

# SH-Vacuum Pump Series



SH-V Series



SH-VDC (Low noise) Series



SH-DV (Oil free) Series

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### Refrigeration industry

Automatic pumping line of refrigerator, air-condition water dispenser; refrigerant charging machine; helium leak detector; helium recovery system etc.



### Medical industry

Plasma sterilizers, vacuum freeze drying, vacuum mixing etc. Considering there is a large amount of H<sub>2</sub>O<sub>2</sub> gas and water vapor which will be exhausted into vacuum pump, value designed weak corrosion-resistant vacuum pump SH-V-series.



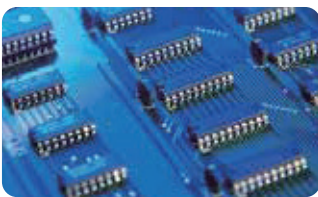
### Analytical instruments

Spectrometer, scanning electron microscope, leak detector, physics & chemistry analytical instrument etc.



### Power industry

SF<sub>6</sub> Gas recovery, detecting instrument, oil filter etc.



### Electronics, semi-conductor industry

Vacuum oven, glove box, sapphire furnace, polycrystalline furnace, single crystal furnace, vacuum annealing, hardening furnace, vacuum sintering furnace, heat treatment furnace, evaporation coating, ion plating, sputtering equipment, LC injection, plasma cleaning, roughing pump for roots pump, molecular pump, diffusion pump.



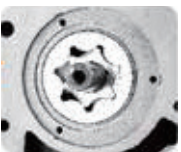
### Refrigeration industry

Automatic pumping line of refrigerator, air-condition water dispenser; refrigerant charging machine; helium leak detector; helium recovery system etc.



### Dual automatic anti-sucking back design

Protects vacuum system from oil pollution when pump stops running and needs to be easily restarted.



### Integrated cylinder structure and pin connection

Convenient and accurate for maintenance and inspection.



### Forced oil circulation system

Ensure stable running of the pump.

# SH-V Series

## Perfect design and performance

Constantly pursuing on highest technology norms, SH Scientific V series vacuum pump reached new highest level: cylinder structure and innovative oil circulation system results in super stability; auto anti-sucking back valve and two shifts gas ballast makes best reliability; Perfect combination of technology and aesthetics helps to become classic.



- Tow-Shift adjustable gas ballast valve satisfies different requirements of condensable vapor (such as water vapor) to be exhausted out of pump in different processes.
- Dual protection of oil anti-sucking back ensures vacuum system from oil pollution when pump stops running and needs to be easily restarted.
- Forced oil circulation system consisted of oil pump and constant pressure oil supply mechanism ensures stable running of the pump.
- Less components are used, easy to maintain and repair.

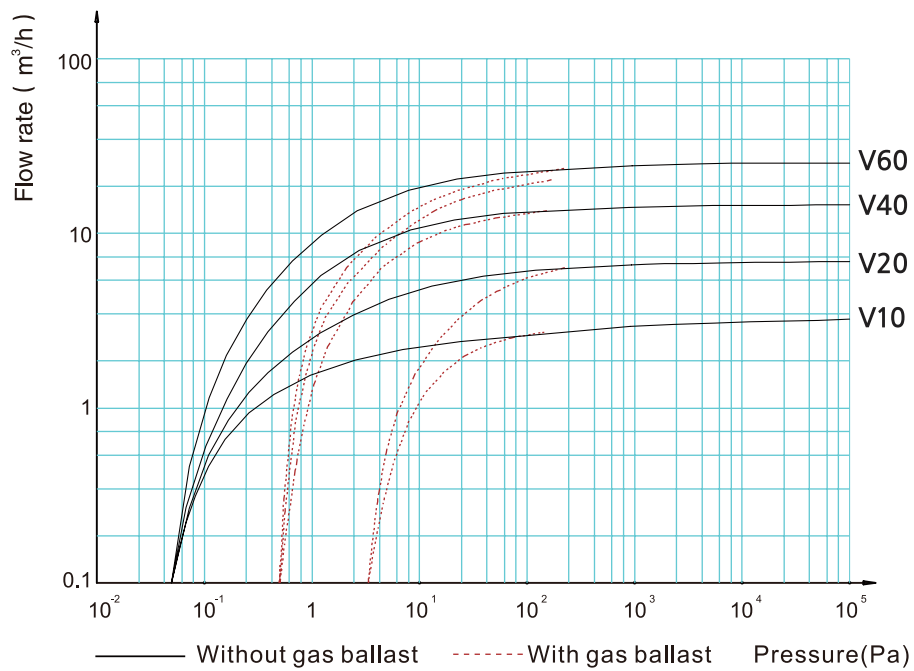
## Specifications

Model		SH-V10	SH-V20	SH-V40	SH-V60
Pumping Speed	50Hz	66L/min	132L/min	264L/min	498L/min
	60Hz	78L/min	156L/min	312L/min	594L/min
Ultimate total pressure gas ballast close (Pa)		$5 \times 10^{-1}$ Pa	$5 \times 10^{-1}$ Pa	$4 \times 10^{-1}$ Pa	$4 \times 10^{-1}$ Pa
Ultimate total pressure gas ballast open (Pa)		3	3	$8 \times 10^{-1}$ Pa	$8 \times 10^{-1}$ Pa
Power supply		Dual Voltage (110V/60Hz, 220V/60Hz)			
Power rating (kw)		0.4 (1 Phase)	0.4 (1 Phase)	0.75 (1 Phase)	1.1 (1 Phase)
Intake and exhaust DN (mm)		KF 16/25	KF 16/25	KF 25	KF 25/40
Oil capacity (L)		0.6~1.0	0.6~1.0	0.9~1.5	1.3~2.0
Ambient temperature (°C)		5-40	5-40	5-40	5-40
Noise level (dB)		≤56	≤56	≤58	≤58
Weight (kg)		19	21	30	43

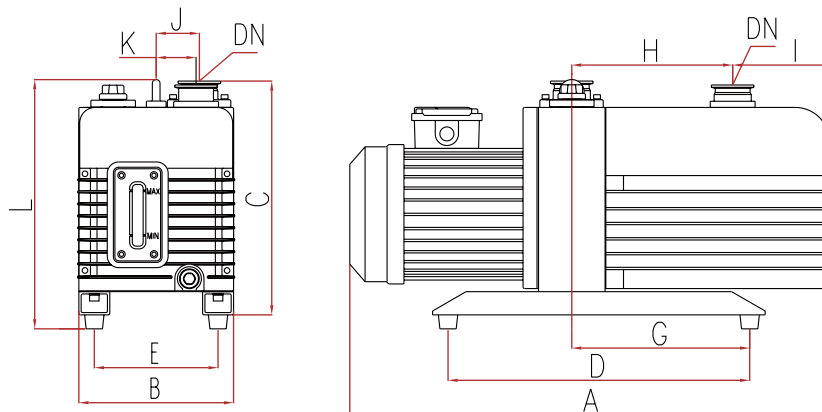


Option: Oil Mist Trap

## Flow Rate Characteristic



## Dimension



Dimensions												
Model	A	B	C	D	E	G	H	I	J	K	L	DN
V10	460	144	207	210	110	126	154	45	45	34	/	KF16/25
V20	460	144	207	210	110	126	154	45	45	34	/	KF16/25
V40	520	188	272	320	148	160	165	69	59	38	295	KF25
V60	520	188	272	320	148	160	165	69	59	38	295	KF25

# SH-VDC (Low noise) Series

## Dual stage low noise rotary vacuum pump

Constantly pursuing on innovative technology and high standards. The pump is absolutely energy-saving with small motor power design. The feature of low noise level is an ideal choice for high requirements of quite operation, especially for analytical applications.



- Low noise level allows for an installation close to the work space.
- **Anti-corrosion design(optional)**
- Low power consumption for cost saving.
- Low and easy maintenance.
- Easy installation and small footprint.

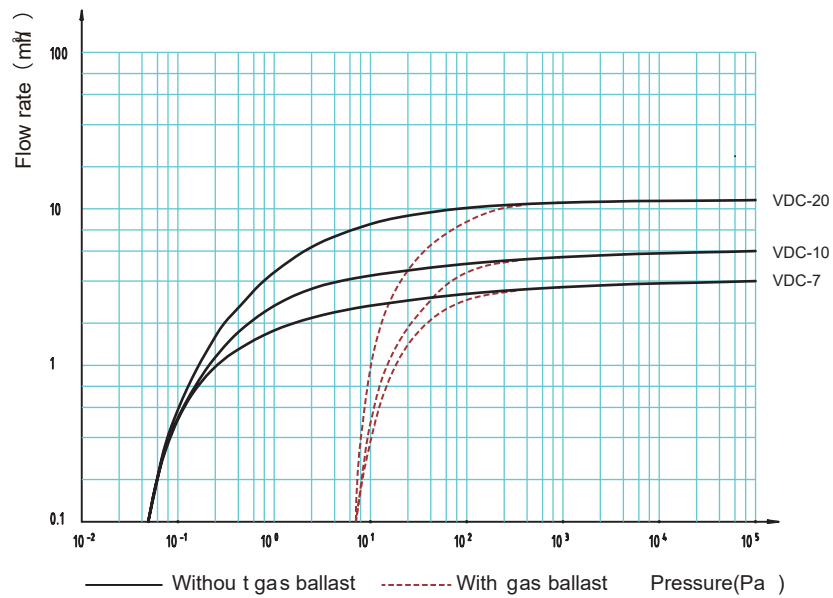
## Specifications

Model	SH-VDC7	SH-VDC10	SH-VDC20
Pumping Speed(50/60Hz)	66L/min	96L/min	183L/min
Ultimate total pressure gas ballast close(Pa)	$5 \times 10^{-2}$ Pa	$5 \times 10^{-2}$ Pa	$5 \times 10^{-2}$ Pa
Ultimate total pressure gas ballast open(Pa)	10	10	10
Power supply	Single-ph (220V/50-60Hz)		
Power rating(kw)	0.37	0.37	0.37
Intake and exhaust DN(mm)	KF 16/25	KF 16/25	KF 16/25
Oil capacity(L)	0.6~1	0.6~1	0.6~1
Ambient temperature(°C)	5-40	5-40	5-40
Noise level(dB)	≤48	≤48	≤50
Weight(kg)	14.5	14.5	15.5

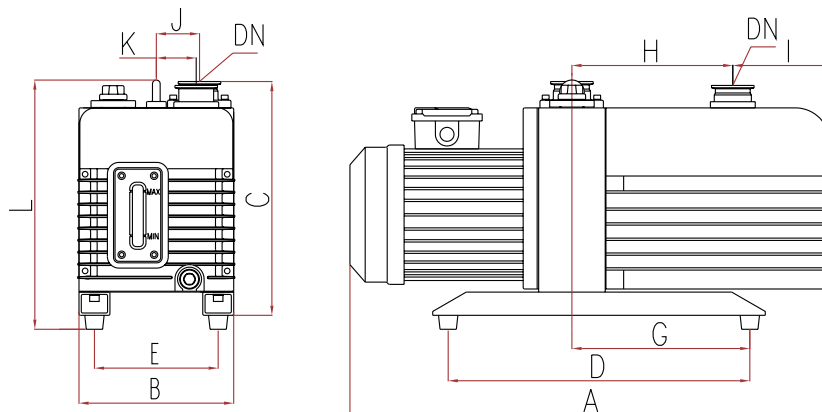


Option: Oil Mist Trap

## Flow Rate Characteristic



## Dimension



Dimensions												
Model	A	B	C	D	E	G	H	I	J	K	L	DN
VDC7	420	144	207	210	110	126	154	45	45	34	/	KF16/25
VDC10	420	144	207	210	110	126	154	45	45	34	/	KF16/25
VDC20	420	144	207	210	110	126	154	45	45	34	/	KF16/25

# SH-DV (Oil free) Series

## Introduction of Oil free Scroll Vacuum Pump



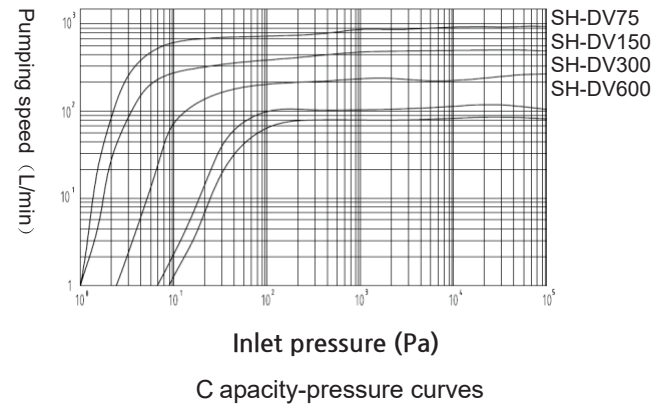
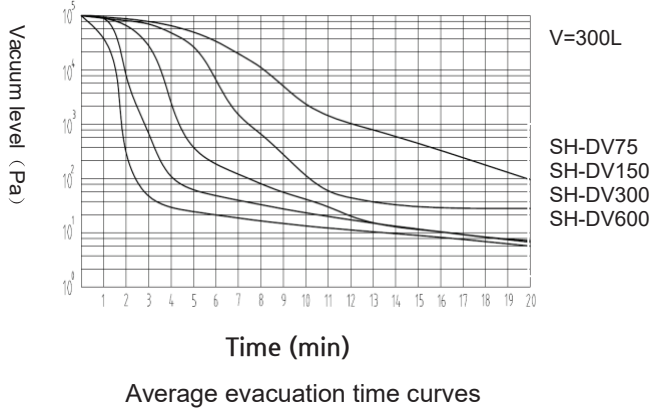
- Wide product line up.
- No oil back diffusion or exhaust.
- Can be repeatedly continuous operated between atmospheric and vacuum.
- Low vibration, low noise and high efficiency.
- Ease of maintenance.

## Specifications

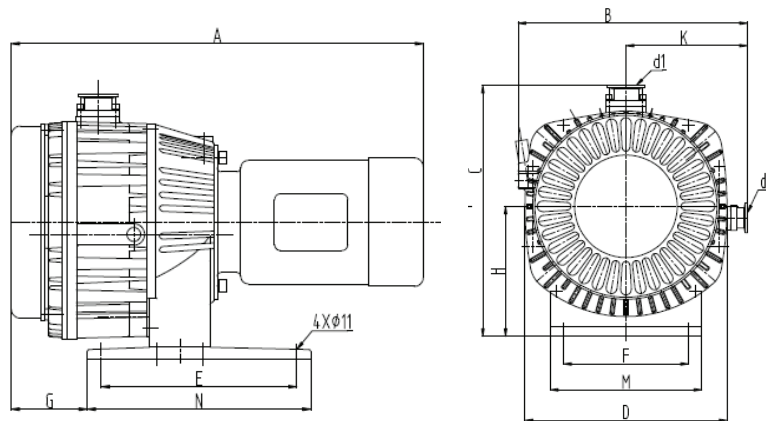
Model			SH-DV75	SH-DV150	SH-DV300	SH-DV600
Displacement	50Hz	m <sup>3</sup> /h	3.6	7.2	15.5	31.3
		cfm	2.2	4.3	9.3	18.7
	60Hz	m <sup>3</sup> /h	4.3	8.6	18.3	37.4
		cfm	2.5	5.1	10.9	22.3
Ultimate Pressure		Torr	$\leq 6.0 \times 10^{-2}$	$\leq 4.0 \times 10^{-2}$	$\leq 1.9 \times 10^{-2}$	$\leq 7.5 \times 10^{-3}$
Noise Level		dB(A)	$\leq 52$	$\leq 57$	$\leq 60$	$\leq 61$
Ambient Operation Temp.		°c	3	3	8x10 <sup>-1</sup> Pa	8x10 <sup>-1</sup> Pa
Inlet/Exhaust Flange			KF 16/25	KF 16/25	KF 25	KF 16/40
Motor 1 phase	Motor Power	kW	0.25	0.25	0.75	0.75
	Voltage	VAC	50 ~ 60Hz/110 ~ 115 or 200 ~ 230			
	Speed	rpm	50Hz /1 425; 60Hz /1725			
Motor 3 phase	Motor Power	kW	-	0.25	0.55	0.75
	Voltage	VAC	-	50 Hz/200 ~ 230 or 380 ~ 415; 60 Hz/200 ~ 230 or 460		
	Speed	rpm	-	50Hz /1425; 60Hz /1725		
Net Weight	1 phase	kg	15	18	27	31
	3 phase	kg	-	20	31	38
Others			With air flush			



## Performance curves



## Dimension



Dimensions

Model	A	B	C	D	E	F	G	H	M	N	K	d1	d2
SH-DV75	405	225	260	200	192	114	72	131	146	225	125	KF25	KF16
SH-DV150	430	250	280	220	214	129	86	130	155	250	135	KF25	KF16
SH-DV300	492	268	324	226	252	163	87	174	192	288	140	KF25	KF16
SH-DV600	530	312	343	275	252	170	115	178	206	288	165	KF40	KF16



# Memo

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**Head office** [www.samheung21.net](http://www.samheung21.net)

92, Jangukjin-ro, Nosong-ri, Yeondong-myeon, Sejong-si,  
Republic of Korea 30066

• Tel +82 (44) 866 5172 • Fax +82 (44) 866 5174  
• E-mail [sales@samheung21.com](mailto:sales@samheung21.com)

**Overseas sales office** [www.samheung21.com](http://www.samheung21.com)

Hongin Tower 1407, Daehak-ro 28, Yuseong-gu, Daejeon,  
Republic of Korea 34186

• Tel +82 (42) 826 5171~2 • Fax +82 (42) 826 5173  
• E-mail [i-sales@samheung21.com](mailto:i-sales@samheung21.com)