

Proud to be part of samvardhana **motherson** 

HISTORY OF VACUUM EQUIPMENT SINCE 1993

ANEST IWATA persists in excellence in technology
ANEST IWATA has been the DRY Scroll technology
leader since 1993.

ANEST IWATA realizes the first-of-the world technologies to its products as a pioneer in the world's industry.
 The world's first OIL-FREE SCROLL VACUUM PUMP was launched in 1993. It has been expanded to present line-ups.

1993

[ISP-500]
[releases]

The World's first Oil-free
 Scroll Vacuum Pump
 was launched.

2003

[VTE-050]
[releases]

High-vacuum pumping
 portable units were
 Introduced.

1997

[DVSL-500]
[releases]

A single-wrap structure
 motor-drive scroll vac-
 uum pumps was Intr-

2007

[ISP-1000]
[releases]

Largest pumping displac- nt
 model in ISP series
 was introduced.

2011

[DVSL-501C-HC]
[releases]

2011 Introduced hard coated
 unit to DVSL series

2013

[ISP-500C-TUT]
[releases]

Leak-tight version
 was introduced in
 ISP series.

2016

[DVSL-500E]
[releases]

High-efficiency three-phase
 motors were employed.

OIL-FREE SCROLL VACUUM PUMP

OIL-FREE SCROLL VACUUM PUMP

ANEST IWATA's vacuum
 equipment leads the world
 industries with its
 state-of-the-art technology.



■ ANEST IWATA's excellence of technology
 realizes the world's first OIL-FREE SCROLL
 VACUUM PUMP.

Its concept is to operate with no liquid lubricant inside.

■ ANEST IWATA products receive high
 commendation from the global industry.

e.g.

- Photon Light Sources and Particle Accelerators.
- Outer Space Simulators.
- Advanced Medical Technologies/ Care Units.
- Industries which sustain human's life such as Automotive area, Civil aerospace businesses, Electronics/ Electrical products, Pharmaceutical products, food, Cosmetics.

VACUUM EQUIPMENT LINE UP

ANEST IWATA has wide range line up of Vacuum pump.

The performance of a vacuum pump is determined by its ultimate pressure and pumping speed. ANEST IWATA provides a wide variety of vacuum pumps, each with a different ultimate pressure and a different pumping speed. Customers can select the products that suit their budget and needs.

Ultimate pressure
(Pa)

1

ISP series (Scroll Meister) Ultimate pressure 1~20Pa



ISP-50
▶▶P.05



ISP-90
▶▶P.06



ISP-250C
▶▶P.07



ISP-500C
▶▶P.08

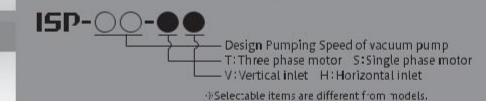


ISP-1000E
▶▶P.09

Scroll Meister SERIES

The ISP Series consists of some models supporting medium- and high-vacuum pressures of 1 to 20 Pa and pumping speeds of 50 to 1000 L/min. The pumps are designed with focus on performance, boast an excellent track record in both cutting-edge industries and general-purpose applications.

How to select for ISP series



DVSL series (S Dry) Ultimate pressure 30~100Pa



DVSL-100C
▶▶P.11



DVSL-500E
▶▶P.12

S Dry SERIES

DVSL pumps are ideal for low-mid vacuum applications. There are 6 models with pumping speeds from 100L/min to 1,000L/min. All models include our air flush port for flashing moisture from inside the pump. Our HC version provides higher durability for demanding applications. We have 2 models for pumping speeds of 100L/min and 500L/min. Applications: Chucking, Dearing/Degassing, Vacuum foaming, Vacuum drying...

Medium-Vacuum

100

Low-Vacuum

View of the icon



1φ
Single phase motor



3φ
Three phase motor



Vertical inlet



Horizontal inlet



CE conformity



CSA conformity



cTUV conformity



RoHS conformity

※Ultimate pressure: Absolute pressure uses in this catalog.

※Pumping speed: This indicates how many liters can be exhausted per minute. The unit is L/min.

Features of ANEST IWATA Vacuum pump

Oil-Free

Conventional oil-sealed rotary pumps uses oil for sealing, which causes oil mists and back-diffusion of oil, resulting in contamination of room air or oil stains on the floor. ANEST IWATA was the first to develop an oil-free scroll pump in the world. The pump, which solves oil contamination and maintenance problems, is used by many customers in a wide range of applications from cutting-edge industries in the field of physical and chemical science to general-purpose uses.

Scroll

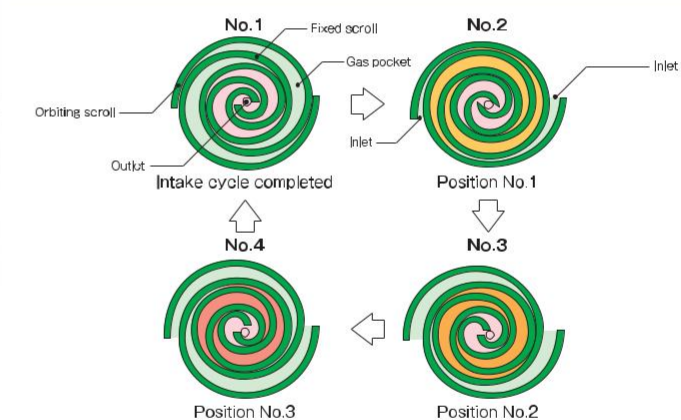
The scroll mechanism is adopted whereby the processes of suction, compression and exhaust proceed continuously with little change in torque, resulting in low vibration and low noise. The suction chamber and exhaust chamber are not adjacent to each other, making the pump less prone to leaks and highly efficient.

Air cooling

The use of an air cooling system, instead of a water cooling system, eliminates the need for the burdensome job of maintaining cooling water and allowing the pump to be installed in places where it was formerly difficult to install. Another feature of ANEST IWATA's vacuum pump is that they are light and compact and designed to minimize the installation space.

Principle of compression

As the orbiting scroll orbits as shown in the illustration from the No.1 position to the No.4 position, crescent shaped gas pockets are gradually reduced. At the last stage compressed gas is exhausted through the center port.



Best selling mid vacuum pumps

ISP/SDM series (Scroll Meister)

ISP-50 1φ

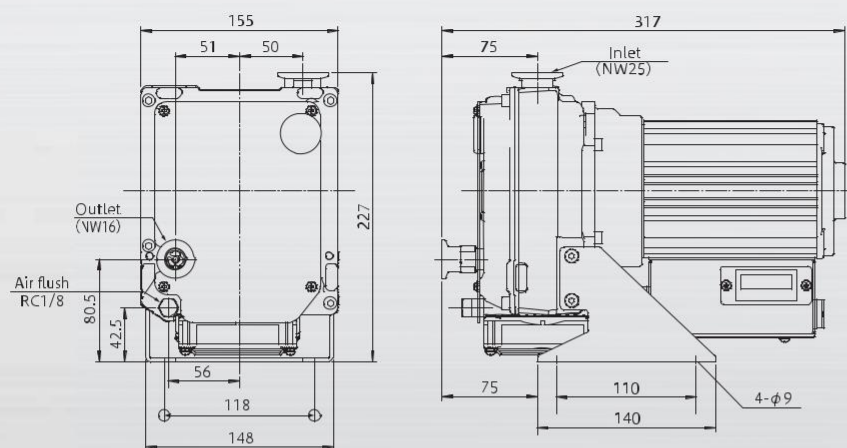
ISP-50-SV1 / ISP-50-SV2
(100V model) (200V model)



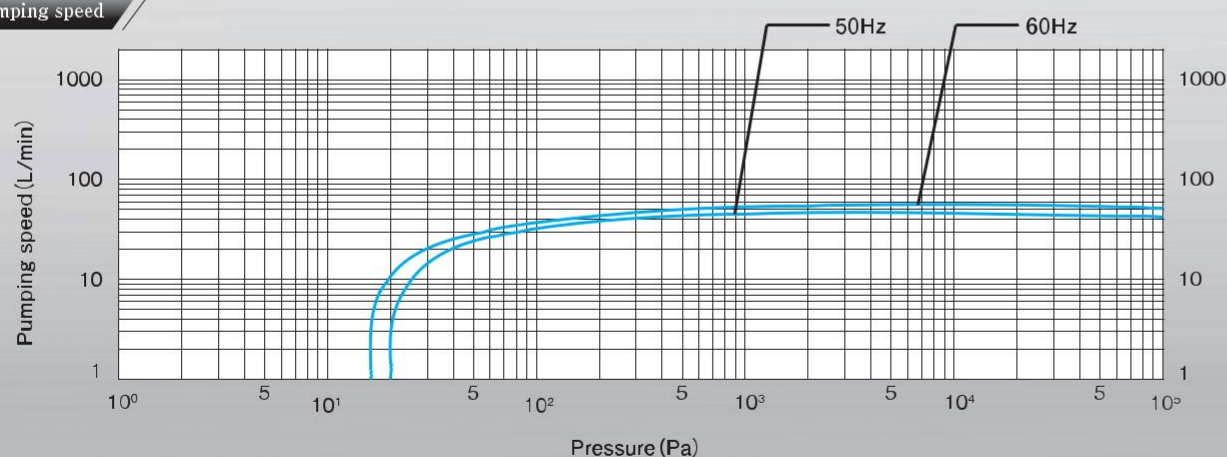
Specifications	
Model	ISP-50
Displacement	L/min (50/60Hz) 50/60
Ultimate pressure	Pa $\leq 20 / \leq 15$ (50/60Hz)
Motor output	kW 0.1
Voltage	V Single phase 100,115/200,230
Noise level	dB (A) 48 (At air flush 57)
Leak tightness	Pa·m ³ /s $\leq 1.0 \times 10^{-7}$
Ambient temperature	°C 5 ~ 40 (Indoor)
Weight	kg 12
Water vapor capacity	g/day 3 (At air flush)
Air flush	L/min 4
Dimensions	mm L317 × W155 × H227
Inlet connection	NW25
Outlet connection	NW16
Cooling Method	Air-cooled
Standard Accessories	Air Flush Attachment, Hour Meter, thermal protector

- Ultimate pressure is measured as total pressure.
- Noise level is measured at ultimate pressure in an anechoic room.

Dimensions



Pumping speed



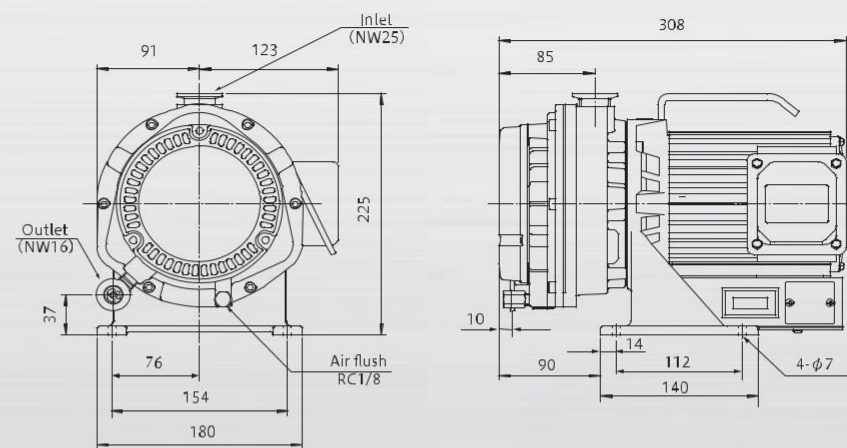
ISP-90 1φ



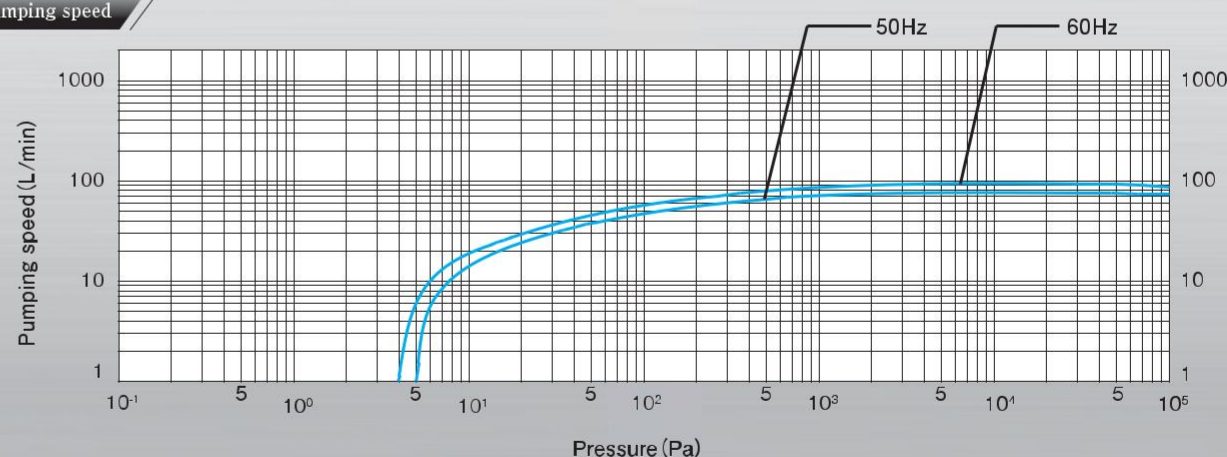
Specifications	
Model	ISP-90
Displacement	L/min (50/60Hz) 90/108
Ultimate pressure	Pa ≤ 5
Motor output	kW 0.15
Voltage	V Single phase 100,115/200,230
Noise level	dB (A) 52 (At air flush 57)
Leak tightness	Pa·m ³ /s $\leq 1.0 \times 10^{-5}$
Ambient temperature	°C 5 ~ 40 (Indoor)
Weight	kg 14
Water vapor capacity	g/day 5 (At air flush)
Air flush	L/min 9
Dimensions	mm L308 × W214 × H225
Inlet connection	NW25
Outlet connection	NW16
Cooling Method	Air-cooled
Standard Accessories	Air Flush Attachment, Hour Meter, thermal protector

- Ultimate pressure is measured as total pressure.
- Noise level is measured at ultimate pressure in an anechoic room.

Dimensions



Pumping speed



ISP/SDM series (Scroll Meister)

ISP-250C 1φ 3φ

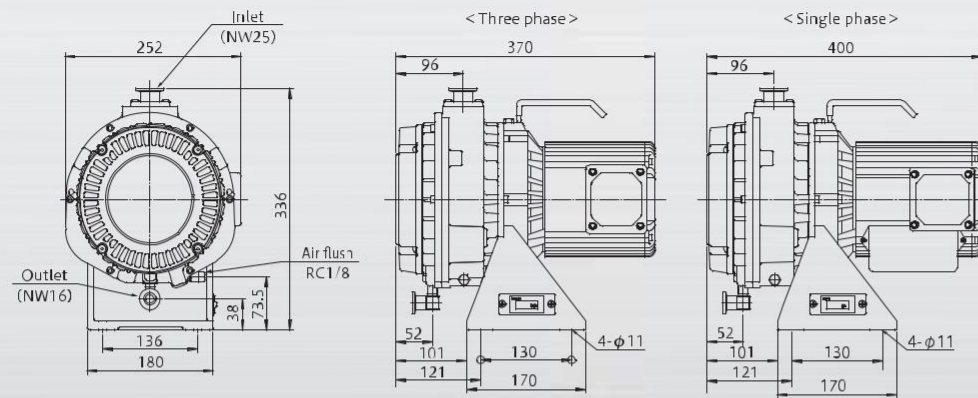
ISP-250C-SV / ISP-250C-TV



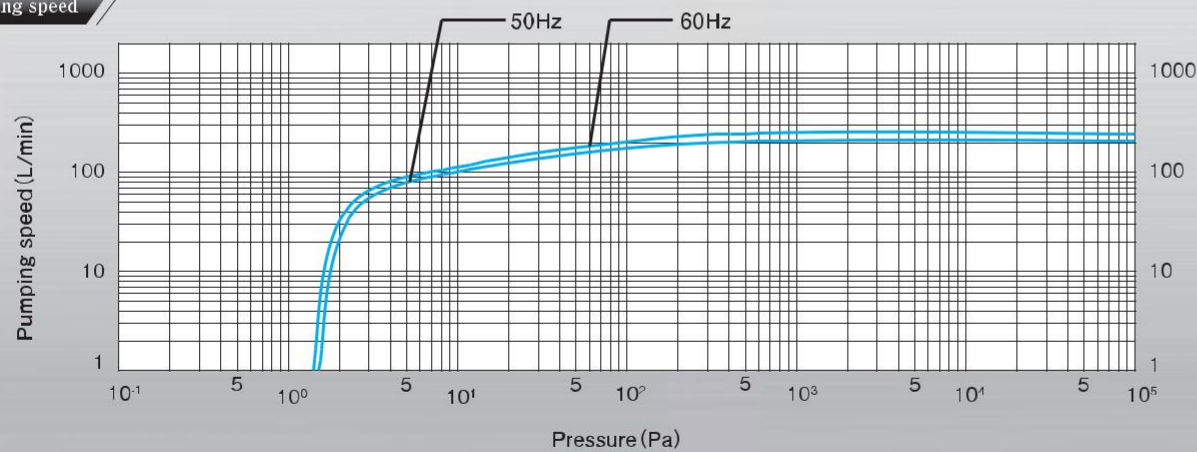
Specifications		
Model	ISP-250C	
Displacement	L/min (50/60Hz)	250/300
Ultimate pressure	Pa	≤ 1.6
Motor output	kW	0.4
Voltage	Single phase	100,115,200,230
	Three phase	200,208,230,380,400,415,460
Noise level	dB (A)	58 (At air flush 66)
Leak tightness	Pa·m ³ /s	≤ 1.0 × 10 ⁻²
Ambient temperature	°C	5 ~ 40 (Indoor)
Weight	Single phase	25
	Three phase	23
Water vapor capacity	g/day	25 (At air flush)
Air flush	L/min	10
Dimensions	Single phase	L400 × W252 × H336
	Three phase	L370 × W252 × H336
Inlet connection	NW25	
Outlet connection	NW16	
Cooling Method	Air-cooled	
Standard Accessories	Air Flush Attachment, Hour Meter, Only single phase motor with thermal protector	

- Ultimate pressure is measured as total pressure.
- Noise level is measured at ultimate pressure in an anechoic room.

Dimensions



Pumping speed



ISP-500C 1φ 3φ

ISP-500C-TH / ISP-500C-TV
ISP-500C-SH / ISP-500C-SV

(Leak tight model)

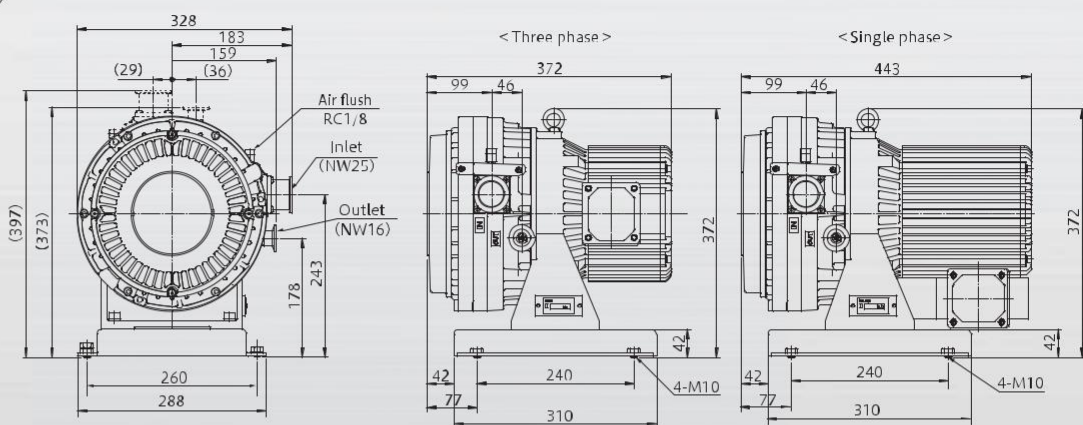
ISP-500C-THT / ISP-500C-TVT
ISP-500C-SHT / ISP-500C-SVT



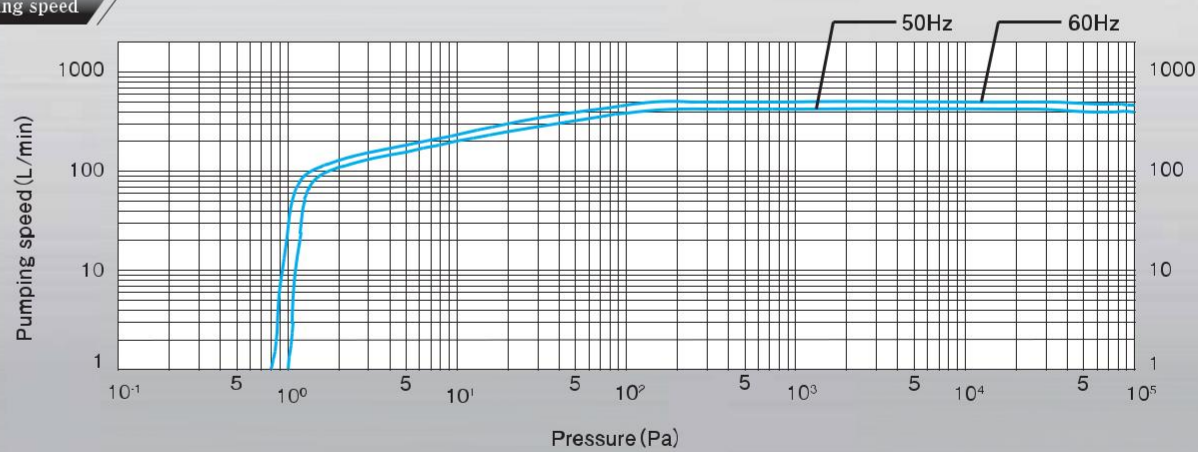
Specifications		
Model	ISP-500C	ISP-500C (Leak tight model)
Displacement	L/min (50/60Hz)	500/600
Ultimate pressure	Pa	≤ 1
Motor output	kW	0.6
Voltage	Single phase	100,115,200,230
	Three phase	200,208,230,380,400,415,460
Noise level	dB (A)	62 (At air flush 70)
Leak tightness	Pa·m ³ /s	≤ 1.0 × 10 ⁻³ / ≤ 1.0 × 10 ⁻⁴
Ambient temperature	°C	5 ~ 40 (Indoor)
Weight	Single phase	44
	Three phase	38
Water vapor capacity	g/day	25 (At air flush)
Air flush	L/min	10
Dimensions	Single phase	L443 × W328 × H372 (L443 × W304 × H397)
	Three phase	L372 × W328 × H372 (L372 × W304 × H397)
Inlet connection	NW40	
Outlet connection	NW25	
Cooling Method	Air-cooled	
Standard Accessories	Air Flush Attachment, Hour Meter, Only single phase motor with thermal protector	

- Ultimate pressure is measured as total pressure.
- Noise level is measured at ultimate pressure in an anechoic room.
- Dimensions in parentheses are dimensions when inlet flange is located upward.

Dimensions



Pumping speed



ISP/SDM series (Scroll Meister)

ISP-1000E

ISP-1000E-TH / ISP-1000E-TV

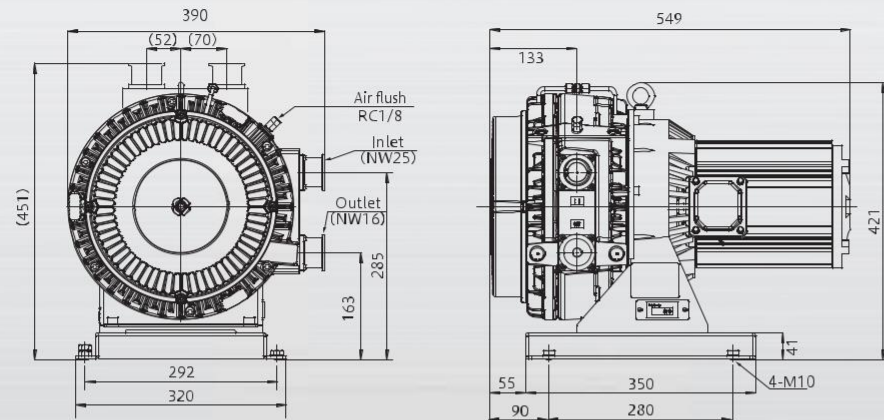


Specifications

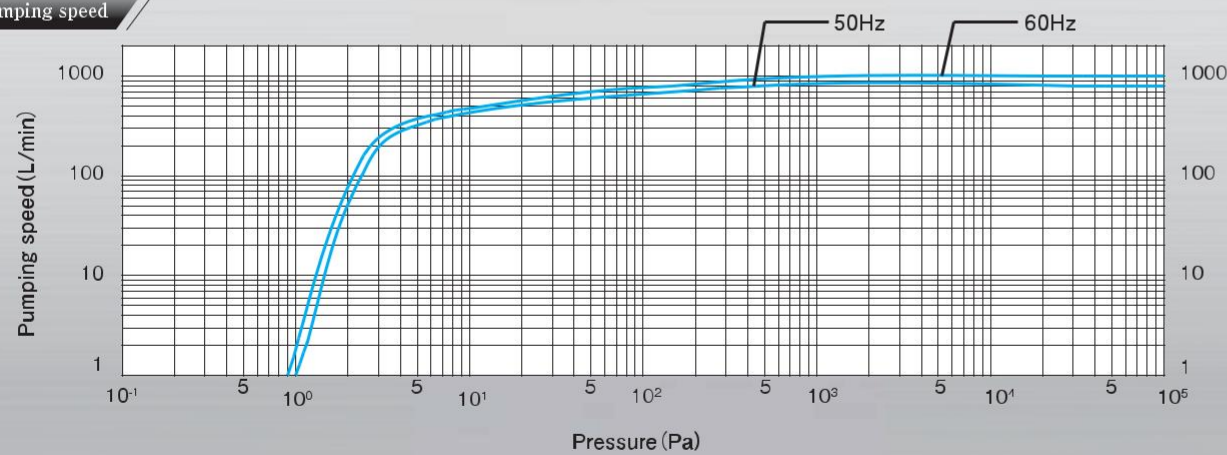
Model	ISP-1000E
Displacement	L/min (50/60Hz) 1000/1200
Ultimate pressure	Pa ≤ 1
Motor output	kW 1.4
Voltage	V Three phase 200,220,230,380,400,415,460
Noise level	dB (A) 67 (At air flush 74)
Leak tightness	Pa·m ³ /s $\leq 1.0 \times 10^{-5}$
Ambient temperature	°C 10 ~ 40 (Indoor)
Weight	kg 68
Water vapor capacity	g/day 25 (At air flush)
Air flush	L/min 10
Dimensions	mm L549 × W390 × H421 (L549 × W359 × H451)
Inlet connection	NW40
Outlet connection	NW40
Cooling Method	Air-cooled
Standard Accessories	Air Flush Attachment, Hour Meter

- Ultimate pressure is measured as total pressure.
- Noise level is measured at ultimate pressure in an anechoic room.
- Dimensions in parentheses are dimensions when inlet flange is located upward.

Dimensions



Pumping speed



Handles water carryover well, ideal for industrial application

DVSL series (S Dry)

DVSL-100C

DVSL-100C

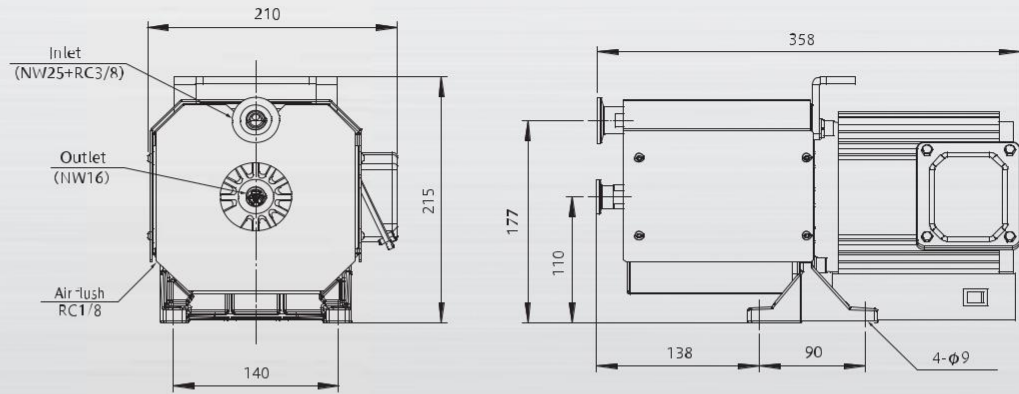


Specifications

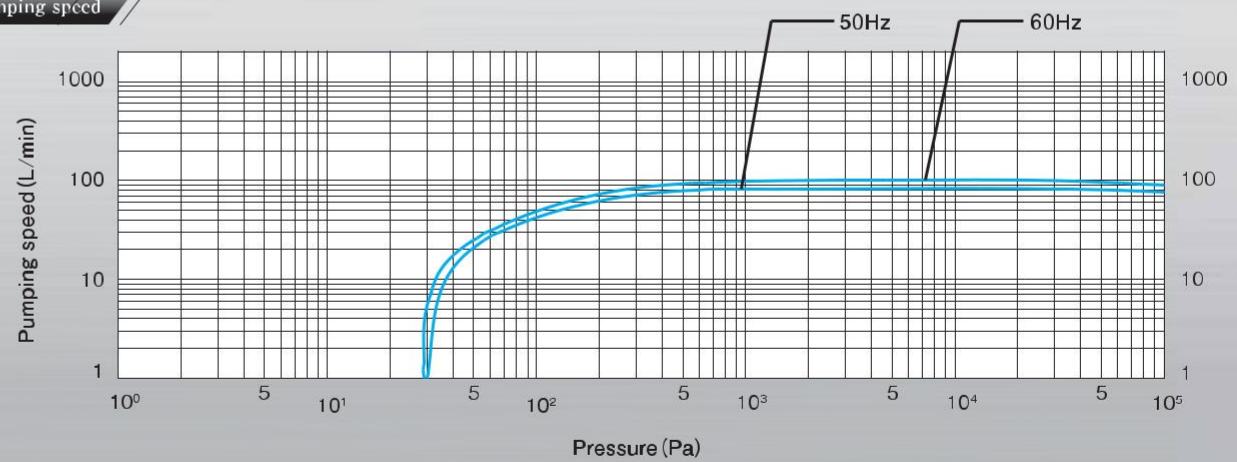
Model	DVSL-100C
Back-up material	Fluorine rubber
Displacement	L/min (50/60Hz) 100/120
Ultimate pressure	Pa ≤ 50
Motor output	kW (50/60Hz) 0.3/0.3
Voltage	V Single phase 100,115,200,230
Noise level	dB (A) 62 (At air flush 65)
Ambient temperature	°C 5 ~ 40 (Indoor)
Weight	kg 15
Water vapor capacity	g/day 100 (At air flush)
Air flush	L/min 5
Dimensions	mm L358 × W210 × H215
Inlet connection	NW25 (with Rc 3/8)
Outlet connection	NW16 (with Exhaust valve)
Cooling Method	Air-cooled
Standard Accessories	Air Flush Attachment, thermal protector
Optional	—

- Ultimate pressure is measured as total pressure.
- Noise level is measured at ultimate pressure in an anechoic room.
- Without hourmeter.

Dimensions



Pumping speed



DVSL series (S Dry)

DVSL-500E



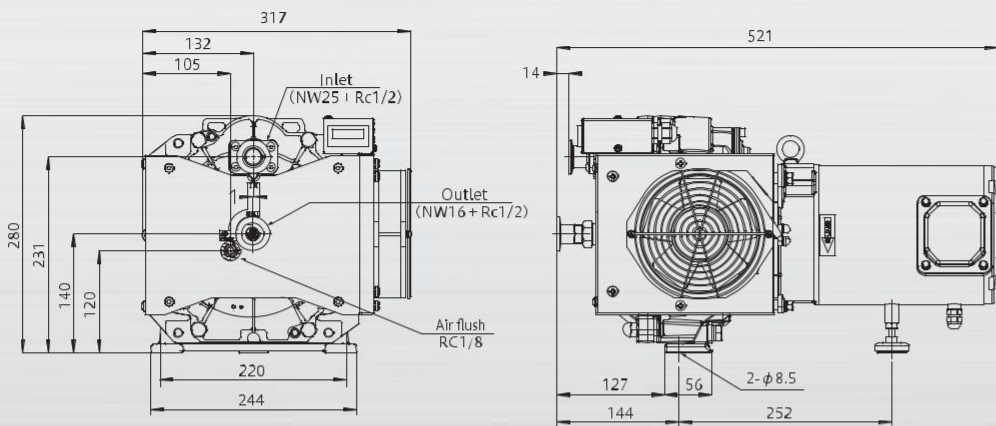
DVSL-500E / DVSL-501E



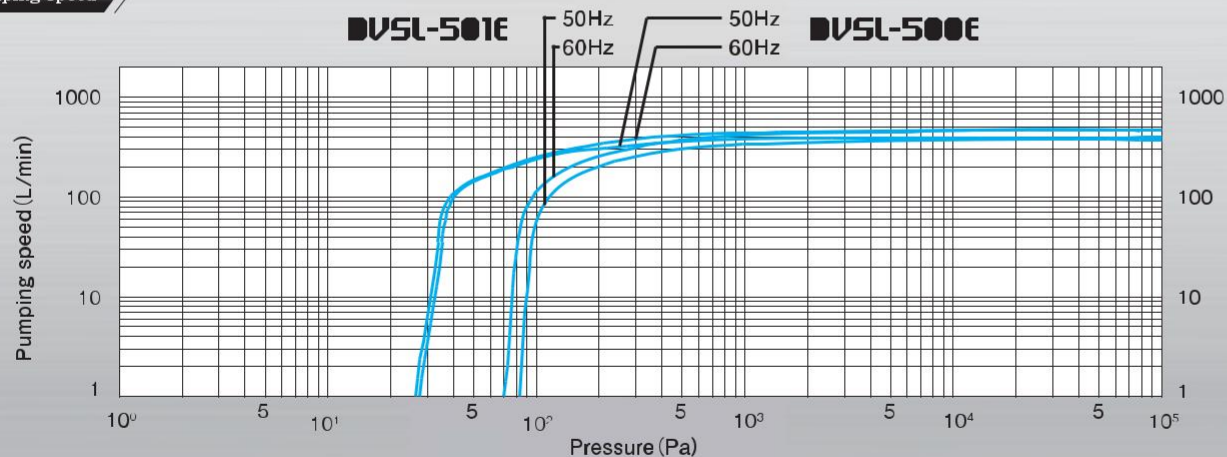
Specifications		DVSL-500E	DVSL-501E
Model		DVSL-500E	DVSL-501E
Back-up material		Silicon rubber	Fluorine rubber
Displacement	L/min (50/60Hz)	433/516	
Ultimate pressure	Pa	≦ 30	≦ 100
Motor output	kW (50/60Hz)	0.9/1.1	
Voltage	V Three phase	200,220,230,380,400,415,460	
Noise level	dB (A)	64 (At air flush 69)	
Ambient temperature	°C	5 ~ 40 (Indoor)	
Weight	kg	34	
Water vapor capacity	g/day	250 (At air flush)	
Air flush	L/min	10	
Dimensions	mm	L521 × W317 × H280	
Inlet connection		NW25 (with Rc 1/2)	
Outlet connection		NW25 (with Exhaust valve)	
Cooling Method		Air-cooled	
Standard Accessories		Air Flush Attachment, Hour meter,	
Optional		Moisture Separator	

● Ultimate pressure is measured as total pressure.
● Noise level is measured at ultimate pressure in an anechoic room.

Dimensions



Pumping speed



Ideal pumps for steamy applications

DVSL series (Hard coat specification)

DVSL-100C-HC



Product dimensions and pumping speed are the same as the DVSL-100C.

Specifications		DVSL-100C-HC
Model		DVSL-100C-HC
Back-up material		Fluorine rubber
Displacement	L/min (50/60Hz)	100/120
Ultimate pressure	Pa	≦ 70
Motor output	kW (50/60Hz)	0.3/0.3
Voltage	V Single phase	100,115,200,230
Noise level	dB (A)	62 (At air flush 65)
Ambient temperature	°C	5 ~ 40 (Indoor)
Weight	kg	15
Water vapor capacity	g/day	100 (At air flush)
Air flush	L/min	5
Dimensions	mm	L358 × W210 × H215
Inlet connection		NW25 (with Rc 3/8)
Outlet connection		NW16 (with Exhaust valve)
Cooling Method		Air-cooled
Standard Accessories		Air Flush Attachment, thermal protector
Optional		—

● Ultimate pressure is measured as total pressure.
● Noise level is measured at ultimate pressure in an anechoic room.

DVSL-501E-HC



Product dimensions and pumping speed are the same as the DVSL-500E.

Specifications		DVSL-501E-HC
Model		DVSL-501E-HC
Back-up material		Fluorine rubber
Displacement	L/min (50/60Hz)	433/516
Ultimate pressure	Pa	≦ 100
Motor output	kW (50/60Hz)	0.9/1.1
Voltage	V Three phase	200,220,230,380,400,415,460
Noise level	dB (A)	64 (At air flush 69)
Ambient temperature	°C	5 ~ 40 (Indoor)
Weight	kg	34
Water vapor capacity	g/day	250 (At air flush)
Air flush	L/min	10
Dimensions	mm	L521 × W317 × H280
Inlet connection		NW25 (with Rc 1/2)
Outlet connection		NW25 (with Exhaust valve)
Cooling Method		Air-cooled
Standard Accessories		Air Flush Attachment, Hour meter,
Optional		Moisture Separator

● Ultimate pressure is measured as total pressure.
● Noise level is measured at ultimate pressure in an anechoic room.

Features

- The life time of scroll surface becomes 3 times longer caused by special coating was applied.*1
- Chemical application is acceptable. Easy to use like DVSL series.*2
- Various application with better ultimate pressure.
Freeze drying system, evaporation, degassing, ultra pure water systems etc. which evacuate a lot of water vapor.

*1 It is just reference compared with our product. This value changes depends on customer application.

*2 Please contact us.

VACUUM EQUIPMENT OPTION

A variety of options are available for vacuum pumps.

Sound Enclosure for ISP-250

It reduces running noise by 5dB. Quieter and ideal ambient for laboratory experiments.



- It weighs only 8 kg. Change to lbs.
- Easy to install.
- The enclosure has a small opening to read hour meter.
- It can attach a clamp to inlet port at after the installation.



Caution

- This enclosure fits ISP-250C only.
- Place enclosure with the pump from above. Remove handle at the top of motor before install the enclosure. Turn and remove a hex-head bolt to remove handle from the pump.
- Please install on a strong and level floor.
- Please install in a well-ventilated place.

Dimensions



Chamber

VCH-20 20L (Connection NW25)

VCH-35 35L (Connection NW40)

Used for multiple purposes such as gas pulsation prevention or use as an auxiliary tank



Carrier

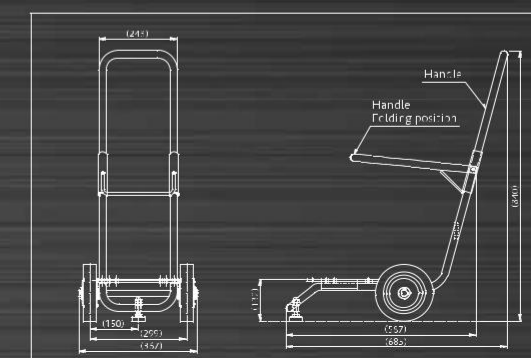
OCX-899

For moving and storing a vacuum pump

■ Applicable models

ISP-250D 250C

ISP-500D 500C



Moisture separator / Silencer

Moisture separator /
Silencer For DVSL • GVS series (98882031)

Air hose (98804230)
Hose clamp (96993705)



Air hose and hose clamp
are sold separately.

Inlet filter

Vacuum inlet filter 15A (98891330)

Inlet connection Rp3/8

Vacuum inlet filter 25A (98891340)

Inlet connection Rp1



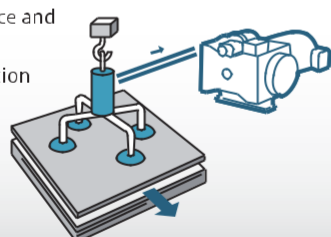
APPLICATION

Vacuum equipment of Anest Iwata are utilized in various applications.

Vacuum Equipment Applications

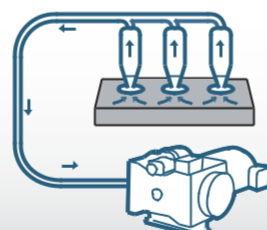
01 Pick and Place [DVSL]

Conveying workpiece and utilizing a pressure difference with suction pad.



02 Vacuum Chuck [DVSL]

Chucking a workpiece by pressure difference. Suitable for distorted surface, soft, thin film and small objects.



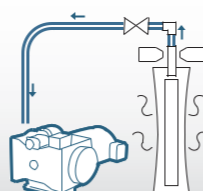
03 Medical [ISP/DVSL]

Used for various applications. Cancer therapy system, Sterilization and aspirator in the hospital etc.



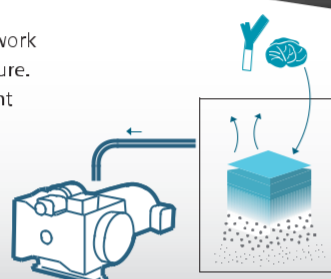
04 Vacuum drying [DVSL]

Removing unnecessary components from the work (workpiece?) using vacuum pressure. It is used for delicate material against heating and complex shape. For example ... Removing washing water from mechanical parts, Removing absorbed water molecular from resin pellets, and centrifugal system for chemicals etc.



05 Vacuum-freeze drying [DVSL]

Sublimating frozen work under vacuum pressure. For example ... instant coffee, dry food, etc.



06 Vacuum heat insulation [DVSL]

Vacuum is suitable for heat-insulation as it doesn't cause heat conduction. For example ... Vacuum heat insulation sheet, thermos etc.



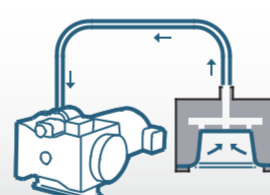
07 Vacuum impregnation [DVSL]

Penetrating the seasoning to groceries using a vacuum pressure. The mechanical components are utilized to infiltrate the adhesive.



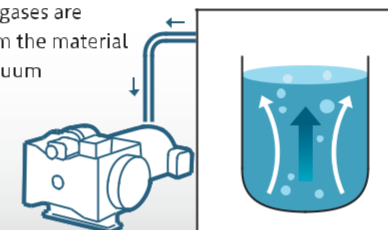
08 Vacuum Forming [DVSL]

Using a vacuum pressure to the molding resin materials.



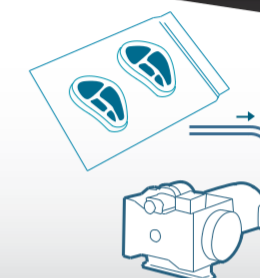
09 Degassing [DVSL]

Contained gases are sucked from the material using a vacuum pressure.



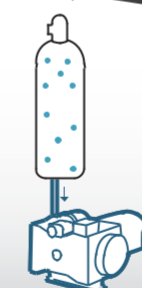
10 Vacuum packaging [DVSL]

Sucking the air from the sealed bag to prevent deterioration of the food and workpiece.



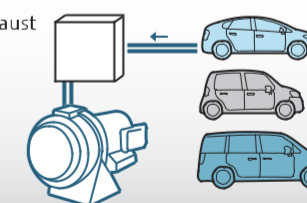
11 Gas recovery devices [ISP/DVSL]

Make it easier to fill the gas to the container which is under vacuum pressure. It is also used to recover the gases, which are the rare gas and the effective gas to the environment (ISP series).



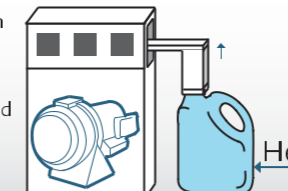
12 Exhaust gas inspection [ISP]

It is used for the inspection of particulate contained in the exhaust gas of automobiles.



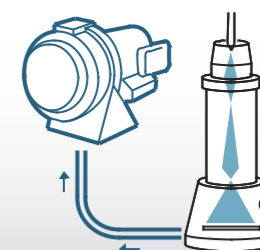
13 Leak detectors [ISP/DVSL]

Checking the leakage of containers by pressure change during the certain time under the vacuum pressure. Leak tight pump is needed for Helium leak tester to prevent the influence of background (ISP series).



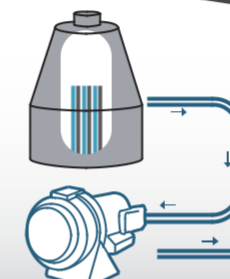
14 Electron microscope [ISP]

The vacuum pressure is needed in the chamber when the sample is scanned by shot electron beam.



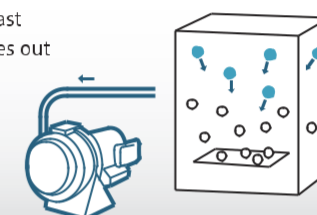
15 Vacuum heat treatment [ISP]

Preventing the oxidation and removing absorbed gas for heat treatment under the vacuum pressure.



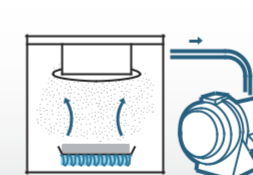
16 Sputtering [ISP]

Deposit metal on a surface by using fast ions to eject particles out of it from a target.



17 Evaporation deposition [ISP]

Deposit metal on a surface by heating a target in vacuum chamber.



18 Accelerator·Synchrotron [ISP]

By creating clean vacuum condition, we are supporting world's cutting-edge technologies such as accelerator and particle physics.



Service network



Why to choose Anest Iwata Scroll Vacuum Pump over others?

We have pioneered this technology in the year 1991 and launched world's first oil free scroll vacuum pump in the year 1993

We are the only manufacturer having a strong setup for aftersales support with availability of spares, manpower competence and adequate tool kits in India

Our Scroll machines are Class '0' certified from TUV which signifies the assuredness of clean & non-contaminated vacuum

We are the preferred oil free scroll vacuum pump supplier to many leading OEMs and analytical equipment suppliers around the globe

We are the only manufacturer of scroll vacuum pump with serviceable air end and having global service network

We are the world leader for oil free scroll vacuum pump technology with possession of many patents

