

# PLATINUM® SERIES VACUUM PUMPS

## OPERATING & PARTS MANUAL

2-STAGE,  
DIRECT DRIVE



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WWW.JBIND.COM 800.323.0811 SALES@JBIND.COM



## ABOUT THE PLATINUM<sup>®</sup> VACUUM PUMP

**\*25,400 MICRONS = 1 INCH OF HG.**

Each Platinum<sup>®</sup> vacuum pump has been factory tested to guarantee 15 micron\* or better and listed CFM performance. The serial number has been recorded. Complete and mail the Warranty Registration Card within 10 days of purchase to validate your warranty. There is also an option to register your product online at [www.jbind.com](http://www.jbind.com). Product videos and technical updates can be found at [www.jbind.com](http://www.jbind.com).

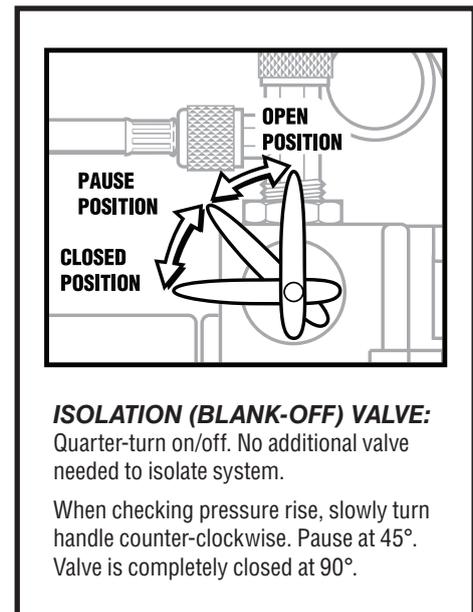
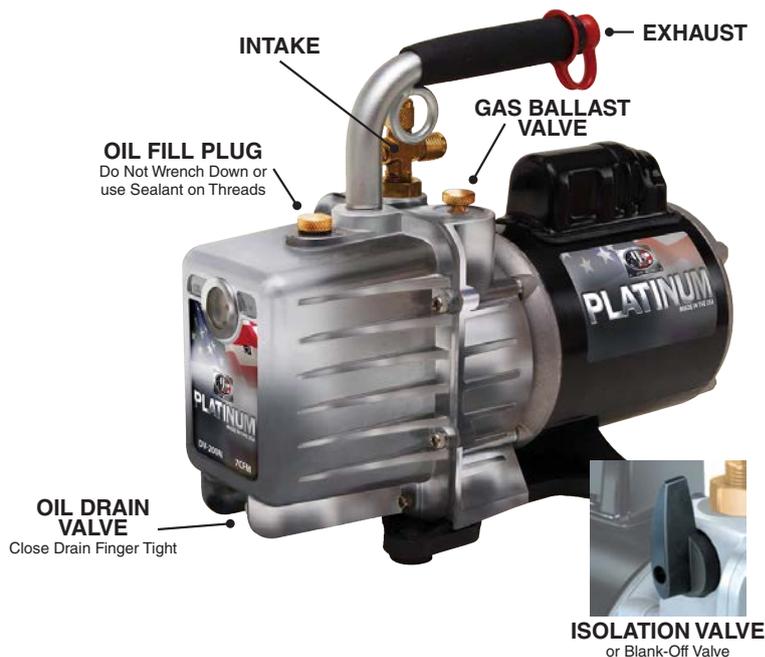
**NOTE** Platinum<sup>®</sup> pumps are not to be used on **Ammonia or Lithium Bromide** (salt water) systems. Pump maintenance is the responsibility of the owner.

**PLEASE READ JB INDUSTRIES' "KEEPING THE LIFE OF YOUR PUMP" BOOKLET THAT CAN BE FOUND ON JBIND.COM.**

## SPECIFICATIONS

### PUMP MOTOR:

Vacuum pump and oil must be above 30°F. Line voltage must be equal to motor nameplate  $\pm 10\%$ . Normal operating temperature is approximately 160°F, which is hot to the touch. Line voltage and ambient conditions will affect this somewhat. Motor has automatic resetting thermal overload protection. The Platinum<sup>®</sup> pump is designed for continuous duty and will run for extended periods without overheating.



## US DOMESTIC

	DV-42N	DV-85N	DV-142N	DV-200N	DV-285N
CFM	1.5 CFM (42 l/m)	3 CFM (85 l/m)	5 CFM (142 l/m)	7 CFM (200 l/m)	10 CFM (285 l/m)
MOTOR	1/2 HP, 1725 RPM	1/2 HP, 1725 RPM	1/2 HP, 1725 RPM	1/2 HP, 1725 RPM	1/2 HP, 1725 RPM
VOLTAGE	115v, 60Hz	115v, 60Hz	115v, 60Hz	115v, 60Hz	115v, 60Hz
INTAKE PORT	1/4"	1/2" x 1/4" x 3/8"			
OIL CAPACITY	26 oz (798 cc)	26 oz (798 cc)	21 oz (680)	21 oz (680)	26 oz (798 cc)

## DUAL VOLTAGE (-250 series)

	DV-42N-250	DV-85N-250	DV-142N-250	DV-200N-250	DV-285N-250
MOTOR	1/2 HP, 1725/1425 RPM				
VOLTAGE	115v, 60Hz, 230v, 50Hz				

### IMPORTANT:

**THIS UNIT HAS BEEN DRAINED OF OIL FOR SHIPMENT. DO NOT ATTEMPT TO OPERATE WITHOUT ADDING OIL.**

## CARING FOR YOUR PUMP

In order to make the best use of your investment, familiarize yourself with the new features and operation instructions before starting the pump. With routine care the Platinum® pump will provide years of reliable service by following proper maintenance guidelines. Platinum® pumps are designed for deep vacuum work in refrigeration systems and air conditioning only.

### **OIL – PUMP OIL ACTS SIMULTANEOUSLY AS A COOLANT, LUBRICANT & SEALANT**

**IMPORTANT:** Use oil specifically refined for deep vacuum pumps. Using oil not refined for deep vacuum pumps and/or operation with contaminated oil will void warranty.

Slowly add oil until oil level rises to the top of the OIL LEVEL line (see Diagram A). Replace oil fill plug.

If oil is too low, you will hear air out of the exhaust. If the oil level is too high, excess oil will be blown out the exhaust. Pump oil should be changed after each use. If the system is heavily contaminated, oil may have to be changed several times during evacuation.

After filling the pump with oil, it is best to check the oil level while the pump is running.

**AFTER EVACUATION, OIL CONTAINS RUST FORMING WATER AND CORROSIVE ACIDS.  
DRAIN IMMEDIATELY WHILE PUMP IS WARM.**

## CHANGING OIL

To reach deep vacuum, Platinum® pumps need clean, moisture-free oil throughout evacuation. Care should be taken to avoid contact on skin and clothing when changing oil. A convenient way to dispose of oil is using the DV-T1 TANK oil caddy after every evacuation while the pump is warm and the oil is thin.

- 1 Place the Tank on a level surface. Unscrew black plug counterclockwise in the drain base to open.
- 2 Place vacuum pump in the cradle and drain pump.
- 3 Once the pump has finished draining, turn the black cap clockwise to close after every use (the Tank can hold up to 5 oil changes).
- 4 Close drain on pump. Remove oil fill cap and fill to top of OIL LEVEL line with **BLACK GOLD Pump Oil**. Replace oil fill cap.



## FLUSHING

### **ALWAYS DRAIN PUMP BEFORE FLUSHING!**

If the oil is badly contaminated, flushing may be necessary.

Slowly pour 1/3-1/2 cup of BLACK GOLD Pump Oil into the intake connection while pump is running. Repeat as required until contamination is removed from oil reservoir, pump rotors, vanes and housing.

Dispose of all oil used in flushing of pump.

**IMPORTANT**  
**DO NOT START PUMP BEFORE ADDING OIL**



## OPERATION

The following procedures will prevent oil from being drawn into the pump cartridge and creating hard start-up.

### **START-UP:**

Open one intake port and isolation valve, close gas ballast valve and start pump. Make vacuum connections.

Crack gas ballast valve for the first part of the evacuation procedure. After pump quiets down from initial volume of air, close valve and continue evacuating. Failure to close valve will result in poor pump performance.

### **SHUT-DOWN:**

Close isolation valve and open gas ballast valve all the way. Continue running pump for 2-3 seconds. With gas ballast valve still opened, stop pump and then close valve.

Remove hose connections and cap intakes.

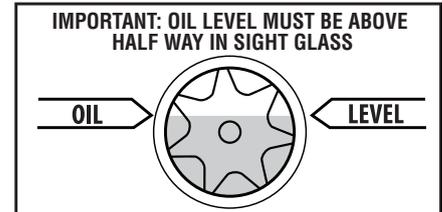


Diagram A

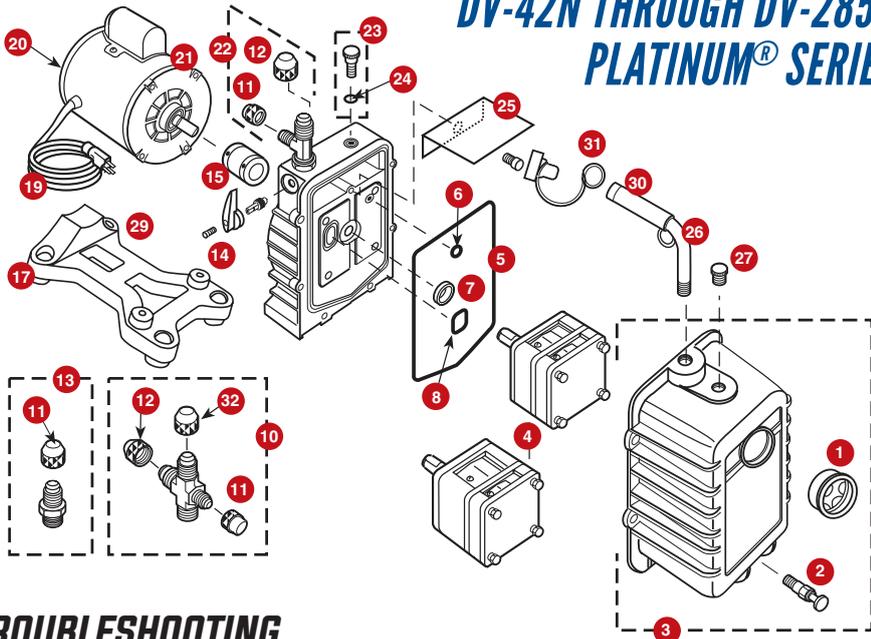
## WIRELESS MICRON GAUGE



### DV-40S

- Accurately measures vacuum from 12,000 microns down to 10 microns
- Heavy duty water resistant
- Includes backup display on the gauge
- Programmable with low & high limit alarm
- Smart phone control through the new, free JB App
- Remote management capability
- Wireless Bluetooth®
- Data logging capabilities for sharing job analytics
- Rechargeable battery
- Factory calibrated
- Measures in microns, psia, inhg, Pascals, torr, mtorr, and mbar
- USB charging adapter for wall or computer charging
- Light or dark app theme for visibility in different environments

## REPAIR PARTS



## TROUBLESHOOTING

Symptom	Possible Cause(s)	Corrective Action
<b>Pump won't start</b>	<ol style="list-style-type: none"> <li>1. Power cord not plugged in securely</li> <li>2. Motor switch not on</li> <li>3. Pump temp. below 30°F</li> <li>4. Inconsistent line voltage</li> </ol>	<ol style="list-style-type: none"> <li>1. Plug power cord in securely</li> <li>2. Turn motor switch to ON position</li> <li>3. Warm up pump to 30°F &amp; turn motor switch on</li> <li>4. Line voltage must be within 10% of 115 volts</li> </ol>
<b>Pump won't pull deep vacuum</b>	<ol style="list-style-type: none"> <li>1. Contaminated oil</li> <li>2. Oil level too low</li> <li>3. Air leak in system being evacuated</li> <li>4. Pump inlet fittings missing or not tightened</li> <li>5. Coupler slipping</li> </ol>	<ol style="list-style-type: none"> <li>1. Change oil</li> <li>2. Add oil</li> <li>3. Locate &amp; repair leak(s)</li> <li>4. Clean or replace O-ring</li> <li>5. Tighten coupler setscrews to flats of cartridge and motor</li> </ol>
<b>Oil drips from point where shaft enters the pump housing</b>	Damaged shaft seal	Replace shaft seal
<b>Pump shuts down and will not start</b>	Thermal overload may be open	Disconnect pump from system. Wait about 15 minutes for motor to cool and turn it on again. If it cycles off again, return pump to factory for repair.
<b>Pump cycles on and off from a completely cold start and then runs smoothly</b>	Oil backed up into cartridge and was being cleared out. Pump has not been shutdown properly.	Remove 1/4" cap then turn pump on

## OTC WARRANTY

Platinum® pumps are warranted against defects in materials and workmanship for 2 years. Not changing oil will void warranty. All JB products are guaranteed when used in accordance with our directions and recommendations, and we limit this warranty to the repair, replacement, or credit at invoice price (our option) of products which in our opinion are defective due to defects in workmanship and/or materials. In no case will we allow charges for labor, expense or consequential damage. Repairs performed on items out of warranty will be invoiced on a nominal basis. Contact your wholesaler for details. The entire Limited Warranty and OTC Warranty can be found at [www.jbind.com](http://www.jbind.com).



**JB INDUSTRIES, INC.**  
Aurora, IL 60505 USA  
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**Main Warehouse**  
**JB INDUSTRIES, INC.**  
PO Box 1180 Dept. 85  
Aurora, IL 60507-1180 USA  
[sales@jbind.com](mailto:sales@jbind.com)  
Toll-Free Technical Service #: 800.323.0811

REF. NO. | PART NO. | DESCRIPTION

PLATINUM® PUMP REPAIR PARTS		
1	PR-1	Sight Glass
2	PR-2	Drain Valve
3	PR-300	DV-42N through DV-200N Cover Assy. Includes: Sight Glass, Drain Valve, Handle, Grip, End Cap and Tethered Plug
	PR-301	DV-285N Cover Assy. Includes: Sight Glass, Drain Valve, Handle, Grip, End Cap and Tethered Plug
4	PR-302	DV-85N Cartridge w/O-rings and Cover Seal
	PR-303	DV-142N Cartridge w/O-rings and Cover Seal
	PR-304	DV-200N Cartridge w/O-rings and Cover Seal
	PR-305	DV-42N Cartridge w/O-rings and Cover Seal
5	PR-314	DV-285N Cartridge w/O-rings and Cover Seal
	PR-311	Cover Seal
6	PR-211	Trap O-ring, Gas Ballast
7	PR-3	Shaft Seal
8	PR-315	Trap O-ring, Intake
9	PR-4	Rubber Foot and Screw Assembly (1/4" - 20 x 5/8")
10	PR-76	Intake Cross w/Caps (3/8", 1/2", 1/4" with 3/8" MPT Into Pump)
11	NFT5-4	1/4" Cap w/O-ring for Intake
12	NFT5-6	3/8" Cap w/O-ring Cap for Intake
13	PR-32	1/4" Intake w/Cap (U1-4C and NFT5-4)
14	PR-209	Plastic Isolation Valve Handle and Screw w/Stem and Retainer (Not Interchangeable w/PR-210)
15	PR-208	Flexible Coupler (3 parts)
	PR-308	Flexible Section only (From PR-208)
	PR-6	Flexible Coupler (3 parts)
16	PR-77	Flexible Section Only (From PR-6)
	PR-42	Motor Foot w/Screw
17	PR-59	Rubber Foot for Base (Grommet Style)
19	PR-31	Line Cord (Emerson Motor)
	PR-58	Line Cord (Marathon Motor)
20	PR-35	Rocker Switch w/Prongs (Marathon 1101-0105)
	PR-54	Rocker Switch w/Wire Leads (Emerson)
21	PR-206	1/2 Hp, 115v, 60 Hz Motor w/Line Cord and Switch
	PR-207	1/2 Hp, 115/230v, 50/60 Hz Motor w/Line Cord And Switch
22	PR-5	Intake Tee w/Caps (3/8", 1/4" with 3/8" MPT Into Pump)
23	PR-7	Gas Ballast Valve w/O-ring
24	P90009	O-ring, Gas Ballast Valve
25	PR-40	Splash Guard and Screw (Excludes 3 CFM Manufactured Before 1/01. Use PR-39.)
	PR-75	Cushioned Handle w/Lift Ring 1/2" NPT And DV-EP-8 As of 2008
26	PR-205	Cushioned Handle 3/8" NPT
	PR-22	Oil Fill Plug w/O-ring
27	PR-56	Adapter Nut w/O-Ring
28	PR-62	Pump Base (Includes Feet)
	PR-500	Cushion and Cap 3/8" NPT
29	PR-501	Cushion and Cap 1/2" NPT
	DV-EP6	Tethered Safety Cap 3/8"
31	DV-EP8	Tethered Safety Cap 1/2"
	NFT5-8	1/2" Cap w/O-ring for Intake