FLUIDX

INDUSTRIAL & SCIENTIFIC SOLUTIONS

USER MANUAL

W2V10

W2V20

W2V40

W2V80

W2V160

HIGH VACUUM ROTARY VANE PUMPS

© 2020 FLUIDX, INC.

CONTENTS

1. Introduction..... 1
1.1 Safety Precautions
1.2 Description of W2V Pumps
2. Installation..... 7
2.1 Unpack and Inspect
2.2 Location
2.3 Mechanical connection
2.4 Electrical connection
3. Operation..... 10
3.1 Gas-ballast control
3.2 Start-up procedure
3.3 Decontamination of oil
3.4 Switching Off/Shut down
4. Maintenance..... 12
4.1 Safety Guide
4.2 Maintenance Frequency
4.3 Maintenance of oil
4.4 Cleaning the Mesh Screen
4.5 Storage and Disposal
5. Trouble Shooting..... 17
6. Technical Data..... 18
6.1 Dimensions of W2V series pumps
6.2 Development figure of W2V series pumps
6.3 Part List (BOM LIST : W2V10)
7. Service & Accessories..... 39
7.1 Service kit (Major Kit / Minor Kit)
7.2 Accessories List

© 2020 FLUIDX, INC.

1. INTRODUCTION

1.1 Safety precautions

Read and follow below instructions before you install and operate the pump.

* **Notices for safe use :**

Do not pump corrosive or explosive gases.

As the pump's driving principle, you cannot pump the gases which are explosive when compressed.
The standard W2V-series pumps are not designed to handle corrosive gasses.
In case of pumping strong corrosive gases, please contact our technical sales dept.

Do not use pump as compressor

Vacuum pump does not have any special design for withstanding inner pressure.
The accumulated pressure by compressed gases in exhaust line can break pump case, therefore can cause both personal injury and property damage.

Do not operate the pumps where explosive processes are involved.

If you need to use explosion-proof motor, please contact our technical sales dept.
The pump must be installed and managed by qualified expert.

Important safety information is highlighted as **WARNING** and **CAUTION** instructions.

WARNING
Indicates procedures that must be strictly observed to prevent personal injury.

CAUTION
Indicates procedures that must be strictly observed to prevent damage to pump or system.

Additional safety information

Danger of electric shock

Danger of hot surface

Danger of explosion

Danger of cut/crush

1.2 Description of W2V Pumps

PRODUCT CODE RULE

W 2 V 10

2 - 2 Stage Pump
10 - 100 ℓ/min (pumping speed)
20 - 200 ℓ/min (pumping speed)
40 - 400 ℓ/min (pumping speed)
80 - 800 ℓ/min (pumping speed)
160 - 1600 ℓ/min (pumping speed)

© 2020 FLUIDX, INC.

1. INTRODUCTION

1 - Inlet end fitting	2 - Gas ballast control	3 - Exhaust end fitting
4 - Oil filling-plug	5 - Oil drain-plug	6 - Oil level sight glass
7 - Oil case	8 - Electric motor	9 - Terminal box

W2V10

Pumping Speed	100 ℓ/min (6m³/h, 3.5CFM)	
Ultimate Pressure	Gas Ballast Closed	5X10^{-3} Torr
	Gas Ballast Open	5X10^{-2} torr (6.7 Pa)
Power Input Options	Standard	120/220VAC 1Φ 50/60Hz
	Options	220/380VAC 3Φ 50/60Hz
	Customer's Request (Voltage, Frequency, Phase)	
Full Load Power	0.4kW (0.5 HP)	
Motor Speed	1,700 rpm	
Inlet and Outlet Options		NW25
Oil Capacity	500 cc (0.5ℓ)	
Weight	22.5 Kg(1Φ) / 19.2 Kg (3Φ)	
Ambient Temp	7~40°C / 45~104°F	
Overall Dimension (mm)	150(W) X 392(L) X 250(H)	

© 2020 FLUIDX, INC.

1. INTRODUCTION

1 - Inlet end fitting	2 - Gas ballast control	3 - Exhaust end fitting
4 - Oil filling-plug	5 - Oil drain-plug	6 - Oil level sight glass
7 - Oil case	8 - Electric motor	9 - Terminal box

W2V20

Pumping Speed	200 ℓ/min (12m³/h, 7.1CFM)	
Ultimate Pressure	Gas Ballast Closed	5X10^{-3} Torr
	Gas Ballast Open	5X10^{-2} Torr (6.7 Pa)
Power Input Options	Standard	120/220VAC 1Φ 50/60Hz
	Options	220/380VAC 3Φ 50/60Hz
	Customer's Request (Voltage, Frequency, Phase)	
Full Load Power	0.4kW (0.5 HP)	
Motor Speed	1,700 rpm	
Inlet and Outlet Options	Standard	NW25
Oil Capacity	600 cc (0.6ℓ)	
Weight	23.3 Kg(1Φ) / 20 Kg(3Φ)	
Ambient Temp	7~40 ℃ / 45~104 ℉	
Overall Dimension (mm)	150(W) X 423(L) X 250(H)	

© 2020 FLUIDX, INC.

FLUIDX VACUUM PUMP MANUAL - HIGH VACUUM ROTARY VANE PUMPS

1. INTRODUCTION

1 - Inlet end fitting	2 - Gas ballast control	3 - Exhaust end fitting
4 - Oil filling-plug	5 - Oil drain-plug	6 - Oil level sight glass
7 - Oil case	8 - Electric motor	9 - Terminal box

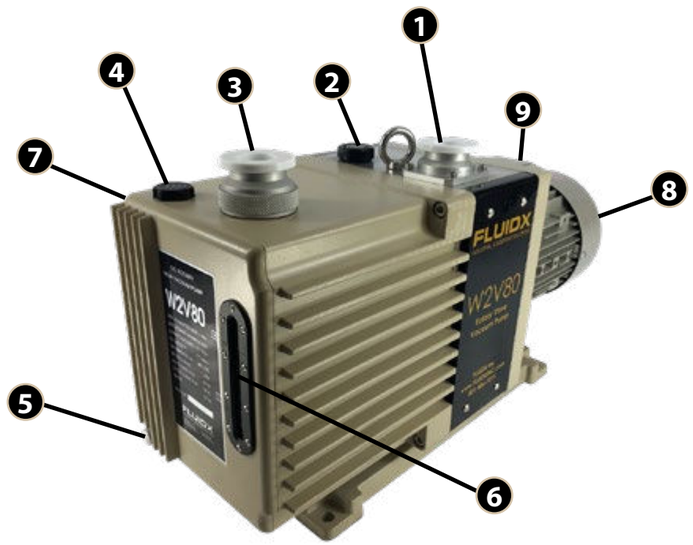
W2V40

Pumping Speed	400 ℓ/min (24m³/h, 14.1CFM)	
Ultimate Pressure	Gas Ballast Closed	5X10^{-3} Torr
	Gas Ballast Open	5X10^{-2} Torr (6.7 Pa)
Power Input Options	Standard	120/220VAC 1Φ 50/60Hz
	Options	220/380VAC 3Φ 50/60Hz
	Customer's Request (Voltage, Frequency, Phase)	
Full Load Power	0.75kW (1 HP)	
Motor Speed	1,700 rpm	
Inlet and Outlet Options	Standard	NW25
Oil Capacity	1500 cc (1.5ℓ)	
Weight	34.8 Kg(1Φ) / 31.6 Kg(3Φ)	
Ambient Temp	7~40 ℃ / 45~104 ℉	
Overall Dimension (mm)	170(W) X 484(L) X 287(H)	

© 2020 FLUIDX, INC.

1. INTRODUCTION

1 - Inlet end fitting	2 - Gas ballast control	3 - Exhaust end fitting
4 - Oil filling-plug	5 - Oil drain-plug	6 - Oil level sight glass
7 - Oil case	8 - Electric motor	9 - Terminal box



W2V80

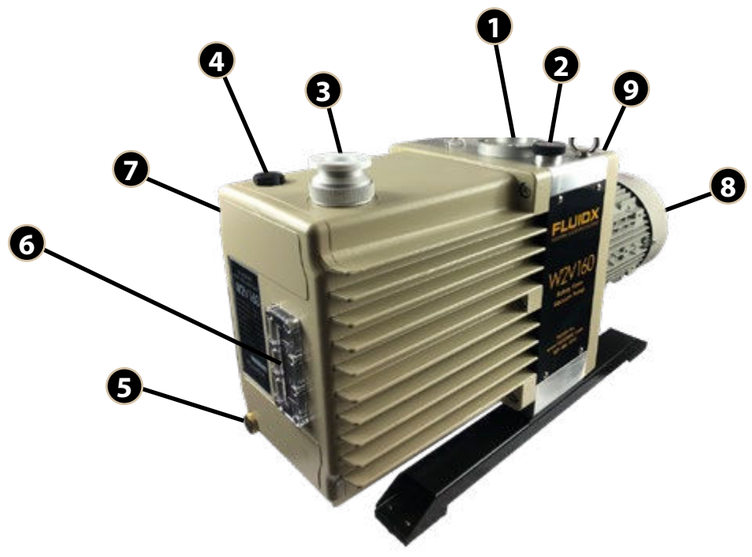
Pumping Speed	800 ℓ/min (48m³/h, 28.3CFM)	
Ultimate Pressure	Gas Ballast Closed	5X10^{-3} Torr
	Gas Ballast Open	5X10^{-2} Torr (6.7 Pa)
Power Input Options	Standard	220/380VAC 3Φ 50/60Hz
	Customer's Request (Voltage, Frequency, Phase)	
Full Load Power	1.5kW (2 HP)	
Motor Speed	1,700 rpm	
Inlet and Outlet Options	Standard	NW40
Oil Capacity	2700 cc (2.7ℓ)	
Weight	68.5 Kg (1Φ) / 65.1 Kg(3Φ)	
Ambient Temp	7~40 °C / 45~104 °F	
Overall Dimension (mm)	226(W) X 624(L) X 346(H)	

© 2020 FLUIDX, INC.

FLUIDX VACUUM PUMP MANUAL - HIGH VACUUM ROTARY VANE PUMPS

1. INTRODUCTION

1 - Inlet end fitting	2 - Gas ballast control	3 - Exhaust end fitting
4 - Oil filling-plug	5 - Oil drain-plug	6 - Oil level sight glass
7 - Oil case	8 - Electric motor	9 - Terminal box



W2V160

Pumping Speed	1600 ℓ/min (96m³/h, 56.5CFM)	
Ultimate Pressure	Gas Ballast Closed	5X10^{-3} Torr
	Gas Ballast Open	5X10^{-2} Torr (6.7 Pa)
Power Input Options	Standard	220/380VAC 3Φ 50/60Hz
	Customer's Request (Voltage, Frequency, Phase)	
Full Load Power	3.7kW (5HP)	
Motor Speed	1,700 rpm	
Inlet and Outlet Options	Standard	NW40
Oil Capacity	6200 cc (6.2ℓ)	
Weight	101.5 Kg(3Φ)	
Ambient Temp	7~40 °C / 45~104 °F	
Overall Dimension (mm)	264(W) X 777.5(L) X 442(H)	

© 2020 FLUIDX, INC.

2. INSTALLATION

WARNING
Do not carry out any unauthorized conversions or modifications on the pump

2.1 Unpack and Inspect

Remove all packing materials and protective covers.

Leave the inlet and outlet lids on before connection of the pump. (The pump is supplied filled with oil.)

① Check the pump and accessories if they are the same type you have ordered.

② Check the oil level contained through the sight glass.

③ Check the pump if it has any sign of loose bolts, spilt oil, and broken/loose parts.

④ Do not use the pump if it is damaged; notify FLUIDX with your order and serial number.

2.2 Location

CAUTION
The pump should be set up on a flat, horizontal surface.
Terminal box should not to exposed to excessive moisture.

The pump can be used free-standing on its baseplate.

To firmly install the pump in place, use bolts and fasten it to the ground or to a secure object through holes in the baseplate. It is recommended to use anti-vibration pads between base plate and fixing surface.

Locate the pump where you can check the oil level sight-glass and access the controls including oil filling-plug, oil drain-plug, and gas-ballast.

When installing the pump in a closed housing, make sure there is sufficient air circulation.

We use vacuum oil, VacOil LVO191G as our default vacuum oil and it is recommended to use the pump over 7 °C (45 °F)

FLUIDX standard pump is not suited for installation in explosion hazard areas. If you need to apply the pump to such area, please contact us first.

2.3 Mechanical connection

Before connecting the FLUIDX pump, remove the shipping seals from the inlet and exhaust connection flanges. (FLUIDX pumps are sealed with white PE seals for domestic and ocean transport and metal blank clamped for air shipment to maintain oil inside)

FLUIDX pumps are shipped with oil contained inside, so take extra care not to

spill it Retain shipping seals in case you need to store the pump in the future.

Ensure that sealing surfaces are clean and scratch-free prior to assembly.

© 2020 FLUIDX, INC.

2. INSTALLATION

2.3.1 Inlet port Connection

* ***Connection Tip*** : To achieve specified pumping speed, make the length of pipeline between vacuum chamber and the pump as short as possible. Also the internal diameter of the pipeline is at least the same as inlet port; the narrow inlet line can reduce pumping speed.

You can protect the pump with applying proper accessories such as separators, filters and cooling traps etc. between vacuum chamber and pump. However, the conductance value of the accessory could cause a reduction in pumping speed.

Connection

Connect the intake and exhaust lines with a clamp and centering each.

- Default: Connect to the NW25 flange supplied on the pump; use the clamp and centering.

- Option: Contact FLUIDX for other inlet plumbing connections.

Inlet filters can be installed for very dusty applications or pumping condensable vapor.

Valves can be used for isolating the pump from the vacuum system; to maintain vacuum when the pump is switched off. We recommend to install an Angle Valve. (refer section 7.2)

2.3.2 Outlet port Connection

WARNING
If the exhaust gases from the vacuum pump are harmful to human body, these must be safely lead away and subjected to post-treatment as required

* ***Connection Tip*** : Never run vacuum without an oil mist eliminator.

Oil vapors can be discharged from the exhaust port in low vacuum section (760 Torr~10 Torr) since the large amount of air is sucked into the vacuum pump. In order to reduce the emission of oil vapors, we recommend the installation of an oil mist eliminator especially when the oil mist can not be lead out by separate hood or duct system.
Contact FLUIDX for the detailed inquiry.

Connection

Exhaust connections options are the same as Inlet Connection

* ***Connection Tip*** : Ensure that the internal diameter of the exhaust line is at least the same as outlet port; the narrow exhaust line can accumulate the inner pressure in the pump and it can damage the pump seals therefore cause oil leaks. The maximum pressure in the oil case must not exceed 1.5 bar (absolute).

CAUTION
If the temperature of the pump-body exceeds 70°C (158 °F),
you must fit suitable guards to prevent contact with hot surfaces.

© 2020 FLUIDX, INC.

2. INSTALLATION

Depending on the type of application or the kind of pumped media, the corresponding regulations and information sheets must be observed.

2.4 Electrical connection

WARNING
ELB(Earth leakage breaker) must be installed to prevent electrical accident.
Electrical connections for 3 phase must be done by a qualified electrician.

If you don't have knowledge of 3 phase power connection, please inquire of FLUIDX.
FLUIDX can not be responsible for any trouble caused by electrical connection.

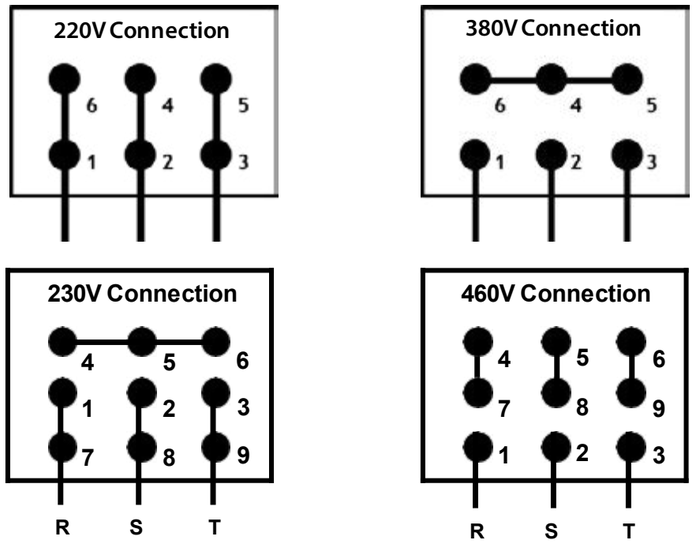
* For 1 phase pump, no specific connection process is needed.
  Simply connect the plug to the power.

Connection (3 phase)

① Open the cover of terminal box. You can see 6 or 9 electric cords need to be connected.

② For 3 phase motor, 3 external power cords and 1 extra electric cord to earth should be supplied.

③ With referring to the diagram on the back of terminal cover, connect the motor to the power.



(Fig) Examples of 3 phase power connection

380V, 460V at 3 phase : high voltage connection / 220V, 230V at 3 phase : low voltage connection.

④ After wiring the motor, check its direction of rotation by operating the pump for short time(2~3 sec) before connecting the pump to your vacuum system. If the rotation is the opposite to the direction of the arrow on the motor cap, change the codes from outside (ex. 1 2 3 -> 1 3 2) and check the direction again.

© 2020 FLUIDX, INC.

3. OPERATION

3.1 Gas-ballast control

The gas ballast introduces a small amount of air(or inert gas) during the compression stage in order to adjust the saturation pressure of the vapor and it can prevent condensation of vapors in the pump; the condensates cause contamination of the oil.
In general use, it is recommended to use the pump with gas-ballast closed.

GB control closed	GB control open
to achieve ultimate vacuum	to pump high concentrations of condensable vapor
to pump dry gases	to decontaminate the oil

Operating pump with GB control open will lower ultimate vacuum level and raise the temperature of the pump body. Also it will increase the speed of oil loss from the pump.

3.2 Start-up procedure

WARNING
Never operate the pump with a sealed exhaust line.
There is the danger of injury.

Ensure all vacuum connections are completely sealed before switch on the pump.
Operating pump with being exposed to normal pressure in long period of time can cause serious mechanical troubles.

Do not operate the pump with inlet port open. It would overload the pump and cause oil loss.

Never expose any part of the body to the vacuum. It might cause personal injury.

*** In case of Emergency stop or Power failure**

There is no need of a particular procedure to prevent from loosing vacuum in case of an emergency stop or power failure.
The oil regulator built inside of the pump prevents Back-Flow of oil when the pump stops.
However, it is more recommended to vent the inlet side of the pump if it stops accidentally.

Procedure

① Check that the pump oil-level is between the H and L marks through the oil-level sight-glass; if it is not, refer to sec 4.3 (Never operate the pump with the oil level below L mark.)

② Turn the gas-ballast control to the required position if you pump condensable vapor.

③ Switch on the electrical supply to the pump.

④ For 3 phase pump, check the direction of rotation of the motor.

When starting-up a pump after prolonged storage period, the actual vacuum level might not be able to reach to the ultimate pressure, specified on the pump. It is generally because of the contamination of the oil inside. Replace with new vacuum oil.

© 2020 FLUIDX, INC.

3. OPERATION

3.3 Decontamination of Oil

As the oil is gradually contaminated during operation by dissolved gases and vapors, the degas process is necessary to prevent corrosion of the pump. Allow the pump to continue operating with inlet port closed and gas ballast control open until the oil is free of condensed vapors.

It is recommended to leave the pump being operating in this mode for about 30 min after finishing the process. To attain the ultimate pressure, close the gas ballast after this process.

Changing the oil is the number one recommendation for achieving the best vacuum levels and ensuring a long pump life. If at anytime the oil is discolored or the vacuum level is not adequate first change the oil. If the oil is severely contaminated or milky white then we recommend also using a lower viscous flushing fluid See vacoil.com LVOFF1G and running the pump for about 30 minutes with the flushing fluid while blanked off or isolated. Then remove the flushing fluid and add back in the appropriate oil like the LVO191G.

3.4 Switching Off & Shutdown

You can simply switch off to stop the pump, under normal circumstances.

* When motor is switched off while the gas ballast is open, the system pressure can be risen slowly. (Close the gas ballast to maintain vacuum level.)

If the pump is to be shutdown for an extended period after pumping aggressive or corrosive media or if the pump has to be stored, proceed as follows;

① Drain the oil through oil drain-plug.
② Add clean oil until the oil-level is at the H mark and let the pump operate for some time.
③ Drain the oil again and add clean oil until the oil level is at the H mark.
④ Seal the connection ports.

WARNING
When pumping harmful substance, take adequate safety precautions.

© 2020 FLUIDX, INC.

4. MAINTENANCE

4.1 Safety Guide

WARNING
Obey the safety instruction given below.
If you do not, you can cause personal injury and property damage

Allow the pump to cool to a safe temperature before you start maintenance work.

WARNING
Disconnect the electrical connection before disassembling the pump.
Make absolutely sure that the pump cannot be accidentally started.
(pull the main plug)

A suitably trained and supervised technician must maintain the pump.
Obey your local and national safety requirements.

If the pump has pumped harmful substances, ascertain the nature of hazard and take adequate safety measures.

CAUTION
When disposing of used oil,
you must observe the applicable environmental regulation.

When the pump has been pumping corrosive media, we recommend to perform any possibly planned maintenance work immediately in order to prevent corrosion of the pump.

After maintenance is completed and reconnect the power of 3 phase pump, recheck the pump rotation direction.

Do not reuse o-ring and seals if they are damaged.

4.2 Maintenance Frequency

The plan shown in the below Table details the routine maintenance operations necessary to maintain the pump in normal use.

More frequent maintenance may be required if the pump is used to process corrosive or abrasive gases and vapors; in these circumstances, we recommend that you replace the pump seals every year. If necessary, adjust the maintenance plan according to your experience.

When you maintain the pump, use FLUIDX spares and service kits;
there contain all of the components necessary to complete maintenance operations successfully.
The Item Numbers of the spares and kits are given in Section 7.1.

*** FLUIDX provides 2 kinds of Service kits(Repair kits)**

'**Minor Repair Kit for W2V10'** is for the general use for overhaul and consists of various metal and rubber parts. It contains mainly disposable parts which need to be periodically replaced.

'**Major Repair Kit for W2V10** contains major parts(ex.vanes) which should be replaced for repair process in addition to all Minor parts.(refer sec 7.1)

© 2020 FLUIDX, INC.

4. MAINTENANCE

Overhaul is a process of dismantlement the pump, cleaning all parts and reassembling.
It is highly important to improve the performance and elongate lifetime of the pump.
FLUIDX recommends users to do overhaul at least every other year.

Maintenance Frequency

Operation	Frequency
Check the oil-level	Daily
Replace the oil	1,000 operation hours or as needed per application
Inspect and clean the inlet-filter	Every oil change
Clean or replace the gas-ballast o-ring	Every oil change
Clean the motor fan-cover	Yearly
Clean and overhaul the pump (Minor kit repair)	15,000 operation hours
Fit new blades (Major kit repair)	30,000 operation hours
Test the motor condition	15,000 operation hours

Oil change Frequency

Application	Frequency (hrs)
High Vacuum in Lab environment, or system seldom exposed to the air	2,500
High Vacuum in manufacturing environment, often exposed to the air	1,200
Vacuum ovens	600
Vacuum drier, vacuum molding, vacuum packing	200
Vacuum degassing	120

3. Maintenance of oil

1. Checking the oil-level

During operation of the pump, the oil level must always remain between marks H and L on the oil-level glass. The amount of oil must be checked and topped up as required.

Note : The pump must be switched off before topping up the oil. It is recommended to power off other components connected to pump for safety reason.

If gases of liquids dissolved in the oil result in a deterioration of the ultimate pressure, the oil can be degassed by allowing the pump to run for approx. 30 min. with the intake port closed and the gas ballast valve open.

© 2020 FLUIDX, INC.

4. MAINTENANCE

4.3.2 Oil change

For proper operation of the pump, it is essential that the pump has an adequate supply of the correct and clean oil at all times.

Clean vacuum oil is basically odorless and transparent. (VacOil LVO191G has amber yellow color)
As operating pumps, the color of vacuum oil turns from yellow through orange into red brown.
This discoloration is caused by gases and foreign materials pumped in and this mixture would impair the vacuum level and damage the interior of pump.

Change vacuum oil when discoloration is dark yellow to red brown. (4 in above picture.)
When the color reach 6~7 with deterioration, the interior of pump would be damaged and overhaul process is necessary before operating the pump again.

If the vacuum oil becomes cloudy as milk color, it is caused by moisture flowed in.

In this case, stop the pump and fully drain out all the oil. Tip the pump up to ensure that all oil and sludge are drained off. Next, add a lower viscous flushing fluid (see vacoil.com LVOFF1G) and run the pump for about 30 minutes with the flushing fluid while blanked off or isolated. Remove the flushing fluid and add back in the appropriate oil, recommended oil is VacOil LVO191G.

Design the process so as moisture not to be pumped in and install a cold trap if necessary.

Before and after a prolonged storage, additional change of oil is required.

If the speed of deterioration of oil is too fast, apply inlet trap to the pump.
(refer to sec 7.4 : WMT-250/400)
Contact FLUIDX for further information.

Caution
Only change the oil after the pump has been switched off and while the pump is still warm..

Procedure

① Remove the oil-drain plug and let the used oil drain into a suitable container.
② When the flow of oil slows down, screw the oil-drain plug back in, briefly switch on the pump (max. 10 sec) and then switch it off again. Remove the oil-drain plug once more and drain out the remaining oil.
③ Screw the oil-drain plug back in (check the gasket and reinstall a new one if necessary.)
④ Remove the oil-fill plug and fill in with fresh oil.
⑤ Screw the oil-fill plug back in.

* Recommended Vacuum oil : **VacOil LVO191G**

Caution
We can only guarantee that the pump operates as specified by the technical data if the vacuum oil recommended by us is used.

© 2020 FLUIDX, INC.

4. MAINTENANCE

The ultimate pressure is determined by the saturation vapor pressure, viscosity and solubility of gases of the vacuum oil used.
Use suitable vacuum oil for the pump – recommended oil – VacOil LVO191G

* SDS report for LVO19 series vacuum oil is available to download on VacOil web site.
(https://www.vacoil.com/vacoil-19-grade-vacuum-pump-oil-1-quart/)

VACOIL LVO19 Grade Vacuum Oil	
Color	light yellow
Pour point	-18 °C
Fire point	(COC) 260 °C | 500 °F
Flash point	(COC) 235 °C | 455 °F
Viscosity (40 °C)	59cSt
Vapor pressure (25 °C)	1 X 10^{-5} Torr

4.4 Cleaning the Inlet Mesh Screen

The pump has an inlet mesh screen in the inlet port; a wire mesh structure which is designed to sieve coarse particles. To keep the pumping speed as specified, the mesh screen should be cleaned up regularly.

Take out the mesh screen from the inlet port and rinse it in a suitable container with solvent.

Dry it completely with compressed air.

Check the condition of the mesh screen and replace it if damaged.

Caution

The cleaning intervals depend on the application. If the pump is exposed to large amounts of abrasive materials, a dust filter should be fitted into the intake line.

4.5 Storage and Disposal

Caution

Observe the storage temperature: -30~70 °C (-22~158 °F)
Storage below -30°C (-22°F) will permanently damage the pump seals.

4.5.1 Storage

The pump should be stored in a dry place preferably at room temperature 20 °C (68 °F).

All other components and connections to vacuum system must be properly removed and purged the pump with dry nitrogen if possible.

The used oil should be changed to prevent corrosion during the idle period. (refer 3.4)

The inlets and outlets of the pump must be sealed. (Use the seals provided upon delivery.)
The gas ballast switch must be tightly closed and it is recommended to put the pump in a PE bag with silica gel (desiccant) for prolonged storage.

© 2020 FLUIDX, INC.

FLUIDX VACUUM PUMP MANUAL - HIGH VACUUM ROTARY VANE PUMPS

4. MAINTENANCE

When a pump is put into operation after over one year of storage, standard maintenance should be run on the pump and the oil should also be exchanged.

4.5.2 Disposal

Dispose of the pump, the oil and any components removed from the pump safely in accordance with all local and national safety and environmental requirements.

Take particular care with the following:

- Components which have come into contact with the vacuum oil.
- Components which have been contaminated with dangerous process substances.

*** Do not incinerate fluoroelastomer seals and o-rings. (eg.viton)**

© 2020 FLUIDX, INC.

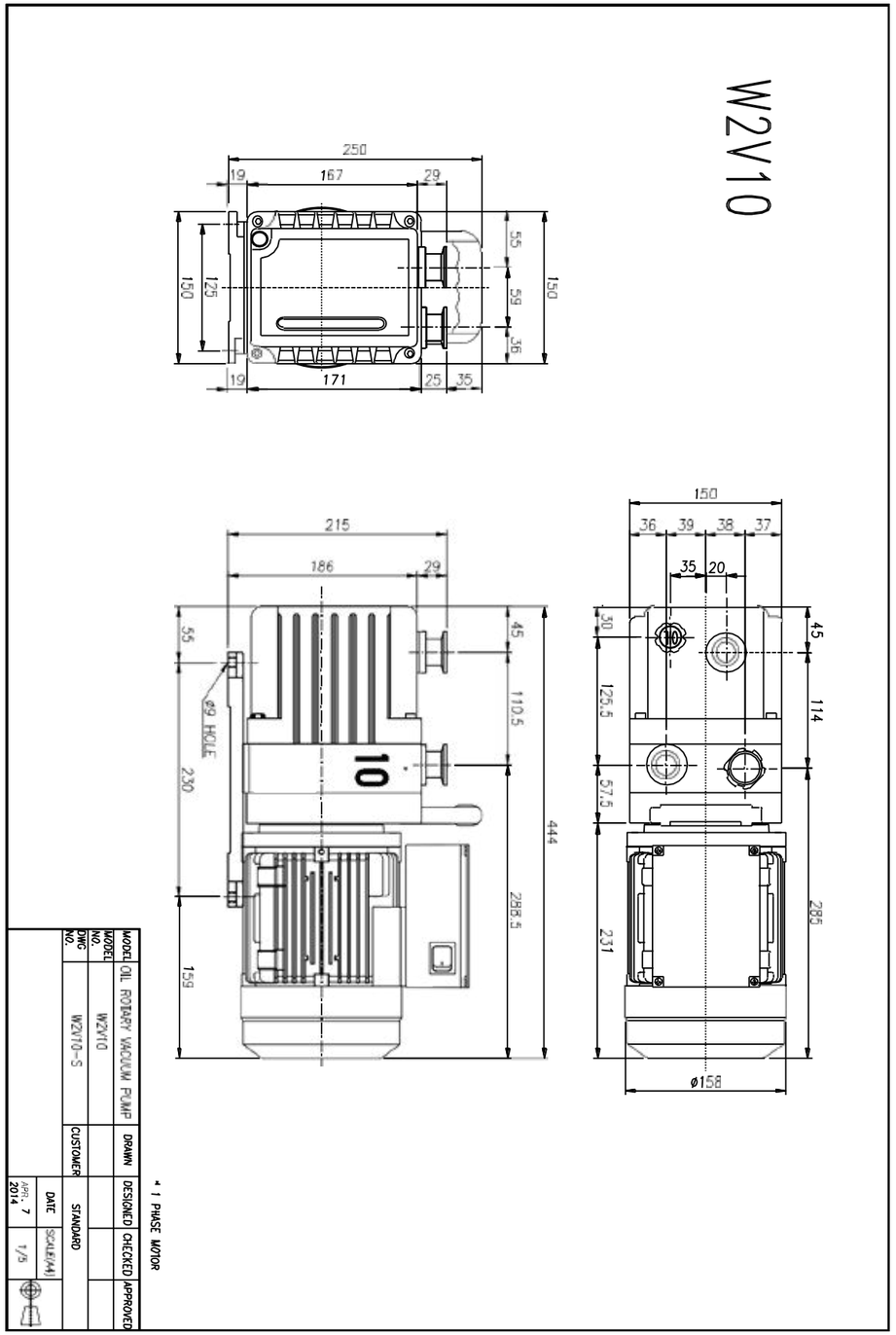
5. TROUBLE SHOOTING

Symtom	Possible cause	Corrective actions
The motor is noisy and does not rotate	voltage of power and connection.	Correct voltage or its connections.
	Any foreign material in the pump.	Remove the substance and/or change oil.
	Motor (Open internal circuit)	Replace motor.
The pump is noisy and over-heated.	Any foreign material blocks the exhaust valve.	Remove the foreign material.
	Leakage in the system	Fine the part and fix the leakage.
	If leakage valve is open	Close the valve.
	Open valves in the vacuum line	Close if found open.
Vacuum level drops continuously.	Low oil level	Top vacuum oil up.
	Leakage on the connected device	Close the intake and recheck.
	Condensed moisture in oil	Change oil.
	Gas ballast open	Close the gas ballast.
Motor rotates but pump doesn't run.	Worn out coupling	Replace coupling parts.
	Worn out key between motor and pump	Replace the key and set screws
	Any foreign material blocks the pump	Overhaul the pump
The pump fails to start	Status of connected voltage	Align the voltage with motor specification.
	Wiring is malfunctioning	Check and repair wiring.
	Oil temperature is below 7 °C	Warm up the pump and oil.
	Any foreign material blocked	Overhaul the pump.
	Motor is malfuncioning	Overhaul or replace the motor.
Failure to reach ultimate vacuum	Leakage in the system	Do leak test.
	Measurement range of the gauge	Use suitable gauge for the vacuum level.
	Incorrect way of measuring vacuum	Use an absolute style digital Torr gauge.
	Type of oil or contamination level	Use recommended oil and change it if contaminated.
	Valve failure	Repair or replace the valve
	Insufficient pump capacity	Replace the pump with sufficient capacity.
Pumping speed is too slow	Contamination of inlet mesh screen	Clean or replace the mesh screen.
	Design of piping system.	Make the connected pipes bigger than pump and have minimum length.

© 2020 FLUIDX, INC.

6. TECHNICAL DATA

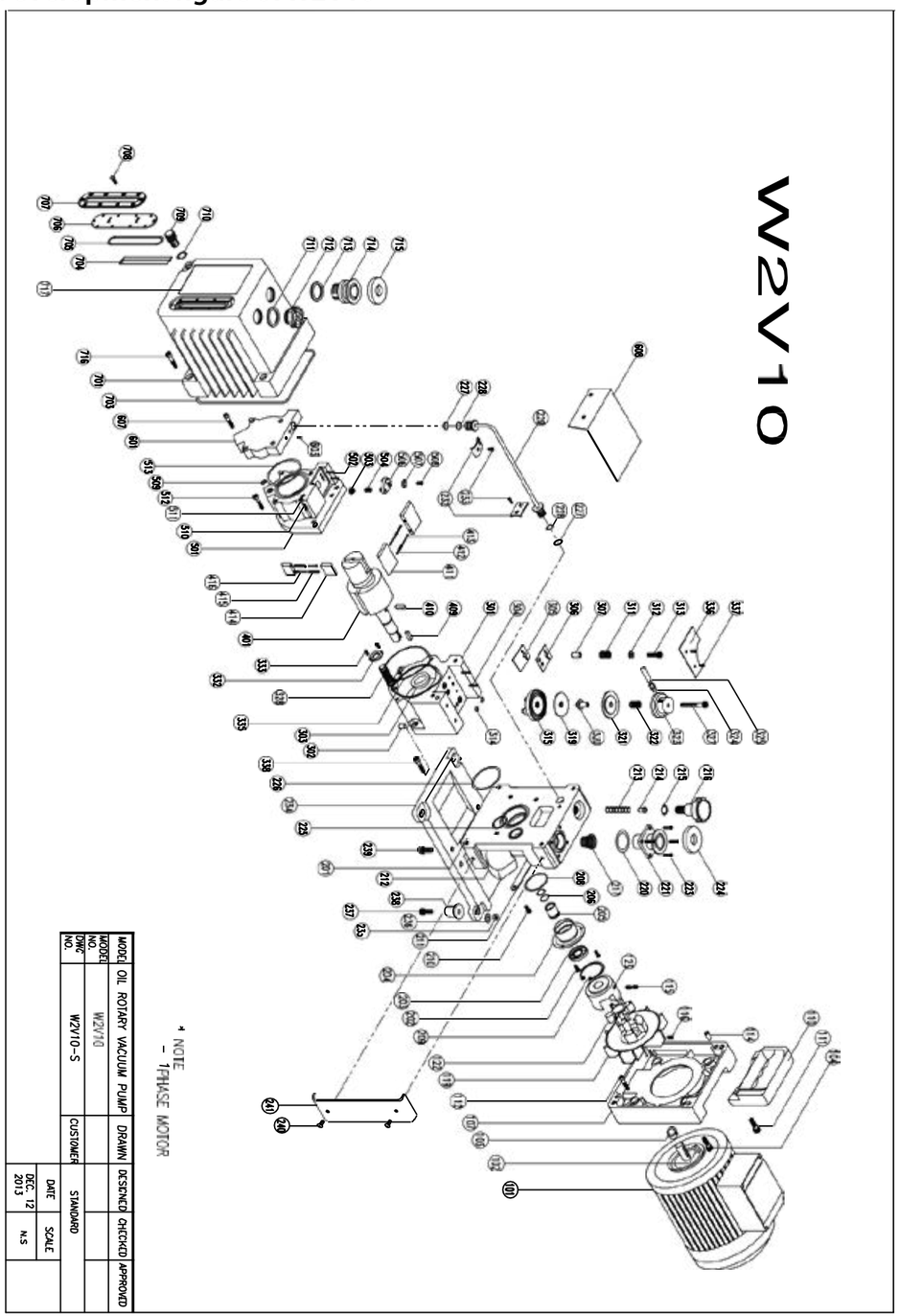
6.1 Dimensions of W2V10



© 2020 FLUIDX, INC.

6. TECHNICAL DATA

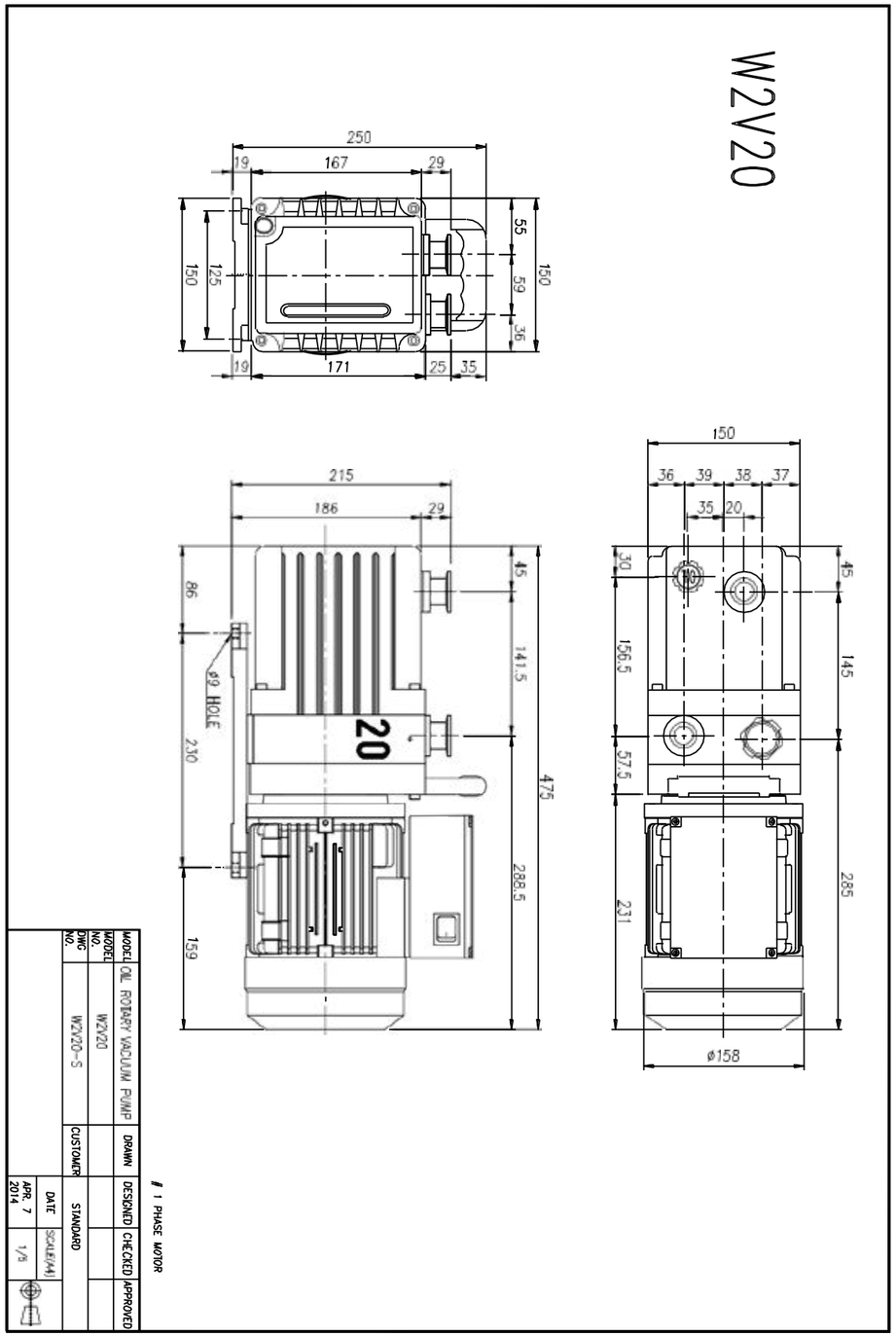
6.2 Development figure of W2V10



© 2020 FLUIDX, INC.

6. TECHNICAL DATA

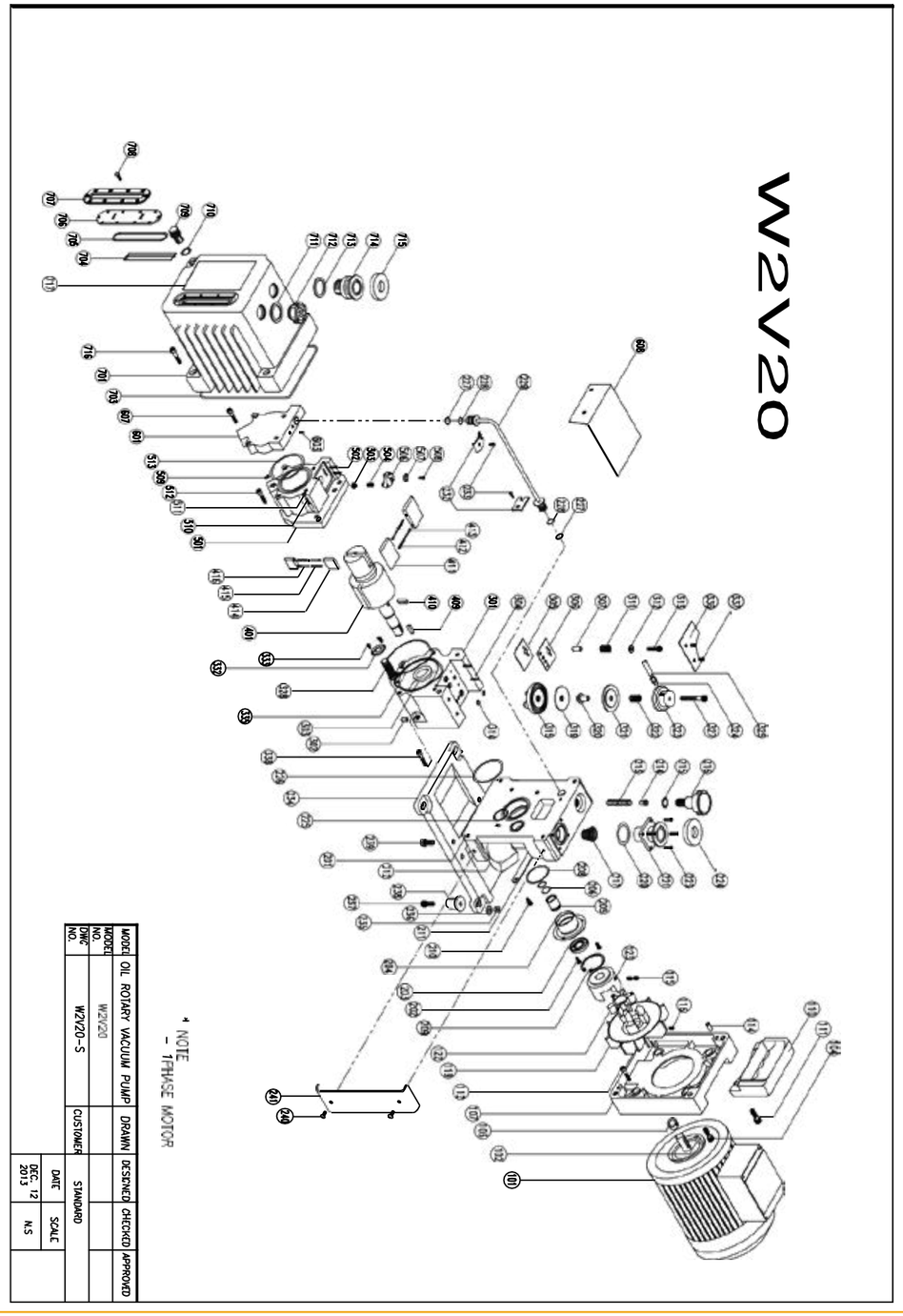
6.1 Dimensions of W2V20



© 2020 FLUIDX, INC.

6. TECHNICAL DATA

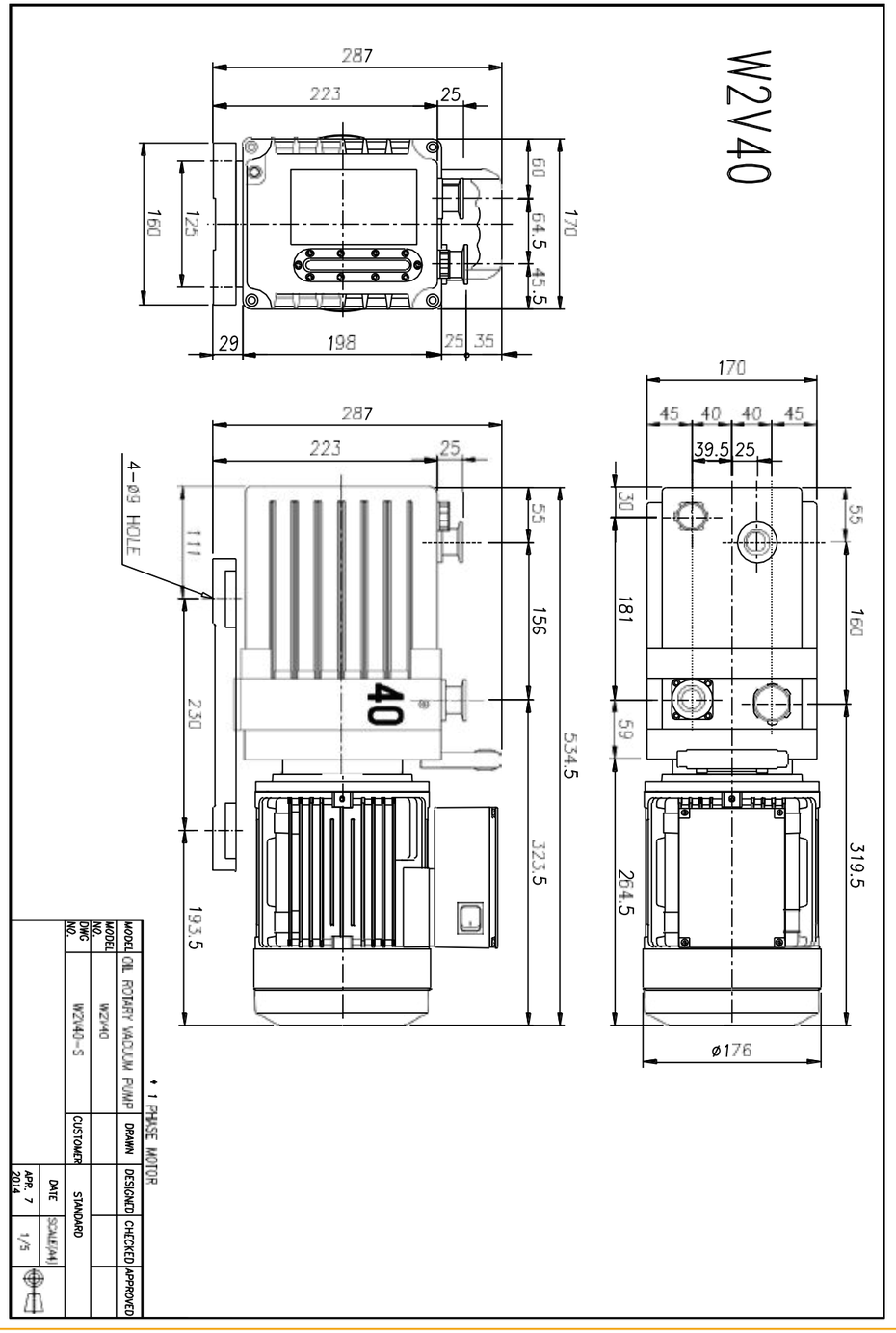
6.2 Development figure of W2V20



© 2020 FLUIDX, INC.

6. TECHNICAL DATA

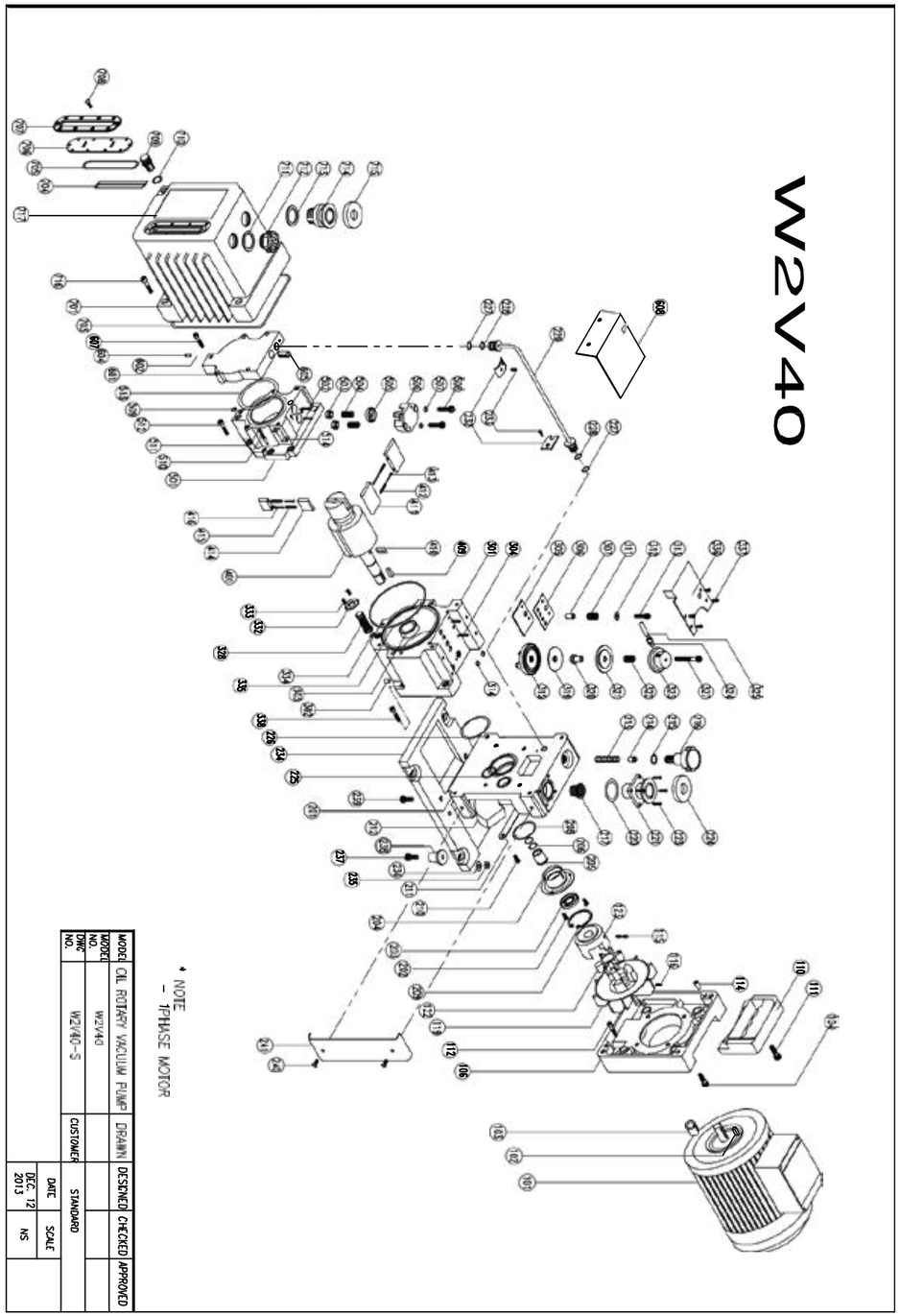
6.1 Dimensions of W2V40



© 2020 FLUIDX, INC.

6. TECHNICAL DATA

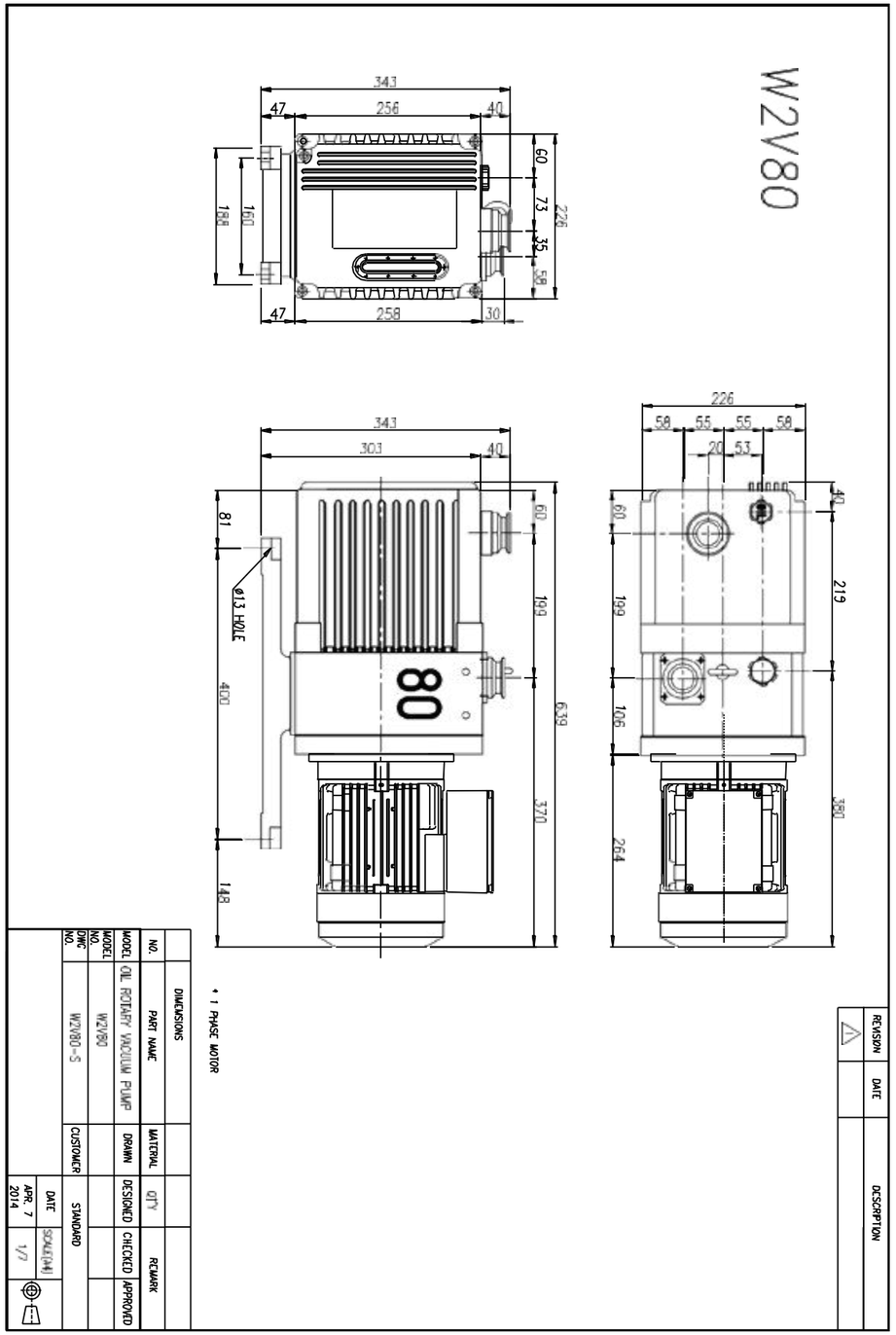
6.2 Development figure of W2V40



© 2020 FLUIDX, INC.

6. TECHNICAL DATA

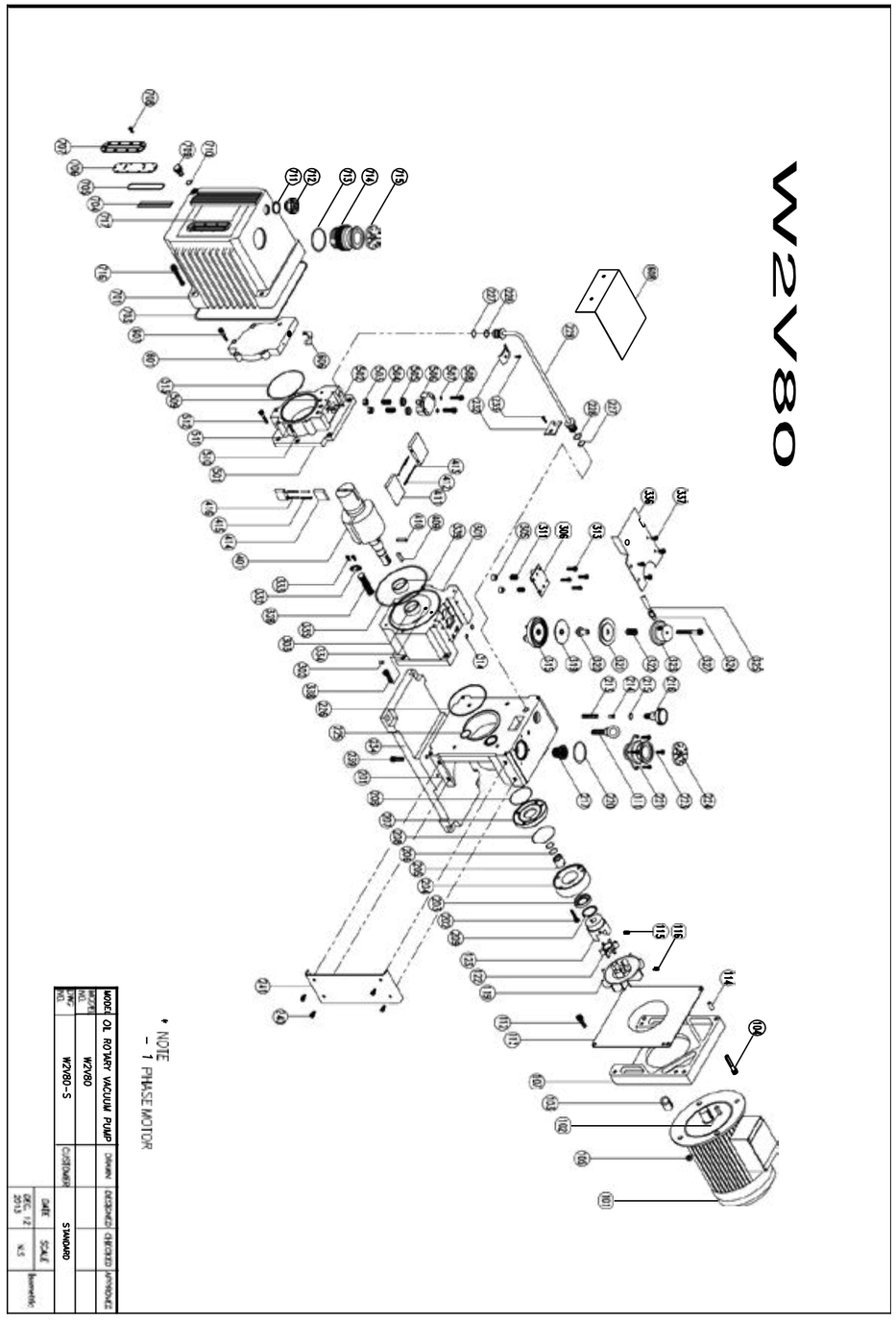
6.1 Dimensions of W2V80



© 2020 FLUIDX, INC.

6. TECHNICAL DATA

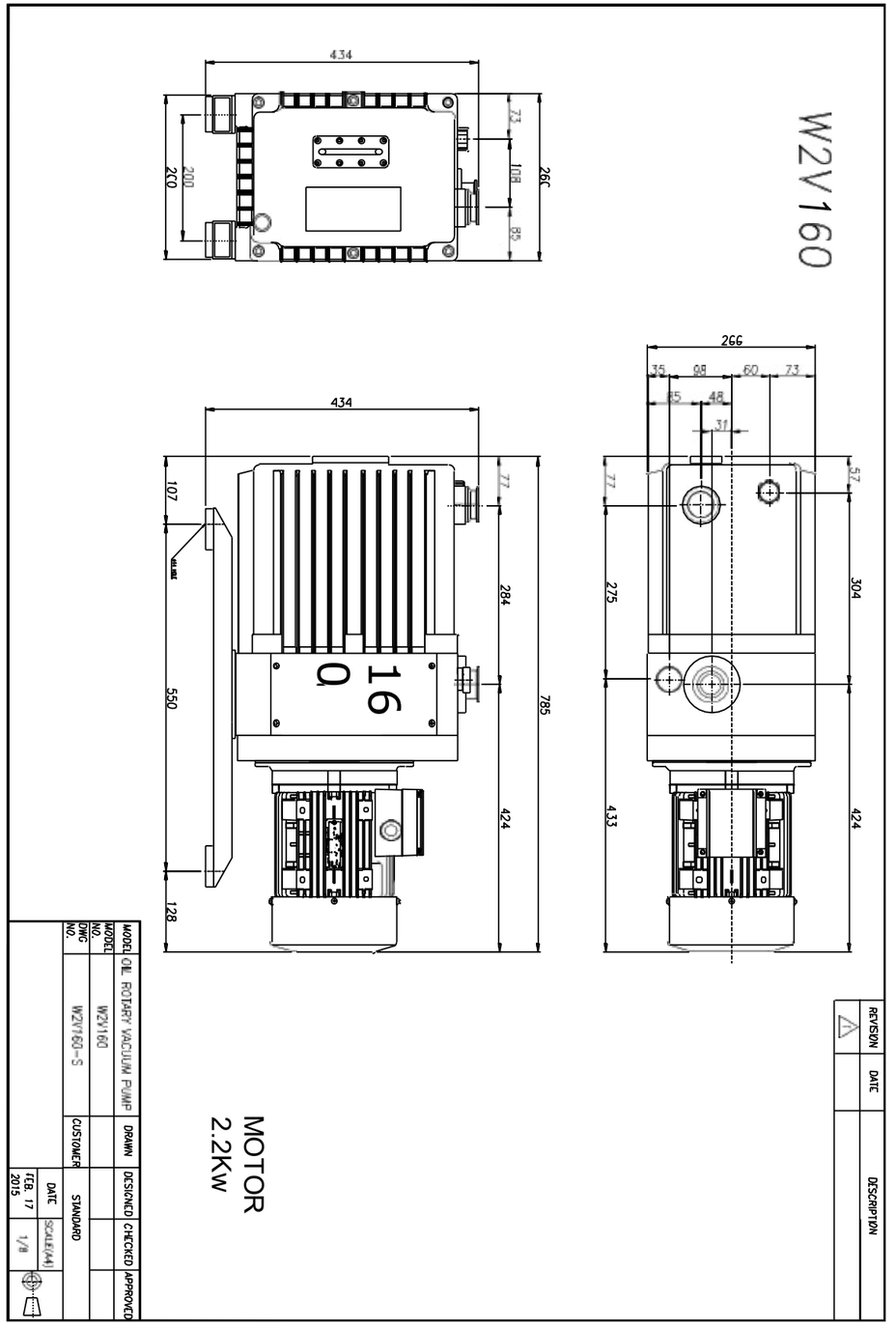
6.2 Development figure of W2V80



© 2020 FLUIDX, INC.

6. TECHNICAL DATA

6.1 Dimensions of W2V160



© 2020 FLUIDX, INC.

6. TECHNICAL DATA

6.3 Parts List (BOM LIST: W2V10)

Part No.	Code No.	Description	Specification	Qty
241	WPRE024101YW	SIDE COVER **(FLUIDX)**	ABS(YELLOW)	2
301	WPMI03010100	1ST STAGE STATOR	FC-25	1
302	WPMC03022100	TAPER PIN	Ø5.9 X Ø6.5 X 7	2
303	WPRV03030700	OIL SEAL(for block)	Ø25/35 X 7	1
304	WPMI03041300	VALVE GUIDE PIN(SPRING PIN)	Ø3 X 20	2
305	WPRV03050100	1ST STAGE VALVE	24 X 36 X 2t(VITON)	1
306	WPMI03060100	1ST VALVE BACK PLATE	25 X 36 X 1.6t	1
307	WPMS03071300	1ST VALVE SPACER	Ø8/6.3 X 13(SUS)	1
311	WPMI03111300	1ST VALVE SPRING	W1 X Φ9/11 X 15.5L	1
312	WPMSW5N0000	WASHER	Ø5(SUS FLAT)	1
313	WPMIM5X22HN	BOLT	M5 X 22	1
314	WPRSP6000000	DISTRIBUTER SLEEVE O-Ring	P-6(SILICON)	2
315	WPME03152100	DISTRIBUTER SLEEVE ASSEMBLY		1
319	WPRV03192100	DISTRIBUTER VALVE	Ø45 X 9 X 1.5(VITON)	1
320	WPMI03202101	DISTRIBRTER SPACER	Ø15 X 16(S45C,NEW TYPE)	1
321	WPMC03212100	DISTRIBUTER WEIGHT	Ø44 X 4.7t	1
322	WPMI03222100	DISTRIBUTER SPRING	W0.6 X Ø8.3/9.5 X 17L	1
323	WPMA03232100	DISTRIBUTER CAP	Ø50 X 20	1
324	WPMA03242100	TUBE FITTING	Ø8 x 1/8"PC	1
325	WPRE03250100	HOSE	73MM	1
327	WPMIM5X50HN	BOLT	M5 X 50	1
328	WPMI03280300	OIL FILTER ASSEMBLY		1
332	WPMI03320300	OIL FILTER FIXTURE	t2.0(PRESS)	1
333	WPMIM4X8HN0	BOLT	M4 X 8	2
335	WPRSS8000000	O-RING	S-80(SILICON)	1
336	WPMI03360100	1ST VALVE OIL BAFFLE	52 X 46 X 1.2t	1
337	WPMIM4X8HN0	BOLT	M4 X 8	2
338	WPMIM6X25HN	BOLT	M6 X 25	3
401	WPMI04010100	ROTOR ASSEMBLY(NEW TYPE)	FCD-64	1
409	WPMI04090700	KEY	5 X 5 X 11 X 17.5L	1
410	WPME04100700	OIL PUMP BLADE	8 X 6 X 21	1
411	WPME04110100	1ST STAGE BLADE	25 X 32 X 6t(ROUND 28x70x6.5)	2
412	WPMS04122100	1ST STAGE BLADE SPRING	W0.4 X Ø2.7/1.9 X 30L(SUS)	2
413	WPMI04132100	1ST STAGE BLADE SPRING GUIDE	Ø1.8/3 X 26(Ø2/3 x 26)	2
414	WPME04140100	2ND STAGE BLADE	22 X 22 X 6t(ROUND 25x50x6.5)	2
415	WPMS04152100	2ND STAGE BLADE SPRING	W0.4 X Ø2.7/1.9 X 30L(SUS)	2
416	WPMI04162100	2ND STAGE BLADE SPRING	Ø1.8/3 X 26(Ø2/3 x 26)	2
501	WPMI05010100	2ND STAGE STATOR	FC-25(Φ49x42t)	1
502	WPMI05022100	VALVE GUIDE PIN (spring pin)	Ø3 X 20	2
503	WPRV05032100	2ND STAGE VALVE	Ø14.5 X 7(VITON)	1
504	WPMI05042100	2ND VALVE SPRING	W0.6 X Ø7.3/8.5 X 17L	1
506	WPMI05060300	SPRING SUPPORT(for 2nd valve)	DIECAST(SMALL)	1
507	WPMIW5G00000	WASHER	Ø5(GEAR, SPRING)	1
508	WPMIM5X20HN	BOLT	M5 X 20	1
509	WPRSP6000000	O-RING	P-6(SILICON)	1
510	WPMI05102100	TAPER PIN(ONE SCREW)	Ø7 X 25L(M6)	2
511	WPMIM6000000	NUT	M6	2
512	WPMIM6X25HN	BOLT	M6 X 25	5

© 2020 FLUIDX, INC.

FLUIDX VACUUM PUMP MANUAL - HIGH VACUUM ROTARY VANE PUMPS

6. TECHNICAL DATA

Parts List (BOM LIST: W2V10)

Part No.	Code No.	Description	Specification	Qty
241	WPRE024101YW	SIDE COVER **(FLUIDX)**	ABS(YELLOW)	2
301	WPMI03010100	1ST STAGE STATOR	FC-25	1
302	WPMC03022100	TAPER PIN	Ø5.9 X Ø6.5 X 7	2
303	WPRV03030700	OIL SEAL(for block)	Ø25/35 X 7	1
304	WPMI03041300	VALVE GUIDE PIN(SPRING PIN)	Ø3 X 20	2
305	WPRV03050100	1ST STAGE VALVE	24 X 36 X 2t(VITON)	1
306	WPMI03060100	1ST VALVE BACK PLATE	25 X 36 X 1.6t	1
307	WPMS03071300	1ST VALVE SPACER	Ø8/6.3 X 13(SUS)	1
311	WPMI03111300	1ST VALVE SPRING	W1 X Φ9/11 X 15.5L	1
312	WPMSW5N0000	WASHER	Ø5(SUS FLAT)	1
313	WPMIM5X22HN	BOLT	M5 X 22	1
314	WPRSP6000000	DISTRIBUTER SLEEVE O-Ring	P-6(SILICON)	2
315	WPME03152100	DISTRIBUTER SLEEVE ASSEMBLY		1
319	WPRV03192100	DISTRIBUTER VALVE	Ø45 X 9 X 1.5(VITON)	1
320	WPMI03202101	DISTRIBRTER SPACER	Ø15 X 16(S45C,NEW TYPE)	1
321	WPMC03212100	DISTRIBUTER WEIGHT	Ø44 X 4.7t	1
322	WPMI03222100	DISTRIBUTER SPRING	W0.6 X Ø8.3/9.5 X 17L	1
323	WPMA03232100	DISTRIBUTER CAP	Ø50 X 20	1
324	WPMA03242100	TUBE FITTING	Ø8 x 1/8"PC	1
325	WPRE03250100	HOSE	73MM	1
327	WPMIM5X50HN	BOLT	M5 X 50	1
328	WPMI03280300	OIL FILTER ASSEMBLY		1
332	WPMI03320300	OIL FILTER FIXTURE	t2.0(PRESS)	1
333	WPMIM4X8HN0	BOLT	M4 X 8	2
335	WPRSS8000000	O-RING	S-80(SILICON)	1
336	WPMI03360100	1ST VALVE OIL BAFFLE	52 X 46 X 1.2t	1
337	WPMIM4X8HN0	BOLT	M4 X 8	2
338	WPMIM6X25HN	BOLT	M6 X 25	3
401	WPMI04010100	ROTOR ASSEMBLY(NEW TYPE)	FCD-64	1
409	WPMI04090700	KEY	5 X 5 X 11 X 17.5L	1
410	WPME04100700	OIL PUMP BLADE	8 X 6 X 21	1
411	WPME04110100	1ST STAGE BLADE	25 X 32 X 6t(ROUND 28x70x6.5)	2
412	WPMS04122100	1ST STAGE BLADE SPRING	W0.4 X Ø2.7/1.9 X 30L(SUS)	2
413	WPMI04132100	1ST STAGE BLADE SPRING GUIDE	Ø1.8/3 X 26(Ø2/3 x 26)	2
414	WPME04140100	2ND STAGE BLADE	22 X 22 X 6t(ROUND 25x50x6.5)	2
415	WPMS04152100	2ND STAGE BLADE SPRING	W0.4 X Ø2.7/1.9 X 30L(SUS)	2
416	WPMI04162100	2ND STAGE BLADE SPRING	Ø1.8/3 X 26(Ø2/3 x 26)	2
501	WPMI05010100	2ND STAGE STATOR	FC-25(Φ49x42t)	1
502	WPMI05022100	VALVE GUIDE PIN (spring pin)	Ø3 X 20	2
503	WPRV05032100	2ND STAGE VALVE	Ø14.5 X 7(VITON)	1
504	WPMI05042100	2ND VALVE SPRING	W0.6 X Ø7.3/8.5 X 17L	1
506	WPMI05060300	SPRING SUPPORT(for 2nd valve)	DIECAST(SMALL)	1
507	WPMIW5G00000	WASHER	Ø5(GEAR, SPRING)	1
508	WPMIM5X20HN	BOLT	M5 X 20	1
509	WPRSP6000000	O-RING	P-6(SILICON)	1
510	WPMI05102100	TAPER PIN(ONE SCREW)	Ø7 X 25L(M6)	2
511	WPMIM6000000	NUT	M6	2
512	WPMIM6X25HN	BOLT	M6 X 25	5

© 2020 FLUIDX, INC.

6. TECHNICAL DATA

Parts List (BOM LIST: W2V10)

Part No.	Code No.	Description	Specification	Qty
513	WPRSG5500000	O-RING	G-55(SILICON)	1
601	WPMI06010300	END PLATE	FC-25	1
603	WPMC06030300	TAPER PIN	Ø3.5 X Ø2.9 X 6.0	1
607	WPMIM6X30HN	BOLT	M6 X 30	4
608	WPMI06080100	2ND DISCHARGE BAFFLE	100 X 140 X 1.2t	1
701	WPMA07010100	OIL BOX	DIECAST	1
703	WPRS07030300	O-RING(for oil box)	167 X 126 X 2t(SILICON)	1
704	WPMS07041500	OIL LEVEL PLATE SUS	10 X 95 X 0.2t	1
705	WPRS07052100	O-RING(for oil window)	112.5x2(S-75,SILICON)	1
706	WPRE07062100	OIL LEVEL WINDOW	34 X 122 X 3, PC	1
707	WPMZ07072100	OIL LEVEL BACK PLATE	DIECAST	1
708	WPMIM35X11C	BOLT	M3.5 X 11(CROSS, Ni-PLATED)	10
709	WPMC07091300	OIL DRAIN PLUG	M10(BRASS)	1
710	WPRSAN109000	O-RING(for drain plug)	AN-109(SILICON)	1
711	WPRSAN118000	O-RING(for oil filling plug)	AN-118(SILICON)	1
712	WPRE07122100	OIL FILLING PLUG	M24	1
713	WPRN07130700	O-RING(for exhaust flange)	Ø30/20.5 X 2.5t(NBR)	1
714	WPMZ07140700	EXHAUST ASSEMBLY(OUTLET)	NW-25	1
715	WPRE0224N250	NW25 FLANGE CAP	NW-25(CAP)	1
716	WPMIM6X35HN	BOLT	M6 X 35	4
717	WPMA0717010	NAME PLATE **(FLUIDX)**	0.2t, AL STICKER	1

© 2020 FLUIDX, INC.

6. TECHNICAL DATA

6.3 Parts List (BOM LIST: W2V20)

Part No.	Code No.	Description	Specification	Qty
101	JWME01010310	MOTOR (1PHASE)	1P 220V 400W 50/60Hz ±5%	1
102	WPMI01020300	KEY (FOR MOTOR)	5X5X15R	1
103	WPMC01030300	RING (FOR COUPLING SPACE)	Ø20/14X8.5 (BRASS)	1
104	WPMIM6X35HN	BOLT	M6X35	4
107	WPMA01070300	MOTOR PLATE	DIECAST	1
110	WPMA01100700	HANDLE	DIECAST	1
111	WPMIM6X15HN	BOLT	M6X15	2
112	WPMIM6X20HN	BOLT	M6X20	4
114	WPMC01140700	MOTOR PLATE GUIDE PIN	Ø6 X 13L(BRASS)	2
115	WPMIM5X8HS00	BOLT	M5X8 (SET SCREW)	2
116	WPMIM5X8HS00	BOLT	M5X8 (SET SCREW)	1
119	WPMA00119030	COUPLING FAN	DIECAST(Ø14)	1
122	WPRE01222100	COUPLING JOINT	RUBBER	1
123	WPMA01230700	COUPLING	DIECAST(Ø15)	1
201	WPMA02010300	MAIN PLATE	DIECAST	1
202	WPMIM4X10HF0	BOLT	M4 X 10(FLAT HEAD,Ni-PLATED)	3
203	WPRV02030700	OIL SEAL (FOR HOUSING)	Ø22/32 X 7	1
204	WPMA02040700	OIL SEAL HOUSING(SLEEVE)	Ø40/32 X 25.5	1
205	WPMI02050700	BUSHING	Ø22/18x20,SUJ2	1
206	WPRSS1800000	O-RING	S-18(SILICON)	2
208	WPRSG3500000	O-RING	G-35(SILICON)	1
209	WPMI02090700	SNAP RING (FOR HOUSING)	R-32	1
210	WPMIM4X80HN	BOLT	M4X8	2
211	WPMI02110300	SUCTION FELT STRAP	1t x 92 x 13 x R34	1
212	WPME02120700	OIL SUCTION FELT	FELT	1
213	WPMI02132100	G/B SPRING (FOR KNOB)	W0.9 X Ø4.5/6.3 X 33L	1
214	WPMC02142100	G/B BRASS PIN(FOR KNOB)	Ø4.5 X 6.2 X 11.5(BRASS)	1
215	WPRSP10A0000	O-RING	P-10A(SILICON)	1
216	WPRE02162100	GAS BALLAST KNOB	Ø40	1
217	WPMS02170700	STRAINER ASSEMBLY	Ø0.2 X 32# X Ø17	1
220	WPRSP3000000	O-RING	P-30(SILICON)	1
221	WPMZ02210700	INTAKE FLANGE	NW-25	1
223	WPMIM4X12HN	BOLT	M4 X 12	4
224	WPRE0224N250	NW25 FLANGE CAP	NW-25(CAP)	1
225	WPRSP2000000	O-RING	P-20(SILICON)	1
226	WPRSG4500000	O-RING	G-45(SILICON)	1
227	WPRSAN109000	O-RING	AN-109(SILICON)	2
228	WPRSP10A0000	O-RING	P-10A(SILICON)	2
229	WPMC02290200	G/B TUBE ASSEMBLY(STANDARD)	BRASS	1
232	WPMI02322100	GAS BALLAST CLAMP	16 X 26 X 2.0T	2
233	WPMIM4X12HN	BOLT	M4X12	2
234	WPMA02340300	BASE PLATE	DIECAST	1
235	WPMIM6000000	NUT	M6	4
236	WPMIW6X18N0	WASHER	Ø6 X 18(FLAT)	4
237	WPMIM6X20HN	BOLT	M6 X 20	4
238	WPRE02380700	BASE RUBBER	Ø24 X 12	4
239	WPMIM6X15HN	BOLT	M6 X 15	4
240	WPMIM4X8HB0	BOLT	M4 X 8(ROUND HEAD,Ni-PLATED)	4

© 2020 FLUIDX, INC.

6. TECHNICAL DATA

Parts List (BOM LIST: W2V20)

Part No.	Code No.	Description	Specification	Qty
241	WPRE024102YW	SIDE COVER **(FLUIDX)**	ABS(YELLOW)	2
301	WPMI03010200	1ST STAGE STATOR	FC-25	1
302	WPMC03022100	TAPER PIN	Ø5.9 X Ø6.5 X 7	2
303	WPRV03030700	OIL SEAL(for block)	Ø25/35 X 7	1
304	WPMI03041300	VALVE GUIDE PIN(SPRING PIN)	Ø3 X 20	2
305	WPRV03050200	1ST STAGE VALVE	43 X 35 X 2t(VITON)	1
306	WPMI03060200	1ST VALVE BACK PLATE	42 X 35 X 1.2t	1
307	WPMS03071300	1ST VALVE SPACER	Ø8/6.3 X 13(SUS)	1
311	WPMI03111300	1ST VALVE SPRING	W1 X Φ9/11 X 15.5L	1
312	WPMSW5N0000	WASHER	Ø5(SUS FLAT)	1
313	WPMIM5X22HN	BOLT	M5 X 22	1
314	WPRSP6000000	DISTRIBUTER SLEEVE O-Ring	P-6(SILICON)	2
315	WPME03152100	DISTRIBUTER SLEEVE ASSEMBLY		1
319	WPRV03192100	DISTRIBUTER VALVE	Ø45 X 9 X 1.5(VITON)	1
320	WPMI03202101	DISTRIBRTER SPACER	Ø15 X 16(S45C,NEW TYPE)	1
321	WPMC03212100	DISTRIBUTER WEIGHT	Ø44 X 4.7t	1
322	WPMI03222100	DISTRIBUTER SPRING	W0.6 X Ø8.3/9.5 X 17L	1
323	WPMA03232100	DISTRIBUTER CAP	Ø50 X 20	1
324	WPMA03242100	TUBE FITTING	Ø8 x 1/8"PC	1
325	WPRE03250200	HOSE	95MM	1
327	WPMIM5X50HN	BOLT	M5 X 50	1
328	WPMI03280300	OIL FILTER ASSEMBLY		1
332	WPMI03320300	OIL FILTER FIXTURE	t2.0(PRESS)	1
333	WPMIM4X8HN0	BOLT	M4 X 8	2
335	WPRSS8000000	O-RING	S-80(SILICON)	1
336	WPMI03360200	1ST VALVE OIL BAFFLE	52 X 64 X 1.2t	1
337	WPMIM4X8HN0	BOLT	M4 X 8	2
338	WPMIM6X25HN	BOLT	M6 X 25	3
401	WPMI04010200	ROTOR ASSEMBLY(NEW TYPE)	FCD-64	1
409	WPMI04090700	KEY	5 X 5 X 11 X 17.5L	1
410	WPME04100700	OIL PUMP BLADE	8 X 6 X 21	1
411	WPME04110200	1ST STAGE BLADE	42 X 32 X 6t(ROUND 45x70x6.5)	2
412	WPMS04122100	1ST STAGE BLADE SPRING	W0.4 X Ø2.7/1.9 X 30L(SUS)	2
413	WPMI04132100	1ST STAGE BLADE SPRING GUIDE	Ø1.8/3 X 26(Ø2/3 x 26)	2
414	WPME04140200	2ND STAGE BLADE	30 X 22 X 6t(ROUND 33x50x6.5)	2
415	WPMS04152100	2ND STAGE BLADE SPRING	W0.4 X Ø2.7/1.9 X 30L(SUS)	2
416	WPMI04162100	2ND STAGE BLADE SPRING	Ø1.8/3 X 26(Ø2/3 x 26)	2
501	WPMI05010200	2ND STAGE STATOR	FC-25(Φ49x50t)	1
502	WPMI05022100	VALVE GUIDE PIN (spring pin)	Ø3 X 20	2
503	WPRV05032100	2ND STAGE VALVE	Ø14.5 X 7(VITON)	1
504	WPMI05042100	2ND VALVE SPRING	W0.6 X Ø7.3/8.5 X 17L	1
506	WPMI05060300	SPRING SUPPORT(for 2nd valve)	DIECAST(SMALL)	1
507	WPMIW5G00000	WASHER	Ø5(GEAR, SPRING)	1
508	WPMIM5X20HN	BOLT	M5 X 20	1
509	WPRSP6000000	O-RING	P-6(SILICON)	1
510	WPMI05102100	TAPER PIN(ONE SCREW)	Ø7 X 25L(M6)	2
511	WPMIM6000000	NUT	M6	2
512	WPMIM6X25HN	BOLT	M6 X 25	5

© 2020 FLUIDX, INC.

FLUIDX VACUUM PUMP MANUAL - HIGH VACUUM ROTARY VANE PUMPS

6. TECHNICAL DATA

Parts List (BOM LIST: W2V20)

Part No.	Code No.	Description	Specification	Qty
513	WPRSG5500000	O-RING	G-55(SILICON)	1
601	WPMI06010300	END PLATE	FC-25	1
603	WPMC06030300	TAPER PIN	Ø3.5 X Ø2.9 X 6.0	1
607	WPMIM6X30HN	BOLT	M6 X 30	4
608	WPMI06080200	2ND DISCHARGE BAFFLE	100 X 170 X 1.2t	1
701	WPMA07010200	OIL BOX	DIECAST(171x166)	1
703	WPRS07030300	O-RING(for oil box)	167 X 126 X 2t(SILICON)	1
704	WPMS07041500	OIL LEVEL PLATE SUS	10 X 95 X 0.2t	1
705	WPRS07052100	O-RING(for oil window)	112.5x2(S-75,SILICON)	1
706	WPRE07062100	OIL LEVEL WINDOW	34 X 122 X 3, PC	1
707	WPMZ07072100	OIL LEVEL BACK PLATE	DIECAST	1
708	WPMIM35X11C	BOLT	M3.5 X 11(CROSS, Ni-PLATED)	10
709	WPMC07091300	OIL DRAIN PLUG	M10(BRASS)	1
710	WPRSAN109000	O-RING(for drain plug)	AN-109(SILICON)	1
711	WPRSAN118000	O-RING(for oil filling plug)	AN-118(SILICON)	1
712	WPRE07122100	OIL FILLING PLUG	M24	1
713	WPRN07130700	O-RING(for exhaust flange)	Ø30/20.5 X 2.5t(NBR)	1
714	WPMZ07140700	EXHAUST ASSEMBLY(OUTLET)	NW-25	1
715	WPRE0224N250	NW25 FLANGE CAP	NW-25(CAP)	1
716	WPMIM6X35HN	BOLT	M6 X 35	4
717	WPMA0717020	NAME PLATE **(FLUIDX)**	0.2t, AL STICKER	1

© 2020 FLUIDX, INC.

6. TECHNICAL DATA

6.3 Parts List (BOM LIST: W2V40)

Part No.	Code No.	Description	Specification	
101	JWME01010411	MOTOR (1PHASE)	1P 220V 750W 50/60HZ	
102	WPMI01020400	KEY (FOR MOTOR)	6X6X15R	
103	WPMA01030400	RING (FOR COUPLING SPACE)	Ø25/19X24 (AL)	
104	WPMIM6X35HN	BOLT	M6X35	
106	WPMA01060400	MOTOR PLATE ASSEMBLY	DIECAST	
110	WPMA01100700	HANDLE	DIECAST	
111	WPMIM6X20HN	BOLT	M6X20	
112	WPMIM6X35HN	BOLT	M6X35	
114	WPMC01140700	MOTOR PLATE GUIDE PIN	Ø6 X 13L(BRASS)	
115	WPMIM5X8HS00	BOLT	M5X8 (SET SCREW)	
116	WPMIM6X12HS0	BOLT	M6X12 (SET SCREW)	
119	WPMA01190400	COUPLING FAN	DIECAST(Ø19)	
122	WPRE01222100	COUPLING JOINT	RUBBER	
123	WPMA01230700	COUPLING	DIECAST(Ø15)	
201	WPMA02010400	MAIN PLATE	DIECAST	
202	WPMIM4X10HF0	BOLT	M4 X 10(FLAT HEAD,Ni-PLATED)	
203	WPRV02030700	OIL SEAL (FOR HOUSING)	Ø22/32 X 7	
204	WPMA02040700	OIL SEAL HOUSING(SLEEVE)	Ø40/32 X 25.5	
205	WPMI02050700	BUSHING	Ø22/18x20,SCM415	
206	WPRSS1800000	O-RING	S-18(SILICON)	
208	WPRSG3500000	O-RING	G-35(SILICON)	
209	WPMI02090700	SNAP RING (FOR HOUSING)	R-32	
210	WPMIM4X80HN	BOLT	M4X8	
211	WPMI02110400	SUCTION FELT STRAP	1t x 92 x 13 x R34	
212	WPME02120700	OIL SUCTION FELT	FELT	
213	WPMI02132100	G/B SPRING (FOR KNOB)	W0.9 X Ø4.5/6.3 X 33L	
214	WPMC02142100	G/B BRASS PIN(FOR KNOB)	Ø4.5 X 6.2 X 11.5(BRASS)	
215	WPRSP10A0000	O-RING	P-10A(SILICON)	
216	WPRE02162100	GAS BALLAST KNOB	Ø40	
217	WPMS02170700	STRAINER ASSEMBLY	Ø0.2 X 32# X Ø17	
220	WPRSP3000000	O-RING	P-30(SILICON)	
221	WPMZ02210700	INTAKE FLANGE	NW-25	
223	WPMIM4X12HN	BOLT	M4 X 12	
224	WPRE0224N250	NW25 FLANGE CAP	NW-25	
225	WPRSP2200000	O-RING	P-22(SILICON)	
226	WPRSG4500000	O-RING	G-45(SILICON)	
227	WPRSAN109000	O-RING	AN-109(SILICON)	
228	WPRSP10A0000	O-RING	P-10A(SILICON)	
229	WPMC02291200	G/B TUBE ASSEMBLY(기본)	BRASS	
232	WPMI02322100	GAS BALLAST CLAMP	16 X 26 X 2.0T	
233	WPMIM4X12HN	BOLT	M4X12	
234	WPMA02340400	BASE PLATE	GRAVITY CASTING	
235	WPMIM6000000	NUT	M6	
236	WPMIW6X18N0	WASHER	Ø6 X 18(FLAT)	
237	WPMIM6X25HN	BOLT	M6X25	
238	WPRE02380700	BASE RUBBER	Ø24 X 12	
239	WPMIM6X20HN	BOLT	M6X20	
240	WPMIM4X8HB0	BOLT	M4 X 8(ROUND HEAD,Ni-PLATED)	

© 2020 FLUIDX, INC.

FLUIDX VACUUM PUMP MANUAL - HIGH VACUUM ROTARY VANE PUMPS

6. TECHNICAL DATA

Parts List (BOM LIST: W2V40)

Part No.	Code No.	Description	Specification	Qty
241	WPRE024101YW	SIDE COVER **(FLUIDX)**	ABS(YELLOW)	2
301	WPMI03010400	1ST STAGE STATOR	FC-25	1
302	WPMC03022100	TAPER PIN	Ø5.9 X Ø6.5 X 7	2
303	WPRV03030700	OIL SEAL(for block)	Ø25/35 X 7	1
304	WPMI03041300	VALVE GUIDE PIN(SPRING PIN)	Ø3 X 20	2
305	WPRV03050400	1ST STAGE VALVE	54 X 50 X 3t(VITON)	1
306	WPMI03060400	1ST VALVE BACK PLATE	54 X 50 X 1.6t	1
307	WPMS03071300	1ST VALVE SPACER	Ø8/6.3 X 13(SUS)	1
311	WPMI03111300	1ST VALVE SPRING	W1 X Φ9/11 X 15.5L	1
312	WPMSW5N0000	WASHER	Ø5(SUS FLAT)	1
313	WPMIM5X22HN	BOLT	M5 X 22	1
314	WPRSP6000000	DISTRIBUTER SLEEVE O-Ring	P-6(SILICON)	2
315	WPME03152100	DISTRIBUTER SLEEVE ASSEMBLY	DIECAST	1
319	WPRV03192100	DISTRIBUTER VALVE	Ø45 X 9 X 1.5(VITON)	1
320	WPMI03202101	DISTRIBRTER SPACER	Ø15 X 16(S45C,NEW TYPE)	1
321	WPMC03212100	DISTRIBUTER WEIGHT	Ø44 X 4.7t	1
322	WPMI03222100	DISTRIBUTER SPRING	W0.6 X Ø8.3/9.5 X 17L	1
323	WPMA03232100	DISTRIBUTER CAP	Ø50 X 20	1
324	WPMA03242100	TUBE FITTING	Ø8 x 1/8"PC	1
325	WPRE03250400	HOSE	130MM	1
327	WPMIM5X50HN	BOLT	M5 X 50	1
328	WPMI03281800	OIL FILTER ASSEMBLY		1
332	WPMI03321800	OIL FILTER FIXTURE	t2.0(PRESS)	1
333	WPMIM4X8HN0	BOLT	M4 X 8	2
334	WPRSP6000000	O-RING	P-6(SILICON)	1
335	WPRSS9500000	O-RING	S-95(SILICON)	1
336	WPMI03360400	1ST VALVE OIL BAFFLE	112 X 147 X 1.2t	1
337	WPMIM5X10HN	BOLT	M5 X 10	4
338	WPMIM6X25HN	BOLT	M6 X 25	4
401	WPMI04010400	ROTOR ASSEMBLY(NEW TYPE)	FCD-64	1
409	WPMI04090700	KEY	5 X 5 X 11 X 17.5L	1
410	WPME04100700	OIL PUMP BLADE	8 X 6 X 21	1
411	WPME04110400	1ST STAGE BLADE	55 X 40 X 6t(Round 58x86x6.5)	2
412	WPMS04122100	1ST STAGE BLADE SPRING	W0.4 X Ø2.7/1.9 X 30L(SUS)	2
413	WPMI04132100	1ST STAGE BLADE SPRING GUIDE	Ø1.8/3 X 26(Ø2/3 x 26)	2
414	WPME04140400	2ND STAGE BLADE	40 X 29 X 6t(원43x63x6.5)	2
415	WPMS04152100	2ND STAGE BLADE SPRING	W0.4 X Ø2.7/1.9 X 30L(SUS)	2
416	WPMI04162100	2ND STAGE BLADE SPRING	Ø1.8/3 X 26(Ø2/3 x 26)	2
501	WPMI05010400	2ND STAGE STATOR	FC-25(Φ62.5x60t)	1
502	WPMI05022100	VALVE GUIDE PIN (spring pin)	Ø3 X 20	2
503	WPRV05032100	2ND STAGE VALVE	Ø14.5 X 7(VITON)	2
504	WPMI05042100	2ND VALVE SPRING	W0.6 X Ø7.3/8.5 X 17L	2
505	WPMC05051800	SPRING SUPPORT SPACER(BRASS)	Ø17.5/10.5 X 5L	2
506	WPMI05061800	SPRING SUPPORT(for 2nd valve)	DIECAST(Large)	2
507	WPMIW5G00000	WASHER	Ø5(GEAR, SPRING)	2
508	WPMIM5X20HN	BOLT	M5 X 20	2
509	WPRSP6000000	O-RING	P-6(SILICON)	1
510	WPMI05102100	TAPER PIN(One side Screw)	Ø7 X 25L(M6)	2

© 2020 FLUIDX, INC.

6. TECHNICAL DATA

Parts List (BOM LIST: W2V40)

Part No.	Code No.	Description	Specification	Qty
511	WPMIM6000000	NUT	M6	2
512	WPMIM6X30HN	BOLT	M6 X 30	6
513	WPRSG7000000	O-RING	G-70(SILICON)	1
601	WPMI06010400	END PLATE	FC-25	1
602	WPMI06021000	END PLATE BALL	Ø4(SUJ2)	1
604	WPMIM5X5HS00	BOLT	M5 x 5(SET SCREW)	1
605	WPMI06051000	SPRING PIN(for end plate)	Ø10 x 20	1
607	WPMIM6X30HN	BOLT	M6 X 30	5
608	WPMI06080400	2ND DISCHARGE BAFFLE	118 X 121 X 1.2t	1
701	WPMA07010400	OIL BOX	DIECAST	1
703	WPRS07030400	O-RING(for oil box)	193.6 X 142.3 X 2.6t(SILICON)	1
704	WPMS07041500	OIL LEVEL PLATE SUS	10 X 95 X 0.2t	1
705	WPRS07052100	O-RING(for oil window)	112.5x2(S-75,SILICON)	1
706	WPRE07062100	OIL LEVEL WINDOW	34 X 122 X 3, PC	1
707	WPMZ07072100	OIL LEVEL BACK PLATE	DIECAST	1
708	WPMIM35X11C	BOLT	M3.5 X 11(CROSS, Ni-PLATED)	10
709	WPMC07091300	OIL DRAIN PLUG	M10(BRASS)	1
710	WPRSAN109000	O-RING(for drain plug)	AN-109(SILICON)	1
711	WPRSAN118000	O-RING(for oil filling plug)	AN-118(SILICON)	1
712	WPRE07122100	OIL FILLING PLUG	M24	1
713	WPRN07130700	O-RING(for exhaust flange)	Ø30/20.5 X 2.5t(NBR)	1
714	WPMZ07140700	EXHAUST ASSEMBLY(OUTLET)	NW-25	1
715	WPRE0224N250	NW25 FLANGE CAP	NW-25(CAP)	1
716	WPMIM6X35HN	BOLT	M6 X 35	4
717	WPMA0717040	NAME PLATE **(FLUIDX)**	0.2t, AL STICKER	1

© 2020 FLUIDX, INC.

6. TECHNICAL DATA

6.3 Parts List (BOM LIST: W2V80)

Part No.	Code No.	Description	Specification	Qty
101	MOTOR	3P 220/380V 1.5KW 50/60Hz	W2V60,W2V80	1
102	WPMI01021400	KEY (FOR MOTOR)	8X7X22R	1
103	WPMA01031400	RING (FOR COUPLING SPACE)	Ø30/24X28 (AL)	1
104	WPMIM8X30HN	BOLT	M8X30	4
107	WPMIM8000000	NUT	M8(FLANGE NUT FOR B5)	4
111	WPMI01111400	HOOK(EYE BOLT)	M10X20	1
112	WPMIM8X30HN	BOLT	M8X30	4
113	WPMA01130800	FAN COVER	258 X 226 X 1.5T (RM :	1
114	WPMC01141400	MOTOR PLATE GUIDE PIN	Ø8 X 20L(BRASS)	2
115	WPMIM6X12HS0	BOLT	M6X12 (SET SCREW)	1
116	WPMIM8X10HS0	BOLT	M8X10(SET SCREW)	1
119	WPMA01191400	COUPLING FAN ASSEMBLY	DIECAST	1
122	WPRE01222100	COUPLING JOINT	RUBBER	1
123	WPMI01231400	COUPLING	CR0010(Ø20)	1
201	WPMA02010800	MAIN PLATE	DIECAST	1
202	WPMIM6X35HN	BOLT	M6 X 35	3
203	WPRV02030800	OIL SEAL(for housing)	Ø32/45 X 7	1
204	WPMA02040800	OIL SEAL HOUSING	Ø93/40 x 22	1
205	WPMI02050800	BUSHING	Ø32/24x20	1
206	WPRSAN021000	O-RING	AN-021(SILICON)	2
207	WPMI02070800	OIL PUMP HOUSING(SLEEVE)	Ø95/32 x 16	1
208	WPRSG6000000	O-RING	G-60(SILICON)	1
209	WPMI02090800	SNAP RING (FOR HOUSING)	R-45	1
213	WPMI02132100	G/B SPRING (FOR KNOB)	W0.9 X Ø4.5/6.3 X 33L	1
214	WPMC02142100	G/B BRASS PIN(FOR KNOB)	Ø4.5 X 6.2 X 11.5(BRASS)	1
215	WPRSP10A0000	O-RING	P-10A(SILICON)	1
216	WPRE02162100	GAS BALLAST KNOB	Ø40	1
217	WPMS02171400	STRAINER ASSEMBLY	Ø0.2 X 32# X Ø27	1
220	WPRSP4500000	O-RING	P-45(SILICON)	1
221	WPMA02211400	INTAKE FLANGE	NW-40(ROUND85x54),ANODIZED	1
223	WPMIM5X15HN	BOLT	M5 X 15	4
224	WPRE0224N250	NW25 FLANGE CAP	NW-25(CAP)	1
225	WPRSP3000000	O-RING	P-30(SILICON)	1
226	WPRSG1050000	O-RING	G-105(SILICON)	1
227	WPRSAN109000	O-RING	AN-109(SILICON)	2
228	WPRSP10A0000	O-RING	P-10A(SILICON)	2
229	WPMC02291200	G/B TUBE ASSEMBLY(기본)	BRASS	1
232	WPMI02322100	GAS BALLAST CLAMP	16 X 26 X 2.0T	2
233	WPMIM4X12HN	BOLT	M4X12	2
234	WPMA02341400	BASE PLATE	DIECAST	1
239	WPMIM8X35HN	BOLT	M8X35	4
240	WPMIM5X12HB	BOLT	M5 X 12(ROUND HEAD,Ni-PLATED))	8
241	WPRE024108YW	SIDE COVER **(FLUIDX)**	ABS(YELLOW)	2
301	WPMI03010800	1ST STAGE STATOR	FC-25	1
302	WPMC03022100	TAPER PIN	Ø5.9 X Ø6.5 X 7	2
303	WPRV03030800	OIL SEAL(for block)	Ø35/47 X 7	1
305	WPRV03050800	1ST STAGE VALVE	Ø23 X 13(VITON)	2
306	WPMI03060800	1ST VALVE BACK PLATE		1

© 2020 FLUIDX, INC.

6. TECHNICAL DATA

Parts List (BOM LIST: W2V80)

Part No.	Code No.	Description	Specification	Qty
311	WPMI03110800	1ST VALVE SPRING	W0.7 X Φ10/11.4 X 35L	2
313	WPMIM5X15HN	BOLT	M5 X 15	4
314	WPRSP6000000	DISTRIBUTER SLEEVE O-Ring	P-6(SILICON)	2
315	WPME03152100	DISTRIBUTER SLEEVE ASSEMBLY		1
319	WPRV03192100	DISTRIBUTER VALVE	Ø45 X 9 X 1.5(VITON)	1
320	WPMI03202101	DISTRIBRTER SPACER	Ø15 X 16(S45C,NEW TYPE)	1
321	WPMC03212100	DISTRIBUTER WEIGHT	Ø44 X 4.7t	1
322	WPMI03222100	DISTRIBUTER SPRING	W0.6 X Ø8.3/9.5 X 17L	1
322	WPMS03222100	DISTRIBUTER SPRING	W0.6 X Ø8.3/9.5 X 17L(SUS)	1
323	WPMA03232100	DISTRIBUTER CAP	Ø50 X 20	1
324	WPMA03242100	TUBE FITTING	Ø8 x 1/8"PC	1
325	WPRE03250800	HOSE	185MM	1
327	WPMIM5X55HN	BOLT	M5 X 55	1
328	WPMI03281800	OIL FILTER ASSEMBLY		1
332	WPMI03321800	OIL FILTER FIXTURE	t2.0(PRESS)	1
333	WPMIM4X8HN0	BOLT	M4 X 8	2
334	WPRSP6000000	O-RING	P-6(SILICON)	1
335	WPRSG1450000	O-RING	G-145(SILICON)	1
336	WPMI03360800	1ST VALVE OIL BAFFLE	135 X 179 X 1.2t(REFER DEV.FIG.)	1
337	WPMIM5X10HN	BOLT	M5 X 10	4
338	WPMIM8X25HN	BOLT	M8 X 25	4
339	WPMI03390800	BEARING (for 1st block)	NU1007 (fag,nsk)	1
401	WPMI04010800	ROTOR ASSEMBLY(NEW TYPE)	FCD-64	1
409	WPMI04090800	KEY	7 X 7 X 40R	1
410	WPME04100800	OIL PUMP BLADE	8 X 7 X 35	1
411	WPME04110800	1ST STAGE BLADE	75 X 55 X 7t(ROUND78x58x7.5)	2
412	WPMS04122100	1ST STAGE BLADE SPRING	W0.4 X Ø2.7/1.9 X 30L(SUS)	2
413	WPMI04132100	1ST STAGE BLADE SPRING GUIDE	Ø1.8/3 X 26(Ø2/3 x 26)	2
414	WPME04140800	2ND STAGE BLADE	36 X 41 X 7t(ROUND39x88x7.5)	2
415	WPMS04152100	2ND STAGE BLADE SPRING	W0.4 X Ø2.7/1.9 X 30L(SUS)	2
416	WPMI04162100	2ND STAGE BLADE SPRING	Ø1.8/3 X 26(Ø2/3 x 26)	2
501	WPMI05010800	2ND STAGE STATOR	FC-25(Φ88x61t)	1
502	WPMI05022100	VALVE GUIDE PIN (spring pin)	Ø3 X 20	2
503	WPRV05032100	2ND STAGE VALVE	Ø14.5 X 7(VITON)	1
504	WPMI05042100	2ND VALVE SPRING	W0.6 X Ø7.3/8.5 X 17L	1
505	WPMC05051800	SPRING SUPPORT SPACER(BRASS)	Ø17.5/10.5 X 5L	2
506	WPMI05061800	SPRING SUPPORT(for 2nd valve)	DIECAST(LARGE)	2
507	WPMIW5G00000	WASHER	Ø5(GEAR, SPRING)	1
508	WPMIM5X20HN	BOLT	M5 X 20	1
509	WPRSP6000000	O-RING	P-6(SILICON)	1
510	WPMI05102100	TAPER PIN(ONE SCREW)	Ø7 X 25L(M6)	2
511	WPMIM6000000	NUT	M6	2
512	WPMIM6X30HN	BOLT	M6 X 30	6
513	WPRSG1000000	O-RING	G-100(SILICON)	1
601	WPMI06010800	END PLATE	FC-25	1
606	WPMC06060800	NIPPLE	1/8"(L TYPE)2EA ASSEMBLED	2
607	WPMIM6X30HN	BOLT	M6 X 30	4
608	WPMI06080800	2ND DISCHARGE BAFFLE	170 X 180 X 1.2t	1

© 2020 FLUIDX, INC.

FLUIDX VACUUM PUMP MANUAL - HIGH VACUUM ROTARY VANE PUMPS

6. TECHNICAL DATA

Parts List (BOM LIST: W2V80)

Part No.	Code No.	Description	Specification	Qty
701	WPMA07010800	OIL BOX	DIECAST	1
703	WPRS07030800	O-RING(for oil box)	250 X 195 X 2.6t(D SHAPE)	1
704	WPMS07041500	OIL LEVEL PLATE SUS	10 X 95 X 0.2t	1
705	WPRS07052100	O-RING(for oil window)	112.5x2(S-75,SILICON)	1
706	WPRE07062100	OIL LEVEL WINDOW	34 X 122 X 3, PC	1
707	WPMZ07072100	OIL LEVEL BACK PLATE	DIECAST	1
708	WPMIM35X11C	BOLT	M3.5 X 11(CROSS, Ni-PLATED)	10
709	WPMA07090800	OIL DRAIN PLUG	M10(AL)	1
710	WPRSAN109000	O-RING(for drain plug)	AN-109(SILICON)	1
711	WPRSAN118000	O-RING(for oil filling plug)	AN-118(SILICON)	1
712	WPRE07122100	OIL FILLING PLUG	M24	1
713	WPRSP4500000	O-RING(for exhaust flange)	P-45(SILICON)	1
714	WPMA07141800	EXHAUST ASSEMBLY(OUTLET)	M52xP2.0+NW40,ANODIZED	1
714	WPMI07141400	EXHAUST ASSEMBLY(OUTLET)	CAP TYPE(ASS'Y STATUS)	1
715	WPRE0224N400	NW40 FLANGE CAP	NW-40(CAP)	1
716	WPMIM8X40HN	BOLT	M8 X 40	4
717	WPMA0717080	NAME PLATE**(FLUIDX)**	0.2t, AL STICKER	1

© 2020 FLUIDX, INC.

7. SERVICE & ACCESSORIES

7.1 Service Kits (Major / Minor): W2V10

No	C/N	Description	Qty	Standard	Remarks
1	203	OIL SEAL(for housing)	1	Ø22/32 X 7	Minor and Major
2	205	SEAL RING (BUSHING)	1	Ø22/18x20,SCM415	Minor and Major
3	206	O-RING(for bushing)	2	S-18(SILICON)	Minor and Major
4	208	O-RING(for sleeve housing)	1	G-35(SILICON)	Minor and Major
5	212	OIL SUCTION FELT	1	FELT	Minor and Major
6	215	GAS BALLAST KNOB O-Ring	1	P-10A(SILICON)	Minor and Major
7	220	O-RING(for suction flange)	1	P-30(SILICON)	Minor and Major
8	225	O-RING(for body)	1	P-20(SILICON)	Minor and Major
9	226	O-RING(for body)	1	G-45(SILICON)	Minor and Major
10	227	O-RING(for gas ballast)	2	AN-109(SILICON)	Minor and Major
11	228	GAS BALLAST KNOB O-Ring	2	P-10A(SILICON)	Minor and Major
12	303	OIL SEAL(for block)	1	Ø25/35 X 7	Minor and Major
13	305	1ST STAGE VALVE	1	24 X 36 X 2t(VITON)	Minor and Major
14	314	DISTRIBUTER SLEEVE O-Ring	2	P-6(SILICON)	Minor and Major
15	319	DISTRIBUTER VALVE(VITON)	1	Ø45 X 9 X 1.5(VITON)	Minor and Major
16	325	HOSE(for distribute casing)	1	Ø8/5 X 73mm	Minor and Major
17	335	O-RING(for 1st block)	1	S-80(SILICON)	Minor and Major
18	503	2ND STAGE VALVE	1	Ø14.5 X 7(VITON)	Minor and Major
19	509	O-RING(for block oil hole)	1	P-6(SILICON)	Minor and Major
20	513	O-RING(for 2nd block)	1	G-55(SILICON)	Minor and Major
21	703	O-RING(for oil box)	1	167 X 126 X 2t(SILICON)	Minor and Major
22	705	O-RING(for oil window)	1	112.5x2(S-75,SILICON)	Minor and Major
23	706	OIL LEVEL WINDOW	1	34 X 122 X 3, PC	Minor and Major
24	710	O-RING(for drain plug)	1	AN-109(SILICON)	Minor and Major
25	711	O-RING(for oil filling plug)	1	AN-118(SILICON)	Minor and Major
26	713	O-RING(for exhaust flange)	1	Ø30/20.5 X 2.5t(NBR)	Minor and Major
Minor Kit (LKTW2V10MN)					
27	311	1ST VALVE SPRING	1	W1 X Φ9/11 X 15.5L	Major only
28	322	DISTRIBUTER SPRING	1	W0.6 X Ø8.3/9.5 X 17L	Major only
29	410	OIL PUMP BLADE	1	8 X 6 X 21	Major only
30	411	1ST STAGE BLADE	2	25 X 32 X 6t	Major only
31	412	1ST STAGE BLADE SPRING	2	W0.4 X Ø2.7/1.9 X 30L(SUS)	Major only
32	413	1ST STAGE BLADE SPRING GUIDE	2	Ø1.8/3 X 26	Major only
33	414	2ND STAGE BLADE	2	22 X 22 X 6t	Major only
34	415	1ST STAGE BLADE SPRING	2	W0.4 X Ø2.7/1.9 X 30L(SUS)	Major only
35	416	1ST STAGE BLADE SPRING GUIDE	2	Ø1.8/3 X 26	Major only
36	504	2ND VALVE SPRING	1	W0.6 X Ø7.3/8.5 X 17L	Major only
Major Kit (LKTW2V10MJ)					

© 2020 FLUIDX, INC.

FLUIDX VACUUM PUMP MANUAL - HIGH VACUUM ROTARY VANE PUMPS

7. SERVICE & ACCESSORIES

7.1 Service Kits (Major / Minor): W2V20

No	C/N	Description	Qty	Standard	Remarks
1	203	OIL SEAL(for housing)	1	Ø22/32 X 7	Minor and Major
2	205	SEAL RING (BUSHING)	1	Ø22/18x20,SCM415	Minor and Major
3	206	O-RING(for bushing)	2	S-18(SILICON)	Minor and Major
4	208	O-RING(for sleeve housing)	1	G-35(SILICON)	Minor and Major
5	212	OIL SUCTION FELT	1	FELT	Minor and Major
6	215	GAS BALLAST KNOB O-Ring	1	P-10A(SILICON)	Minor and Major
7	220	O-RING(for suction flange)	1	P-30(SILICON)	Minor and Major
8	225	O-RING(for body)	1	P-20(SILICON)	Minor and Major
9	226	O-RING(for body)	1	G-45(SILICON)	Minor and Major
10	227	O-RING(for gas ballast)	2	AN-109(SILICON)	Minor and Major
11	228	GAS BALLAST KNOB O-Ring	2	P-10A(SILICON)	Minor and Major
12	303	OIL SEAL(for block)	1	Ø25/35 X 7	Minor and Major
13	305	1ST STAGE VALVE	1	43 X 35 X 2t(VITON)	Minor and Major
14	314	DISTRIBUTER SLEEVE O-Ring	2	P-6(SILICON)	Minor and Major
15	319	DISTRIBUTER VALVE(VITON)	1	Ø45 X 9 X 1.5(VITON)	Minor and Major
16	325	HOSE(for distribute casing)	1	Ø8/5 X 95mm	Minor and Major
17	335	O-RING(for 1st block)	1	S-80(SILICON)	Minor and Major
18	503	2ND STAGE VALVE	1	Ø14.5 X 7(VITON)	Minor and Major
19	509	O-RING(for block oil hole)	1	P-6(SILICON)	Minor and Major
20	513	O-RING(for 2nd block)	1	G-55(SILICON)	Minor and Major
21	703	O-RING(for oil box)	1	167 X 126 X 2t(SILICON)	Minor and Major
22	705	O-RING(for oil window)	1	112.5x2(S-75,SILICON)	Minor and Major
23	706	OIL LEVEL WINDOW	1	34 X 122 X 3, PC	Minor and Major
24	710	O-RING(for drain plug)	1	AN-109(SILICON)	Minor and Major
25	711	O-RING(for oil filling plug)	1	AN-118(SILICON)	Minor and Major
26	713	O-RING(for exhaust flange)	1	Ø30/20.5 X 2.5t(NBR)	Minor and Major
Minor Kit (LKTW2V20MN)					
27	311	1ST VALVE SPRING	1	W1 X Φ9/11 X 15.5L	Major only
28	322	DISTRIBUTER SPRING	1	W0.6 X Ø8.3/9.5 X 17L	Major only
29	410	OIL PUMP BLADE	1	8 X 6 X 21	Major only
30	411	1ST STAGE BLADE	2	42 X 32 X 6t	Major only
31	412	1ST STAGE BLADE SPRING	2	W0.4 X Ø2.7/1.9 X 30L(SUS)	Major only
32	413	1ST STAGE BLADE SPRING GUIDE	2	Ø1.8/3 X 26	Major only
33	414	2ND STAGE BLADE	2	30 X 22 X 6t	Major only
34	415	1ST STAGE BLADE SPRING	2	W0.4 X Ø2.7/1.9 X 30L(SUS)	Major only
35	416	1ST STAGE BLADE SPRING GUIDE	2	Ø1.8/3 X 26	Major only
36	504	2ND VALVE SPRING	1	W0.6 X Ø7.3/8.5 X 17L	Major only
Major Kit (LKTW2V20MJ)					

© 2020 FLUIDX, INC.

7. SERVICE & ACCESSORIES

7.1 Service Kits (Major / Minor): W2V40

No	C/N	Description	Qty	Standard	Remarks
1	203	OIL SEAL(for housing)	1	Ø22/32 X 7	Minor and Major
2	205	SEAL RING (BUSHING)	1	Ø22/18x20,SCM415	Minor and Major
3	206	O-RING(for bushing)	2	S-18(SILICON)	Minor and Major
4	208	O-RING(for sleeve housing)	1	G-35(SILICON)	Minor and Major
5	212	OIL SUCTION FELT	1	FELT	Minor and Major
6	215	GAS BALLAST KNOB O-Ring	1	P-10A(SILICON)	Minor and Major
7	220	O-RING(for suction flange)	1	P-30(SILICON)	Minor and Major
8	225	O-RING(for body)	1	P-22(SILICON)	Minor and Major
9	226	O-RING(for body)	1	G-45(SILICON)	Minor and Major
10	227	O-RING(for gas ballast)	2	AN-109(SILICON)	Minor and Major
11	228	GAS BALLAST KNOB O-Ring	2	P-10A(SILICON)	Minor and Major
12	303	OIL SEAL(for block)	1	Ø25/35 X 7	Minor and Major
13	305	1ST STAGE VALVE	1	54 X 50 X 3t(VITON)	Minor and Major
14	314	DISTRIBUTER SLEEVE O-Ring	2	P-6(SILICON)	Minor and Major
15	319	DISTRIBUTER VALVE(VITON)	1	Ø45 X 9 X 1.5(VITON)	Minor and Major
16	325	HOSE(for distribute casing)	1	Ø8/5 X 130mm	Minor and Major
17	334	O-RING(for 1st block oil hole)	1	P-6(SILICON)	Minor and Major
18	335	O-RING(for 1st block)	1	S-95(SILICON)	Minor and Major
19	503	2ND STAGE VALVE	2	Ø14.5 X 7(VITON)	Minor and Major
20	509	O-RING(for block oil hole)	1	P-6(SILICON)	Minor and Major
21	513	O-RING(for 2nd block)	1	G-70(SILICON)	Minor and Major
22	703	O-RING(for oil box)	1	193.6 X 142.3 X 2.6t(SILICON)	Minor and Major
23	705	O-RING(for oil window)	1	112.5x2(S-75,SILICON)	Minor and Major
24	706	OIL LEVEL WINDOW	1	34 X 122 X 3, PC	Minor and Major
25	710	O-RING(for drain plug)	1	AN-109(SILICON)	Minor and Major
26	711	O-RING(for oil filling plug)	1	AN-118(SILICON)	Minor and Major
27	713	O-RING(for exhaust flange)	1	Ø30/20.5 X 2.5t(NBR)	Minor and Major
Minor Kit (LKTW2V40MN)					
28	311	1ST VALVE SPRING	1	W1 X Φ9/11 X 15.5L	Major only
29	322	DISTRIBUTER SPRING	1	W0.6 X Ø8.3/9.5 X 17L	Major only
30	410	OIL PUMP BLADE	1	8 X 6 X 21	Major only
31	411	1ST STAGE BLADE	2	55 X 40 X 6t	Major only
32	412	1ST STAGE BLADE SPRING	2	W0.4 X Ø2.7/1.9 X 30L(SUS)	Major only
33	413	1ST STAGE BLADE SPRING GUIDE	2	Ø1.8/3 X 26	Major only
34	414	2ND STAGE BLADE	2	40 X 29 X 6t	Major only
35	415	1ST STAGE BLADE SPRING	2	W0.4 X Ø2.7/1.9 X 30L(SUS)	Major only
36	416	1ST STAGE BLADE SPRING GUIDE	2	Ø1.8/3 X 26	Major only
37	504	2ND VALVE SPRING	2	W0.6 X Ø7.3/8.5 X 17L	Major only
Major Kit (LKTW2V40MJ)					

© 2020 FLUIDX, INC.

7. SERVICE & ACCESSORIES

7.1 Service Kits (Major / Minor): W2V80

No	C/N	Description	Qty	Standard	Remarks
1	203	OIL SEAL(for housing)	1	Ø32/45 X 7	Minor and Major
2	205	SEAL RING (BUSHING)	1	Ø32/24x20,SCM415(21)	Minor and Major
3	206	O-RING(FOR BUSHING)	2	AN-021(SILICON)	Minor and Major
4	208	O-RING(for oil pump housing)	2	G-60(SILICON)	Minor and Major
5	215	GAS BALLAST KNOB O-Ring	1	P-10A(SILICON)	Minor and Major
6	220	O-RING(for suction flange)	1	P-45(SILICON)	Minor and Major
7	225	O-RING(for body)	1	P-30(SILICON)	Minor and Major
8	226	O-RING(for body)	1	G-105(SILICON)	Minor and Major
9	227	O-RING(for gas ballast)	2	AN-109(SILICON)	Minor and Major
10	228	GAS BALLAST KNOB O-Ring	2	P-10A(SILICON)	Minor and Major
11	303	OIL SEAL(for block)	1	Ø35/47 X 7	Minor and Major
12	305	1ST STAGE VALVE	2	Ø23 X 13(VITON)	Minor and Major
13	314	DISTRIBUTER SLEEVE O-Ring	2	P-6(SILICON)	Minor and Major
14	319	DISTRIBUTER VALVE(VITON)	1	Ø45 X 9 X 1.5(VITON)	Minor and Major
15	325	HOSE(for distribute casing)	1	Ø8/5 X 185mm	Minor and Major
16	334	O-RING(for 1st block oil hole)	1	P-6(SILICON)	Minor and Major
17	335	O-RING(for 1st block)	1	G-145(SILICON)	Minor and Major
18	503	2ND STAGE VALVE	2	Ø14.5 X 7(VITON)	Minor and Major
19	509	O-RING(for block oil hole)	1	P-6(SILICON)	Minor and Major
20	513	O-RING(for 2nd block)	1	G-100(SILICON)	Minor and Major
21	703	O-RING(for oil box)	1	250 X 195 X 2.6t(D SHAPE)	Minor and Major
22	705	O-RING(for oil window)	1	112.5x2(S-75,SILICON)	Minor and Major
23	706	OIL LEVEL WINDOW	1	34 X 122 X 3, PC	Minor and Major
24	710	O-RING(for drain plug)	1	AN-109(SILICON)	Minor and Major
25	711	O-RING(for oil filling plug)	1	AN-118(SILICON)	Minor and Major
26	713	O-RING(for exhaust flange)	1	P-45(SILICON)	Minor and Major
Minor Kit (LKTW2V80MN)					
27	311	1ST VALVE SPRING	2	W0.7 X Φ10/11.4 X 35L	Major only
28	322	DISTRIBUTER SPRING	1	W0.6 X Ø8.3/9.5 X 17L	Major only
29	410	OIL PUMP BLADE	1	8 X 7 X 35	Major only
30	411	1ST STAGE BLADE	2	75 X 55 X 7t	Major only
31	412	1ST STAGE BLADE SPRING	2	W0.4 X Ø2.7/1.9 X 30L(SUS)	Major only
32	413	1ST STAGE BLADE SPRING GUIDE	2	Ø1.8/3 X 26	Major only
33	414	2ND STAGE BLADE	2	36 X 41 X 7t	Major only
34	415	1ST STAGE BLADE SPRING	2	W0.4 X Ø2.7/1.9 X 30L(SUS)	Major only
35	416	1ST STAGE BLADE SPRING GUIDE	2	Ø1.8/3 X 26	Major only
36	504	2ND VALVE SPRING	2	W0.6 X Ø7.3/8.5 X 17L	Major only
Major Kit (LKTW2V80MJ)					

© 2020 FLUIDX, INC.

7. SERVICE & ACCESSORIES

7.2 Accessories List

Category	P/N	Description	Recommended Pump
Oil Mist Eliminator	LOME20025	Oil Mist Eliminator, White Housing, NW25 Port	W2V10, W2V20
	LOME50025	Oil Mist Eliminator, White Housing, NW25 Port	W2V40
	LOME80025	Oil Mist Eliminator, Two-Stage, White Housing, NW25 Ports	W2V10, W2V20, W2V40
	LOME40040	Oil Mist Eliminator, White Housing, NW 40 Port	W2V80
	LOME70040	Oil Mist Eliminator, White Housing, NW40 Port	W2V80, W2V160
Inlet Trap	MV300200-NW25	Trap, Inlet, 9.5" Clear Sump w/ SS Gauze Insert & NW 25	W2V10, W2V20, W2V40
	MV300910	Replacement Filter, 9.5" Stainless Steel Element	W2V10, W2V20, W2V40
Pump Oil	LVO191Q	Oil, Vacuum Pump, 19, 1 Quart	All
	LVO191G	Oil, Vacuum Pump, 19, 1 Gallon	All
	LVOFF1G	Oil, Vacuum, Flush Fluid, 1 Gallon	All
Digital Gauge	LMSA0107	Gauge, Vacuum, Convection, Range ATM-10^{-3} Torr, 1/8”	All
	LMSA103152-120V	Gauge Power Supply - 120V	All
	LVFATN25FP12S	Adaptor, Tee, NW25 X 1/8 FNPT SS	W2V10, W2V20, W2V40
Vacuum Fittings	LVFE90N25S	Elbow, 90, NW25, 304 SS	W2V10, W2V20, W2V40
	LVFCN25A	Clamp, NW25, Aluminum, Wing Nut	W2V10, W2V20, W2V40
	LVFGN25SV	Ring, Center, NW25,SS/Viton	W2V10, W2V20, W2V40
	LVFCN40A	Clamp, NW40, Aluminum, Wing Nut	W2V80, W2V160
	LVFGN40SV	Ring, Center, NW40,SS/Viton	W2V80, W2V160
Vacuum Hoses		Contact FLUIDX for options	

© 2020 FLUIDX, INC.

FLUIDX VACUUM PUMP MANUAL - HIGH VACUUM ROTARY VANE PUMPS

© 2020 FLUIDX, INC.

CONTACT US

FLUIDX
INDUSTRIAL & SCIENTIFIC SOLUTIONS

PHONE | FAX
Phone: 801-486-1015
Fax: 801-486-1032

ADDRESS
FLUIDX
139 W. 2260 S.
Salt Lake City, UT 84115

WEB
www.fluidxinc.com
info@fluidxinc.com