



BECKER PUMPS CORP. • 100 East Ascot Lane • Cuyahoga Falls, Ohio 44223

Maintenance Guide for VT 4 -Series





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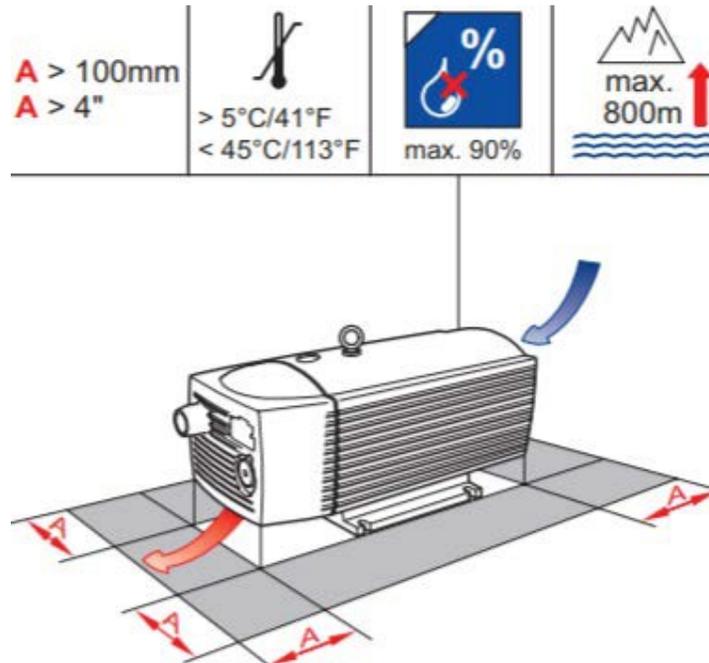
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Ambient Conditions

- **Allowable Conditions:**
 - Allow for 4" of space around the pump for cooling
 - Min ambient temperature = 41F
 - Max ambient temperature = 113F
 - Allowable humidity = 90%
 - If operating above 2,600 feet, call into Becker for adjustment steps
 - Air use only



Maintenance:

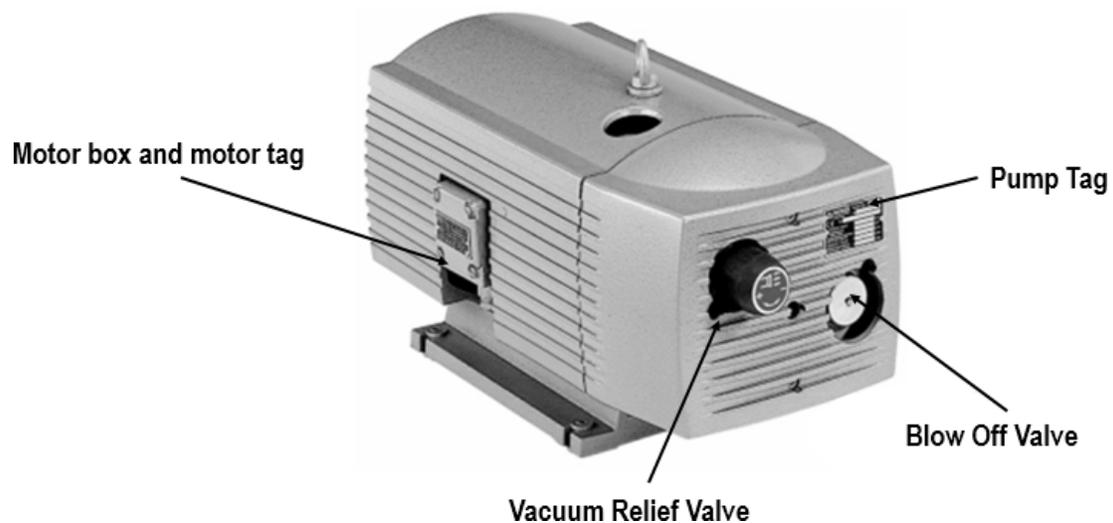
Preventative Maintenance Schedule:

- **Every 40-200 Hours:**
 - If installed Check and clean air intake filter
 - Max of 4 blast air filter cleanings
 - A new filter should be installed if clogged
 - A new filter should be installed annually

- **Check Carbon Vanes – Every 3,000 Hours:**
 - Check vanes for minimum height:
 - VT 4.10 – 18mm min height
 - VT 4.16 – 21mm min height
 - VT 4.25 – 28mm min height
 - VT 4.40 – 28mm min height

POWER NEEDS TO BE TURNED OFF DURING ALL MAINTENANCE STEPS

Vacuum Pump Overview



Contact our staff today. We're ready to help. Call 888-633-1083 or email: info@beckerpumps.com.



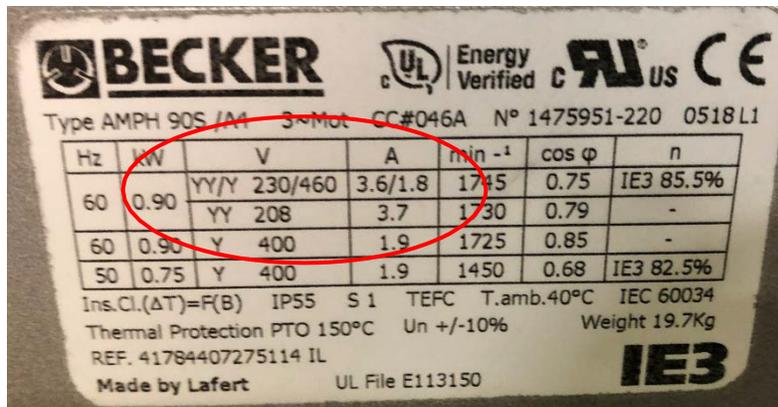
Nationwide Sales and Service: USA, Canada, and Mexico 888-633-1083

Becker Pumps Corp. • 100 East Ascot Lane • Cuyahoga Falls, Ohio 44223
Tel 330-928-9966 • Fax 330-928-7065 • info@beckerpumps.com • www.beckerpumps.com

Wiring

3 Phase

- Confirm applied Voltage
- Y = High Voltage
- YY = Low Voltage



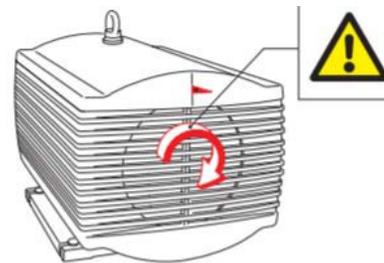
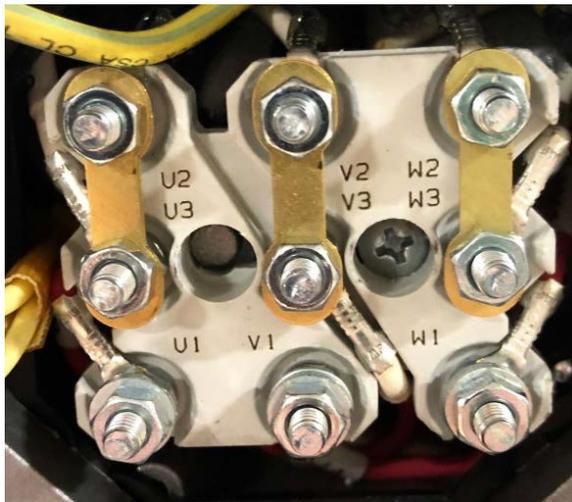
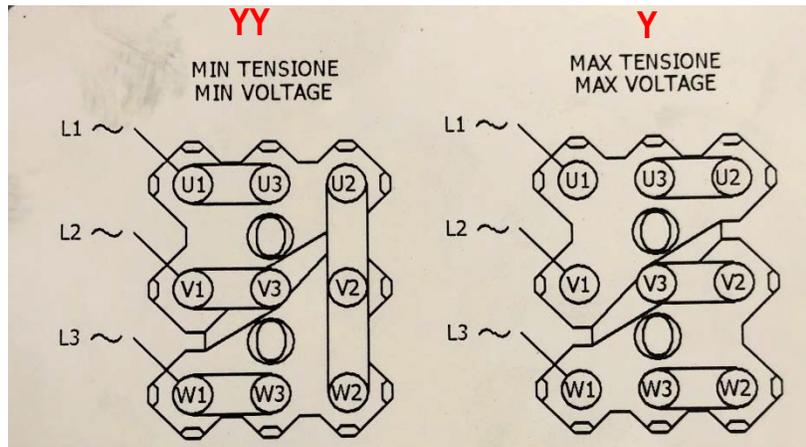
Hz	kW	V	A	rpm ⁻¹	cos φ	η
60	0.90	YY/Y 230/460	3.6/1.8	1745	0.75	IE3 85.5%
		YY 208	3.7	1730	0.79	-
60	0.90	Y 400	1.9	1725	0.85	-
50	0.75	Y 400	1.9	1450	0.68	IE3 82.5%

Type AMPH 90S /A1 3-Phase Mot CC#046A N° 1475951-220 0518 L1
 Ins.Cl.(ΔT)=F(B) IP55 S 1 TEFC T.amb.40°C IEC 60034
 Thermal Protection PTO 150°C Un +/-10% Weight 19.7Kg
 REF. 41784407275114 IL
 Made by Lafert UL File E113150

Wiring

3 Phase

- Configure the jumper bars according to the applied voltage
- 208V / 230V = YY
- 460V = Y



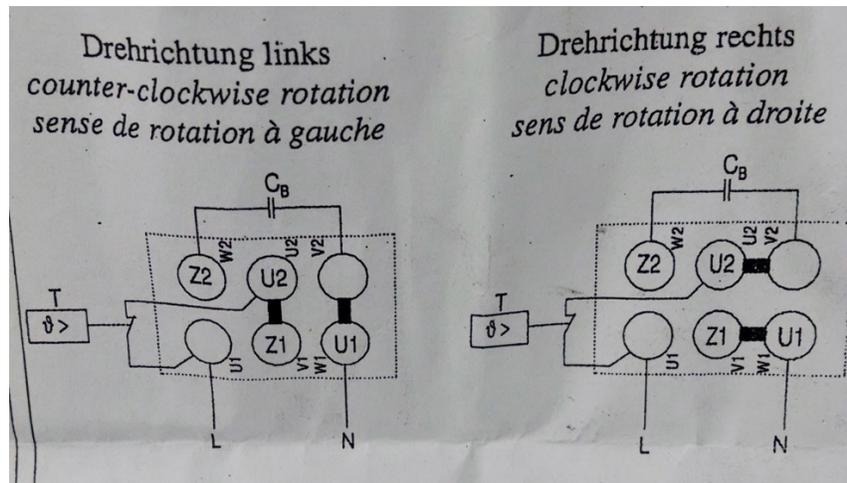
Bump power and check rotation

Do not run backwards longer than a few seconds

Wiring

Single-Phase

- Jumper bars are only changed if rotation is incorrect
- Voltage across L1 and N should equal the applied voltage
 - I.E. 230V across both L and N



Changing Filter

1. Remove the air guide cover



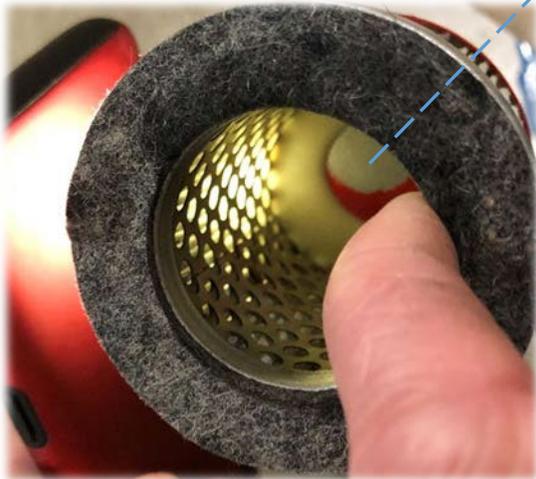
Changing Filter

1. Remove the filter housing



Changing Filter

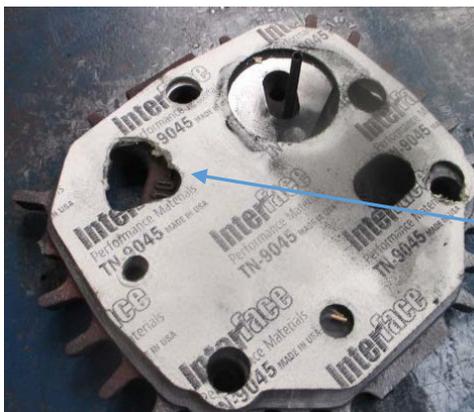
1. Remove the filter cartridge and replace if necessary



Tip: Use a flashlight to determine if the filter is clogged

Measuring or Changing Carbon Vanes

1. Complete the steps listed above to uncover the End Shield bolts
2. Remove the End Shield
 - a. 4 – 5mm bolts



Tip: There can be a loss of vacuum if the gasket is damaged

Check the spare parts list for part number

Measuring or Changing Carbon Vanes

1. Pull off the End Shield and check for damage

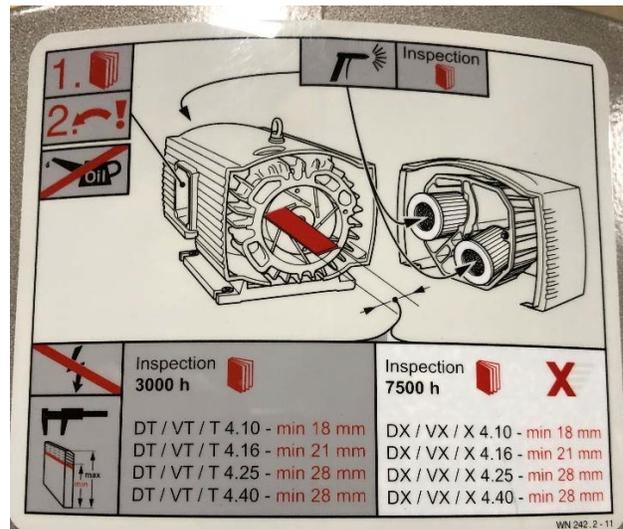


2. Clean off the End Shield face



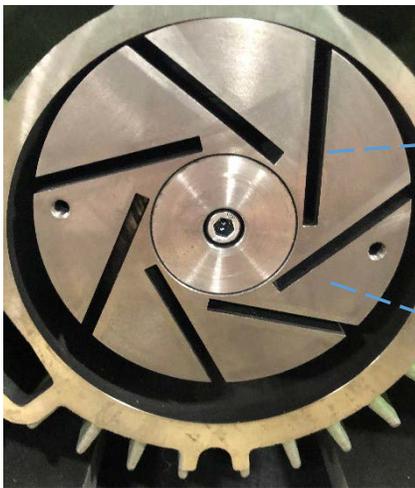
Measuring or Changing Carbon Vanes

1. Pull out the vanes and measure them
 - a. The minimum vane heights are listed on the maintenance sticker
 - b. Locate the pump type for value
2. Replace the vanes if they are at or close to the min height



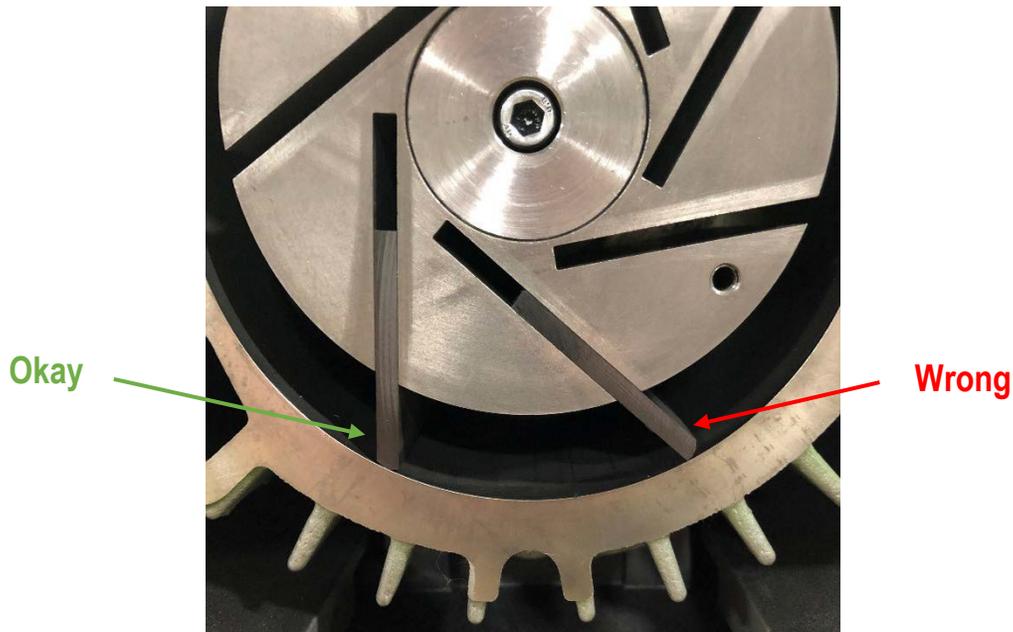
Changing Carbon Vanes

1. Pull out old vanes
 - a. Remove any broken pieces if applicable
 - b. Use blast air to remove broken pieces
2. Remove all Carbon buildup from the working chamber



Changing Carbon Vanes

1. **Insert the new set of vanes**
 - a. **Align the beveled edge flush with the cylinder**
 - b. **Take care of orientation**
 - i. **If inserted backwards, the vanes can break**



Spare Parts Overview

Vacuum Pumps

Model	CFM	Max Vac.	HP
VT 4.10	7.1	25.5" Hg	.28
VT 4.16	11	25.5" Hg	.94
VT 4.25	18	25.5" Hg	1.2
VT 4.40	28	25.5" Hg	2

Maintenance Kits

VT 4.10	338072M0000
VT 4.16	338073M0000
VT 4.25	33874M00000
VT 4.40	33876M00000

Included in Kit:

- Vanes
- Filter

Click the Becker Logo for Operation instructions and Spare parts lists

Or

Visit www.Beckerpumps.com



Accessory Options

1. Check Valve Assembly:

a. Optional vacuum gauge and air filter:

i. Part numbers listed below in yellow under "Option"

3/41016CKVLVE : Check Valve Assembly for : U4.20/VT4.10/4.16



Parts Needed

3/44605K274	3/4-1/2 BELL REDUCER
3/44605K448	3/4 X 3/4 X 1/2 T PIPE
3/44615K414	1/2X1-1/8 NIPPLE
3/4708K5400	3/4 SWING CHECK VALVE
ADPF05006-S	1/2 X 1/4 BUSH
ADPF0754100	3/4 CLOSE NIPPLE, BLACK
ADPF02502-W	1/4 PLUG, COUNTER-SUNK

Option:
W/Filter : 74000105,
ADPF07541 (Qty.2)
Option:
W/Gauge: ADG00001

3/42540CKVLVE : Check Valve Assembly: For T 4.25/4.40



Parts needed

ADP00003...	CHECK VALVE 1.1/4INCH (ALUM IN)
ADPF12508-Q	1-1/4 X 1/2 X 1-1/4T,FFF
ADPF05006-S	1/2 X 1/4 BUSH
ADPF02502-W	1/4 PLUG, COUNTER-SUNK
ADPF0754100	3/4" CLOSE NIPPLE, BLACK"
44605K32200	1 1/4" - 3/4" REDUCING COUPLIN

Option:
w/Gauge : ADG00001
Option:
w/filter : 74000107, ADPF12511-L

2. 1-Phase to 3-Phase Converter:

- In = 115V 1-Phase
- In = 230V 1-Phase
- Out = 230V 3-Phase

