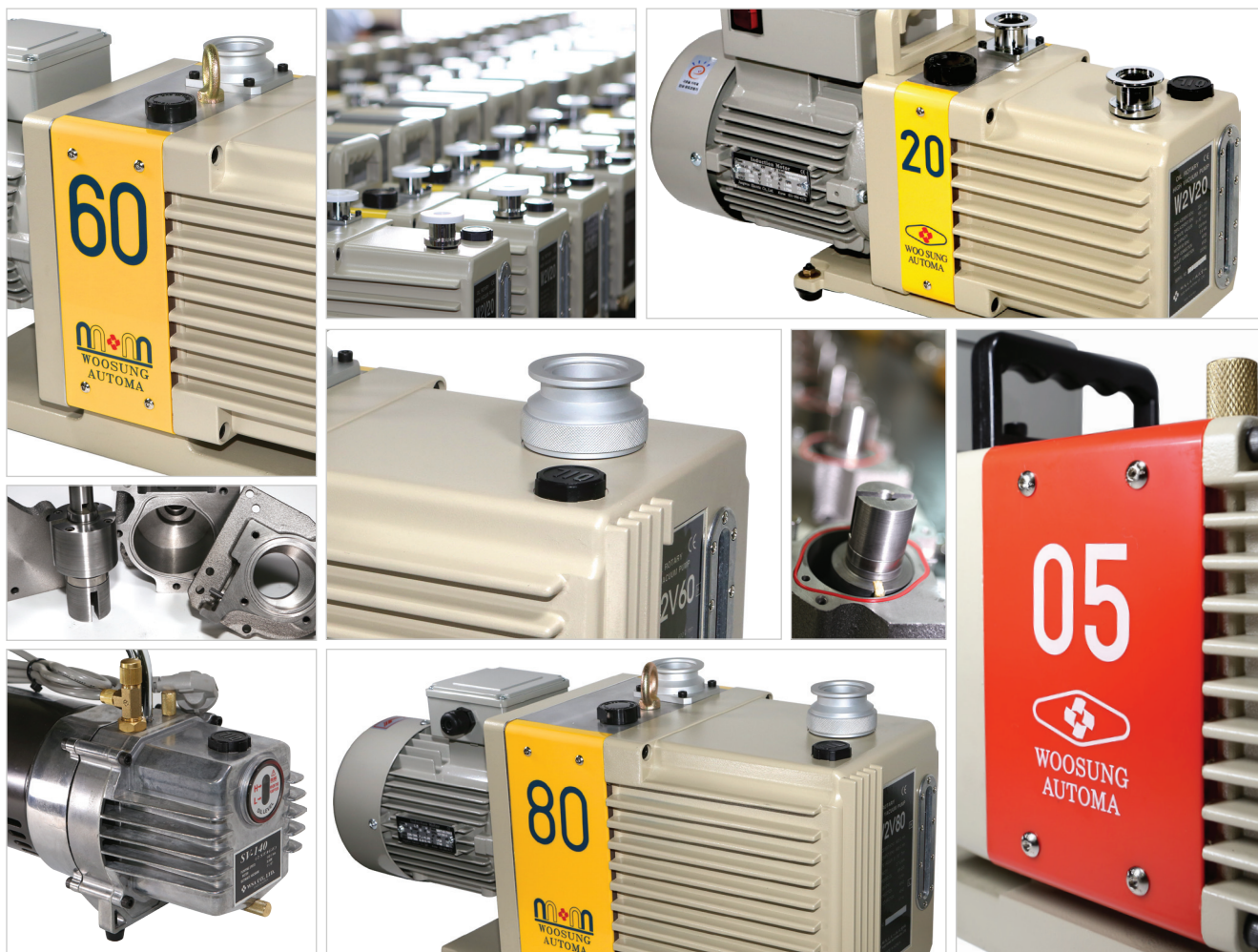


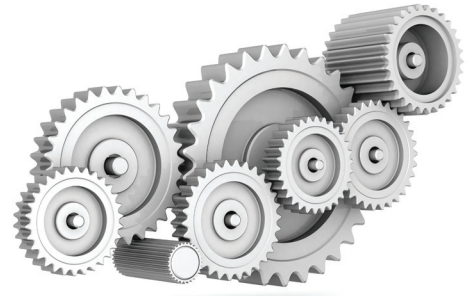
PRODUCT CATALOGUE

Rotary Vane Pumps · Vacuum Gauges · Oil Mist Traps · Accessories · Service Kits



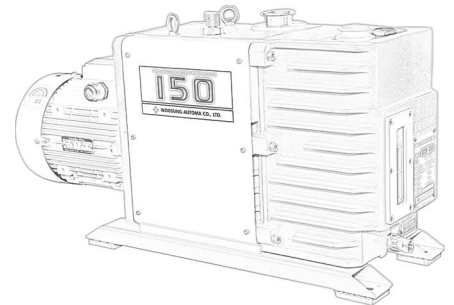
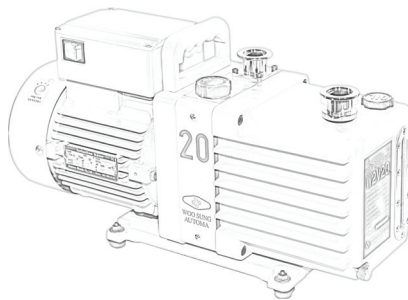
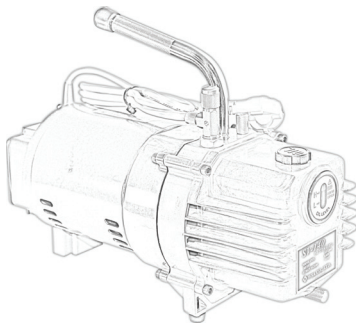
About us

WSA products provide Stable & Reliable performance throughout overall vacuum.



WSA has produced and supplied vacuum technology-based products such as vacuum pumps, vacuum gauges and accessories. As being developed for the first time in Korea as direct-coupled type oil rotary pumps in 1989, W2V-series, 2stage Oil Rotary Pumps have been steadily delivered to the production facilities of major display and consumer electronics companies (SAMSUNG, LG, DAEWOO, HITACHI, ORION etc.) for over 20 years. Based on these accumulated technical capabilities, WSA widened its area to various research and laboratory equipment and currently has exported to more than 20 countries around the world including U.S, Russia, China and Japan. Vacuum pumps are used in various field of industrial and research areas. WSA performs the entire process in-house from the purchase of raw materials such as cast and aluminum die casting to machining of all parts hence WSA can be quickly corresponding to the special needs of the customer.

With passion and a sense of mission that all employees of the WSA is responsible for the foundation of vacuum industries, you can be assured that we do our best to continuous technology development and quality improvement.



Export Status



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PRODUCT CATALOGUE

PRODUCT LIST

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Specifications of WSA pumps

Pump model no.		SV-140	W2V05	W2V10	W2V20	W2V40	W2V60	W2V80	W2V100	W2V150	W2V180
Pumping Speed	ℓ/min	140	50	100	200	400	600	800	1,000	1,500	1,800
	m³/h	92.4	33	66	132	264	396	528	660	990	1,188
	CFM	4.9	1.8	3.5	7.1	14.1	21.2	28.3	35.3	53.0	63.6
Motor Speed (rpm)		1,700									
Ultimate pressure		5×10 ⁻²	3×10 ⁻²	5×10 ⁻² Torr (6.7 Pa) with Gas Ballast Open							
		5×10 ⁻³	3×10 ⁻³	≤1X10 ⁻³ Torr(1.3X10 ⁻¹ Pa) with Gas Ballast Closed							
Power Input Options		220VAC 1Φ 50/60Hz							220VAC/380VAC 3Φ 50/60Hz		
		110VAC 1Φ 50/60Hz		220VAC/380VAC 3Φ 50/60Hz							
		Customer's Request (Voltage, Frequency and Phase)									
Full Load Power(kW)		0.4(0.5 HP)	0.15(0.2 HP)	0.4(0.5 HP)	0.4(0.5 HP)	0.75(1 HP)	1.5(2 HP)	1.5(2 HP)	1.5(2 HP)	3.7(5 HP)	3.7(5 HP)
Inlet and Outlet Options		Tee/Handle	NW16	NW25			NW40				
		Cross/Handle	NW25	+ Hose Nipple (Φ12, Φ16, Φ26 OD for NW25 / Φ36 OD for NW40)							
		NW25	NW25	+ PT Nipple (1/4″ , 3/8″ , 1/2″ , 3/4″ , 1″ for NW25)							
		User Requested Type									
Oil Capacity (cc)		600	200	500	600	1,500	2,700	2,900	4,500	6,200	6,200
Overall Dimension (mm)	W	160	120	150	150	170	206	226	264	264	264
	L	397	373.5	392	423	484	609	624.5	663.5	777.5	777.5
	H	297	200	250	250	287	318	343	442	442	442
Weight (kg)		16	14	19	21	29	51.5	53	80	110	120
Ambient Temp.		7~40°C / 45~104°F									

Applicable areas of Rotary Vane Pump

- Chemical, science experiment, Analyzer and Laser system
- Semiconductor equipment, Sputtering equipment and vacuum evaporation
- Backing pumps for the electronic microscope
- Vacuum dryer and Freeze dryer
- Lamps and tubes manufacture and Display manufacture

Pump Code Rule

① 2 stage pump

W2V40

② 400 ℓ/min : pumping speed

SV-140

Pumping Speed

140L/min

Ultimate Pressure

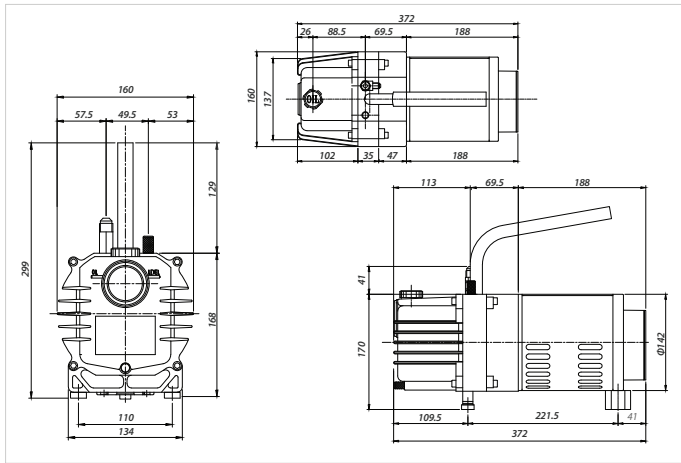
$\leq 5 \times 10^{-3}$ Torr

Motor Power

400W(0.5hp)



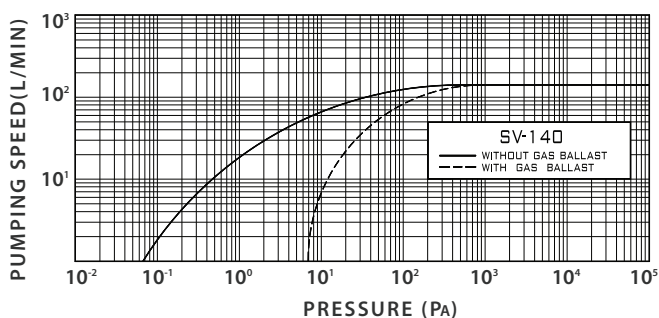
Dimension



Specifications

Pumping Speed	140ℓ/min	
Ultimate Pressure	Gas Ballast Open	5X10 ⁻³ Torr (6.7 Pa)
	Gas Ballast Closed	5X10 ⁻² Torr (6.7 X 10 ⁻¹ Pa)
Power Input	Standard	220VAC 1Φ 50/60Hz
	Option I	110VAC 1Φ 50/60Hz
	Option II	Customer's Request (Voltage, Frequency)
Full load Power	0.4kW (0.5 HP)	
Motor Speed	1,700 rpm	
Inlet	Standard	1/4" and 3/8" T-type
	Option I	1/4" and 3/8" Cross type
	Option II	3/8" Stand type
Weight	14.7kg	
Oil Capacity	600cc (0.6ℓ)	
Ambient Operation Temp.	7~40℃ / 45~104℉	
Overall Dimension(mm)	160x397x297 (unit : mm)	

Pumping Curve



W2V05

Pumping Speed

50L/min

Ultimate Pressure

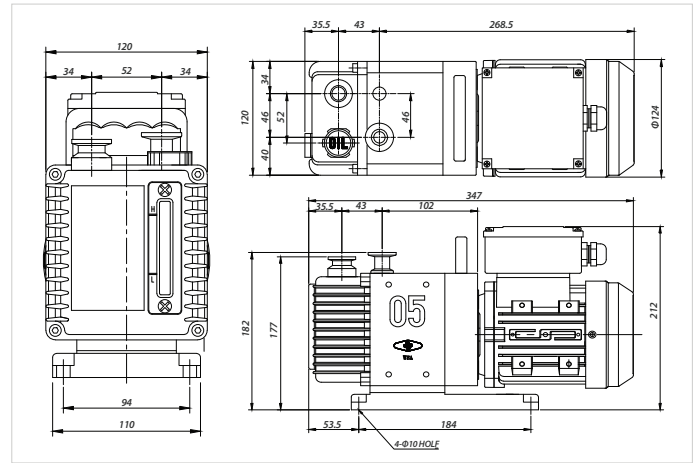
$\leq 3 \times 10^{-3}$ Torr

Motor Power

0.12kW(0.16hp)



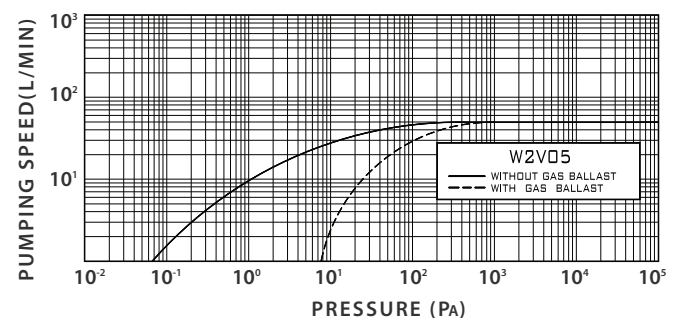
Dimension



Specifications

Pumping Speed	50ℓ/min		
Ultimate Pressure	Gas Ballast Open	5X10 ⁻² Torr (6.7 Pa)	
	Gas Ballast Closed	≤3X10 ⁻³ Torr (4.0 X 10 ⁻¹ Pa)	
Power Input	Standard	220VAC 1Φ 50/60Hz	
	Option I	110VAC 1Φ 50/60Hz	
	Option II	Customer's Request(Voltage, Frequency)	
Full load Power	0.12kW(0.16hp)		
Motor Speed	1,700 rpm		
Inlet	Standard		NW16
	Option I	NW25 + Hose Nipple : Φ12, Φ16, Φ26 OD for NW25	
	Option II	NW25 + PT Nipple : 1/4", 3/8", 1/2", 3/4", 1" for NW25	
	Option III	User Requested Type	
Weight	14.2kg	Oil Capacity	200cc (0.2ℓ)
Ambient Operation Temp.	7~40℃ / 45~104℉		
Overall Dimension(mm)	120x373.5x200 (unit : mm)		

Pumping Curve



W2V10

Pumping Speed

100L/min

Ultimate Pressure

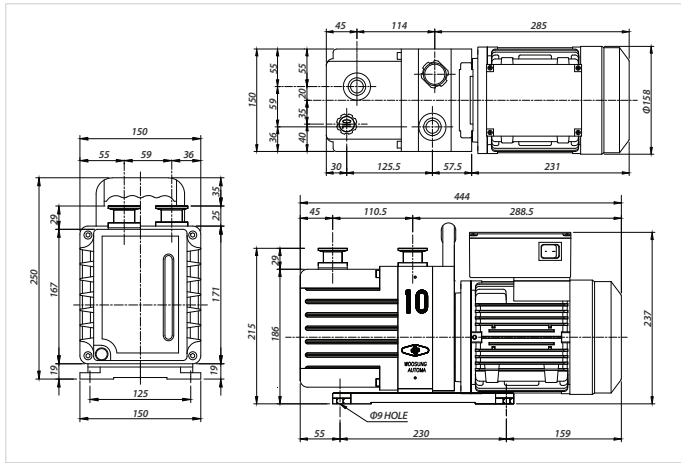
$\leq 1 \times 10^{-3}$ Torr

Motor Power

400W(0.5hp)



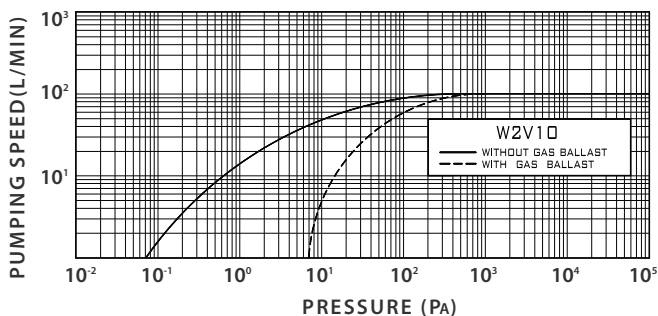
Dimension



Specifications

Pumping Speed	100ℓ/min		
Ultimate Pressure	Gas Ballast Open	5X10 ⁻³ Torr (6.7 Pa)	
	Gas Ballast Closed	≤1X10 ⁻³ Torr (1.3X10 ⁻¹ Pa)	
Power Input	Standard	220VAC 1Φ 50/60Hz	
	Option I	220VAC/380VAC 3Φ 50/60Hz	
	Option II	Customer's Request(Voltage, Frequency)	
Full load Power	0.4kW (0.5 HP)		
Motor Speed	1,700 rpm		
Inlet	Standard		NW25
	Option I	+ Hose Nipple : Φ12, Φ16, Φ26 OD	
	Option II	+ PT Nipple : 1/4" ,3/8" ,1/2" ,3/4" ,1" for NW25	
	Option III	User Requested Type	
Weight	22.5kg	Oil Capacity	500cc (0.5ℓ)
Ambient Operation Temp.	7~40°C / 45~104°F		
Overall Dimension(mm)	150x392x250 (unit : mm)		

Pumping Curve



W2V20

Pumping Speed

200L/min

Ultimate Pressure

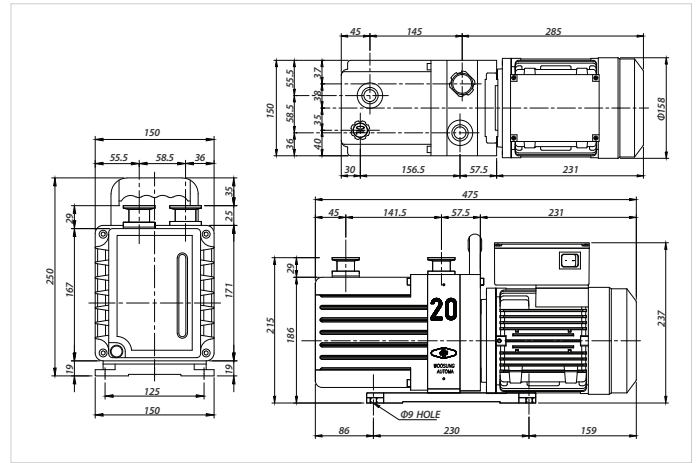
$\leq 1 \times 10^{-3}$ Torr

Motor Power

400W(0.5hp)



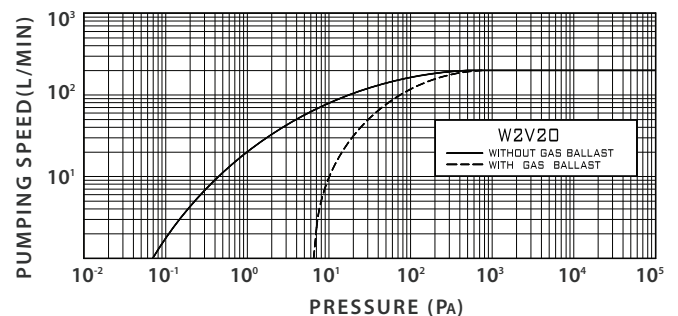
Dimension



Specifications

Pumping Speed	200ℓ/min		
Ultimate Pressure	Gas Ballast Open	5X10 ⁻³ Torr (6.7 Pa)	
	Gas Ballast Closed	≤1X10 ⁻³ Torr (1.3X10 ⁻¹ Pa)	
Power Input	Standard	220VAC 1Φ 50/60Hz	
	Option I	110VAC 1Φ 50/60Hz	
	Option II	Customer's Request(Voltage, Frequency)	
Full load Power	400W(0.5hp)		
Motor Speed	1,700 rpm		
Inlet	Standard		NW25
	Option I	+ Hose Nipple : Φ12, Φ16, Φ26 OD	
	Option II	+ PT Nipple : 1/4", 3/8", 1/2", 3/4", 1" for NW25	
	Option III	User Requested Type	
Weight	23.3kg	Oil Capacity	600cc (0.6ℓ)
Ambient Operation Temp.	7~40°C / 45~104°F		
Overall Dimension(mm)	150x423x250 (unit : mm)		

Pumping Curve



W2V40

Pumping Speed

400L/min

Ultimate Pressure

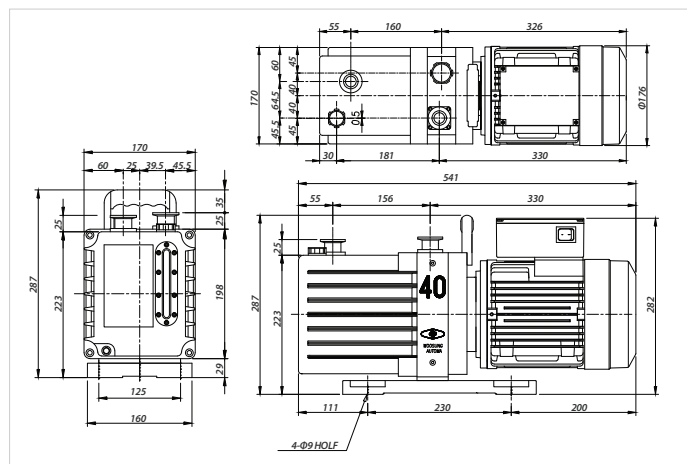
$\leq 1 \times 10^{-3}$ Torr

Motor Power

750W(1hp)



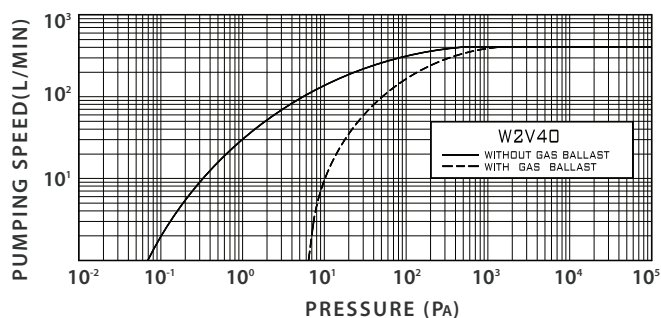
Dimension



Specifications

Pumping Speed	400ℓ/min		
Ultimate Pressure	Gas Ballast Open	5X10 ⁻³ Torr (6.7 Pa)	
	Gas Ballast Closed	≤1X10 ⁻³ Torr (1.3X10 ⁻¹ Pa)	
Power Input	Standard	220VAC 1Φ 50/60Hz	
	Option I	220VAC/380VAC 3Φ 50/60Hz	
	Option II	Customer's Request(Voltage, Frequency)	
Full load Power	0.4kW (0.5 HP)		
Motor Speed	1,700 rpm		
Inlet	Standard	NW25	
	Option I	+ Hose Nipple : Φ12, Φ16, Φ26 OD	
	Option II	+ PT Nipple : 1/4", 3/8", 1/2", 3/4", 1" for NW25	
	Option III	User Requested Type	
Weight	34.8kg	Oil Capacity	1,500cc (1.5ℓ)
Ambient Operation Temp.	7~40°C / 45~104°F		
Overall Dimension(mm)	170x484x287 (unit : mm)		

Pumping Curve



W2V60

Pumping Speed

600L/min

Ultimate Pressure

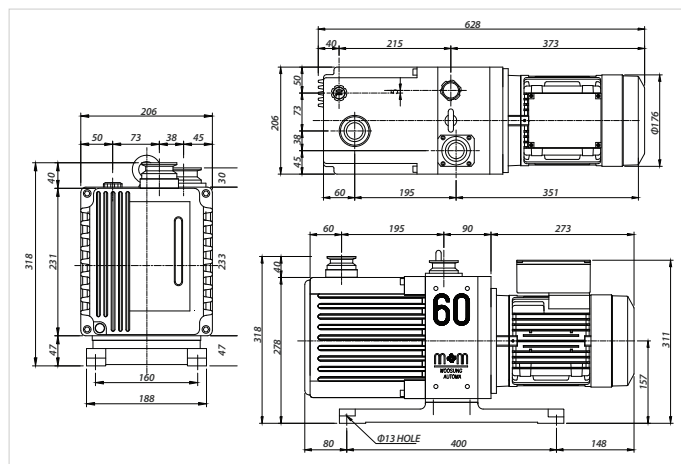
$\leq 1 \times 10^{-3}$ Torr

Motor Power

1.5kW(2hp)



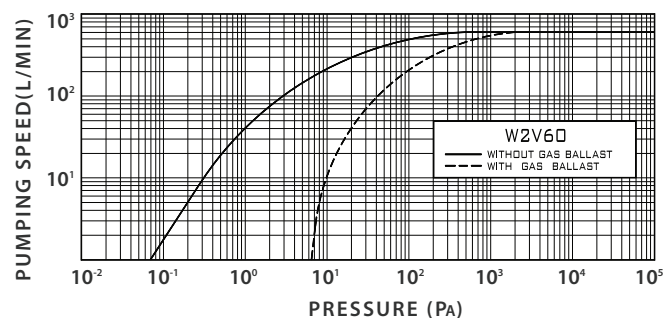
Dimension



Specifications

Pumping Speed	600ℓ/min	
Ultimate Pressure	Gas Ballast Open	5X10 ⁻³ Torr (6.7 Pa)
	Gas Ballast Closed	≤1X10 ⁻³ Torr (1.3X10 ⁻¹ Pa)
Power Input	Standard	Φ3 220VAC/380VAC 50/60 Hz
	Option	Φ1 220VAC/380VAC 50/60 Hz
	Customer's Request (Voltage, Frequency)	
Full load Power	1.5kw (2 HP)	
Motor Speed	1,700 rpm	
	Standard	NW40 * Can be changed to NW25
Inlet	Option I	+ Hose Nipple : Φ36 OD for NW40
	Option II	+ PT Nipple : 1&1/4 for NW40
	Option III	User Requested Type
Weight Φ1	53.5 kg	
Weight Φ3	50.1 kg	
Oil Capacity	2300cc (2.7 L)	
Ambient Operation Temp. Range	7~40 °C	
Overall Dimension(mm)	206(W) X 609(L) X 313(H)	

Pumping Curve



W2V80

Pumping Speed

800L/min

Ultimate Pressure

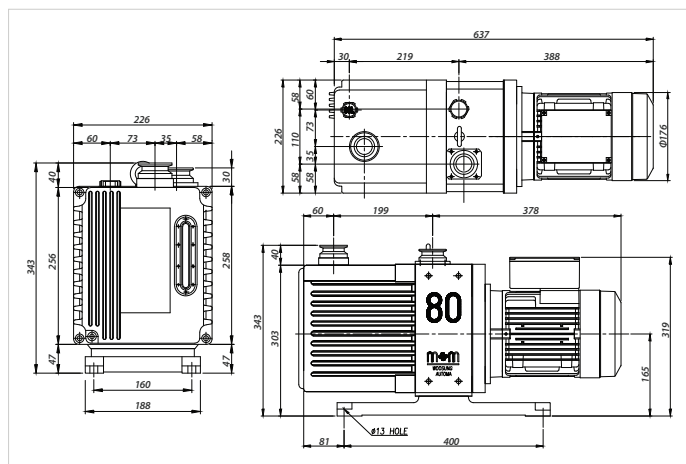
 $\leq 1 \times 10^{-3}$ Torr

Motor Power

1.5kW(2hp)



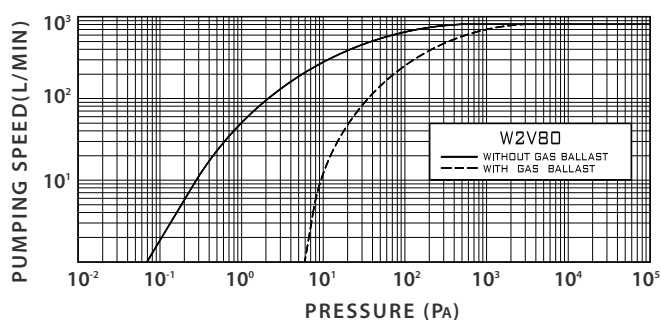
■ Dimension



■ Specifications

Pumping Speed	800ℓ/min	
Ultimate Pressure	Gas Ballast Open	5X10 ⁻³ Torr (6.7 Pa)
	Gas Ballast Closed	≤1X10 ⁻³ Torr (1.3X10 ⁻¹ Pa)
Power Input	Standard	Φ3 220VAC/380VAC 50/60 Hz
	Option	Φ1 220VAC/380VAC 50/60 Hz
	Customer's Request (Voltage, Frequency)	
Full load Power	1.5kw (2 HP)	
Motor Speed	1,700 rpm	
	Standard	NW40 * Can be changed to NW25
	Option I	+ Hose Nipple : Φ36 OD for NW40
Inlet	Option II	+ PT Nipple : 1&1/4 for NW40
	Option III	User Requested Type
Weight Φ1	68.5 kg	
Weight Φ3	65.1 kg	
Oil Capacity	2700cc (2.7 L)	
Ambient Operation Temp. Range	7~40 °C	
Overall Dimension(mm)	226(W) X 624(L) X 346(H)	

- **Pumping Curve**



W2V100

Pumping Speed

1 000L/min

Ultimate Pressure

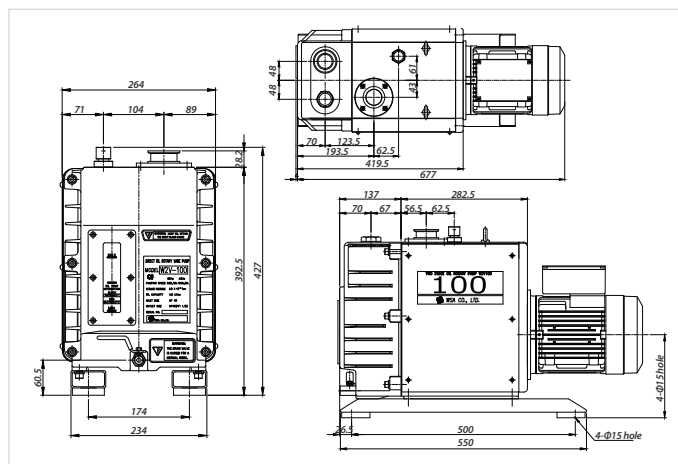
 $\leq 1 \times 10^{-3}$ Torr

Motor Power

1.5kW(2hp)



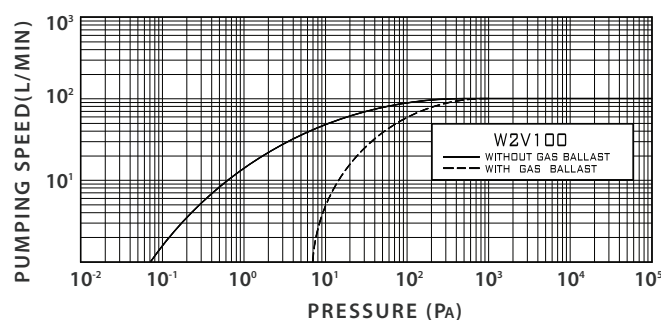
- **Dimension**



■ Specifications

Pumping Speed	1000ℓ/min	
Ultimate Pressure	Gas Ballast Open	5X10 ⁻³ Torr (6.7 Pa)
	Gas Ballast Closed	≤1X10 ⁻³ Torr (1.3X10 ⁻¹ Pa)
Power Input	Standard	Φ3 220VAC/380VAC 50/60 Hz
	Option	Φ1 220VAC/380VAC 50/60 Hz
	Customer's Request (Voltage, Frequency)	
Full load Power	1.5kw (5 HP)	
Motor Speed	1,700 rpm	
Inlet	Standard	NW40 * Can be changed to NW25
	Option I	NW25 or Hose (Φ36 OD) for NW40
	Option II	+ PT Nipple : 1&1/4 for NW40
	Option III	User Requested Type
Weight Φ1	82.2kg	
Weight Φ3	78.8kg	
Oil Capacity	4500cc (4.5 L)	
Overall Dimension(mm)	264(W) X 663.5(L) X 442(H)	

- **Pumping Curve**



W2V150

Pumping Speed

1500L/min

Ultimate Pressure

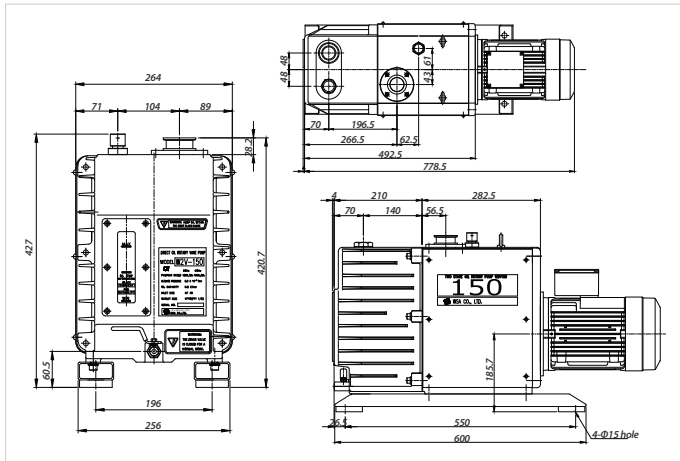
$\leq 1 \times 10^{-3}$ Torr

Motor Power

3.7kW(5hp)



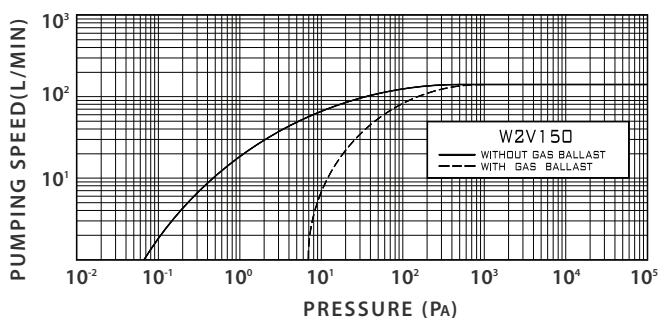
Dimension



Specifications

Pumping Speed	1500L/min	
Ultimate Pressure	Gas Ballast Open	5×10^{-2} Torr (6.7 Pa)
	Gas Ballast Closed	$\leq 1 \times 10^{-3}$ Torr (1.3×10^{-1} Pa)
Power Input	Standard	$\Phi 3$ 220VAC/380VAC 50/60 Hz
	Customer's Request (Voltage, Frequency and phase)	
Full load Power	3.7kw (5 HP)	
Motor Speed	1,700 rpm	
Inlet	Standard	NW40
	Option I	+ Hose Nipple : $\Phi 36$ OD for NW40
	Option II	+ PT Nipple : 1&1/4 for NW40
	Option III	User Requested Type
Weight $\Phi 3$	101.5kg	
Oil Capacity	6200cc (6.2 L)	
Overall Dimension(mm)	264(W) X 777.5(L) X 442(H)	

Pumping Curve



W2V180

Pumping Speed

1800L/min

Ultimate Pressure

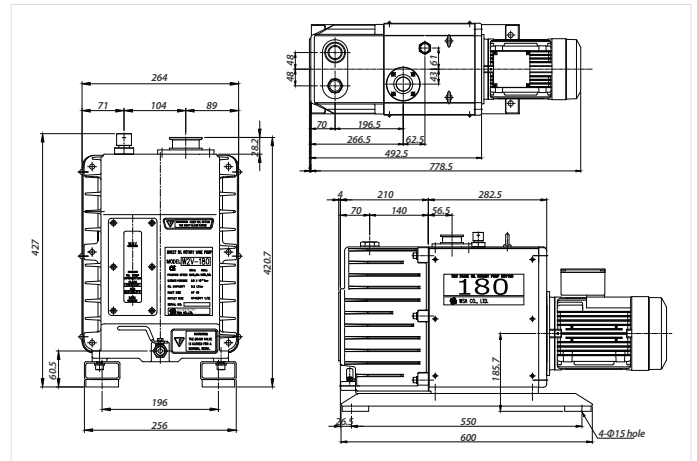
$\leq 1 \times 10^{-3}$ Torr

Motor Power

3.7kW(5hp)



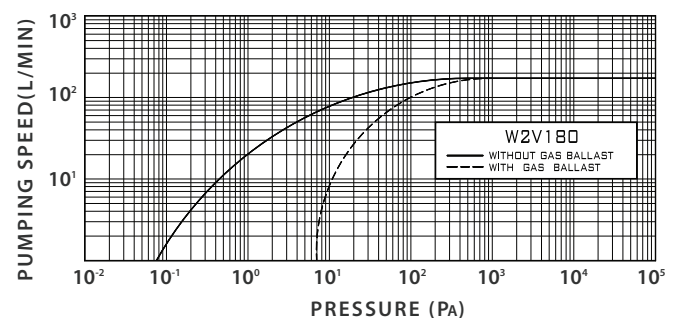
Dimension



Specifications

Pumping Speed	1800L/min	
Ultimate Pressure	Gas Ballast Open	5×10^{-2} Torr (6.7 Pa)
	Gas Ballast Closed	$\leq 1 \times 10^{-3}$ Torr (1.3×10^{-1} Pa)
Power Input	Standard	$\Phi 3$ 220VAC/380VAC 50/60 Hz
	Customer's Request (Voltage, Frequency and phase)	
Full load Power	3.7kw (5 HP)	
Motor Speed	1,700 rpm	
Inlet	Standard	NW40
	Option I	NW25 or Hose ($\Phi 36$ OD)
	Option II	User Requested Type
	Option III	User Requested Type
Weight $\Phi 3$	101.5kg	
Oil Capacity	6200cc (6.2 L)	
Overall Dimension(mm)	264(W) X 777.5(L) X 442(H)	

Pumping Curve



Pirani Gauge

Display Range	1mTorr~20Torr
Data Gathering Cycle	200ms
Power	20W, Ac85~260V, 60/50Hz

Digital gauge with pirani method measures the range of 20 Torr ~ 1mTorr. It provides the measured vacuum data as graphs and excel file formats through a dedicated program.

Specifications

Content	Description
Display Range	1mTorr ~ 20Torr
Error Range	15%
Display	FND, LED
Operation	Front 8 button type
Calibration	User can calibrate by using SPAN & ZERO dial
Set Point	Dual Set Point(High/Low Set Value) Relay Contact
Data Gathering Cycle	200ms
Digital Output	12bit output of current vacuum level
Monitoring Program	RS232C data transfer to PC program
ADC	12Bit
Sensor Type	15mm O.D. (standard)
Sensor Cable	2M (default length)
Power	20W, AC85 ~ 260V, 60/50Hz

Pirani Gauge Parts



Control Panel

- LED display by 0.1 point
- Setting 2 set points for auto controlling
- Torr/Pascal Unit Change



Gauge Adaptor(T)/(I)

- NW25-15 phi Gauge Port -NW25 / Venting
- NW25-15 phi Gauge Port / Venting



Sensor Cable

- 2m(default)
- 5m
- 10m
- User request length

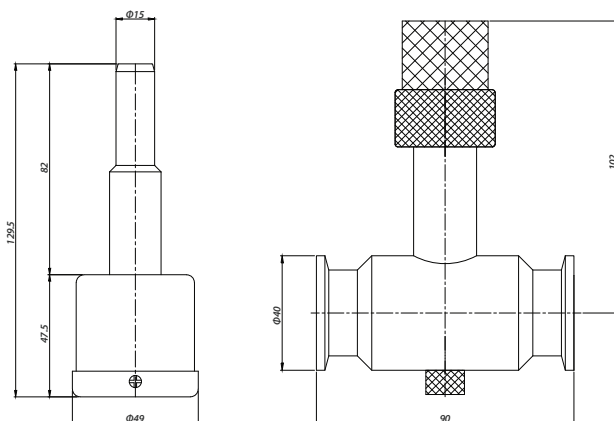
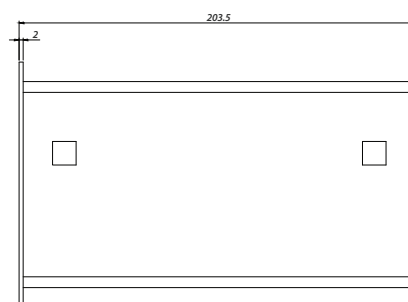
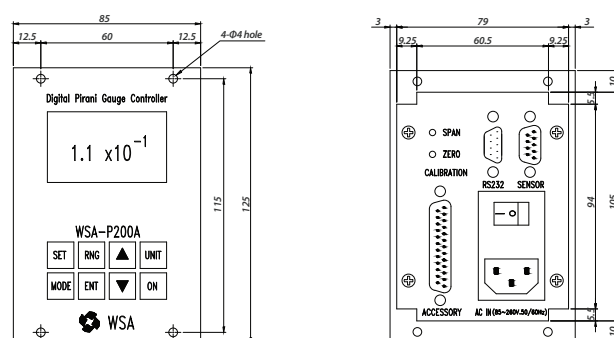


Sensor

- 15mm O.D.(standard)
- ISO KF(NW16)



Dimension



Oil Mist Traps

In low vacuum section between the atmospheric pressure (760 Torr) and 10 Torr, since the amount of air sucked into the vacuum pump is large, the phenomenon that the vacuum oil is discharged with the air as a fine mist from the exhaust port will occur. This is referred to as the oil mist and OMT is the exhaust filter that is used in case you can't connect the exhaust line to a separate hood and duct, or external.

Applicable Oil Mist Traps

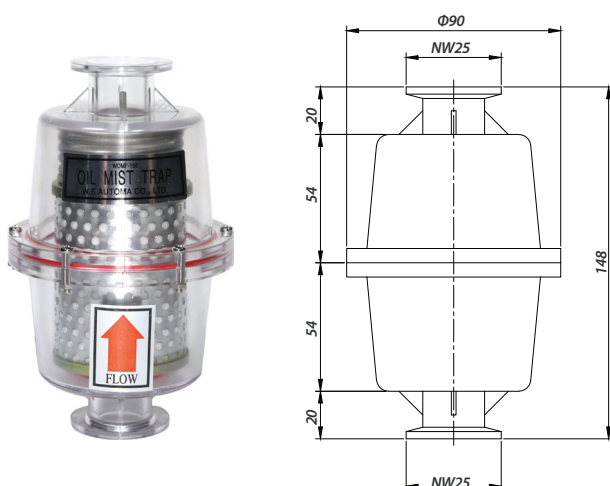
Applicable OMT	WOF-150 (PC)	WOF-150 (Metal)	WOF-200 (Metal)	WOF-250 (PA)	WOF-350 (Metal)	WOF-400 (Metal)
SV-140	○	○				
W2V05	○	○				
W2V10	●	●	●			
W2V20	●	●	●			
W2V40	●	●	●	○		
W2V60				●	●	
W2V80				●	●	
W2V100					●	
W2V150					●	●
W2V180						●

● : Recommended ○ : Available after replacement of Inlet option

* Selection of Oil Mist Trap depends on the application environment.

* Please contact WSA technical sales dept., if you find difficult to choose appropriate model.

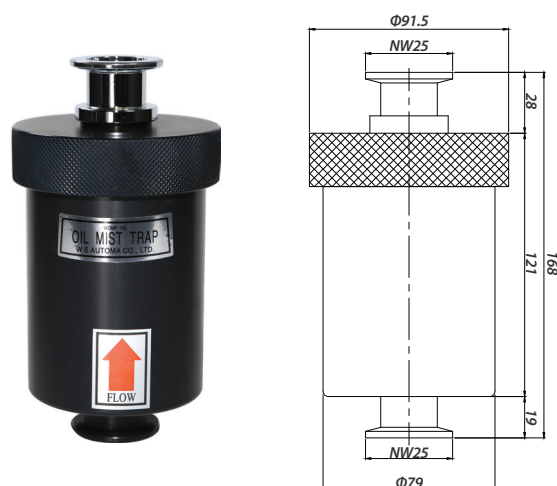
WOF-150(PC)



Specifications

Inlet/Outlet	NW25/NW25
Material	Poly Carbonate (PC)
Weight	0.38kg
Filter Spare for replacement	OMT Filter for WOF-150
Applicable Pumps	W2V10 ~ W2V40

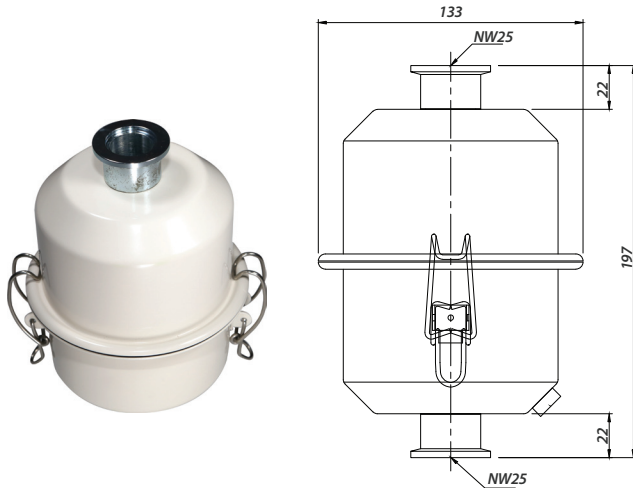
WOF-150(Metal)



Specifications

Inlet/Outlet	NW25/NW25
Material	Poly Carbonate (PC)
Weight	0.38kg
Filter Spare for replacement	OMT Filter for WOF-150
Applicable Pumps	W2V10 ~ W2V40

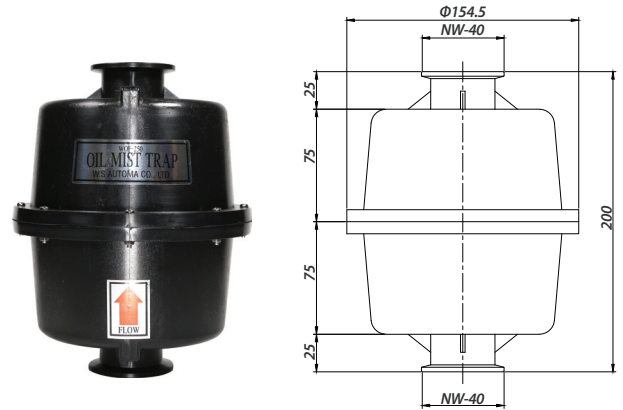
WOF-200(Metal)



Specifications

Inlet/Outlet	NW25/NW25
Material	Iron
Weight	1kg
Filter Spare for replacement	OMT Filter for WOF-200
Applicable Pumps	W2V10 ~ W2V40

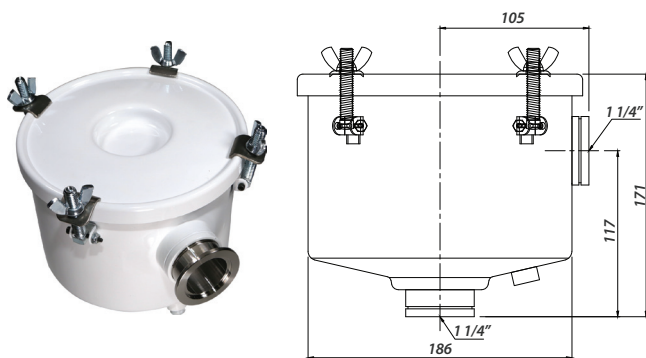
WOF-250(PA)



Specifications

Inlet/Outlet	NW40/NW40
Material	Poly Amide 6/6 (Nylon)
Weight	1.45kg
Filter Spare for replacement	OMT Filter for WOF-250
Applicable Pumps	W2V60 ~ W2V80

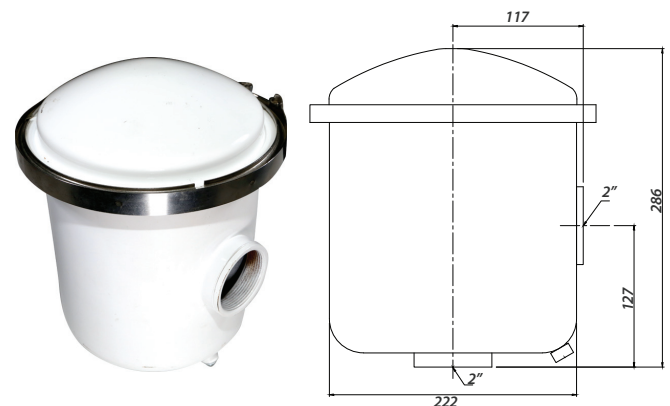
WOF-350(Metal)



Specifications

Inlet/Outlet	1 1/4" / 1 1/4"
Material	Iron
Weight	2kg
Filter Spare for replacement	OMT Filter for WOF-350
Applicable Pumps	W2V60 ~ W2V150

WOF-450(Metal)



Specifications

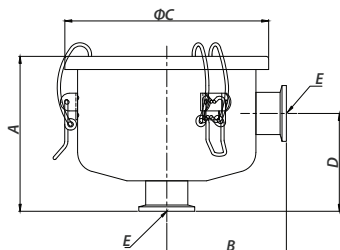
Inlet/Outlet	2" / 2"
Material	Iron
Weight	7kg
Filter Spare for replacement	OMT Filter for WOF-450
Applicable Pumps	W2V180

Accessories

WSA is supplying not only the vacuum pump and gauge but also all the components for implementing a vacuum System. From KF-Flanges (KF16, KF25, KF40 and KF50), vacuum standard, to gene ralvacuum hoses and nipples for PT connection, WSA accessories meet the most standard specification. Through these various accessory, users will be able to implement their own vacuum system more easily.

Inlet Filter

WMT-250/400



Specifications

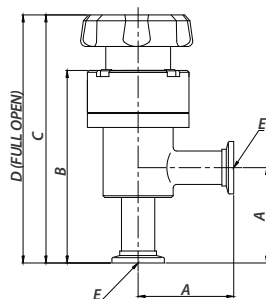
Inlet/Outlet (250, 400)	NW25/NW25, NW40/NW40
Material : Case, An internal filter	Carbon Steel, Teflon Polyester
Weight	1kg
Filter Spare for replacement	Inner filter NW25 for WMT-250 Inner filter NW40(small)/(large)for WMT-400
Applicable Pumps	WMT-250 : W2V10 ~ W2V40 WMT-400 : W2V60 ~ W2V180

Outer dimension

Name	Product Description	Ordering Number	A	B	C	D	E
FORELINE MATERIAL TRAP	WMT-250	IFDFME220000	111	86	146	70	NW25
FORELINE MATERIAL TRAP	WMT-400	IFDFME440000	111	86	146	70	NW40

Valves

Angle Valve



Specifications

	NW25 (Common)	NW40 (Common)
Compressed Air (kg/cm ²)	4~5	4~5
Conductance (ℓ/sec)	12	32
Operating pressure Range (Pa)	Metal Bellows 10 ⁻⁸ to 3x10 ⁵ O-ring 10 ⁻⁶ to 3x10 ⁵	10 ⁻⁸ to 3x10 ⁵ 10 ⁻⁶ to 3x10 ⁵
Leak Rate(Pa.ℓ/sec)	Metal Bellows <1x10 ⁻⁷ O-ring <1x10 ⁻⁶	<1x10 ⁻⁷ <1x10 ⁻⁶
Sealing part(life-time)	Metal Bellows 200,000 O-ring 80,000	200,000 80,000
Temperature Range(°C)	0 to 80	0 to 80
Connection Flange (ISO)	NW25	NW40
Weight(kg)	1.2	1.8

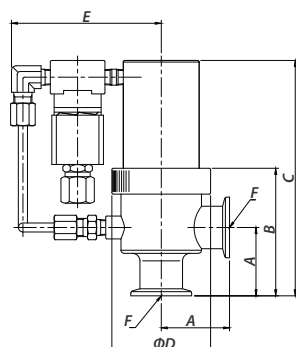
Outer dimension (unit : mm)

*angle valve air type (air double/air single) downloaded the files on the cad, check.

Name	Product Description	Ordering Number	A	B	C	D	E
ANGLE VALVE	NW16 MANUAL BELLOWS	VVAMBL160000	54.6	109.9	141.6	155.5	NW16
ANGLE VALVE	NW25 MANUAL BELLOWS	VVAMBL250000	51.6	104.9	136	150.5	NW25
ANGLE VALVE	NW40 MANUAL BELLOWS	VVAMBL400000	61	129.5	160.5	178.5	NW40
ANGLE VALVE	NW16 MANUAL ORING	VVAMOR160000	54.6	109.9	141.6	155.5	NW16
ANGLE VALVE	NW25 MANUAL ORING	VVAMOR250000	51.6	104.9	136	150.5	NW25
ANGLE VALVE	NW40 MANUAL ORING	VVAMOR400000	61	129.5	160.5	178.5	NW40

Valves

Auto Vent Valve



Outer dimension (unit : mm)

Name	Product Description	Ordering Number	A	B	C	D	E	F
AUTOVENT ANGLEVALVE	NW25/NW25	VVAVOR250000	45	84.5	155	65	94	NW25

Specifications

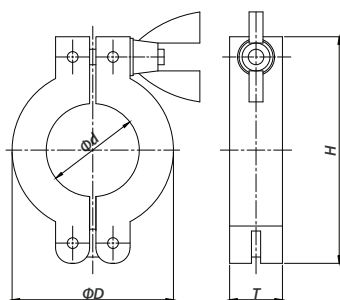
	Auto Vent Valve-NW25	Auto Vent Valve-NW40
Voltage	AC24V, 10~20mA	AC 100V, 25mA
Power(50/60Hz)	11W	6/4.2W
Connector	1/8 inch	
Flange Size	NW25	NW40
Conductance(l/sec)	15	45
Leak Rate(Torr-l/sec)	Max. 1.0×10^{-9}	
Material:Body, Sealing	SUS304, Viton	
Life Cycle	10,000 (Room Temperature)	
Weight(kg)	1.8	2.8

Z-Line Valve

Please direct inquiries to headquarters.

Fittings

Clamp



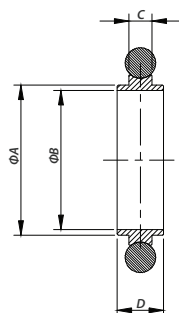
Specifications

Specification	NW25/NW25, NW40/NW40
Material	Aluminum
Applicable Pump	NW16 : W2V05, NW25 : W2V10~40 NW40 : W2V60~180 / NW50 : NW50-Inlet/Outlet

Outer dimension (unit : mm)

Name	Product Description	Ordering Number	D	d	H	T
Clamp	NW16	ACCCMA001610	42	20	61	17
Clamp	NW25	ACCCMA002510	52	30	73	17
Clamp	NW40	ACCCMA004010	70	44	90	17
Clamp	NW50	ACCCMA005010	94	62	123	17

Centering



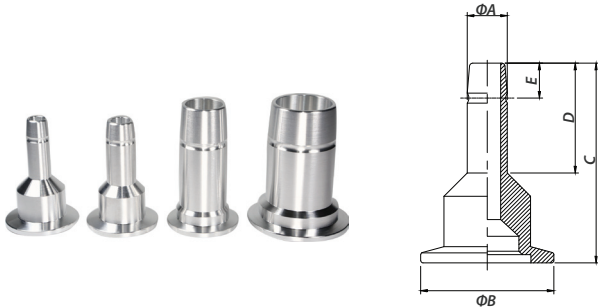
Specifications

Specification	NW16, NW25, NW40, NW50
Material : metal ring, O-ring	STS304, NBR/VITON(Select)
Use	Specification of the same set and clamp

Outer dimension (unit : mm)

Name	Product Description	Ordering Number	A	B	C	D
CENTER RING	NBR/NW16(ST304)	ACCCOORN1601	17	16	8	3.9
CENTER RING	NBR/NW25(ST304)	ACCCOORN2501	26	25	8	3.9
CENTER RING	NBR/NW40(ST304)	ACCCOORN4001	41	40	8	3.9
CENTER RING	NBR/NW50(ST304)	ACCCMA005010	52	50	8	3.9

Fittings

 Hose Nipple


■ Specifications

Specification	NW25-Φ12, NW25-Φ16, NW25-Φ26, NW40-Φ36
Material	Aluminum(A2024)
Applicable Pumps	NW25 : W2V10~W2V40 NW40 : W2V60~W2V150

■ Outer dimension (unit : mm)

Name	Product Description	Ordering Number	A	B	C	D	E
Hose Nipple	NW25 - Φ12	ACHNMA251200	12	40	60	33	10.5
Hose Nipple	NW25 - Φ16	ACHNMA251600	16	40	60	35	10.5
Hose Nipple	NW25 - Φ26	ACHNMA252600	26	40	69	57	20
Hose Nipple	NW40 - Φ36	ACHNMA403600	36	55	68.5	55	20

 PT Nipple


■ Specifications

Specification	NW16-1/4"	NW25-1/4"	NW25-3/8"	NW25-1/2"	NW25-3/4"	NW25-1"	NW40-1&1/4"
Material	SUS	AL	AL	Zn(CR PLATED)	Zn(CR PLATED)	AL	SUS
Spiral	OD	ID	ID	ID	OD	ID	OD
Applicable Pumps	W2V05	W2V10~W2V40				W2V60~W2V180	

■ Outer dimension (unit : mm)

Name	Product Description	Ordering Number	A	B	C	D	E
PT-Nipple	NW25-3/8"(AL/ID)	ACPNMA253800	13.8	40	26	35	3/8"
PT-Nipple	NW25-1/4"(AL/ID)	ACPNMA251400	10.5	40	26	35	1/4"
PT-Nipple	NW25-1"(AL/ID)	ACPNMA251000	24.8	40	40	45	1"
PT-Nipple	NW25-1/2"(ZINC/CR/ID)	ACPNM251200	18.5	40	32	26.5	1/2"
PT-Nipple	NW25-3/4"(ZINC/CR/OD)	ACPNM253401	18.5	40	26	27	3/4"
PT-Nipple	NW25-3/8"(AL/OD)	ACPNMS161401	8	29.4	20	35	1/4"
PT-Nipple	NW25-3/8"(AL/OD)	ACPNMS401141	35	55	42	30	1 1/4"

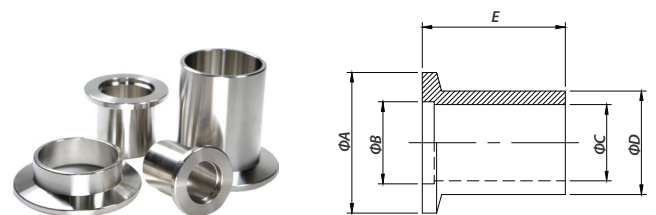
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■ Specifications

Specification	NW16, NW25, NW40, NW50
Material	SUS(STS304)
Applicable Pumps/Pipe	NW16 : W2V05 NW25 : W2V10~W2V40 NW40 : W2V60~W2V180 NW50 : Pump or Pipe with NW50-Inlet/Outlet

■ Outer dimension (unit : mm)

Name	Product Description	Ordering Number	A	B
BLANK	STS/NW16	ACBKMS001600	30	17.2
BLANK	STS/NW25	ACBKMS002500	40	26.2
BLANK	STS/NW40	ACBKMS004000	55	41.2
BLANK	STS/NW50	ACBKMS005000	75	52.2

 Welding Flange


■ Specifications

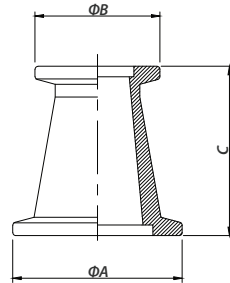
Specification	NW16, NW25, NW40, NW50
Material	SUS(STS304)
Applicable Pumps	NW16 : W2V05 NW25 : W2V10~W2V40 NW40 : W2V60~W2V180 NW50 : Pump or Pipe with NW50-Inlet/Outlet

■ Outer dimension (unit : mm)

Name	Product Description	Ordering Number	A	B	C	D	E
WELDING FLANGE	NW16/15MM	ACFLMS161500	30	17.2	16	20	15
WELDING FLANGE	NW25/15MM	ACFLMS251500	40	26.2	24	28	15
WELDING FLANGE	NW40/15MM	ACFLMS401500	50	41.2	34	38	15
WELDING FLANGE	NW50/15MM	ACFLMS501500	75	52.2	51	57	15
WELDING FLANGE	NW16/30MM	ACFLMS163000	30	17.2	16	20	30
WELDING FLANGE	NW25/30MM	ACFLMS253000	40	26.2	24	28	30
WELDING FLANGE	NW40/30MM	ACFLMS403000	55	41.2	34	38	30
WELDING FLANGE	NW50/30MM	ACFLMS503000	75	52.2	51	57	30

Fittings

Reducer



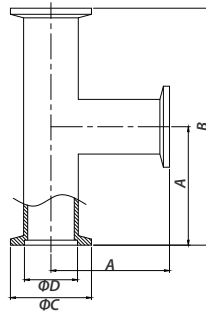
Specifications

Specification	NW25-NW16, NW40-NW25, NW50-NW40
Material	SUS(STS304)

Outer dimension (unit : mm)

Name	Product Description	Ordering Number	A	B	C
REDUCER	NW25-NW16	ACREMS251600	40	30	40
REDUCER	NW40-NW25	ACREMS402500	55	40	40
REDUCER	NW50-NW40	ACREMS504000	75	55	40

Tee



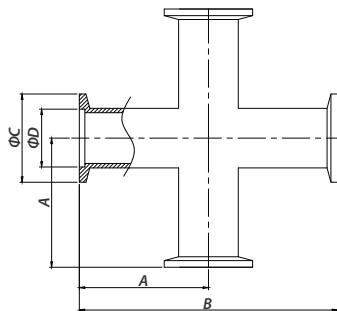
Specifications

Specification	NW16, NW25, NW40, NW50
Material	SUS(STS304)

Outer dimension (unit : mm)

Name	Product Description	Ordering Number	A	B	C	D
TEE	NW16	ACTEMI001600	40.4	80.8	30	17.2
TEE	NW25	ACTEMI002500	58.6	117.2	40	26.2
TEE	NW40	ACTEMI004000	77.6	155.2	55	41.2
TEE	NW50	ACTEMI005000	80	160	75	52.2

Cross



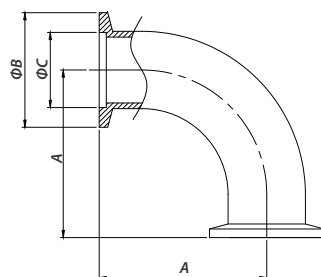
Specifications

Specification	NW16, NW25, NW40, NW50
Material	SUS(STS304)

Outer dimension (unit : mm)

Name	Product Description	Ordering Number	A	B	C	D
CROSS	NW16	ACRMMI001600	40.4	80	30	17.2
CROSS	NW25	ACRMMI002500	58.6	117.2	40	26.2
CROSS	NW40	ACRMMI004000	77.6	155.2	55	41.2
CROSS	NW50	ACRMMI005000	80	160	75	52.2

Elbow



Specifications

Specification	NW16, NW25, NW40, NW50
Material	SUS(STS304)

외형치수 (unit : mm)

Name	Product Description	Ordering Number	A	B	C
ELBOW	NW16	ACELMI001600	53.1	30	17.2
ELBOW	NW25	ACELMI002500	68.1	40	26.2
ELBOW	NW40	ACELMI004000	77.6	55	41.2
ELBOW	NW50	ACELMI005000	70	75	52.2

Fittings

 Bellows


Specifications

Connection standard	NW16, NW25, NW40, NW50
Length	Up to 100 ~ 300MM, 50MM unit, Up to 300 ~ 1000MM, 100MM units Length adjustable in 500MM increments from 1000 to 2000MM
Material	SUS(STS304)

Outer dimension (unit : mm)

Name	Product Description	Ordering Number	A	B	C
BELLOWS	NW16X100~2000MM	ACBL01001600~ACBL20001600	100~2000	30	17.2
BELLOWS	NW16X100~2000MM	ACBL01001600~ACBL20001600	100~2000	40	26.2
BELLOWS	NW16X100~2000MM	ACBL01001600~ACBL20001600	100~2000	55	41.2
BELLOWS	NW16X100~2000MM	ACBL01001600~ACBL20001600	250, 800	75	52.2

 Vacuum Hose

Specifications

Specification : Inside diameter	Φ8, Φ13, Φ20, Φ32
Length	1,000MM single length
Material	RUBBER

(unit : mm)

Name	VACUUM HOSE			
Product Description	Φ8X1000MM	Φ13X1000MM	Φ20X1000MM	Φ32X1000MM
Ordering Number	ACVHUT081000	ACVHUT131000	ACVHUT201000	ACVHUT301000
Inside diameter	8	13	20	32
Use NIPPLE Outside diameter	12	16	26	36

Vacuum Oils


 MR-200 (NEOVAC)

Specifications

		General Properties
ISO Viscosity Grade		68
Viscosity	40°C*mm ² /s	71.0
Color	ASTM	L0.5
Density	15°C g/cm ³	0.883
Flash Point	°C	256
Pour Point	°C	-17.5
Total oxidation	mgKOH/g	0.00
Demulsibility		40-40-0 (Under5)
Vapor Pressure	50°C Pa	Below 1.3×10 ⁻³
	50°C Torr	Below 1.0×10 ⁻⁵

Sales Unit 1L, 20L

 Fomblin 16/6

Specifications

Typical Property	Units	16/6
Average molecular weight	a.m.u.	2700
Specific gravity (20°C) (68°F)	40°C*mm ² / s	71.0
Kinematic Viscosity	ASTM	L0.5
Viscosity Index	15°C g/cm ³	0.883
Vapor Pressure @ 25°C(68°F) @ 100°C(212°F)		
	torr	2×10 ⁻⁶
	torr	2×10 ⁻⁴
Pour Point	°C	-45
	°F	-49
Heat of vaporization (200°C) (392°F)	cal/g	8
Surface Tension	dyne/cm	22
Evaporation loss(22hrs; 149°C)	% by wt.	3.9
Ultimate total pressure	torr	2.4×10 ⁻³
Specific oil consumption	cm ³ /hr	0.5

Sales Unit

- Mainly sold by being filled in pump
- For more information, please contact us.

Service Kits

The advantage of SV-140 and W2V-series is that simple structure makes anyone having a certain degree of mechanical knowledge and experience is able to maintain and repair them by himself. Based on the accumulated experience of supplying many pumps in the foreign countries, WSA provides **the two types** of Service Kit.

✿ Minor Repair Kit



Minor Repair Kit is a universal kit for the overhaul and it contains all rubbers parts (o-ring, oil seal, valve) and associated consumable for replacement.

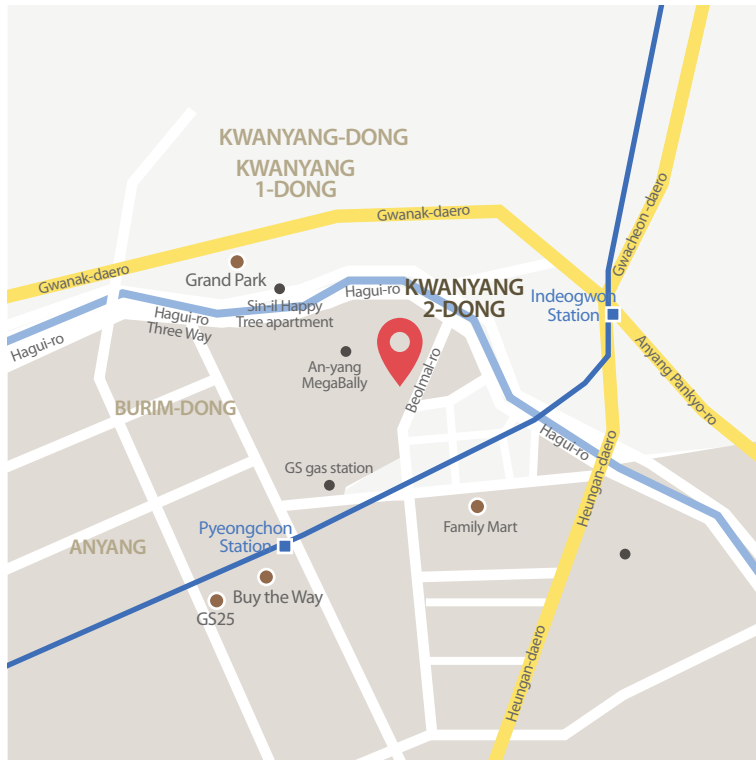
✿ Major Repair Kit



Major Repair Kit provides 1st & 2nd blades (vanes) and its components, in addition to Minor Kit contents, to correspond to the repair of the pump with severe damage.

✿ Detailed part lists are available to download on our website.

Directions



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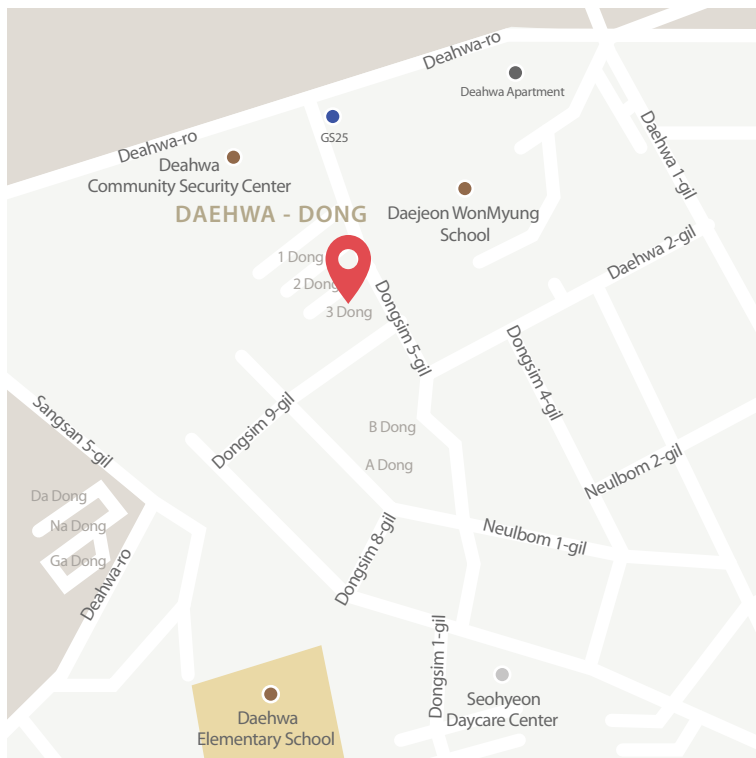
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