

**HEAVY DUTY**

# VACUUM PUMP



**High  
Performance**



**Global  
Recognition**








**Proven  
Technology**

**ARAKI** vacuum pumps deliver exceptional performance and reliability for diverse industrial applications. From rotary piston to high-capacity oil diffusion pumps, **ARAKI** ensures precision and efficiency with advanced features like low oil return, temperature control, and innovative design.



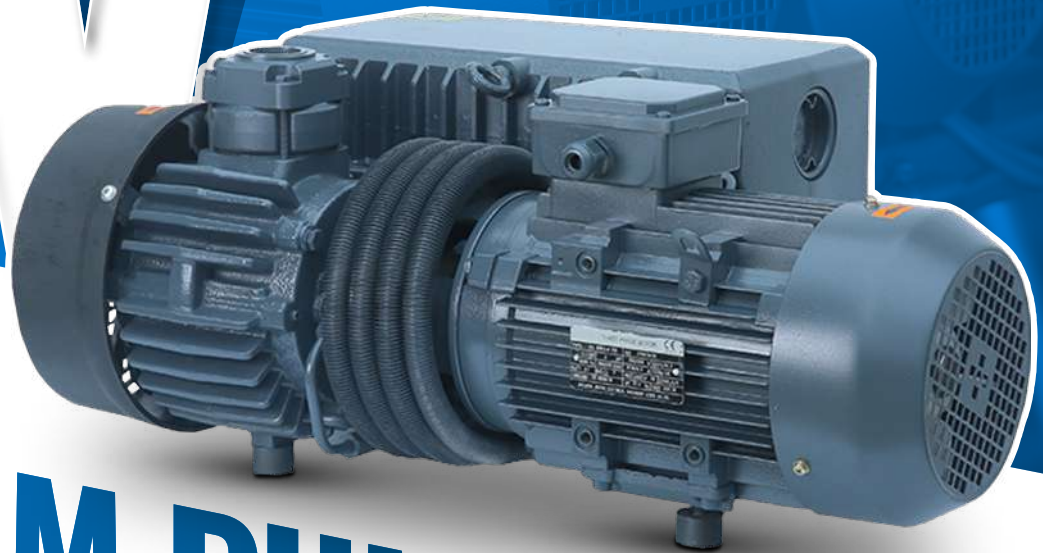
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# RV



## ROTARY VANE VACUUM PUMP



### INTRODUCTION

RV series single stage rotary vane vacuum pump is a kind of reliable, durable, economic and applicable range of vacuum equipment. In the circular pump body, it has an air suction valve and exhaust valve. Three vanes are equipped with an eccentric rotor slot in the rotor, its vanes divide the pump chamber into three parts. The volume of the pump chamber keeps changing periodically with the rotation of the rotor, to finish the process of gas suction, compression and elimination.



### ADVANTAGES

- A. Environmental clean exhaust; no pollution; equipped with oil mist collector.
- B. Direct drive type, compact and lightweight.
- C. Efficient air cooling (standard); easy to install & maintenance.
- D. Inlet with check valve to prevent vacuum oil back into pump system.
- E. Small vibration, low noise.
- F. Continuous operating at the entire range of pressures from the atmospheric pressure to ultimate vacuum pressure.

### APPLICATION

It is widely used in vacuum packaging, material drying, concentration, distilling industry, vacuum coating, vacuum loading, vacuum forming and other fields.

## TECHNICAL SPECIFICATION

MODEL	Pump Speed (m <sup>3</sup> /h)		Ultimate Vacuum (Pa)	Motor Power (kW)	Inlet Diameter (inch)	Rotary Speed (rpm)	Oil Capacity (L)	G.W (kg)	Noise dB(A)	Dimensions (mm)
	50HZ	60HZ								
RV-010	10	12	200	0.37 (3ph) 0.55 (1ph)	G1/2	1400	0.5	20	64	405*253*210
RV-020	20	24	200	0.75 (3ph) 0.90 (1ph)	G1/2	2800	0.5	20	64	405*253*210
RV-025	25	30	200	0.75 (3ph) 0.90 (1ph)	G1/2	2800	0.5	22	64	405*253*210
RV-040	40	48	50	1.5 (3ph) 2.2 (1ph)	G1 1/4	1400	1.0	50	67	660*300*270
RV-063	63	75	50	2.2	G1 1/4	1400	2.0	83	68	695*420*295
RV-100	100	120	50	3.0	G1 1/4	1400	2.0	87	72	735*420*295
RV-160	160	192	50	4.0	G2	1400	45	152	74	805*520*410
RV-200	200	240	50	5.5	G2	1400	45	159	76	825*520*410
RV-250	250	300	50	7.5	G2	1400	7.0	230	76	1000*550*410
RV-300	300	360	50	7.5	G2	1400	7.0	236	76	1200*550*410
RV-630	630	750	10	15.0	DN100	960	35	620	75	1630*1300*980
RV-750	750	900	10	18.5	DN100	1150	35	640	76	1630*1300*980

The ARAKI RV Series single-stage rotary vane vacuum pump stands out for its exceptional performance and versatility. Designed with a robust circular pump body and equipped with a highly efficient three-vane system, it ensures smooth, consistent operation for a wide range of applications. Its durable construction guarantees long-term reliability, while its economic design minimizes energy consumption, making it an ideal choice for both industrial and commercial use. Whether you're in manufacturing, research, or processing, the ARAKI RV Series delivers precise vacuum capabilities you can trust.

**RV SERIES MODEL**



**RV010**



**RV020**



**RV025**



**RV040**



**RV063**



**RV100**



**RV160**



**RV200**



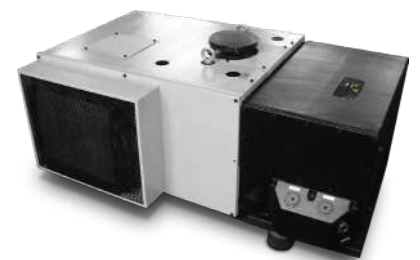
**RV250**



**RV300**



**RV630**



**RV750**

# DDRV

## DIRECT DRIVE ROTARY VANE VACUUM PUMP



### INTRODUCTION

DDRV series double stage rotary vane vacuum pump is a star model for its stable performance and compact structure. It can be the fore pump of high vacuum or super high vacuum system.

### APPLICATION

It is widely used in refrigeration equipment, medical treatment, chemicals and laboratory of hospitals and universities, vacuum smelting, vacuum coating, monocrystal silicon, polysilicon, distilling industry, food packaging, aerospace technology, semiconductor, electronics, etc.

### ADVANTAGES

- A. Compact structure, light weight, low noise, easy operation, stable performance.
- B. Equipped with gas ballast valve to pump gas combined with a little water vapor.
- C. Can be used both as single pump and as fore pump in high vacuum system.
- D. Inlet with check valve to prevent vacuum oil back into pump system.
- E. With anti-oil-return device to guarantee a clean vacuum.
- F. No oil leak, no spray, no pollution.

### TECHNICAL SPECIFICATION

Model		DDRV-1	DDRV-2	DDRV-4	DDRV-6	DDRV-8	DDRV-15	DDRV-25
Speed (L/s) /(CFM)	50HZ	1/2	2/4	4/8	6/13	8/17	15/32	25/53
	60HZ	1.2/2.5	2.4/5	4.8/10	7.2/15	9.6/20	18/38	30/64
Ultimate Pressure (Pa)		1	1	1	1	1	1	1
Rotary Speed (rpm)	50HZ	1400	1400	1400	1400	1400	1400	1400
	60HZ	1720	1720	1720	1720	1720	1720	1720
Motor Power (Kw)		0.25	0.37	0.55	0.75	1.1	1.5	3.0
Working Voltage (v)		220/380	220/380	220/380	380	380	380	380
Inlet Diam (mm)	I.D.	Φ18	Φ25	Φ25	KF-25	KF-40	KF-40	KF-40
	O.D.	KF-18	KF-25	KF-25				
Dimensions (mm)	Length	480	480	520	550	608	676	830
	Width	145	150	150	174	220	220	275
	Height	240	250	250	279	346	346	440
Noise dB (A)		65	65	65	60	65	65	68
Oil Capacity (L)		0.7	1	1.2	1.5	2.5	3	6.5
N.W. (Kg)		17	22	24	31	52	60	90

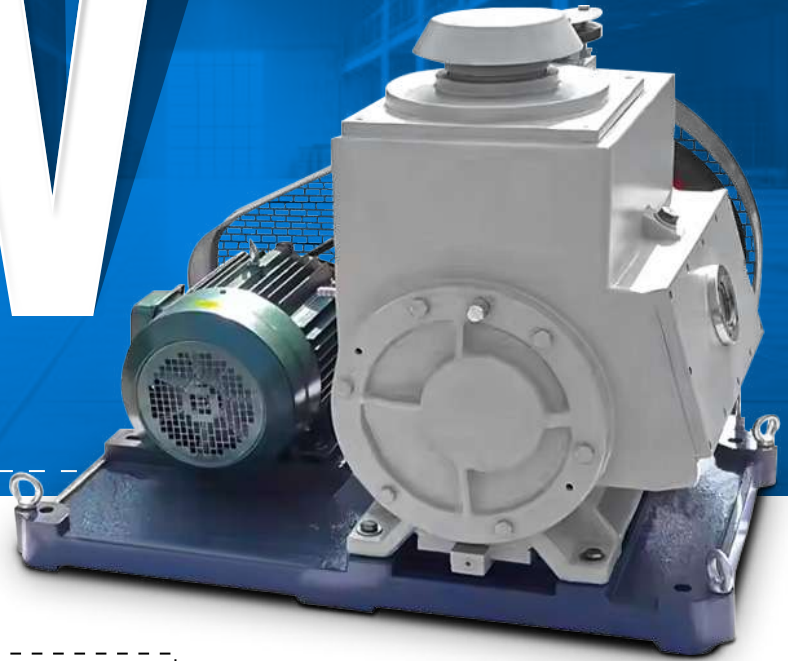


# TSRV

TWO STAGE (BELT TYPE)

**ROTARY VANE**

**VACUUM PUMP**



## INTRODUCTION

TSRV series vacuum pump is two stage structure. The operation performance consists of two parts, high-pressure stage and low-pressure stage. The technical parameter of the pump is  $6 \times 10^{-2}$  Pa. According to the user's operation requirements, and this pump is used as a backing pump of roots booster pump.

## APPLICATION

It is applicable to vacuum coating, vacuum heat treatment, vacuum smelting, vacuum tube, chemicals, packing, forming, health and medical appliances, laboratory, vacuum drying machines and vacuum filtering.

## ADVANTAGES

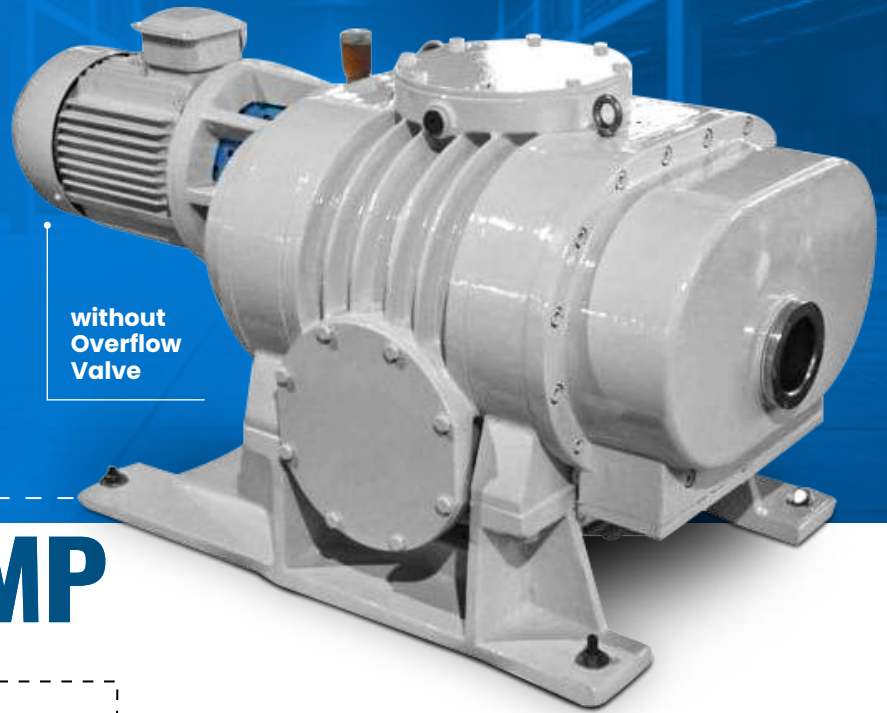
- A. Wide range of free-air capacities to match specific applications.
- B. Positive pressure oil system ensures proper lubrication & prevents oil starvation under high gas loads.
- C. Fast acting inlet valve protects internal components against oil and air contamination if the pump stops while under vacuum.
- D. Gas ballast valve limits internal condensation; Lets you use pump when condensable vapors are present.

## TECHNICAL SPECIFICATION

Model	TSRV-4	TSRV-8	TSRV-15	TSRV-30	TSRV-70	TSRV-100
Pumping speed (L/s)	4	8	15	30	70	100
Ultimate Pressure (Pa)	$\leq 6 \times 10^{-2}$	$\leq 6 \times 10^{-2}$	$\leq 6 \times 10^{-2}$	$\leq 6 \times 10^{-2}$	$\leq 6 \times 10^{-2}$	$\leq 6 \times 10^{-2}$
Motor Power (Kw)	0.55	1.1	2.2	4	5.5	7.5
Rotary Speed (r/min)	450	320	320	450	420	360
Cooling Type	Natural Cooling			Water Cooling		
Noise Level DB (A)	$\leq 65$	$\leq 70$	$\leq 70$	$\leq 70$	$\leq 75$	$\leq 90$
Inlet Diameter (mm)	25	40	50	65	80	90
Outlet Diameter (mm)	30	50	80	85	100	125
Oil Capacity (L)	1	2	2.8	3	4.2	5
Solenoid Valve	DDC-JQ25	DDC-JQ40	DDC-JQ40	DDC-JQ65	DDC-JQ80	DDC-JQ100
Dimension (mm)	540x335x380	790x430x540	790x530x540	810x480x560	910x650x700	1130x740x690
Weight (Kg)	60/50	158/148	202/190	230/216	338/320	400/370

# RO

## ROOTS VACUUM PUMP



without  
Overflow  
Valve

### INTRODUCTION

RO Series Roots Vacuum Pump is a positive displacement pump, also known as roots booster pump, which is one of the main equipment to obtain the middle and high vacuum level. Its working principle is similar to roots blower, which use two figure 8 rotor synchronous rotation in the pump shell, so as to complete the suction and exhaust process.

### ADVANTAGES

- A. Stable operation, less vibration, low noise, Less power consumption, good energy.
- B. Rapid start and get the ultimate pressure in short time.
- C. Pump cavity does not need lubricating oil, avoid oil vapor to pollute vacuum system, is not sensitive to tiny dust.

### APPLICATION

They're widely used in vacuum smelting, vacuum welding, vacuum casting, vacuum coating, vacuum drying, vacuum dynamic experiment and chemical pharmaceutical, electric vacuum device manufacturing industries.

In view of the chemical, pharmaceutical and other industries require huge vapor degassing capability. the sealing structure of RO roots vacuum pump chamber and the bearing chamber has improved, which greatly reducing the bearing cavity and gear cavity oil emulsification. Thus, RO roots vacuum pump is more suitable for pumping large quantities of water vapor and solvent with water ring vacuum pump.

RO series roots vacuum system is non oil seal type. So, it can completely avoid oil returning , oil spills and soot pollution, etc.

### TECHNICAL SPECIFICATION

Model		RO-150	RO-300	RO-600	RO-1200
Pumping Speed (L/s)		150	300	600	1200
Ultimate Pressure (Pa)		$5 \times 10^{-2}$			
Max. Allowable diff. Pressure (Pa)		$8 \times 10^3$		$5 \times 10^3$	
Motor Rotary Speed (RPM)		3000			
Suitable Motor Power (kW)		2.2	4	7.5	11
Flange Size	Inlet (mm)	100	150	200	250
	Outlet (mm)	100	150	200	200
Cooling Water Consumption (L/h)		120		150	
Allowable Temperature (°C)		100			
Vacuum Pump Oil		100#			
Weight (without motor) (kg)		195	250	760	860



# ROV

## ROOTS VACUUM PUMP



with  
Overflow  
Valve

### INTRODUCTION

ROV Series Roots Vacuum Pump is a positive displacement pump, also known as mechanical booster pump, which is one of the main equipment to obtain the middle and high vacuum degree. Its working principle is similar to roots blower, which use two figure 8 rotor synchronous rotation in the pump shell, so as to complete the suction and exhaust process.

### APPLICATION

They're widely used in vacuum smelting, vacuum welding, vacuum casting, vacuum coating, vacuum drying, vacuum dynamic experiment and chemical pharmaceutical, electric vacuum device manufacturing industries.

In view of the chemical, pharmaceutical and other industries require huge vapor degassing capability. the sealing structure of ROV roots vacuum pump chamber and the bearing chamber has improved, which greatly reducing the bearing cavity and gear cavity oil emulsification. Thus, ROV roots vacuum pump is more suitable for pumping large quantities of water vapor and solvent with water ring vacuum pump.

ROV series roots vacuum system is non oil seal type. So, it can completely avoid oil returning, oil spills and soot pollution, etc.

### ADVANTAGES

- A. Stable operation, less vibration, low noise, Less power consumption.
- B. Rapid start and get the ultimate pressure in short time.
- C. Pump cavity does not need lubricating oil, avoid oil vapor to pollute vacuum system, is not sensitive to tiny dust.
- D. ROV series roots vacuum pump is with overflow valve, automatically anti-overloading. RO series roots vacuum pump is without overflow valve.

### TECHNICAL SPECIFICATION

Model	ROV-70	ROV-150	ROV-300	ROV-600	ROV-1200	ROV-2500	
Pumping Speed (L/s)	70	150	300	600	1200	2500	
Ultimate Pressure (Pa)	5x10 <sup>-2</sup>						
Diff. Pressure at Overflow Valve (Pa)	8x10 <sup>3</sup>	4x10 <sup>3</sup>	5.3x10 <sup>3</sup>	2.7x10 <sup>3</sup>			
Motor Rotary Speed (RPM)	3000						
Suitable Motor Power (kW)	1.1	2.2	4	7.5	11	22	
Flange Size	Inlet (mm)	80	100	150	200	250	320
	Outlet (mm)	80	100	150	200	200	320
Cooling Water Consumption (L/h)	-	120		150		200	
Allowable Temperature (°C)	100						
Vacuum Pump Oil	100#						
Weight (without motor) (kg)	110	205	265	780	880	1350	

# RPD



# ROTARY PISTON VACUUM PUMP



## INTRODUCTION

Rotary piston vacuum pumps are divided into two types: single-stage (RP) and double-stage (RPDS). Double-stage ones can reach a higher vacuum than single-stage. Those pumps include an integral, positive pressure lubrication system to insure reliable lubrication at all pressure levels. They can pump gas containing few condensable vapor with their gas ballast open. Equipped with additional devices, they can also pump corrosive gas or gas containing superabundant oxygen.

## ADVANTAGES

- A. Low gravity and power consumption, wonderful stability, small space request, and nice performance.
- B. Less oil ejection at discharge port and low consumption of vacuum pump oil.
- C. With back settled oil tank to prevent oil returning into pump chamber.
- D. With side flash port on oil tank and O-ring seal, easy to be disassembled, convenient for cleaning and maintenance.
- E. Additional Long lifetime for bearing because of newly added sealing between pump chamber and bearing.
- F. Low vibration, low noise.

## APPLICATION

The pump is widely used in vacuum melting, vacuum furnace, thermal processing, vacuum sintering, vacuum metallurgy, vacuum degassing, vacuum drying, vacuum coating, molecular distilling, vacuum impregnation, electronics, solar industries and aerospace simulation test.

## TECHNICAL SPECIFICATION

MODEL	Ultimate Pressure		Pumping Speed	Inlet Diam.	Outlet Diam.	Motor Power	Cooling Water Consumption	Weight
	Pa	Torr	L/s	mm	mm	kw	kg/h	kg
RPDS-15	$6 \times 10^{-2}$	$4.5 \times 10^{-4}$	15	50	40	2.2	Air-cooling	175
RPDS-30	$6 \times 10^{-2}$	$4.5 \times 10^{-4}$	30	63	50	4	100	380
RPDS-70	$6 \times 10^{-2}$	$4.5 \times 10^{-4}$	70	80	50	7.5	150	710
RPDS-120	$6 \times 10^{-2}$	$4.5 \times 10^{-4}$	120	100	80	15	200	960
RPDS-150	$6 \times 10^{-2}$	$4.5 \times 10^{-4}$	150	100	80	15	200	1020
RP-70G	1	$7.5 \times 10^{-3}$	70	80	50	5.5	150	485
RP-150G	1	$7.5 \times 10^{-3}$	150	100	80	7.5	200	970
RP-150	1	$7.5 \times 10^{-3}$	150	100	80	15	200	830
RP-180	1	$7.5 \times 10^{-3}$	180	160	100	15	450	1010
RP-200	1	$7.5 \times 10^{-3}$	200	160	100	15	450	1010
RP-230	1	$7.5 \times 10^{-3}$	230	160	100	18.5	450	1030
RP-300	1	$7.5 \times 10^{-3}$	300	160	100	22	700	1520

The ARAKI rotary piston vacuum pumps, available in both single-stage and double-stage variants, deliver exceptional performance tailored to diverse industrial needs. The double-stage models achieve superior vacuum levels, making them ideal for applications requiring high precision and efficiency. Featuring an integral positive pressure lubrication system, these pumps ensure consistent and reliable operation across all pressure levels, extending service life. With an open gas ballast, they seamlessly handle gases containing condensable vapors, and when equipped with additional devices, they can safely manage corrosive gases or oxygen-rich environments. ARAKI rotary piston pumps combine durability, versatility, and innovation to meet the most demanding vacuum requirements.



# MD

# METAL DIFFUSION PUMP



## INTRODUCTION

Araki MD series oil diffusion pump is the main equipment for obtaining high vacuum ( $10^{-1}$  -  $10^{-5}$  Pa) with high pumping speed from 1500 L/s to 130000 L/s.

## ADVANTAGES

- A. The pump equipped with observation window, oil filling and discharge port, pump oil temperature control and over heated protection device, and cooling water high temperature alarming device.
- B. The heater of diffusion pump is composed by several heating rods, parallelly connected, which allow the rod being changed with pump running and help to shorten the heating time and increase heating efficiency.
- C. Low oil return. Without water cooling plate, the oil return is  $1 \times 10^{-3}$  mg/cm<sup>2</sup>·min for normal diffusion pump oil, and  $1 \times 10^{-4}$  mg/cm<sup>2</sup>·min for 275 silicone oil.
- D. The manufacturing process takes stretching technology which helps to lessen weld joint, increase intensity, and lower the air leakage.

## APPLICATION

The oil diffusion pump is widely used in vacuum coating, vacuum furnace, electronics, chemical industry, aviation, aerospace, metallurgy, material, biological medicine, atomic energy, space exploration and other high-tech fields, also it possesses high praise in titanium sponge field.

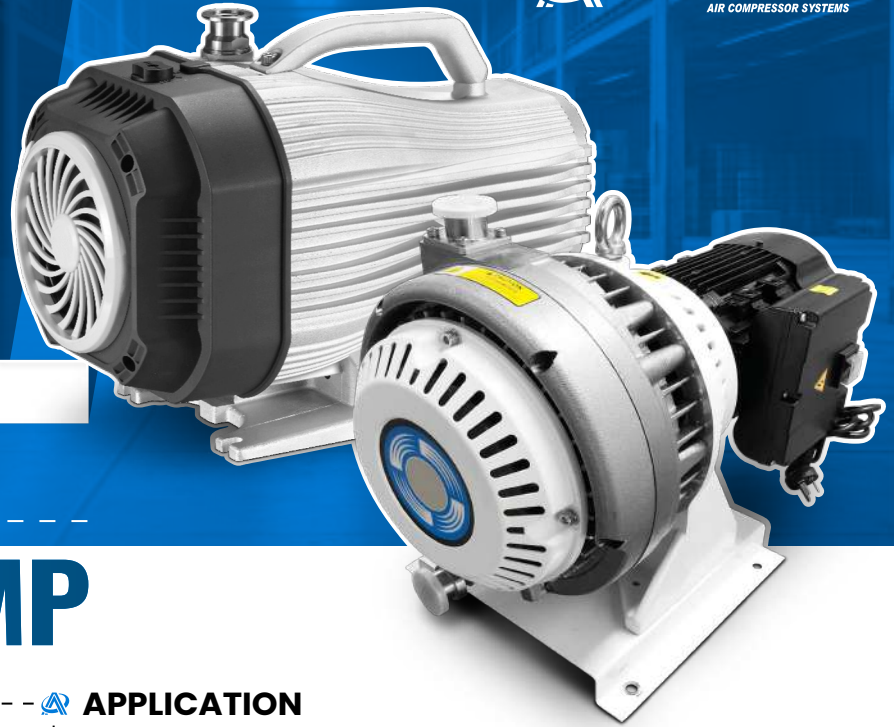
## TECHNICAL SPECIFICATION

Item	Unit	MD-200	MD-250	MD-300	MD-320	MD-400	MD-500	MD-600	MD-630	MD-800	MD-900	MD-1000	MD-1200	MD-1400	MD-1600	
Ultimate Pressure	Pa	$5 \times 10^{-5}$														
Capacity	L/s	2800	3500	4600	5000	8500	12000	17500	20000	30000	40000	50000	60000	90000	130000	
Fore Pump Pressure	Pa	40														
Fore Pump Speed	L/s	15	15	30	30	70	150	300	600	600	600	1200	1200	1200	2500	
Back-Flow Rate	mg / (cm <sup>2</sup> min)	$\leq 3 \times 10^{-2}$														
Heating Time	Min	≤35	≤40			≤45		≤50	≤60	≤65	≤70	≤80		≤90		
Heating Power	kw	1.6-1.8	2.2-2.4	2.4-3	4-5	4-5	6-8	8-9	9-11	13-13.5	14-16	17-20	28-30	38-40	48-50	
Voltage	V	220					360									
Oil Model	/	KS-3														
Oil Volume	L	0.55	1-1.4	1-1.6	1.4-1.8	3-4	4	6-7	7-8	12-14	14-15	15-16	22	38	50	
Cooling Water Consumption	L/h	300	350	400	420	500	600	800	850	1200	1350	1500	2600	3400	4300	
Inlet Diameter	mm	200	250	300	320	400	500	600	630	800	900	1000	1200	1400	1600	
Outlet Diameter	mm	65	65	80	80	100	100	150	160	200	200	300	300	320	320	

The ARAKI MD Series oil diffusion pump is a high-performance solution for achieving ultra-high vacuum levels ( $10^{-1}$  to  $10^{-5}$  Pa) with exceptional pumping speeds ranging from 1500 L/s to 130,000 L/s. Engineered for reliability and efficiency, it features advanced temperature control, overheating protection, and a low oil return rate, ensuring consistent performance even in demanding environments. The innovative heating rod design allows quick replacements without halting operation, reducing downtime and boosting efficiency. Manufactured using advanced stretching technology, the pump minimizes weld joints, enhancing structural integrity and reducing air leakage. Widely trusted across industries like aerospace, metallurgy, and vacuum coating, ARAKI's diffusion pumps set a benchmark for quality and innovation in high-tech applications.

# DSL

## DRY SCROLL VACUUM PUMP



### INTRODUCTION

DSL series dry scroll vacuum pump is developed by our experienced technicians on basis of advanced technology in abroad. It is a type of environmental-friendly pump.

### APPLICATION

It's widely used in semiconductor, aerospace, petrochemical, food and medicines, electric power, energy, environmental protection, automobile, test and analysis instrument industries. It's stable, reliable and clean, which has gained good reputation in industrial production and scientific research.

### ADVANTAGES

- A. Oil free, it can provide clean vacuum condition.
- B. Low noise, less vibration, low temperature rise, excellent sealing means.
- C. Reliable and durable life time over 5 years.
- D. No friction for exhaust parts and moving parts.
- E. High efficiency and low energy consumption.
- F. No return oil or water vapor.
- G. Replaceable for oil rotary vane vacuum pump when ultimate pressure is lower than 1 Pa.
- H. No lubricant and cooling water, hence saving the labor cost for daily maintenance.

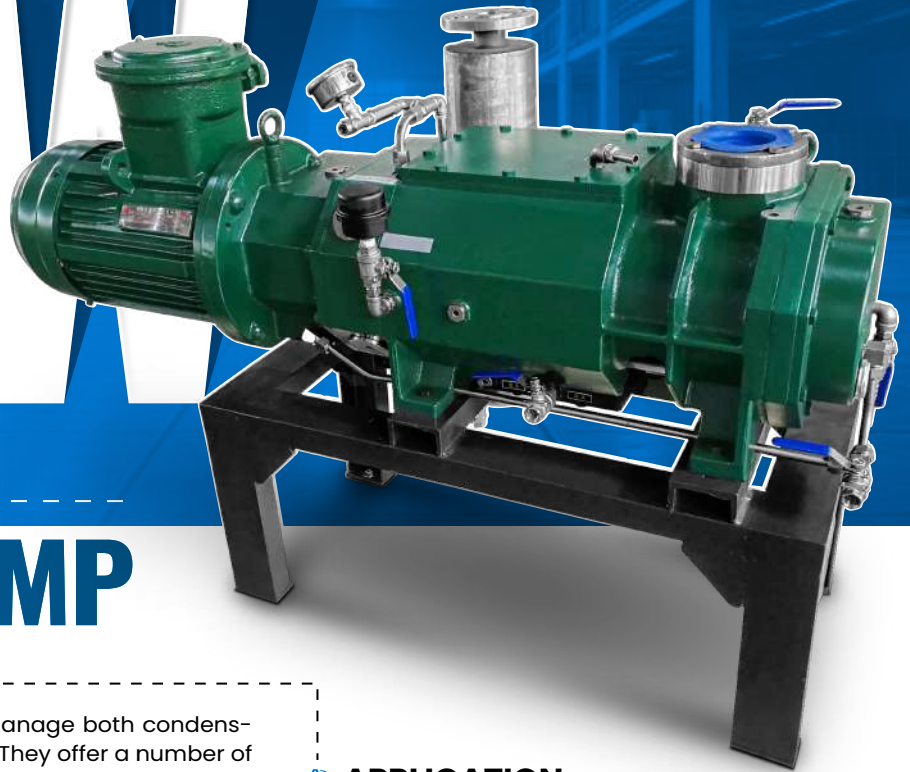
### TECHNICAL SPECIFICATION

Model			DSL1000	DSL600	DSL300	DSL150	DSL75		
Displacement	50Hz	l/s	16.6	8.7	4.3	2.0	1.0		
	60Hz	l/s	19.9	10.4	5.1	2.4	1.2		
Ultimate Pressure		Pa	≤ 1.0	≤ 1.0	≤ 2.6	≤ 8.0	≤ 8.0		
Leakage With Outlet & Air Flush Port Off			1x10 <sup>-2</sup> Pa · l/s (1x10 <sup>-4</sup> mbar · l/s)						
Max. Inlet / Outlet Pressure		mpa	0.1 / 0.13						
Ambient Temperature		°C/°F	5~40 / 41~104						
Max. Moisture Disposal Capacity		G/h	60	60	60	50	50		
Motor	Power	kw/hp	1.50/2.0	0.75/1.00	0.55/0.74	0.25/0.30	0.25/0.30		
	Voltage	VAC	380/220	380/220	220	380/220	220	380/220	220
	Speed	rpm	1410					1425	
Noise Level		dB(A)	≤ 63	≤ 63	≤ 63	≤ 57	≤ 54		
Inlet / Outlet Diameter		mm	KF40/16x2	KF40/16	KF25/16	KF25/16	KF25/16		
External Dimension		mm	548x359x397	487x316x360	457x290x336	416x245x277	405x225x260		
Weight		kg	52	36	32	18	15		
Cooling Type		/	Air Cooled						
Others		/	With Timer & Air Ballast						



# DSW

## DRY SCREW VACUUM PUMP



### INTRODUCTION

DSW series dry screw vacuum pumps can manage both condensable vapors and some solids with no residue. They offer a number of advantages over the traditional vacuum pump designs. There is "NO OIL NO WATER" in contact with the process vapors, therefore they are considered environmentally friendly.

### APPLICATION

Chemical and Pharmaceutical Processing, Solvent Recovery, Crystallization, Vapor Coating, Petroleum and semiconductor markets, etc.

### ADVANTAGES

- A. Oil and Water free Dry running operation makes clean vacuum.
- B. Can achieve ultimate vacuum as low as 0.6 Pa
- C. Quiet operation; Equipped with special silencer, lower noise.
- D. No metal-metal contact between Screw and Casing ensures long pump life.
- E. Simple design results easy maintenance.

### TECHNICAL SPECIFICATION

Model		Unit	DSW50	DSW70	DSW100	DSW150	DSW200	DSW300	DSW350
Suction Capacity	50 Hz	m <sup>3</sup> /hr	180	250	430	540	720	1080	1260
	60 Hz		216	300	360	650	850	1296	1512
Ultimate Pressure	50 Hz	mbar	0.02						
	60 Hz		0.01						
Motor Power	50 Hz	KW	5.5	7.5	11	15	18.5	22	22
	60 Hz		7.5	11	15	15	22	26	26
Rotary Speed	50 Hz	RPM	2900						
	60 Hz		3550						
Inlet Diameter		mm	50	65	70	90	100	100	100
Outlet Diameter		mm	40	40	55	65	65	65	65
Lubricating oil consumption		L	0.85	0.85	1.4	2	2	2	2
Cooling Water Consumption	L/min		2.5	2.6	2.8	3	4	4	4
	gal/min		0.67	0.7	0.75	0.8	1.07	1.07	1.07
Weight		kg	295	350	480	520	680	850	850
Noise		dB(A)	68	70	70	72	74	84	84
Working Temperature		°C	5~40						
Max. Permissible Humidity		/	90%						

# MP MOLECULAR PUMP SERIES



## INTRODUCTION

MP series molecular pump can obtain clean and ultra-high vacuum pressure without cold trap and oil baffle. ARAKI can provide three types of molecular pump with distinguished structure as, hybrid molecular pump, turbo molecular pump, and grease lubricated hybrid molecular pump.

## ADVANTAGES

### FOR HYBRID MOLECULAR PUMP

- A. High pumping speed and compression ration.
- B. Being no critical and with no memory effect to pumped gas.
- C. With clean and high (ultra-high) vacuum without cooling trap and oil flap.
- D. Supply Scope: Molecular pump, with controller and 5m connection cables.

### FOR TURBO MOLECULAR PUMP (MP-3600 MODEL)

- A. High intensity for vane.
- B. Light rotor.
- C. Short start-up time.
- D. Low mechanical consumption.
- E. Long lifetime.
- F. Supply Scope: Molecular pump, with controller and 5m connection cables.

### FOR GREASE LUBRICATED HYBRID MOLECULAR PUMP

- A. High stability.
- B. Easy to achieve high vacuum with oil free.
- C. Same advantage with turbo molecular pump.
- D. Supply Scope: Molecular pump, with controller and 5m connection cables.

## APPLICATION

It can be widely used in variant vacuum technology field like photovoltaic, lighting, aerospace, semi-conductor, energy, military, laser, home electrics, material, automobile, etc.

## MP SERIES HYBRID MOLECULAR PUMP & TURBO MOLECULAR PUMP

MODEL	UNIT	MP-600		MP-1200		MP-1600		MP-3600	
High vacuum flange	mm	150CF	160ISO-K	200CF	200ISO-K	250CF	250ISO-K	400 ISO-K	
Fore pipe flange	mm	40 KF		40 KF		50 KF		100 ISO-K	
Pumping speed	L/s	600		1200		1600		3600	
Compression ration	N <sup>2</sup>	>10 <sup>9</sup>		>10 <sup>9</sup>		>10 <sup>9</sup>		>10 <sup>9</sup>	
	H <sup>2</sup>	>8x10 <sup>3</sup>		>1x10 <sup>4</sup>		>1x10 <sup>4</sup>		>5x10 <sup>2</sup>	
Ultimate pressure	Torr	>8x10 <sup>-8</sup>	>5x10 <sup>-7</sup>	>8x10 <sup>-8</sup>	>5x10 <sup>-7</sup>	>8x10 <sup>-8</sup>	>5x10 <sup>-7</sup>	>5x10 <sup>-6</sup>	
Rotary Speed	rpm	24000		24000		24000		13500	
Vibration value	µm	≤0.1		≤0.1		≤0.15		≤0.15	
Start-up time	min	<4.5		<5		<6		<11	
Fore pump speed	L/s	4-8		8-15		15		30-70	
Cooling method	/	Air / Water		Air / Water		Air / Water		Water	
Ambient temperature (Air)	°C	≤20		≤20		≤20		/	
Cooling Water	Temperature	°C		≤35		≤35		≤25	
	Consumption	L/min	1-2		1-2		1-2		2
Bake-up Temperature	°C	<120		<120		<120		<120	
Heater	Power	KW		<250		<300		<350	
	Input Voltage	V	AC220		AC220		AC220		/
Mounting Position	/	Vertical ±5°		Vertical ±5°		Vertical ±5°		Vertical ±5°	
Weight	kg	25		29		31		100	

## MP SERIES GREASE LUBRICATED (HYBRID) MOLECULAR PUMP

MODEL	UNIT	MP-300		MP-650		MP-1300		MP-2000	
High vacuum flange	mm	100CF	100ISO-K	150CF	160ISO-K	200CF	200ISO-K	250CF	250ISO-K
Fore pipe flange	mm	25 KF		40 KF		40 KF		50 KF	
Pumping speed	L/s	300		650		1300		2000	
Compression ration	N <sup>2</sup>	>10 <sup>9</sup>		>10 <sup>9</sup>		>10 <sup>9</sup>		>10 <sup>9</sup>	
	H <sup>2</sup>	>1x10 <sup>3</sup>		>8x10 <sup>3</sup>		>1x10 <sup>4</sup>		>1x10 <sup>4</sup>	
Ultimate pressure	Torr	>3x10 <sup>-7</sup>	>2x10 <sup>-5</sup>	>8x10 <sup>-8</sup>	>5x10 <sup>-7</sup>	>8x10 <sup>-8</sup>	>5x10 <sup>-8</sup>	>8x10 <sup>-8</sup>	>5x10 <sup>-8</sup>
Rotary Speed	rpm	30000		24000		24000		24000	
Bearing	/	Grease Lubricated Ceramic Bearing							
Vibration value	µm	/		≤0.1		≤0.1		≤0.1	
Start-up time	min	<4		<5		<5		<5	
Fore pump speed	L/s	2		4-8		8-15		8-15	
Cooling method	/	Air		Water		Water/Air		Water/Air	
Cooling Water	Temperature	°C		/		≤20		≤20	
	Consumption	L/min	/		1		1		1
Mounting Position	/	Any		Any		Any		Any	
Weight	kg	11		22		27		35	



**VACUUM SYSTEM**



**VACUUM SYSTEM**



**VACUUM VALVES**

ARAKI offer kinds of vacuum valves, such as ultra-high (high) vacuum gate valve, high vacuum damper valve, vacuum ball valve, vacuum butterfly valve, high vacuum angle valve, high vacuum flap valve, Electro-magnetic differential pressure charge valve etc. Customization is also available.





**VACUUM FITTINGS**

Not only vacuum pump and vacuum system, we also supply vacuum fitting, such as flange fittings, vacuum bellows, vacuum gauges accessories etc. Customization is also available.



# INDOTARA®

## PT. INDOTARA PERSADA

### Our Marketing Office and After Sales Service Center

#### Head Office

50/F, Menara BCA Grand Indonesia  
Jl. M.H. Thamrin No.1  
Jakarta Pusat 10310

021 - 5011 2228

dce@indotara.id



#### Semarang Office

Wisma HSBC Lt. 6 Suite 609  
Jl. Gajah Mada No.135  
Semarang, Jawa Tengah 50134

024 - 40 33 88 99

smg.dce@indotara.id



#### Marketing Office

APL Tower 6th Floor No. 6 Central Park,  
Jl. Letjen S. Parman Kav 28,  
Jakarta Barat - 11440

021 - 5011 2228

dce@indotara.id



#### Medan Office

Sutomo Tower Lantai 5H  
Jl. Sutomo Ujung No.28,  
Kota Medan, Sumatera Utara 20235

061 - 50 300 600

mdn.dce@indotara.id



#### Graha Indotara

Millenium Industrial Estate  
Jl. Millenium 22 Blok R3 No. 1  
Cikupa, Tangerang - Banten 15720

021 - 5011 2228

dce@indotara.id



#### Makassar Office

Fajar Graha Pena Lt. 5  
Jl. Urip Sumoharjo No. 20,  
Makassar - South Sulawesi 90234

021 - 5011 2228

mks.dce@indotara.id



#### Bandung Office

Wisma HSBC Lt. 6 Suite B  
Jl. Asia Afrika No. 116  
Bandung, Jawa Barat 40112

021 - 5011 2228

bdg.dce@indotara.id



#### Balikpapan Office

Panin Tower Lt. 8 - Grand Sudirman  
Jl. Jendral Sudirman No.7 Klandasan Ilir,  
Balikpapan Kota, Kalimantan Timur 76114

021 - 5011 2228

bpp.dce@indotara.id



#### Surabaya Office

Japfa Indoland Center, Tower I Lt. 10/1008  
Jl. Jendral Basuki Rahmat 129-137  
Surabaya 60271

031 - 3313 3333

sby.dce@indotara.id



#### Bali Office

Benoa Square Lt. 2  
Jl. Bypass Ngurah Rai No. 21 A Kedonganan,  
Kuta Badung - Bali Indonesia 80361

021 - 5011 2228

bali.dce@indotara.id



#### Yogyakarta Office

Hartono Mall Yogyakarta Lt. 3  
Kaliwaru, Condongcatur,  
Sleman, Yogyakarta 55281

021 - 5011 2228

yog.dce@indotara.id



#### Singapore Office

Marina Bay Financial Centre Tower 3  
17F, 12 Marina Boulevard  
Singapore - 018982

021 - 5011 2228

sing.dce@indotara.id

