications*). Single voltage motors are supplied fully connected and ready to operate.

1. Confirm that the voltage and frequency at the outlet match the specifications on the pump motor decal.
2. Confirm the ON-OFF switch is in the OFF position before you plug the pump into an inlet fitting.
3. Turn motor switch on the pump before adding pump oil to see if the motor is working properly. If the motor gets stuck, please stop here and return to seller. Shut down if you can confirm that the motor is running smoothly for a few seconds.
4. **The pump is shipped without oil in the reservoir.** Remove the EXHAUST FITTING, and add oil until oil appears in the middle between MAX and MIN in the sight glass. For oil capacities, refer to the *specifications* in this manual.
5. Verify the inlet fitting is capped.
6. Turn the motor switch to ON.
7. After the pump has run for approximately one minute, check the sight glass for the correct oil level — oil should be even with the sight glass's OIL LEVEL line. With the pump off, add oil if necessary.

***Note:** While the pump is running, the oil level should be even with the line on the sight glass. Underfilling the pump will result in poor vacuum performance; overfilling can result in oil blowing from the exhaust.*

<p>Oil Change Procedure</p>	<ol style="list-style-type: none"> 1. Run the pump for approximately one minute to warm the oil. 2. Drain contaminated oil into a suitable container, and dispose of it according to local, state, and federal regulations. 3. When the flow of oil has stopped, tilt the pump forward to drain residual oil. 4. Remove the EXHAUSTING FITTING, and fill the reservoir with new vacuum pump oil until the oil appears at middle of MAX and MIN of the sight glass.
<p>Cleaning Pump</p>	<p>Clean the pump with soap and water only. Do not use commercial cleaners that contain degreasing agents.</p> <p>This product must be grounded. In the event of an electrical short, grounding reduces the risk of electrical shock by providing an escape wire for the electric current. This product is equipped with a power cord with a grounding wire and appropriate grounding plug. The outlet used must be correctly installed and grounded according to local codes and ordinances.</p> <p> WARNING: Incorrect installation of the grounding plug will result in electrical shock. When repair or replacement of the power cord or plug is required, do NOT connect the grounding wire to either flat blade terminal. The wire with green</p>

	insulation (with or without yellow stripes) is the grounding wire.
Grounding Instructions	<p>Consult a qualified electrician when grounding instructions are not completely understood, or when in doubt to whether or not the product is correctly grounded. Do not modify the plug provided; if the plug does not fit the outlet, have an appropriate outlet installed by a qualified electrician.</p> <p>All models are for use on a normal 120V circuit. A temporary adapter may be used to connect this plug to a 2-pole receptacle when a correctly grounded outlet is not available. The temporary adapter should only be used until a correctly grounded outlet is installed. The green rigid ear, lug, or similar part extending from the adapter must be connected to a permanent ground, such as a correctly grounded outlet box cover. Whenever the adapter is used, it must be held in place by a metal screw.</p>



**Extension
Cords**

Use only a 3-wire extension cord that has a 3-blade grounding plug and a 3-slot receptacle that accepts the plug on the product. Verify the extension cord is not damaged. When using an extension cord, use one that is heavy enough to carry the current the product draws. For lengths less than 25 ft., use 18 AWG extension cords. An undersized cord may result in a drop in line voltage, loss of power, or overheating.

Your pump is now ready to evacuate air conditioning and refrigeration systems. Follow normal service procedures and the A/C-R manufacturer's instructions for connections to the system.

CAUTION: Before connecting your vacuum pump to an A/C-R system, remove refrigerant from the system in an accepted manner. Damage to the pump may occur if evacuation is started while the system is under high pressure. Kozyvacu® recommends the use of its Refrigerant Recovery and Recycling equipment.

To shut down the pump after use . . .

To help prolong pump life and promote easy starting, follow these procedures for shutdown:

1. Close the manifold valve between the pump and the system. If you are not using the pump for AC refrigerant changing, it is **highly recommended** to add a valve between the pump and your vacuum chamber you want to evacuate.
2. Shutdown power switch and unplug power cable.
3. Remove the hose from the pump inlet.
4. Cap the inlet fitting to prevent any contamination or loose particles from entering the port.

To maintain your high vacuum pump . . .

Troubleshooting Guide

	<p>Your kozyvacu[®] vacumm pump has been designed for dependable use and long life. However, if something does go wrong, the following guide will help you get the pump back into service as quickly as possible.</p>
Failure To Start	<p>Check line voltage. Kozyvacu[®] vacuum pumps are designed to start at $\pm 10\%$ line voltage (loaded) at 41° F (5° C). At extremes, however, switching between the start and run windings may occur.</p>
Oil Leakage	<ol style="list-style-type: none">1. Verify the oil is not a residual accumulation from spillage, etc.2. If leakage exists, the module cover gasket or the shaft seal may need to be replaced. If leakage exists in the area of the oil drain plug, you may need to reseal the plug using a commercial pipe thread sealer.3. Check if there is a crack in the pump shell in the oil reservoir. If the oil is leaking from the crack, usually it happens after transportation.
Failure to Pull A Good	<ol style="list-style-type: none">1. Confirm the vacuum gauge and all connections are in good condition and leak-free. You can confirm leakage by monitoring the vacuum with a thermistor gauge while applying vacuum pump oil at connections or

<p>Vacuum</p>	<p>suspected leak points. The vacuum will improve briefly while the oil is sealing the leak.</p> <ol style="list-style-type: none"> 2. Verify the pump oil is clean. A badly contaminated pump may require several oil flushes. See <i>OIL CHANGE PROCEDURE</i>. Note: Use only high vacuum pump oil such as Kozyvacu® Premium High Vacuum Pump Oil. Other oils will prevent pull-down to a deep vacuum. 3. Verify the oil is at the correct level. For maximum pump operation, the oil must be in the middle of MAX and MIN line on the sight glass when the pump is running. See <i>OIL CHANGE PROCEDURE</i>. Do not overfill — operating temperatures will cause the oil to expand, so it will appear at a higher level than when the pump is not running. To check the oil level, start the pump with the inlet capped. Check the oil level in the sight glass. Add oil if necessary. 4. It is recommended to use a good vacuum gauge and measure in microns. If you measure vacuum in inches Hg, the result highly depends on the altitude of your location.
<p>When You Need Help</p>	<p>If these procedures do not correct the problem, contact your nearest Kozyvacu® distributor, or call Kozyvacu® toll-free service line for further information: 866-355-0018 (USA only).</p>

Kozyvacu[®] Limited Warranty Statement

ATTENTION: Please register your warranty at our website: <http://www.kozyvacu.com/register-warranty/>

	<p>This product is warranted to be free from defects in workmanship, materials, and components for a period of one year from date of purchase. All parts and labor required to repair defective products covered under the warranty will be at no charge. The following restrictions apply:</p>
Warranty Conditions	<ol style="list-style-type: none">1. The limited warranty applies to the original purchaser only.2. The warranty applies to the product in normal usage situations only, as described in the User Guide. The product must be serviced and maintained as specified.3. If the product fails, it will be repaired or replaced at the option of the manufacturer.4. Transportation charges for warranty service will be reimbursed by the factory upon verification of the warranty claim and submission of a freight bill for normal ground service.5. Warranty service claims are subject to authorized inspection for product defect(s).6. The manufacturer shall not be responsible for any additional costs associated with a

	<p>product failure including, but not limited to, loss of work time, loss of refrigerant, and unauthorized shipping and/or labor charges.</p> <p>7. All warranty service claims must be made within the specified warranty period. Proof-of-purchase date must be supplied to the manufacturer</p>
<p>To Request Warranty Service</p>	<ol style="list-style-type: none"> 1. The sales receipt or other evidence of the date and place of purchase. 2. A description of the problem. 4. Delivery of the product or the defective part, postage prepaid and carefully packed and insured, to: Kozyard LLC, 2825 80th St, Suite 202 Mercer Island, WA 98040
<p>Out of Warranty</p>	<ol style="list-style-type: none"> A. Conditions, malfunctions or damage not resulting from defects in material or workmanship. B. Conditions, malfunctions or damage resulting from normal wear and tear, improper installation, improper maintenance, misuse, abuse, negligence, accident or alteration. C. Our limited warranties are void if a product is returned with removed, damaged or tampered labels or any alterations (including removal of any component or external cover).

Specifications

Model	TA 350	TA 450	TA 500
Voltage	120V / 60 Hz	120V / 60 Hz	120V / 60 Hz
Stage(s)	1	1	2
Free Air Displacement	3.5 CFM	4.5 CFM	5CFM
Intake Fitting	1/4 " flare ; 1/2 " ACME;	1/4 " flare ; 1/2 " ACME;	1/4 " flare ; 1/2 " ACME;
Ultimate Vacuum	150Micron	150Micron	40 microns
Motor	¼ HP	1/3 HP	½ HP
Oil tank Capacity	280 ml 9.5 oz	330 ml 11.2 oz	380 ml 12.8oz
Power Cord Length	4.6 feet	4.6 feet	4.6 feet
Dimensions (inches)	10.6x4.7x8.6	10.6x4.7x8.6	12.6x5.3x9.1
Gross weight	11.7lbs	14.3lbs	19.2lbs

NOTE: TA350G and TA500 are a similar model of corresponding TA350 and TA500, the only differences are the TA350G and TA500 have a built-in vacuum gauge while TA350 and TA500 do not have.

Specifications

Model	TA 800	TA1200
Voltage	120V / 60 Hz	120V / 60 Hz
Stage(s)	2	2
Free Air Displacement	8CFM	12CFM
Intake Fitting	1/4 " flare ; 1/2 " ACME; 3/8"SAE	1/4 " flare ; 1/2" ACME; 3/8" SAE
Ultimate Vacuum	25 microns	25 microns
Motor	3/4HP	1 HP
Oil tank Capacity	500 ml 16.9oz	660 ml 22.3oz
Power Cord Length	4.6 feet	4.6 feet
Dimensions (inches)	14.8x 5.6x9.9 inches	15.4x5.6x9.9 inches
Gross weight	28.4 lbs	29.8lbs

Oil Change Log

Date	Oil Change Log

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