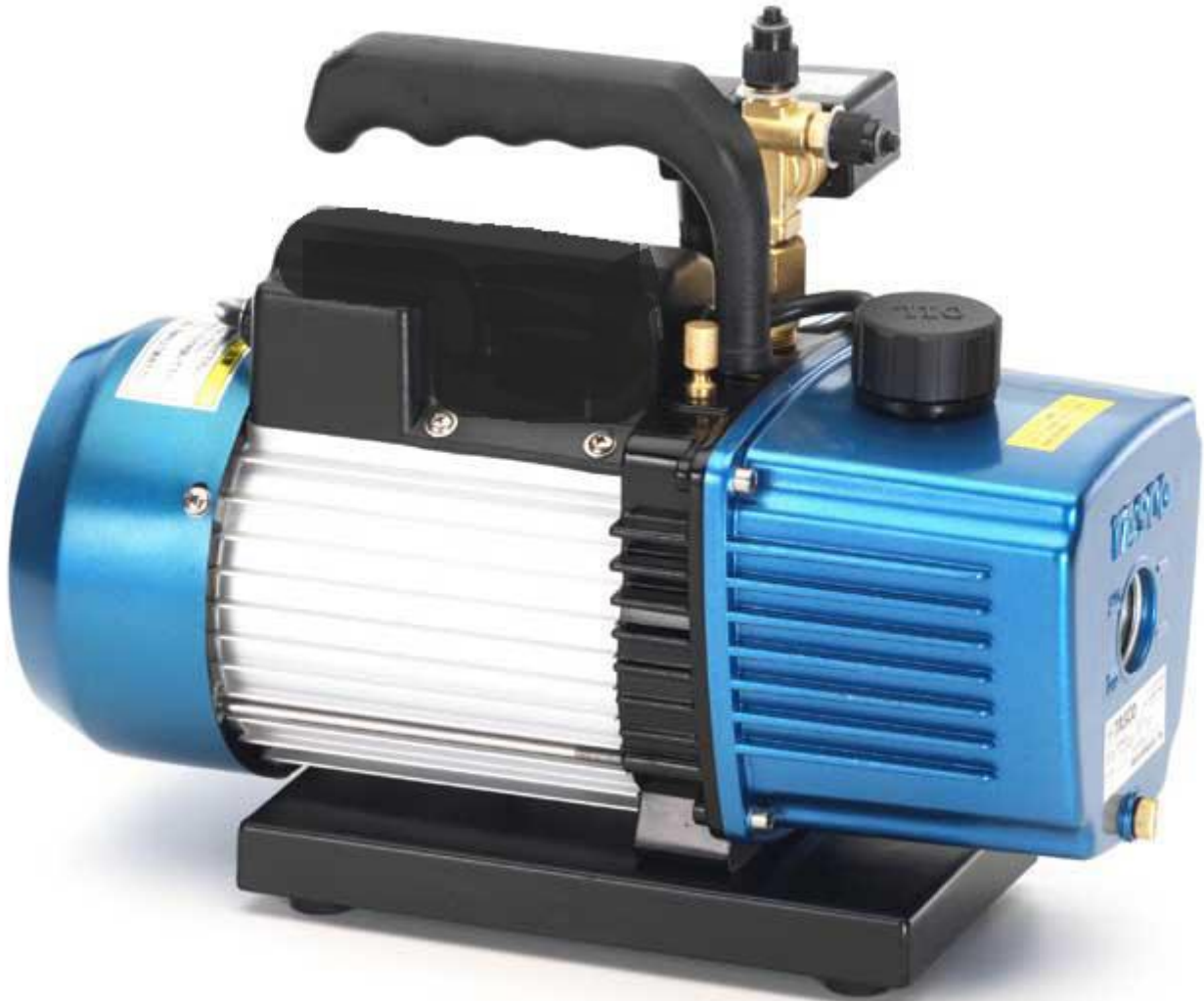


VACUUM PUMP

TA150XX-220

INSTRUCTION MANUAL



Thank you for purchasing the TA150XX-220 Vacuum Pump with Check Valve. Please read this instruction manual carefully before use so that you can use the product properly.



ICHINEN **TASCO** CO.,LTD.

VACUUM PUMP

Thank you for selecting our product!

Thank you for purchasing the TA150XX-220 Vacuum Pump with Check Valve.

Before use, read this instruction manual carefully to understand its contents.

Keep this instruction manual at hand for future reference.

Attach this instruction manual if the vacuum pump is passed on to another user.

If this instruction manual gets lost or destroyed, order a copy from your dealer.

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I. Range of Usage

X-series two stage oil-circulation spiral slice vacuum pumps are basic equipment to vacuate air-tighted vessel. They are applicable to refrigerating service (for R12, R22, R134a, R410A, R407C,R404A, etc), printing machinery, medical machinery, vacuum packaging, gas analysis, thermoplastic molding and other industries. They can also serve as primary pump for various fine vacuum equipment.

Two-stage oil-circulation spiral slice vacuum pump is to vacuate on the basis of single stage pump and it can realize most vacuums.

II. Features

Anti-oil-returning design

Special air passage is designed to prevent pump oil from returning to contaminate vacuum vessel and pipeline after the pump stops.

Aluminum alloy motor casing

Motor adopts aluminum alloy to make its casing, which has high rate of heat emission and can guarantee continuous normal operation. Its appearance is also good looking.

Integrating design

The motor and pump are integrated to make product compact, simple and rational.

Large starting torque

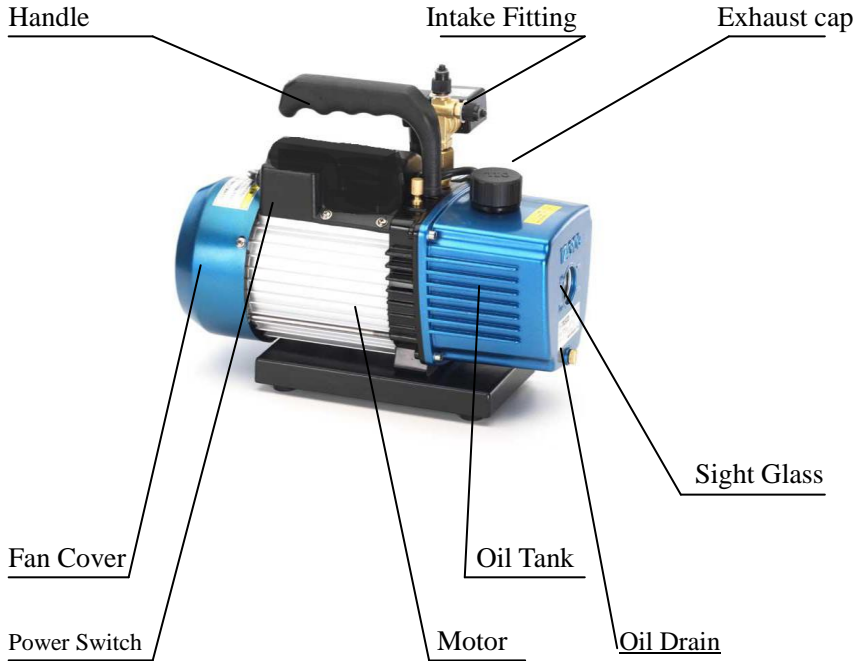
This product is specially designed for low temperature and low voltage condition to guarantee a normal starting in winter ($\geq 5^{\circ}\text{C}$ temperature) and rated voltage $\pm 10\%$.

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Oil circulation design

The product runs with extremely high ultimate vacuum and low noise.

III. Pump components



IV. Technical Parameters

Two Stage Technical Specifications

MODEL	TA150XX-220
VOLTAGE	220V 50/60Hz
FREE AIR DISPLACEMENT	225 l/min
ULTIMATE VACUUM	15 micron
	0.02m/bar
	2pa
MOTOR	400W
MOTOR SPEED	2880 r/m
OIL CAPACITY	570 ml
DIMENSIONS	285(H) X 380(W) X 160(D)mm
NET WEIGHT	14.8kg

V. How to Use

Check oil level before use and ensure oil level to be above oil base line, or else refill oil (high-speed vacuum pump oil adopted, or optional low velocity engine oil).

Remove air inlet cap and connect to vacuum vessel. Pipe used shall be short and reliably sealed without leakage.

Remove air outlet cap, insert in power plug and turn on the pump.

After use, pull out power plug, remove connecting pipe and tighten air inlet cap.

VI. Cautions

1、 Warning:

- 1) Do not vacuate combustible, explosive or poisonous gases;
- 2) Do not vacuate the gases that corrode metal or react chemically with pump oil;
- 3) Do not vacuate the gases that contain particle dust and much steam;
- 4) Running with connection between air inlet and atmosphere shall not exceed 3 minutes;
- 5) The temperature of gas sucked shall not exceed 80°C and ambient temperature shall be +5°C ~60°C;
- 6) Do not serve as compression pump or transfer pump;
- 7) Do not operate without oil;
- 8) Do not touch the hot surface of machine at operation to avoid burning danger;
- 9) Do not block air outlet when pump works;

2、 Caution:

To reduce the danger of electric shock, keep the machine indoor and do not expose it in rain.

3、 Danger:

- 1) Operating voltage is rated voltage \pm 10% with earthing socket; Receptacle shall be well earthed, or else electric shock may be caused. Should power cord or plug be required to repair or replace, do not connect earthed wire lead to any of flat adapter connector. If its surface is green, with or without yellow stripe, the insulation wire is earthing wire. If you cannot fully understand earth instructions and have doubt whether correct earthing is made, check shall be conducted together with professional electrician or service man. Do not change the structure of attached adapter connector. If the adapter connector does not match with receptacle, professional electrician shall be called to install proper receptacle.
- 2) When pulling out power plug, make sure to grip the plug rather than the wire;
- 3) Do not place heavy matter on power wire or let power wire be squeezed;
- 4) Do not use broken plug or socket;
- 5) Do not pull out power plug with wet hand;
- 6) Do not pull out or insert power plug or turn power switch where coal gas leaks.

VII. Installation

Vacuum pump shall be placed in dry, ventilated clean site in operation. Surrounding distance shall be at least 2cm and especially 5cm for the front and rear ends. When equipped with other machinery, normal air inlet shall be guaranteed at fan blade casing.

Installation with other machinery: remove rubber feet on the bottom and connect with M4 tapping screws. For special requirement, please contact us.

Air inlet may be connected according to relevant thread requirement or using leather hose.

Should the air exhausted be harmful to human body or working environment, connect pipeline at air outlet to lead the exhaust outside the work site or treat with environment protection measures.

In case of special requirement, install an electric magnetic valve at air inlet of the pump.

If the air sucked contains much steam or particle dust, or with overhigh temperature, install a cooler, filter or concerned device in the pipeline of air inlet to keep pump performing normally.

VIII. Trouble Shooting

Phenomenon of trouble	Possible reason	Way to eliminate
Low degree of vacuum	1. Oil insufficient	Add oil to center line of oil scale
	2. Pump oil emulsified, not clean	Replace with new oil
	3. Oil inlet blocked or oil feeding inadequate	Clean oil inlet and filtering screen
	4. Pump pipeline or vessel leak	Check pipeline and vessel for leakage and repair
	5. Improper pump chosen	Check the size of vessel sucked and re-compute the pump to choose
	6. Too long service life, parts worn, clearance enlarged	Repair or replace with a new pump
Oil leakage	1. Oil seal damaged	Replace with a new oil seal
	2. Oil tank joint loosen or damaged	Tighten screws or replace O-type ring
Oil injection	1. Too much oil	Discharge oil to oil base line
	2. Inlet pressure too high for a long time	Chose proper model pump
Difficult starting	1. Too low oil temperature	Lead air inlet to atmosphere, start motor interruptedly, heat pump oil
	2. Motor or power supply trouble	Check and repair
	3. Foreign matter falling in the pump	Check and eliminate the foreign matter

IX. Maintenance and Service

If overload stop is stalled in this product, the whole product system will be shut off by it. When overload stop is under work, first turn off the machine and let in atmosphere from air inlet. Restart the machine after five minutes. (If manual reset overload stop is installed in this product, first press RESET button.) Should overload stop continuous work for many times, turn off the machine and shoot the trouble according to "8. Trouble shooting -- Difficult starting". Restart the machine only after eliminating the trouble.

Keep pump clean and avoid foreign matter from falling in the pump.

Keep oil level and do not run the pump without oil.

Observe oil cleanness. If oil turns dirty and turbid or has some water or other volatile matter so that ultimate vacuum is affected, replace pump oil in time. When replacing oil, first run the pump for 30 minutes to thin down the oil, stop the pump and discharge oil, then run 1-2 minutes with air inlet open and add a little clean pump oil from air inlet to replace the residual oil in pump cavity. Repeat the steps for several times until the pump is clean. Replace oil discharging screw plug and refill clean pump oil to oil base line.

If the pump is not to use for a long time, mount the air outlet cap and place the pump in dry place, keeping the pump dampproof and antirust.

If disassembly is needed for repair, only qualified and experienced persons can do the repairing. You can also contact with us.

VACUUM PUMP

Warranty

Terms of Warranty

1. This product is to be repaired free of charge if a failure occurs despite proper use during the period of warranty.
2. This warranty is valid for 1 year starting from the date of purchase.
3. In any of the following cases, this product is to be excluded from free-of-charge repair.
 - 1) Failures incurred by improper use.
 - 2) Failures due to handling and storage beyond its specifications.
 - 3) Failures due to modifications or repairs not done by the manufacturer or its entrusted technicians.
 - 4) Failures due to consumable components.
 - 5) Other failures not deemed to be the manufacturer's responsibilities.

Product Name: Vacuum Pump with Check Valve
Model: TA150XX-220 Serial number: _____
Date of purchase: M: /D: /Y:
Period of warranty: For 1 year starting from M: /D: /Y:
Customer Name: _____ Address: _____ Phone number: _____
Dealer Address and name: _____

* To the dealer: Kindly take a few minutes and fill out the above form.



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