Platinum™ Series Vacuum Pumps

OPERATING INSTRUCTIONS & PARTS MANUAL

2-Stage, Direct Drive

Specifications

DV-42N, DV-85N, DV-142N, DV-200N & DV-285N

MOTOR
1/2 HP, 50HZ, 230 Volt; Capacitor start; Automatic thermal overload protected.

INTAKE

DV-42N	1/4 Male Flare
DV-85N	1/4 x 3/8 Male Flare
DV-142N, DV-200N & DV-285	3/8 x 1/4 x 3/8 Male Flare

FREE AIR DISPLACEMENT

	CFM	Liters Per Minute
DV-42N	1.5	42
DV-85N	3	85
DV-142N	5	142
DV-200N	7	200
DV-285N	10	285

-250 Series

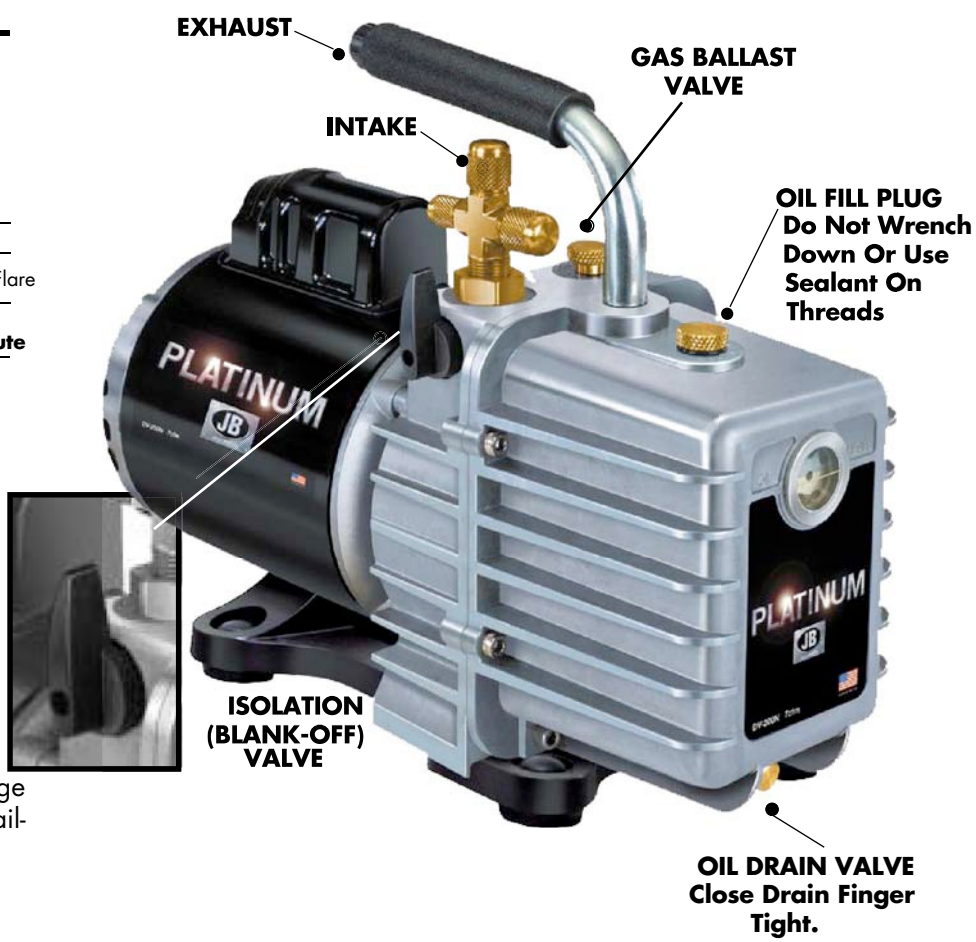
MOTOR
1/2 HP, 50 HZ, 230 Volt; Capacitor start; Automatic thermal overload protected.

INTAKE PORT
See Above

FREE AIR DISPLACEMENT

	CFM	50 HZ Liters Per Minute
DV-42N-250	1.25	35
DV-85N-250	2.5	71
DV-142N-250	4.2	119
DV-200N-250	5.8	167
DV-285N-250	8.3	237

Dual voltage motors available upon request



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

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

Each **Platinum** pump has been factory tested to guarantee 25 micron or better and listed CFM performance. The serial number has been recorded. Complete and mail the Warranty Registration Card within10 days of purchase to validate your warranty. You will be notified of any technical updates.

25,400 Microns = 1"

IMPORTANT
This unit has been drained for shipment.
DO NOT ATTEMPT TO OPERATE WITHOUT ADDING OIL.

OIL

CAPACITY

DV-42N
30 oz. (865 cc)

DV-85N
27 oz. (785 cc)

DV-142N
23 oz. (660 cc)

DV-200N
23 oz. (660 cc)

DV-285N
24 oz. (705 cc)

Being just a teaspoon low affects the ultimate vacuum.

Slowly add oil until oil level rises to the top of OIL LEVEL line. Replace oil fill plug.

If oil is too low, you will hear the exhaust baffle chatter. If the oil level is too high, excess oil will be blown out the exhaust.

Pump oil should be changed after each use. If system is heavily contaminated, oil may have to be changed several times during evacuation.

OPERATION

IMPORTANT
DO NOT START PUMP BEFORE ADDING OIL

The following procedures will prevent oil from being drawn into 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

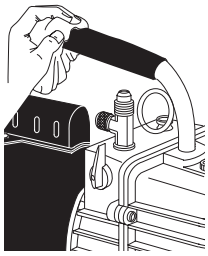
Close isolation valve and crack gas ballast valve. Continue running pump for 2-3 seconds. With gas ballast valve still cracked, stop pump and then close valve.

Remove hose connections and cap intakes.

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. Used oil should be disposed of in a leakproof corrosive-resistant container.



1. After every evacuation while pump is warm and oil is thin, place pump on level surface and open oil drain. Oil can be forced from the pump by opening one intake and partially blocking the exhaust with a cloth while the pump is running. Do not operate the pump for more than 20 seconds using this method.
2. Close drain. Remove oil fill cap and fill to top of OIL LEVEL line with *Black Gold* Pump Oil. Replace oil fill cap.

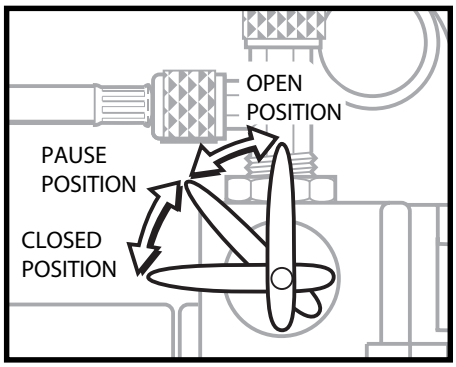
FLUSHING

If the oil is badly contaminated, flushing may be necessary. Slowly pour 1/3-1/2 cup *Black Gold* oil into the intake connection while pump is running. Repeat as required until contamination is removed from oil resevoir, pump rotors, vanes and housing.

Dispose of all oil used in flushing of pump.

After Evacuation, Oil Contains Rust Forming Water and Corrosive Acids. Drain Immediately While Pump Is Warm.

ISOLATION (BLANK-OFF) VALVE



Quarter-turn on/off. No additional valve needed to isolate system.

When checking pressure rise, slowly turn handle counter-clockwise. Pause at 45 °. Valve completely closed at 90°.

PUMP MOTOR

Pump and oil must be above 30°F. Line voltage must be equal to motor nameplate ±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. ***Platinum*** is designed for continuous duty and will run for extended periods without overheating.

DIGITAL VACUUM GAUGES

DV-22N
Battery

- **Reads Vacuum In 7 International Units: Microns, PSIA, InHg, MBars, Pascals, Torr, MTorr**

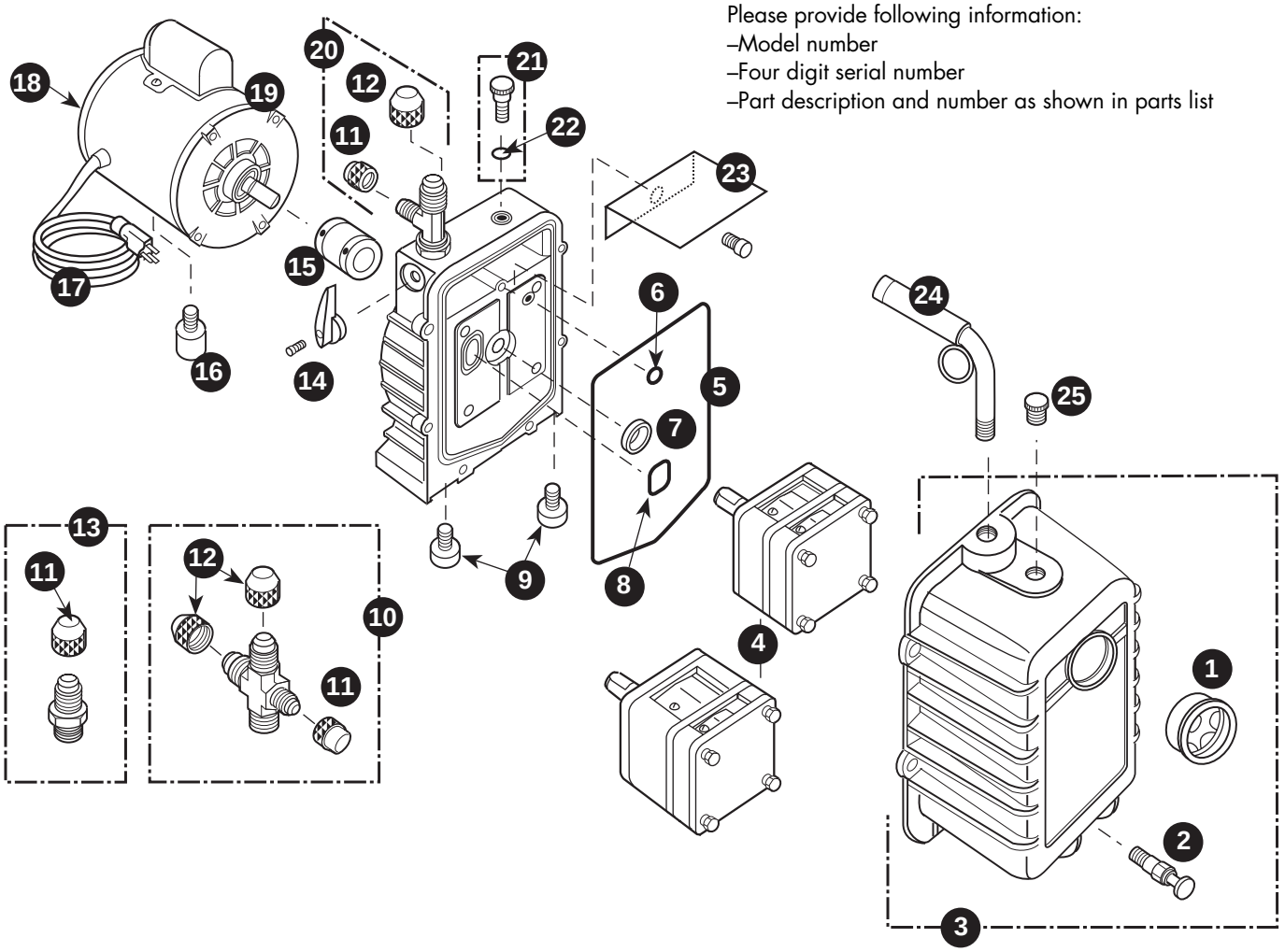
DV-20
Battery/Electric

Both Gauges Feature

- **Digital Display With Solid State Circuitry**
- **+32 ° F to +120 °F (0 ° C to 48.9 °C) Ambient Temperature**
- **NIST Traceable**
- **Solid State Design – No Adjustment Necessary For Temperature**
- **Automatic Power Off Battery Saver**
- **Saves Last Vacuum Readout After Shutdown**
- **Low Battery Indicator**

REPAIR PARTS

Please provide following information:
–Model number
–Four digit serial number
–Part description and number as shown in parts list



Ref. No.	Part No.	Description
1	PR-1	Sight Glass
2	PR-2	Drain Valve
3	PR-300	DV-42N through DV-200N Cover Assy. w/Sight Glass and Drain Valve
	PR-301	DV-285N Cover Assy. w/Sight Glass and Drain Valve
4	PR-305	DV-42N Cartridge w/O-Rings and Cover Seal
	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-314	DV-285N Cartridge w/O–Rings and Cover Seal
5	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 & Screw Assy. (1 per pkg.)
10	PR-24	Intake Cross with Caps
11	NFT5-4	1/4" O-Ring Cap
12	NFT5-6	3/8" O-Ring Cap
13	PR-32	1/4" Intake with Cap
14	PR-209	Plastic Isolation Valve Handle & Screw

Ref. No.	Part No.	Description
15	PR-208	Flexible Coupler
16	PR-42	Motor Foot & Screw
17	PR-31	6' Line Cord, 115V (Emerson before 1201)
	PR-58	6' Line Cord w/M & Fe Ends, 115V (Marathon)
18	PR-35	Rocker Switch, 115V (Marathon)
	PR-54	Rocker Switch, 115V (Emerson before 1201)
19	PR-206	1/2 HP, 115V, 60HZ Motor w/Line Cord and Switch (Marathon)
	PR-207	1/2 HP, 115/230V, 50/60 HZ Motor w/Line Cord and Switch (Marathon)
20	PR-5	Intake Tee with Caps
21	PR-7	Gas Ballast Valve w/O-Ring
22	P90009	O-Ring, Gas Ballast Valve
23	PR-40	Splash Guard and Screw
24	PR-205	Cushioned Handle w/Lift Loop
25	PR-22	Oil Fill Plug w/O-Ring
Not Shown		
	PR-18	Cartridge Valve Repair Kit (Excluding 285N)
	PR-52	DV-285N Cartridge Valve Repair Kit
	PR-45	Pump Repair Kit: PR-1, PR-2, PR-4(2), PR-42, PR-208

TROUBLESHOOTING CHART

Symptom	Possible Cause(s)	Corrective Action
Pump won't start.	1. Power cord not plugged in securely. 2. Motor switch not on. 3. Pump temp. below 30°F. 4. Inconsistent line voltage.	1. Plug power cord in securely. 2. Turn motor switch to ON position. 3. Warm up pump to 30°F & turn motor switch on. 4. Line voltage must be within 10% of 115 volt.
Pump won't pull deep vacuum.	1. Contaminated oil. 2. Oil level too low. 3. Air leak in system being evacuated. 4. Pump inlet fittings missing or not tightened. 5. Coupler slipping	1. Change oil. 2. Add oil. 3. Locate & repair leaks. 4. Clean or replace O-ring. 5. Tighten coupler setscrews to flats of cartridge and motor.
Oil drips from point where shaft enters the pump housing.	Damaged oil seal.	Replace.
Pump shuts down and will not start.	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.
Pump cycles on and off from a completely cold start and then runs smoothly.	Oil backed up into cartridge and was being cleared out. Pump has not been shutdown properly.	1. Remove 1/4" cap. 2. Turn pump on.

PUMP MOTOR

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WARRANTY

Platinum™ pumps are warranted against defects in materials and workmanship for 2 years. 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 you wholesaler for details.

Should you need further assistance, write our Home Office or contact your nearest J/B Service Center.

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