



Coaire Vacuum Pump

경원진공펌프

- Oil Sealed Rotary Vane
- Dry Rotary Vane
- Hook & Claw Vacuum & Pressure
- Vacuum Systems



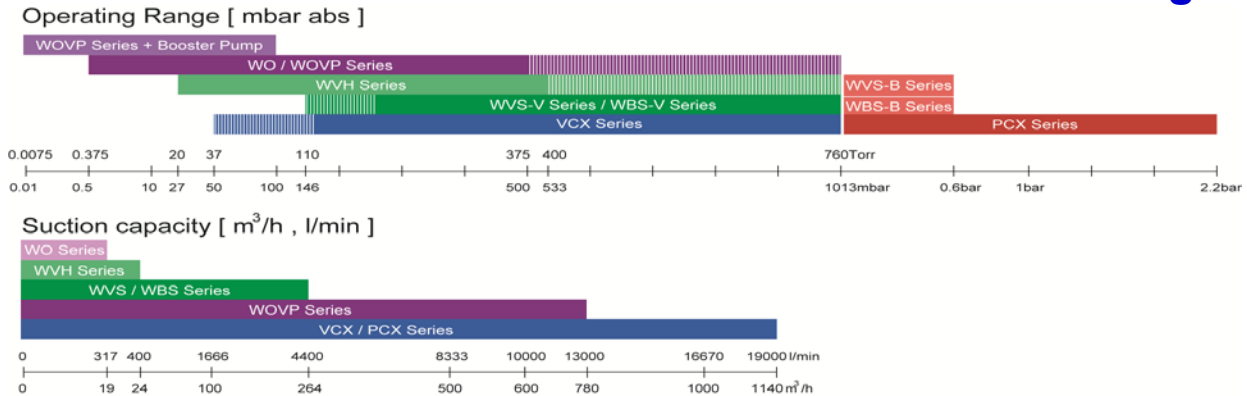
COAIRE

COAIRE vacuum products have provided solutions for a multitude of industrial applications.



COAIRE

Product Ranges:



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Registered
ISO 9001:2015 / ISO 14001:2015

WOVP SERIES

Oil sealed Rotary Vane Vacuum Pump

- **Operating Principle:**

COAIRE's Oil Sealed Rotary Vane Pumps operate according to the rotary vane principle. The rotor is eccentrically positioned in the cylinder and has the slots for vane sliding. The centrifugal forces when rotates push the vanes towards wall of the cylinder through the slots of the rotor. The gas will be sucked in through a built-in anti suck back valve that prevents the pump from rotating backward at standstill, and goes into the cylinder. The gas will be compressed and pushed out through the exhaust opening located between the pumps housing and oil sump. The oil will be fed into the pump module from the oil sump for sealing and lubrication by differential pressure between pump module and oil sump. The discharged oil as a mist with gas will be collected through the oil separator(s) in the upper part of oil sump. The collected oil will be drawn into the pump inlet side for re-circulation by the pressure difference between suction and pressure side through a float valve (F version) or through the return line (L version).. Gas Ballast (in case equipped) will be working by sucking ambient air into the cylinder for prevention of accumulation of condensates(water) from process gas.

- **Versions:**

WOVP Series are designed for reliability in a multitude of applications. Available in three(3) versions to the pumps, each pump is designed to meet your vacuum needs.

"L" version: for medium vacuum – 10~20 mbar for continuous operation with oil return line.

"NM" version: for medium deeper vacuum - 2 mbar for continuous operation with oil return line.

"F" version: for deeper vacuum – 0.1 mbar- Suitable for continuous operation with float valve system .

For dimension/curve information, please see each page of the model.

- **Features:**

- Compact Design – Reliability & Durability – Easy to maintain and operate
- Simple Installation – Air Cooled, No water required
- Direct Drive Design – No Belts required
- Integral Exhaust Filter – Discharge air 99% oil free
- Quite Operation

- **Applications:**

- Food Processing, Packaging
- Plastic Molding, PCB, Hot press, Rubber Press Molding, Metallurgy.
- Vacuum Lifting, Wood Carving
- Hospitals & Clinics
- Laboratories,

- **Safety:**

- All WOVP series has obtained CE Mark.

WOVP SERIES

Oil sealed Rotary Vane Vacuum Pump

- **Standard Equipment:**
 - Composite Vane
 - TEFC High Efficiency Motor
 - Oil Level Sight Glass
 - Wire Mesh Inlet Filter Screen
 - Anti-Suck back Valve
 - Spin on Oil Filter (except WOVP-0020~0040)
 - Vibration Isolator
 - Gas Ballast Valve (F version only) – Optional
 - Exhaust Pressure Gage – Optional
 - Level Switch (Port)–Optional
 - Temperature Switch (Port)–Optional

- **Technical data**

Models			20	30	40	60	80	130	200	320	350	430	500	600	800	1000	1200	1500	
Displace-ment	60Hz	m³/h	12	18	24	36	48	78	120	192	210	258	300	360	505	600	780	NA	
	50Hz		10	15	20	30	40	65	100	160	175	215	250	300	420	500	660	750	
End- Vacuum	F or N Type	mbar	NA	NA	NA	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.5	
	NM Type		2	2	2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
	L Type		20	20	20	NA	NA	NA	NA	NA	NA	NA	NA	NA	10	10	10	10	
Motor (3Ph)	IEC(Kw)	60Hz	0.4	0.75	0.9	1.1	1.5	2.2	3	3.7	5.5	5.5	7.5	8.6	15	15	18.5	NA	
		50Hz	0.4	0.55	0.75	0.9	1.1	1.5	2.2	3.7	5.5	5.5	5.5	7.5	11.25	11.25	15	18.5	
	NEVA(Hp)	60Hz	N/A	N/A	N/A	2	2	3	5	5	7.5	7.5	10	11.5	15	20	25	NA	
Motor (1Ph)	IEC(Kw)	50/60Hz	0.4	0.75	0.9	1.5	1.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Revolution	RPM	60Hz	1740	1740	3480	1740	1740	1740	1740	1740	1740	1740	1740	1740	1160	1160	1160	NA	
		50Hz	1450	1450	2870	1450	1450	1450	1450	1450	1450	1450	1450	1450	980	980	980	1450	
Noise	dB(A)	60Hz	59	60	62	67	67	68	68	75	77	77	77	78	78	78	79	79	
		50Hz	57	58	60	64	64	65	65	72	74	74	74	75	76	76	77	77	
Operating Temp.	℃		77	80	85	76	78	85	85	85	85	85	85	85	80	82	80	82	
Oil Capacity	Ltr		0.5	0.5	0.5	1.4	1.4	2.5	2.7	7	7	7	7	7	19	19	19	19	
Connections	G(BSP) or NPT	Inlet	1/2"	1/2"	1/2"	1-1/4"	1-1/4"	1-1/4"	1-1/4"	2"	2"	2"	2"	2"	3"	3"	3"	3"	
		Outlet	1-1/4"	1-1/4"	1-1/4"	1-1/4"	1-1/4"	1-1/4"	1-1/4"	2"	2"	2"	2"	2"	3"	3"	3"	3"	
Weight	kg (w ith motor)		20	22	20	47	53	66	75	124	164	145	184	188	504 /491*	544 /531*	703 /582*	535	
		Weight can be varied upon motor specific Above weights are w/o oil * for 50Hz motor																	

WOVP SERIES**Oil sealed Rotary Vane Vacuum Pump****WOVP-0020, 0030 & 0040**

Single Stage, Oil Re-circulating, Air Cooled, and Direct Driven



- Compact Design - Reliability & Durability – Easy to maintain and operate.
- Simple Installation – Air Cooled No Water Required.
- Direct Drive – C-Face Design requires no belts
- Integral Exhaust Filter – Discharge Air 99.9% Oil Free
- Quite Operation.

Standard Equipment: Composite Vane, Wire mesh Inlet Filter Screen, Vibration Isolator, TEFC High Efficiency Motor, Anti-Suck Back Valve, Oil Level Sight Glass(1), Exhaust cover Silencer

Optional Equipment: Additional Oil level sight Glass, Exhaust Pressure Gauge, Exhaust Cover(threaded).

- **Specifications:**

Models			20	30	40
Displacement	60Hz	m ³ /h	12	18	24
	50Hz		10	15	20
End Vacuum	NM Type		2	2	2
	L Type		20	20	20
Motor (3Ph)	IEC(Kw)	60Hz	0.4	0.75	0.9
		50Hz	0.4	0.55	0.75
	NEMA(Hp)	60Hz	N/A	N/A	N/A
Motor(1Ph)	IEC(Kw)	50/60Hz	0.4	0.75	0.9
Revolution	RPM	60Hz	1740	1740	3480
		50Hz	1450	1450	2870
Noise	dB(A)	60Hz	59	60	62
		50Hz	57	58	60
Operating Temp.	℃		77	80	85
Oil Capacity	Ltr		0.5	0.5	0.5
Connections	G(BSP) or NPT	Intake	1/2"	1/2"	1/2"
		Exhaust	1-1/4"	1-1/4"	1-1/4"
Weight	kg (with motor)		20	22	20

WOVP SERIES**Oil sealed Rotary Vane Vacuum Pump****WOVP-060 & 080**

Single Stage, Oil Re-circulating, Air Cooled, and Direct Driven



- Compact Design - Reliability & Durability – Easy to maintain and operate.
- Simple Installation – Air Cooled No Water Required.
- Direct Drive – C-Face Design requires no belts
- Integral Exhaust Filter – Discharge Air 99.9% Oil Free
- Quite Operation.



Standard Equipment: Composite Vane, Wire mesh Inlet Filter Screen, Vibration Isolator, TEFC High Efficiency Motor, Anti-Suck Back Valve, Oil Level Sight Glass, Gas Ballast Valve (N & F Only), Spin-on Oil Filter.

Optional Equipment: Exhaust Pressure Gauge, Level Switch, and Heater

- **Specifications:**

Models			60	80
Displacement	60Hz	m ³ /h	36	48
	50Hz		30	40
End- Vacuum	F Type	mbar	0.1	0.1
Motor (3Ph)	IEC(Kw)	60Hz	1.1	1.5
		50Hz	0.9	1.1
	NEMA(Hp)	60Hz	2	2
Motor(1Ph)	IEC(Kw)	50/60Hz	1.5	1.5
Revolution	RPM	60Hz	1740	1740
		50Hz	1450	1450
Noise	dB(A)	60Hz	67	67
		50Hz	64	64
Operating Temp.	°C		76	78
Oil Capacity	Ltr		1.4	1.4
Connections	G(BSP) or NPT	Intake	1-1/4"	1-1/4"
		Exhaust	1-1/4"	1-1/4"
Weight	kg (w ith motor)		47	53

WOVP SERIES**Oil sealed Rotary Vane Vacuum Pump****WOVP-120 & 200**

Single Stage, Oil Re-circulating, Air Cooled, and Direct Driven



- Compact Design - Reliability & Durability – Easy to maintain and operate.
- Simple Installation – Air Cooled No Water Required.
- Direct Drive – C-Face Design requires no belts
- Integral Exhaust Filter – Discharge Air 99.9% Oil Free
- Quite Operation.



Standard Equipment: Composite Vane, Wire mesh Inlet Filter Screen, Vibration Isolator, TEFC High Efficiency Motor, Anti-Suck Back Valve, Oil Level Sight Glass, Gas Ballast Valve (N & F Only), Spin-on Oil Filter.

Optional Equipment: Exhaust Pressure Gauge, Level Switch, and Heater

• **Specifications:**

Models			120	200
Displacement	60Hz	m³/h	75	120
	50Hz		63	100
End- Vacuum	F Type	mbar	0.1	0.1
Motor (3Ph)	IEC(Kw)	60Hz	2.2	3
		50Hz	1.5	2.2
	NEMA(Hp)	60Hz	3	5
Revolution	RPM	60Hz	1740	1740
		50Hz	1450	1450
Noise	dB(A)	60Hz	68	68
		50Hz	65	65
Operating Temp.	℃		85	85
Oil Capacity	Ltr		2.5	2.7
Connections	G(BSP) or NPT	Intake	1-1/4"	1-1/4"
		Exhaust	1-1/4"	1-1/4"
Weight	kg (w ith motor)		64	75

WOVP SERIES**Oil sealed Rotary Vane Vacuum Pump****WOVP-320 & 430**

Single Stage, Oil Re-circulating, Air Cooled, and Direct Driven



- Compact Design - Reliability & Durability – Easy to maintain and operate.
- Simple Installation – Air Cooled No Water Required.
- Direct Drive – C-Face Design requires no belts
- Integral Exhaust Filter – Discharge Air 99.9% Oil Free
- Quite Operation.

Standard Equipment: Composite Vane, Wire mesh Inlet Filter Screen, Vibration Isolator, TEFC High Efficiency Motor, Anti-Suck Back Valve, Oil Level Sight Glass, Gas Ballast Valve, Built-in Float Valve Assembly for oil return, Spin-on Oil Filter.

Optional Equipment: Exhaust Pressure Gauge, Oil Level Switch (Port), Temperature Switch (Port), Heater and Water Cooler.

- **Specifications:**

Models	320			430
Displacement	60Hz	m ³ /h	192	258
	50Hz		160	215
End- Vacuum	F Type	mbar	0.1	0.1
Motor (3Ph)	IEC(Kw)	60Hz	3.7	5.5
		50Hz	3.7	5.5
	NEMA(Hp)	60Hz	5	7.5
Revolution	RPM	60Hz	1740	1740
		50Hz	1450	1450
Noise	dB(A)	60Hz	75	77
		50Hz	72	74
Operating Temp.	°C		85	85
Oil Capacity	Ltr		7	7
Connections	G(BSP) or NPT	Intake	2"	2"
		Exhaust	2"	2"
Weight	kg (w ith motor)		124	145

WOVP SERIES**Oil sealed Rotary Vane Vacuum Pump****WOVP-350**

Single Stage, Oil Re-circulating, Air Cooled, and Direct Driven



- Compact Design - Reliability & Durability – Easy to maintain and operate.
- Simple Installation – Air Cooled No Water Required.
- Direct Drive – C-Face Design requires no belts
- Integral Exhaust Filter – Discharge Air 99.9% Oil Free
- Quite Operation.

Standard Equipment: Composite Vane, Wire mesh Inlet Filter Screen, Vibration Isolator, TEFC High Efficiency Motor, Anti-Suck Back Valve, Oil Level Sight Glass, Gas Ballast Valve, Built-in Float Valve Assembly for oil return, Spin-on Oil Filter.

Optional Equipment: Exhaust Pressure Gauge, Oil Level Switch (Port), Temperature Switch (Port), Heater and Water Cooler.

- **Specifications:**

Models			350
Displacement	60Hz	m ³ /h	210
	50Hz		175
End- Vacuum	F Type	mbar	0.1
Motor (3Ph)	IEC(Kw)	60Hz	5.5
		50Hz	5.5
	NEMA(Hp)	60Hz	7.5
Revolution	RPM	60Hz	1740
		50Hz	1450
Noise	dB(A)	60Hz	77
		50Hz	74
Operating Temp.	°C		85
Oil Capacity	Ltr		7
Connections	G(BSP) or NPT	Intake	2"
		Exhaust	2"
Weight	kg (with motor)		164

WOVP SERIES**Oil sealed Rotary Vane Vacuum Pump****WOVP-500 & 600**

Single Stage, Oil Re-circulating, Air Cooled, and Direct Driven



- Compact Design - Reliability & Durability – Easy to maintain and operate.
- Simple Installation – Air Cooled No Water Required.
- Direct Drive – C-Face Design requires no belts
- Integral Exhaust Filter – Discharge Air 99.9% Oil Free
- Quite Operation.



Standard Equipment: Composite Vane, Wire mesh Inlet Filter Screen, Vibration Isolator, TEFC High Efficiency Motor, Anti-Suck Back Valve, Oil Level Sight Glass, Gas Ballast Valve (N, F & NM Only), Built-in Float Valve Assembly for oil return, Spin-on Oil Filter.

Optional Equipment: Exhaust Pressure Gauge, Oil Level Switch (Port), Temperature Switch (Port), Heater and Water Cooler.

- **Specifications:**

Models			500	600
Displacement	60Hz	m ³ /h	300	360
	50Hz		250	300
End Vacuum	F Type	mbar	0.1	0.1
Motor (3Ph)	IEC(Kw)	60Hz	7.5	8.6
		50Hz	5.5	7.5
	NEMA(Hp)	60Hz	10	11.5
Revolution	RPM	60Hz	1740	1740
		50Hz	1450	1450
Noise	dB(A)	60Hz	77	78
		50Hz	74	75
Operating Temp.	℃		85	85
Oil Capacity	Ltr		7	7
Connections	G(BSP) or NPT	Intake	2"	2"
		Exhaust	2"	2"
Weight	kg (with motor)		184	188

WOVP SERIES**Oil sealed Rotary Vane Vacuum Pump****WOVP-800,1000 &1200**

Single Stage, Oil Re-circulating, Air Cooled, and Direct Driven



- Compact Design - Reliability & Durability – Easy to maintain and operate.
- Simple Installation – Air Cooled No Water Required.
- Direct Drive – C-Face Design requires no belts
- Integral Exhaust Filter – Discharge Air 99.9% Oil Free
- Quite Operation.

Standard Equipment: Composite Vane, Wire mesh Inlet Filter Screen, Vibration Isolator, TEFC High Efficiency Motor, Anti-Suck Back Valve, Oil Level Sight Glass, Gas Ballast Valve, Spin-on Oil Filter.

Optional Equipment: Exhaust Pressure Gauge, Oil Level Switch (Port), Temperature Switch (Port), Heater Water Cooler, and Float Valve Assembly for oil return,

- **Specifications:**

Models			800	1000	1200
Displacement	60Hz	m ³ /h	505	600	780
	50Hz		420	500	660
End Vacuum	F or N version	mbar	0.1	0.1	0.1
	L version		10	10	10
Motor (3Ph)	IEC(Kw)	60Hz	15	15	18.5
		50Hz	11.25	11.25	15
	NEMA(Hp)	60Hz	15	20	25
Revolution	RPM	60Hz	1160	1160	1160
		50Hz	980	980	980
Noise	dB(A)	60Hz	78	79	79
		50Hz	76	77	77
Operating Temp.	°C		80	82	80
Oil Capacity	Ltr		19	19	19
Connections	G(BSP) or NPT	Intake	3"	3"	3"
		Exhaust	3"	3"	3"

WOVP SERIES**Oil sealed Rotary Vane Vacuum Pump****WOVP-1500****Single Stage, Oil Re-circulating, Air Cooled, and Direct Driven**

- Compact Design - Reliability & Durability – Easy to maintain and operate.
- Simple Installation – Air Cooled No Water Required.
- Direct Drive – C-Face Design requires no belts
- Integral Exhaust Filter – Discharge Air 99.9% Oil Free
- Quite Operation.

Standard Equipment: Composite Vane, Wire mesh Inlet Filter Screen, Vibration Isolator, TEFC High Efficiency Motor, Anti-Suck Back Valve, Oil Level Sight Glass, Gas Ballast Valve, Spin-on Oil Filter, Exhaust Pressure Gauge.

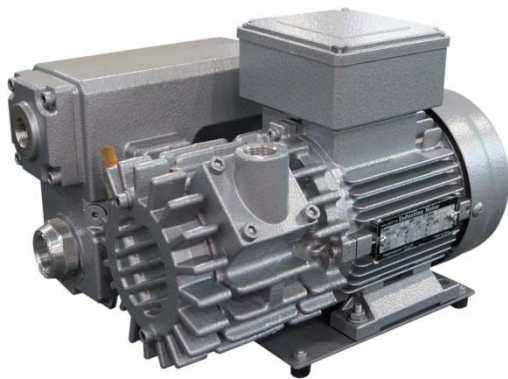
Optional Equipment: Oil Level Switch (Port), Temperature Switch (Port), Heater, Water Cooler, and Float Valve Assembly for oil return,

- **Specifications:**

Models			1500
Displacement		M3/hour	750
End Vacuum	F or N version	mbar	0.5
	L version		10
Motor		50Hz	18.5
Revolution		50Hz	1500
Noise		50Hz	79
Operating Temp.	°C		85
Oil Capacity	Ltr		19
Connections	G(BSP) or NPT	Intake	3"
		Exhaust	3"
Weight	kg (with motor) for 50Hz motor		535

WO SERIES**Oil sealed Rotary Vane Vacuum Pump****WO-10, 12 & 20**

Single Stage, Oil Re-circulating, Air Cooled, and Direct Driven



- Compact Design - Reliability & Durability – Easy to maintain and operate.
- Simple Installation – Air Cooled No Water Required.
- Direct Drive – Compact Size
- Integral Exhaust Filter – Discharge Air 99.9% Oil Free
- Quite Operation.



Standard Equipment: Composite Vane, Wire mesh Inlet Filter Screen, Vibration Isolator, TEFC High Efficiency Motor, Anti-Suck Back Valve, Oil Level Sight Glass(1), Exhaust Cover(threaded).

Optional Equipment: Additional Oil level sight Glass, Exhaust Filter Pressure Gauge.

Specifications:

Models			10	12	20
Displacement	60Hz	m ³ /h	10	12	19
	50Hz		8	10	16
End Vacuum	Float Type		0.5	2	2
Motor (1 & 3Ph)	Kw	50/60Hz	0.3	0.3	0.6
Revolution	RPM	60Hz	1800	3600	3600
		50Hz	1500	3000	3000
Noise	dB(A)	60Hz	60	63	64
		50Hz	57	59	60
Operating Temp.	°C		77	80	85
Oil Capacity	Ltr		0.3	0.3	0.3
Connections	G(BSP) or NPT	Intake	1/2"	1/2"	1/2"
		Exhaust	1/2"	1/2"	1/2"
Weight	Kg (with motor)		16	16	18

WVS & WBS SERIES

Dry Rotary Vane Vacuum Pump

■ Operating Principle:

COAIRE's Dry Rotary Vane Pumps operate according to the rotary vane principal. The rotor is eccentrically positioned in the pump cylinder and has the machined slots for sliding of the vanes. The centrifugal forces of the rotation pushes vanes out towards the wall of the cylinder. The gas enters vacuum pump through the inlet manifold (Air filter) and is compressed and pushed out through the outlet manifold (built-in silencer) installed on pump module. The regulators installed on manifold are adopted for regulating vacuum or pressure level constantly. Carbon material vane is employed for self-lubrication.

■ Versions:

WVS/WBS Series are designed for reliability in a multitude of applications. Available in various combination versions to the pumps, each pump is designed to meet your vacuum and pressure needs.

- WVS (Single Pump Module)
 - 1) V version – Vacuum Operation only
 - 2) VB version – Vacuum and Blow Operation
- WBS (Dual Pump Modules)
 - 1) V version – Vacuum operation on each module independently
 - 2) VV version – Vacuum operation only - double capacity by combining two modules
 - 3) VB version – Vacuum or Blow operation on each module
 - 4) VBVB version – Vacuum and Blow operation on each module
 - 5) B version – Blow operation only on each module independently
 - 6) BB version – Blow operation only - double capacity by combining two modules

■ Features:

- Single Stage, Carbon Vane Rotary, Air-Cooled.
- Compact Design – Reliability & Durability – Easy to maintain and operate
- Simple installation – Air Cooled – No water Required.
- Quiet Operation
- Oil free

■ Applications:

WVS / WBS series are ideal for use of following applications:
Printing, Book Binding, Packing, Forming, Automation, Absorption and many other industrial applications.

WVS SERIES

Dry Rotary Vane Vacuum Pump

• Standard Equipment:

- Carbon Vanes
- TEFC High efficiency Motor
- Vacuum Regulator & Gauge
- Vibration Isolators
- Built-in particulate Filter & Silencer
- Pressure Regulator & Gauge (Optional)

• Technical data

For dimension/curve information, please see each page of the model.

Models			WVH		WVS						WBS									
			3	5	3 / 3H	5 / 5H	6 / 6H	8 / 8H	9 / 9H	10 / 10H	30A	50A	60A	80A	80B	85B	90B	95B	100B	
Displace-ment	60Hz	l/min	260	400	280	480	685	1115	1350	2200	280x2	480x2	685x2	1115x2	1115x2	1350+ 1115	1350x2	1350+ 2200	2200x2	
	50Hz	l/min	220	330	235	405	575	935	1130		235x2	405x2	575x2							
End- Vacuum	mm HgG		724		610	650				670	650									
Normal Operating Vacuum	mm HgG		400~724		450 / 600					410 / 600	450							410		
Normal Operating Pressure	Kg/cm2		<div></div>		0.6					0.5	0.6									
Motor	Kw				0.4	0.75	0.4	0.75	1.5	1.5(6P)	2.2(6P)	4	0.75	1.5	2.2	4	4	4	5.5	5.5
Pump RPM	60Hz	rpm	1430	1300	1740	1740	1740	1160	1160	1100	1740	1740	1740	1160	1160	1160	1160	1160+ 1100	1100	
	50Hz	rpm	1190	1080	1450	1450	1450	980	980	1100	1450	1450	1450							
Operating Amb.Temp	℃		0 ~ 40 ℃																	
Connections	Intake(G-Bsp)		3/8"		3/4"			1"		1-1/4"	3/4"			1"				1" -1-1/4"		1-1/4"
Driven			T-Belt		Coupling					V-Belt	T-Belt				V-Belt					
Weight	kg (w/ motor)		22	33	24	33	44	73	97	120	40	56	75	115	129	150	165	200	235	

Weight can be varied upon motor makers and its specification.

WVS SERIES**Dry Rotary Vane Vacuum Pump****WVH- 3, 5****Single Stage, Carbon Vane Rotary, Air Cooled,**

- Compact Design - Reliability & Durability – Easy to maintain and operate.
- Simple Installation – Air Cooled, No Water Required – Oil Free
- Quite Operation.
- **Belt Drive**

Standard Equipment: Carbon Vanes, Built-in Silencer, Vibration Isolators, Vacuum gage and Regulator, TEFC High Efficiency Motor

Optional Equipment: Inlet Filter

- **Specifications:**

MODEL		WVH-3	WVH-5
Displacement	60Hz l/min	260	400
	50Hz l/min	220	330
End Vacuum	mm HgG	724	724
Normal Operating Vacuum	mm HgG	400~724	400~724
Motor	Kw	0.4	0.75
Pump Revolution	60Hz rpm	1430	1300
	50Hz rpm	1190	1080
Operating Amb.Temp.	℃	0 ~ 40 ℃	
Connections	Intake(G-Bsp)	3/8"	3/8"
Driven		Belt	
Weight	kg (with motor)	22	33

WVS SERIES**Dry Rotary Vane Vacuum Pump****WVS- 3, 5& 6, 3H, 5H & 6H****Single Stage, Carbon Vane Rotary, Air Cooled,**

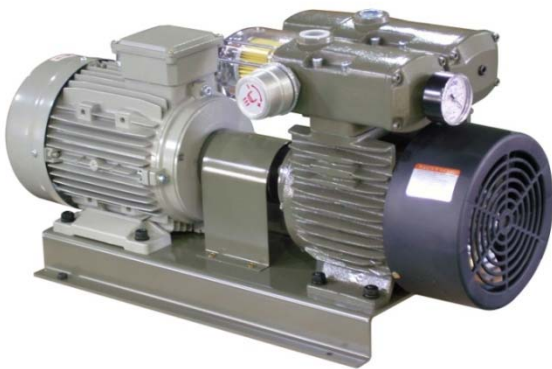
- Compact Design - Reliability & Durability – Easy to maintain and operate.
- Simple Installation – Air Cooled, No Water Required – Oil Free
- Quite Operation.
- Direct Coupling Drive

Standard Equipment: Carbon Vanes, Built-in particulate Filter & Silencer, Vibration Isolators, Vacuum gage and Regulator, TEFC High Efficiency Motor

Optional Equipment: Pressure Gauge & regulator for Blow operation

- **Specifications:**

MODEL			WVS-3 / 3H	WVS-5 / 5H	WVS-6 / 6H
Displacement	60Hz	l/min	280	480	685
	50Hz	l/min	235	405	575
End Vacuum	mm HgG		610	650	650
Normal Operating Vacuum	mm HgG		450 / 600	450 / 600	450 / 600
Normal Operating Pressure	Kgf/cm ²		0.6	0.6	0.6
Motor	Kw		0.4	0.75	1.5
Pump Revolution	60Hz	rpm	1740	1740	1740
	50Hz	rpm	1450	1450	1450
Operating Amb.Te mp.	°C		0 ~ 40 °C		
Connections	Intake(G-Bsp)		3/4"	3/4"	3/4"
Driven			coupling		
Weight	kg (with motor)		24	33	44

WVS SERIES**Dry Rotary Vane Vacuum Pump****WVS- 8 & 9, 8H & 9H****Single Stage, Carbon Vane Rotary, Air Cooled,**

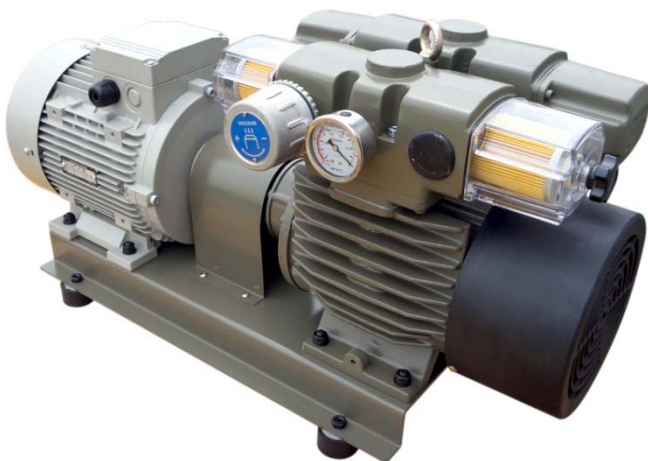
- Compact Design - Reliability & Durability – Easy to maintain and operate.
- Simple Installation – Air Cooled, No Water Required – Oil Free
- Quite Operation.
- Direct Coupling Drive

Standard Equipment: Carbon Vanes, Built-in particulate Filter & Silencer, Vibration Isolators, Vacuum gage and Regulator, TEFC High Efficiency Motor

Optional Equipment: Pressure Gauge & regulator for Blow operation

- **Specifications:**

MODEL			WVS-8	WVS-8H	WVS-9	WVS-9H
Displacement	60Hz	l/min	1115	1115	1350	1350
	50Hz	l/min	935	935	1130	1130
End Vacuum	mm HgG		650	740	650	740
Normal Operating Vacuum	mm HgG		450	600	450	600
Normal Operating Pressure	Kgf/cm2		0.6	0.7	0.6	0.7
Motor	Kw		1.5(6P)	1.5(6P)	2.2(6P)	2.2(6P)
Pump Revolution	60Hz	rpm	1160	1160	1160	1160
	50Hz	rpm	980	980	980	980
Operating	°C		0 ~40°C			
Connections	Intake(G-Bsp)		1"	1"	1"	1"
Driven			Via Coupling			
Weight	kg (with motor)		73	73	97	97

WVS SERIES**Dry Rotary Vane Vacuum Pump****WVS- 10A & 10AH****Single Stage, Carbon Vane Rotary, Air Cooled,**

- Compact Design - Reliability & Durability – Easy to maintain and operate.
- Simple Installation – Air Cooled, No Water Required – Oil Free
- Quite Operation.
- Direct Coupling Drive

Standard Equipment: Carbon Vanes, Built-in particulate Filter & Silencer, Vibration Isolators, Vacuum gage and Regulator, TEFC High Efficiency Motor

Optional Equipment: Pressure Gauge & regulator for Blow operation

- **Specifications:**

MODEL			WVS-10A	WVS-10AH
Displacement	60Hz	l/min	2350	2350
	50Hz	l/min	1960	1960
End Vacuum	mm HgG		670	740
Normal Operating Vacuum	mm HgG		410	600
Normal Operating Pressure	Kgf/cm2		0.5	0.7
Motor	Kw		4	4
Pump Revolution	60Hz	rpm	1175	1175
	50Hz	rpm	980	980
Operating Amb. Temp.	°C		0 ~ 40 °C	0 ~ 40 °C
Connections	Intake(G-Bsp)		1-1/4"	1-1/4"
Driven			Via Coupling	
Weight	kg (with motor)		120	120

WVS SERIES**Dry Rotary Vane Vacuum Pump****WVS- 10 & 10H****Single Stage, Carbon Vane Rotary, Air Cooled,**

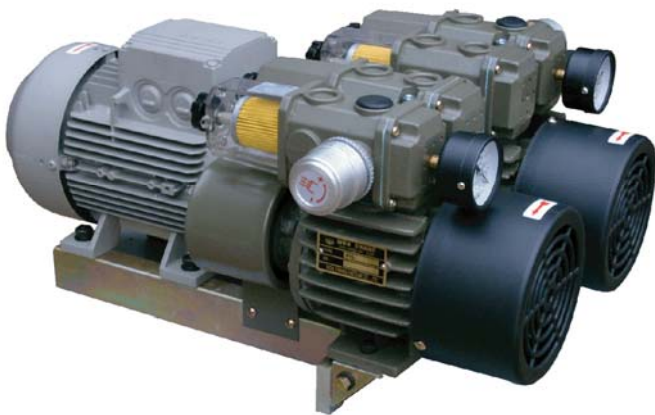
- Compact Design - Reliability & Durability – Easy to maintain and operate.
- Simple Installation – Air Cooled, No Water Required – Oil Free
- Quite Operation.
- V - Belt Drive

Standard Equipment: Carbon Vanes, Built-in particulate Filter & Silencer, Vibration Isolators, Vacuum gage and Regulator, TEFC High Efficiency Motor

Optional Equipment: Pressure Gauge & regulator for Blow operation

- **Specifications:**

MODEL			WVS-10	WVS-10H
Displacement	60Hz	l/min	2200	2200
	50Hz	l/min		
End Vacuum	mm HgG		670	740
Normal Operating Vacuum	mm HgG		410	600
Normal Operating Pressure	Kgf/cm2		0.5	0.7
Motor	Kw		4	4
Pump Revolution	60Hz	rpm	1100	1100
	50Hz	rpm		
Operating Amb. Temp.	°C		0 ~ 40 °C	0 ~ 40 °C
Connections	Intake(G-Bsp)		1-1/4"	1-1/4"
Driven			V-Belt	V-Belt
Weight	kg (with motor)		120	120

WBS SERIES**Dry Rotary Vane Vacuum Pump****WBS- 30A, 50A, 60A & 80A****Single Stage, Carbon Vane Rotary, Air Cooled,**

- Compact Design - Reliability & Durability – Easy to maintain and operate.
- Simple Installation – Air Cooled, No Water Required – Oil Free
- Quite Operation.
- Timing Belt Drive
- Ideal for Vacuum and Blow Operation

Standard Equipment: Carbon Vanes, Built-in particulate Filter & Silencer, Vibration Isolators, Vacuum gage and Regulator, TEFC High Efficiency Motor

Optional Equipment: Pressure Gauge & regulator for Blow operation

- **Specifications:**

MODEL			WBS-30A	WBS-50A	WBS-60A	WBS-80A
Displacement	60Hz	l/min	280x2	480x2	685x2	1115x2
	50Hz	l/min	235x2	405x2	575x2	
End Vacuum	mm HgG		650	650	650	650
Normal Operating Vacuum	mm HgG		450	450	450	450
Normal Operating Pressure	Kgf/cm2		0.6	0.6	0.6	0.6
Motor	Kw		0.75	1.5	2.2	4
Pump Revolution	60Hz	rpm	1740	1740	1740	1740
	50Hz	rpm	1450	1450	1450	1450
Operating Amb.Temp.	°C		0 ~ 40 °C			
Connections	Intake(G-Bsp)		3/4"	3/4"	3/4"	1"
Driven			T-Belt	T-Belt	T-Belt	T-Belt
Weight	kg (with motor)		44	56	75	115

WBS SERIES**Dry Rotary Vane Vacuum Pump****WBS- 80B, 85B, 90B, 95B &100B****Single Stage, Carbon Vane Rotary, Air Cooled,**

- Compact Design - Reliability & Durability – Easy to maintain and operate.
- Simple Installation – Air Cooled, No Water Required – Oil Free
- Quite Operation.
- V - Belt Drive
- Ideal for Vacuum and Blow Operation

Standard Equipment: Carbon Vanes, Built-in particulate Filter & Silencer, Vibration Isolators, Vacuum gage and Regulator, TEFC High Efficiency Motor

Optional Equipment: Pressure Gauge & regulator for Blow operation

- **Specifications:**


			WBS-80B	WBS-85B	WBS-90B	WBS-95B	WBS-100B
Displace ment	60Hz	l/min	1115x2	1350+1115	1350x2	1350+2200	2200x2
	50Hz	l/min					
End Vacuum	mm HgG		650	650	650	650	650
Normal Operating Vacuum	mm HgG		450	450	450	450	410
Normal Operating Pressure	Kgf/cm2		0.6	0.6	0.6	0.6	0.6
Motor	Kw		4	4	5.5	5.5	7.5
Pump Revolution	60Hz	rpm	1160	1160	1160	1160+ 1100	1100
	50Hz	rpm					
Operating Amb.Temp.	℃		0 ~ 40 ℃				
Connections	Intake(G-Bsp)		1"	1"	1"	1" -1-1/4"	1-1/4"
Driven			V-Belt	V-Belt	V-Belt	V-Belt	V-Belt
Weight	kg (with motor)		129	150	165	200	235

VCX-B SERIES**Claw Vacuum Pump****VCX- 60, 100****Dry Running - Oil Free – Contact Free Design**

- **Simple Modular Construction**
- **Air cooled & Direct Driven**
- **Low maintenance – No wear**
- **High Efficiency – Continuous Duty**

Applications:

Packaging, CNC Routing, Wood Works, Pneumatic Conveying, Holding & Lifting, Pick and Place, Medical & Lab., Plastics Industries, Central Vacuum Systems.

Safety: CE certified (DOC) **General Description:**

The VCX-B Series pumps are dry contact-less vacuum pumps with modular constructions consisting of compartments: pumping and gear chambers are separated by using labyrinth seals., As two claws rotate in opposite direction, the air will be sucked in the pumping chamber, compressed and discharged under pressure. In gear chamber, two gears for synchronizing of claws rotation will be placed with appropriate oil lubrication. A built in anti-suck back valve installed in inlet flange will prevent the air from flowing back into the vacuum chamber when the pump is shutdown. The pumps are directly driven by a flanged motor via a coupling.

Specifications:

Model		VCX 60	VCX 100
M3/ Hour	60Hz	72	120
	50Hz	60	100
Ulti. Va. Max.	Torr	722 Torr gage (50mbar abs)	
Ulti. Va. Conti.	Torr	685	640
Kw	60Hz	1.5	2.6
	50Hz	1.1	2.2
RPM	60/50Hz	3450/2850	
Voltage Available		208~230/460V, 220~240 /380~420V, 400/690V	
dB(A), Average	60Hz	80	77
	50Hz	78	76
Oil Capa (Gear box)	Ltr	0.6	0.75
Inlet / Outlet Conn.	**BSP(G)	1"	1-1/2"
L * x W x H (mm)	60Hz	758x321x461	720x548x399
	50Hz	736x321x461	709x548x399
Amb. Operating Temp.	(°C)	5°C ~40°C	
Approx. *Weight (Kg).	60Hz	60	111
	50Hz	55	106
Accessories		Non Return Valve, Vacuum Regulator, Exhaust Silencer	

Note: 1) * Length varies to motor mfg 2) **NPT threads available upon request

VCX SERIES**Claw Vacuum Pump****VCX- 155, 255, 305, 405 & 515****Dry Running - Oil Free – Contact Free Design**

- **Simple Modular Construction**
- **Air cooled & Direct Driven**
- **Low maintenance – No wear**
- **High Efficiency – Continuous Duty**

Applications:

Packaging, CNC Routing, Wood Works, Pneumatic Conveying, Holding & Lifting, Pick and Place, Medical & Lab., Plastics Industries, Central Vacuum Systems.

Safety: CE certified (DOC)

**General Description:**

The VCX Series pumps are dry contact-less vacuum pumps with modular constructions consisting of compartments: pumping and gear chambers are separated by using labyrinth seals. As two claws rotate in opposite direction, the air will be sucked in the pumping chamber, compressed and discharged under pressure. In gear chamber, two gears for synchronizing of claws rotation will be placed with appropriate oil lubrication. A built in anti-suck back valve installed in inlet flange will prevent the air from flowing back into the vacuum chamber when the pump is shutdown. The pumps are directly driven by a flanged motor via a coupling.

Specifications:

Model		VCX 155	VCX 255	VCX 305	VCX 405	VCX 515
M3/ Hour	60Hz	180	300	360	480	600
	50Hz	150	250	300	400	500
Ulti. Va. Max.	Torr	722.5 Torr gage (50mbar abs)				
Ulti. Va. Conti.	Torr	647.5	610			
Kw	60Hz	3.4	5.5	6.6	9	11
	50Hz	2.8	4.3	5.5	7.5	9
RPM (motor)	60/50Hz	3450 / 2850				
Voltage Available		208~230/460V, 220~240 / 380~420V, 400/690V				
dB(A), Max +- 3 tolerance	60Hz	77	80	80	80	82
	50Hz	73	78	78	78	80
Oil Capa (Gear box)	Ltr	0.5	0.9		1.8	
Inlet / Outlet Conn.	**BSP(G)	1-1/2"	2"		3"	
W x H (mm)		422 x 562	501 x 685	501 x 685	586 x 695	586 x 695
L* (mm)	60Hz	862	961	975	1105	1291
	50Hz	837	961	975	1065	1120
Amb. Operating Temp.	(°C)	5°C ~40°C				
Accessories		Non Return Valve, Vacuum Regulator, Exhaust Silencer				

Note: 1) * Length varies to motor mfg 2) **NPT threads available upon request

VCX SERIES**Claw Vacuum Pump****VCX - 1005****Dry Running - Oil Free – Contact Free Design**

- **Simple Modular Construction**
- **Air cooled & Direct Driven**
- **Low maintenance – No wear**
- **High Efficiency – Continuous Duty**

Applications:

Packaging, CNC Routing, Wood Works, Pneumatic Conveying, Holding & Lifting, Pick and Place, Medical & Lab., Plastics Industries, Industrial Central Vacuum Systems.

CE certified**General Description:**

The VCX Series pumps are dry contact-less vacuum pumps with modular constructions consisting of compartments: pumping and gear chambers are separated by using labyrinth seals. As two claws rotate in opposite direction, the air will be sucked in the pumping chamber, compressed and discharged under pressure. In gear chamber, two gears for synchronizing of claws rotation will be placed with appropriate oil lubrication. The pumps are directly driven by a flanged motor via a coupling. Configured with two silencers suitable for compact installation space. The 4" aluminum check valve for anti suck back and inlet filter (flanged) can be supplied separately. Ideally suited to use with Frequency Controlled Drives for energy saving.

Specifications:

Model	VCX 1005	
M3 / Hour (cfm)	60Hz	1140 (670cfm)
	50Hz	950 (558cfm)
Ultimate Va. Max.	Torr (mbar a)	722.5 (50mbar a)
Ultimate Va. Continuous	Torr	610 (200mbar a)
Kw(Hp)	60Hz	22 (30Hp)
	50Hz	18.5 (25Hp)
RPM	60/50Hz	3450/2850
Voltage Available	220~240/380~420V x 50/60Hz, 400/690Vx 50Hz, 208~230/460V x 60Hz	
dB(A), Max +- 3 tolerance	60Hz	85
	50Hz	82
Oil Capacity (Gear box)	Ltr	2.8
Inlet / Outlet Connection	Flange	DN 100 PN6 / DN100 PN10
Amb. Operating Temp.	(°C)	5~40
Accessories	Non Return Valve, Vacuum Regulator, Exhaust Silencer	

PCX-IF SERIES

Claw Compressors

PCX- 60, 100



Dry Running - Oil Free – Contact Free Design

- **Simple Modular Construction**
- **Air cooled & Direct Driven**
- **Low maintenance – No wear**
- **High Efficiency – Continuous Duty**

Applications:

Transport, Pneumatic Conveying, Environmental systems, Air Sparging Applications, Fishing Farm, Central Pressure System.

Safety: CE certified (DOC)



General Description:

The PCX-IF Series compressors are identical in internal construction to VCX pump, but are outfitted with different inlet and outlet accessories to allow for operation as a compressor. For reduction of noise, inlet silencer is installed in inlet side. For a protection of overload, a pressure safety valve or regulating valve is installed in exhaust side. The compressors are directly driven by a flanged motor via a coupling.

Specifications:

Model		PCX 60	PCX 100		
M3/ Hour	60Hz	68	120		
	50Hz	56	100		
Press. Conti., Bar	60Hz	2	~	1.4	2.2
	50Hz	2	0.8	1.4	2.2
Kw	60Hz	3.6	~	4.8	6.5
	50Hz	3	3	4	5.5
RPM - 60/50Hz	RPM	3450 / 2850			
Voltage, Available	V	208~230/460V, 220~240 / 380~420V, 400/690V			
dB(A), Max	60Hz	79	83		
+ - 3 tolerance	50Hz	78	81		
Oil Capa (Gear box)	Ltr	0.6	0.75		
Inlet / Outlet Conn.	**BSP(G)	1"	1-1/2"		
W x H (mm)		297X461	488 x 618/673^ (5.5kw+)		
L* (mm)	60Hz	806	-	778	778
	50Hz	781	717	742	778
Amb. Operating Temp	(°C)	5°C ~40°C			
Approx. *Weight (Kg).	60Hz	75	~	135	150
	50Hz	69	108	120	140
Accessories	Pressure Regulator, Safety Valve, Inlet Silencer, and Inlet Filter				

Note: 1) * Length varies to motor mfg 2) **NPT threads available upon request

PCX SERIES

Claw Compressors

PCX- 155, 255, 305, 405 & 515



Dry Running - Oil Free – Contact Free Design

- **Simple Modular Construction**
- **Air cooled & Direct Driven**
- **Low maintenance – No wear**
- **High Efficiency – Continuous Duty**

Applications:

Transport, Pneumatic Conveying, Environmental systems, Air Sparging Applications, Fishing Farm, Central Pressure System.

Safety: CE certified (DOC)



General Description:

The PCX Series compressors are identical in internal construction to VCX pump, but are outfitted with different inlet and outlet accessories to allow for operation as a compressor. For reduction of noise, inlet silencer is installed in inlet side. For a protection of overload, a pressure safety valve or regulating valve is installed in exhaust side. The compressors are directly driven by a flanged motor via a coupling.

Specifications:

Model		PCX 155		PCX 255				PCX 305			PCX 405				PCX 515			
M3/ Hour	60Hz	180		300				360			480				600			
	50Hz	150		250				300			400				500			
Press. Conti., Bar	60Hz	1	2	0.8	1.4	1.8	2.2	~	1.2	2.2	0.6	1.2	1.6	2	0.8	-	1.6	2
	50Hz	1	2	1	~	2	~	0.6	1.4	2.2	0.8	1.4	1.8	2	0.8	1.2	1.6	2
Kw	60Hz	6.5	9	9	11	13	15	~	13	18	13	18	22	26	18	-	26	36
	50Hz	6.5	7.5	7.5	~	11	~	7.5	11	15	11	15	18.5	22	15	18.5	22	30
RPM - 60/50Hz	RPM	3450 / 2850																
Voltage, Available	V	208~230/460V, 220~240 / 380~420V, 400/690V																
dB(A), Ave	60Hz	82		82				82			83				83			
	50Hz	80		79				79			81				81			
Oil Capa (Gear box)	Ltr	0.5		0.9							1.8							
Inlet / Outlet Conn.	**BSP(G)	1-1/2"		2"							3"							
W x H (mm)		431 x 403		573 x 757				573 x 757			672 x 1003				672 x 1003			
L* (mm)	60Hz	903	941	1001	1171	1171	1171	~	1183	1183	1274	1274	1340	1395	1289	~	1410	1410
	50Hz	903	903	961	~	1171	~	973	1183	1183	1274	1274	1274	1340	1289	1289	1355	1410
Amb. Operating Temp	(°C)	5°C ~40°C																
Accessories		Pressure Regulator, Safety Valve, Inlet Silencer, and Inlet Filter																

Note: 1) * Length varies to motor mfg 2) **NPT threads available upon request

Vacuum System

Rotary vane vacuum systems are available in a multitude of configurations: Simplex tank mount, Duplex tank mount, as well as Triplex, and Quadruplex stack mount systems.

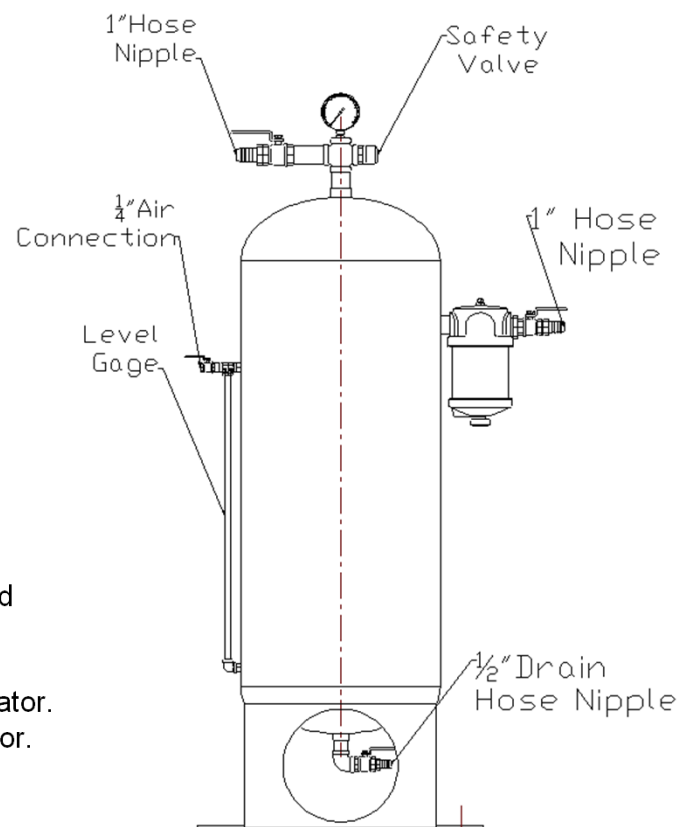
The system shall include interconnecting piping and wiring to provide a functional operating package with applicable electrical and plumbing connections at the installation site. The packaged unit shall be factory assembled, tested, painted and crated prior to shipment.

■ Normal Operation Vacuum:

- Oil Sealed Rotary Vane Pump System
Set at 550 ~ 700mmHg
- Dry Rotary Vane Pump System:
Set at 400 ~ 500mmHg

■ Standard Equipment:

- WOVP or WVS series Rotary Vane Pump(s)
- Tank receiver
- Electrical control panel
- Integral Piping and Wirings
- Vacuum gage and Vacuum control switch
- Inlet air filter, Manual drain valve,
- Check valve & Pump isolation valve
- Three way solenoid valve (Optional)

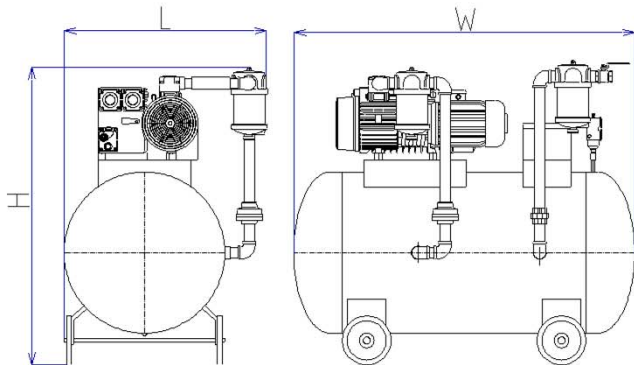


CENTRIFUGAL VACUUM SEPARATOR

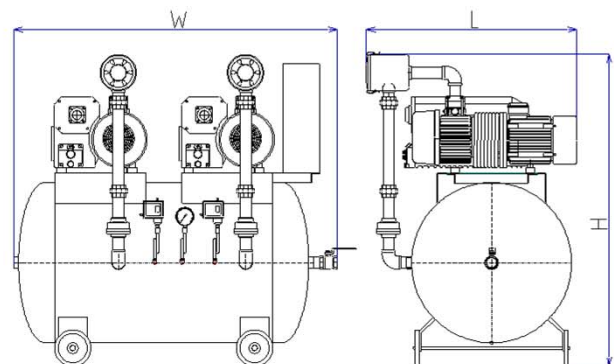
Centrifugal vacuum separator is designed to extract the liquids (mist and drops) from the gases and mixtures of gases. This separator will be installed upstream of vacuum pump to prevent the liquids from flowing into the pump from system. It should be stopped and aerated to drain the liquids out of separator. Liquids level can be easily checked with level indicator.

Vacuum System

Simplex Tank Mounted System



Duplex Tank Mounted System



Oil sealed Rotary Vane Pump System

MODEL	Pump Model	NO of Pump	Tank Size	Volume	Kw (Motor)	"W"	"L"	"H"
Simplex Tank Mounted								
OST-020	WOVP-020	1	Ø350 x 650	50 ℓ	0.4 x 1	600	450	700
OST-040	WOVP-040	1	Ø350 x 650	50ℓ	0.9 x 1	600	450	700
OST-060	WOVP-060	1	Ø470 x 1100	170ℓ	1.5 x 1	1100	600	900
OST-090	WOVP-090	1	Ø470 x 1100	170ℓ	1.5 x 1	1100	600	900
OST-130	WOVP-130	1	Ø660 x 1200	370ℓ	2.2 x 1	1200	880	1200
OST-200	WOVP-200	1	Ø660 x 1200	370ℓ	3.0 x 1	1200	880	1200
OST-320	WOVP-320	1	Ø800 x 1400	630ℓ	3.7 x 1	1500	1100	1600
OST-350	WOVP-350	1	Ø800 x 1400	630ℓ	5.5 x 1	1500	1100	1600
OST-430	WOVP-430	1	Ø800 x 1400	630ℓ	5.5 x 1	1500	1100	1600
OST-500	WOVP-500	1	Ø800 x 1400	630ℓ	7.5 x 1	1500	1100	1600
Duplex Tank Mounted								
ODT-020	WOVP-020	2	Ø480 x 1100	170ℓ	0.4 x 2	1200	500	1300
ODT-040	WOVP-040	2	Ø480 x 1100	170ℓ	0.9 x 2	1200	500	1300
ODT-060	WOVP-060	2	Ø470 x 1500	250ℓ	1.5 x 2	1550	700	1300
ODT-090	WOVP-090	2	Ø470 x 1500	250ℓ	1.5 x 2	1550	700	1300
ODT-130	WOVP-130	2	Ø660 x 1500	500ℓ	2.2 x 2	1700	900	1500
ODT-200	WOVP-200	2	Ø660 x 1500	500ℓ	3.0 x 2	1700	900	1500
ODT-320	WOVP-320	2	Ø800 x 1800	850ℓ	3.7 x 2	1950	1000	1700
ODT-350	WOVP-350	2	Ø800 x 1800	850ℓ	5.5 x 2	1950	1200	1700
ODT-430	WOVP-430	2	Ø800 x 1800	850ℓ	5.5 x 2	1950	1200	1700
ODT-500	WOVP-500	2	Ø800 x 1800	850ℓ	7.5 x 2	1950	1200	1700

Dry Rotary Vane Pump System

MODEL	Pump Model	NO of Pump	Tank Size	Volume	Kw (Motor)	"W"	"L"	"H"
Simplex Tank Mounted								
OST-030	WVS - 3	1	Ø350 x 650	50 ℓ	0.4 x 1	600	450	650
OST-050	WVS - 5	1	Ø350 x 650	50ℓ	0.75 x 1	600	450	650
OST-060	WVS - 6	1	Ø470 x 1100	170ℓ	1.5 x 1	1200	600	900
OST-080	WVS - 8	1	Ø470 x 1100	170ℓ	1.5(6P) x 1	1200	600	900
OST-090	WVS - 9	1	Ø660 x 1200	370ℓ	2.2(6P) x 1	1500	800	1300
OST-100	WVS - 10	1	Ø660 x 1200	370ℓ	4.0 x 1	1500	800	1300