



INSTRUCTION MANUAL

■ OIL-FREE SCROLL VERTICAL PUMP-MOTOR ASSEMBLY

SLVB-5

Thank you for purchasing our oil-free scroll air compressor.

- Before operation, be sure to read this instruction manual thoroughly for safe and efficient use for a long operating lifetime.
- After reading it, store in a convenient place for immediate and future reading.

Before use, be sure to fill in the blank spaces below for future repair and after service.

MODEL	
SERIAL No.	
Purchased from	
Date of purchase	
Date of use	



Important information and Safety precautions

▪ Important information

Read all important information and safety precautions before use. The operator shall be fully knowledgeable of the requirements stated within this instruction manual, including important warnings, cautions and operation.

Read manual before performing any maintenance.



Keep this booklet in an appropriate place for immediate reference.

• Indications of warnings and cautions

	WARNING	May cause injury or death.
	CAUTION	May result in injury or property damage.

• Examples of warnings and cautions

	May cause electric shock.
	Do not touch.
	Must be grounded.

* Supplier is not responsible for any injuries or damages caused by disregard of warnings, operating instruction specifications or maintenance schedules.

Important	Indicates important notices you must observe. They are helpful to achieve top performance and functions of the equipment.
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Important information and Safety precautions

▪ Safety precautions



WARNING



Install in a safe area.

To prevent a fire or explosion, install in an area free of flammable gases or organic solvents.



Never install outdoors.

To prevent fire or electric shock, never install outdoors.



Turn off the main electric source.

To prevent electric shock or serious injury, always turn off the main electric source before inspecting or servicing the unit.



Ask a qualified electrician.

Only a qualified electrician should perform maintenance on the unit.



Be sure to ground.

Unit must be grounded to prevent electric shock.



Never use to compress anything other than air.

Unit must only be used to compress air.



Do not use with respiratory equipment, which could cause serious injury or death.



Important information and Safety precautions



WARNING



Not for use as life support.

Serious bodily injury and/or death may occur. Unit must only be used to compress air.



Do not touch.

Keep hands and fingers away from fans, pulleys and belts while the power is on.
Serious injury, including entanglement of fingers or hands can occur.



Release pressure.

Release pressure from unit before conducting maintenance and/or inspection.
Failure to do so may cause serious injury.



Conduct maintenance and inspection.

Conduct maintenance and inspection according to this manual to prevent unit failure.



Important information and Safety precautions



CAUTION



Use at ambient temperatures of 36°F to 104°F.

Drain will freeze at less than 36°F and will cause unit failure.

Using over 104°F will cause a shorter lifespan or unit damage.



Use in an area free of dirt and dust.

Failure to do so may result in equipment failure.



Use in an area free of corrosive gas.

Failure to do so may result in equipment failure.



Only qualified personnel should perform repairs to prevent electric shock or fire.



Keep Away.

Keep away from the compressor while it is operating and allow it to cool before servicing.

Failure to do so may result in serious burns and or bodily harm.



Never alter the compressor

Fire and or electric shock may occur if unit is altered and warranty will be void.



Use genuine parts

Be sure to use only genuine parts during maintenance.

Failure to do so may result in equipment failure.



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Installation

▪ Precautions about installation



WARNING!

Do not use in an area which is exposed to rain, steam or high humidity.

High humidity can cause electric shock or fire.

Do not install in an area with corrosive gas (ammonia, acid, salinity, ozone gas and sulfur dioxide) preventing a shorter lifespan of the unit.



WARNING!

To prevent a fire or explosion, install in an area free of flammable gases or organic solvents.



Ambient temperature

Use at ambient temperatures of 36°F to 104°F.

Using at less than 36°F will cause unit failure or freezing.



CAUTION!

Install this product on a level floor to prevent vibration and noise, causing damage to the unit.



CAUTION!

Install in an area which is free of dust. Dust can cause increased temperature and wear, resulting in a shorter lifespan and/or unit failure.



Installation

▪ Installation space

Secure the space around the compressor for safe inspection and maintenance.

Installation space (inch)	
Above	24
Front side	40
Other Sides	20

▪ Ventilation

When using in an enclosed room, install a fan for ventilation.

Model	British Thermal Unit (BTU)
SLVB-5	12800



Test operation

▪ Operation

❖ Preparation

- (1) Make sure all safety warnings, labels, and instructions have been read and understood before continuing.
- (2) Make sure any shipping materials, brackets, etc. are removed.
- (3) Check that the electric power source and ground have been firmly connected
- (4) Make sure all pressure connections are tight.

❖ Operation and check pressure increase

- (1) Switch the electric source breaker on.
- (2) Be sure the pressure increases when the compressor starts.
- (3) Check that the compressor operates without excessive vibration, unusual noises or leaks.

❖ Check maximum control pressure

Operate the unit while the ball valve of the air receiver is closed.

Be sure the compressor stops at the pressure shown below.

Voltage	Max. pressure (psi)
208V	100
230V	115

❖ Stop

Turn off unit to stop the compressor.

After the test operation ends, open the stop valve of the air outlet.



Maintenance and inspection

Carry out the following maintenance and inspection items according to the schedule below.

This interval is based on conditions where ambient temperature is at around 86°F.

If your location is warmer or running condition is severe, maintain at a shorter period.

During warmer conditions, shorten the period approximately 30 % from our recommendation at every 9°F.

The maintenance time differs from guarantee period.

■ Pump-Motor Assembly maintenance standards

Inspect and check operational hours or number of years, whichever comes first.

Items	Contents	Maintenance time							Remarks
	Operational hours	Daily	Every 400hrs, Every 2 months	Every 2,500hrs, Every 1 year	Every 5,000hrs, Every 2 years	Every 10,000hrs, Every 4 years	Every 20,000hrs, Every 8 years	Every 30,000hrs, Every 12years	
	Period								
Abnormal sound/vibration		○							
Intake filter			○	●					Replace when it is dirty.
Belt	Inspect, replace		○ Initial only	○		●☆			No looseness, no abnormal sound
Motor insulation	Check insulation				○☆				Replace if abnormal.
Motor	Inspect, replace						●☆		
Pulley	Check groove.					○☆			Replace if abnormal.
After cooler	Clean outside					○☆			Replace if abnormal.
O rings	Replace					●☆			
Air end seal parts, Re-grease	Inspect, replace					●☆			Use Iwata genuine grease.
Air end fan FS·OS fins	Clean					○☆			Replace when it is dirty.
Air end	Replace							●☆	

○ Inspect, ● Replace ☆ Consult with distributor who sold it to you.

Air intake filters are not covered under warranty. You may want to keep extra filters on hand.



Maintenance and inspection

▪ How to carry out maintenance

- Intake filter

Blow dust off the filter with an air gun and replace if it is dirty.

- Belt tension

If the V belt makes a slipping sound at the startup, due to decrease of V belt tension, readjust the belt tension or replace it.

If the belt tension is less than the figure in the chart below, adjust the belt tension again.

An exclusive tool is necessary to measure belt tension.

Ask our distributor to readjust belt tension when needed.

Model	Readjustment standard load / Hz	Readjustment target load / Hz Tolerance ± 5	Replacement new belt target load / Hz Tolerance ± 5
SLVB-5	75	98	105



Troubleshooting guide

If you have any problems, please refer to the below chart.

(*) marked items may be difficult to remedy and require technical support. Please contact distributor for assistance.

Problem	Cause	Corrective action
Compressor unit does not start	Electric source is not ON.	Turn on electric source
	Electric source is not connected correctly.	Connect it correctly
Power is at supply connection and compressor does not start	Overload relay has tripped	See last entry of Troubleshooting guide
	Wrong or low voltage	Inspect incoming power supply and unit power rating.
	Starter has failed	Inspect, repair or replace contactor assembly *
	Motor has failed	Inspect, repair or replace motor *
Compressor is running but will not make pressure	Drive belts came off or too loose	Inspect, tighten or replace drive belts *
	Clogged intake filter element	Clean or replace intake filter element
	Discharge air is leaking	Inspect and repair
	Pump has failed	Inspect, repair or replace pump *
	Pump running in the wrong direction	Correct power connections
Excessive noise or vibration	Drive belt has flipped or slipped	Inspect, repair or replace drive belt *
	Motor has failed	Inspect, repair or replace motor*
	Pump has failed	Inspect, repair or replace pump
Compressor running hot	Ambient temperature is high	Be sure not to exceed above 104 degree F
	Pump running at high pressure	Check tank pressure and pump outlet are not obstructed
	Clogged intake filter element	Clean or replace intake filter element
Motor overload has tripped	Pump has failed	Inspect, repair or replace pump *
	Motor has failed	Inspect, repair or replace motor*
	Improper wiring	Inspect and rewire *
	Wrong overload setting	Check setting of overload relay *
	Low voltage	Check incoming power supply



Specifications

▪ Pump-Motor Assembly specifications

Model		SLVB-5
Item		
Compressor	Pump model	SL-165E-US
	Max Working pressure (psi)	100 psi @ 208V 115 psi @ 230V
	Air delivery (cfm)	^{*1} 14.8
	Driving system	V-belt
	Discharge air temperature (°F)	Ambient temperature + less than 342
	Air outlet	½" JIC
Motor	Operating voltage	Single Phase 208-230V, 60Hz
	Output (HP)	5
Others	Dimensions (L × W × H) (inch)	^{*2} 17 x 20 x 26
	Approx. mass (Lbs.)	190

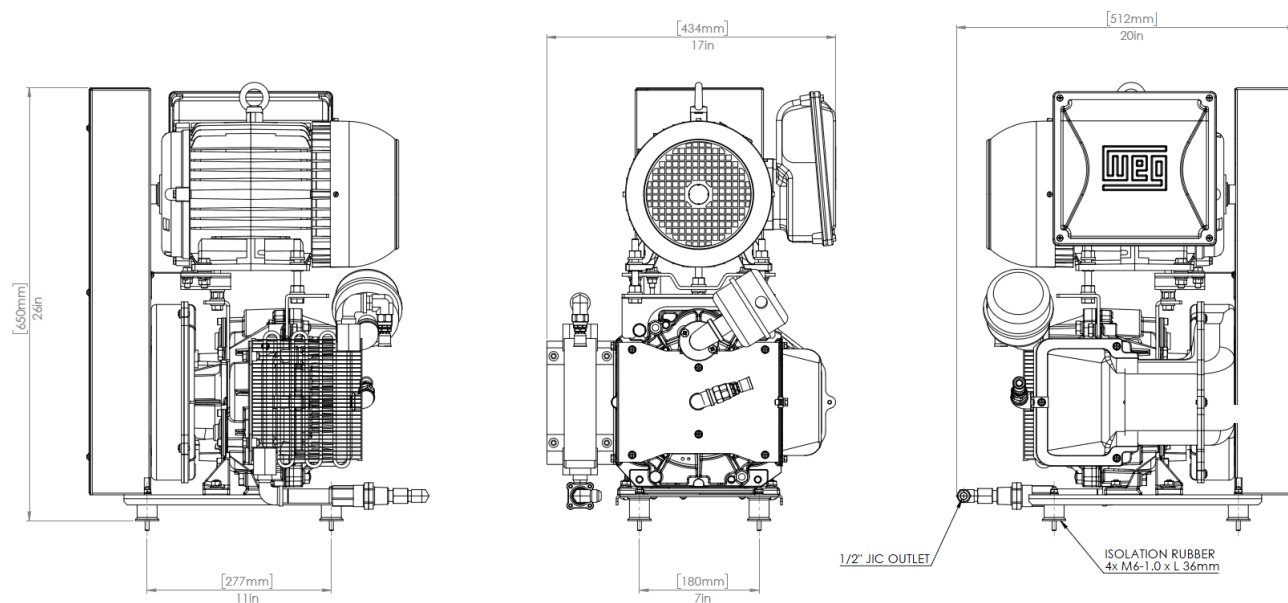
Note

- *1) Air delivery means average discharge air volume at 115 psi (maximum pressure) converted into atmospheric pressure. It is not a warranted figure.
- *2) Dimensions are outer dimensions excluding extruding parts.



Appendix

▪ Outer dimensions



Warranty

■ Warranty and Remedies

- (a) **General.** Anest Iwata - Air Engineering warrants each Compressor System, Compressor Air-End, or Anest Iwata branded accessory (collectively “products”, individually each a “product”) to be free from defects in material and workmanship (“Defects”) at the date of shipment. EXCEPT AS SET FORTH BELOW, NO OTHER WARRANTY, WHETHER EXPRESS OR IMPLIED, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, SHALL EXIST IN CONNECTION WITH THE SALE OR USE OF SUCH PRODUCTS. TO THE EXTENT PERMITTED BY LAW ANY AND ALL IMPLIED WARRANTIES ARE EXCLUDED. All claims under this warranty must be made in writing and delivered to Anest Iwata Air Engineering, or such claim shall be barred. Upon timely receipt of a claim, Anest Iwata Air Engineering shall inspect the product claimed to have a defect, and Anest Iwata Air Engineering shall repair, or, at its option, replace, free of charge, any product which it determines to have had a defect at the time of shipment from Anest Iwata Air Engineering; provided, however, that if circumstances are such as to preclude the remedying of defect by repair or replacement, Anest Iwata Air Engineering shall, upon return of the product, refund to buyer any part of the purchase price of such products paid to Anest Iwata Air Engineering. Freight for the returning products to Anest Iwata Air Engineering for inspection shall be paid by buyer. The warranties and remedies herein are the sole and exclusive remedy for any breach of warranty or for any other claim based on any defect, or non-performance of the products, whether based upon contract, warranty or negligence.
- (b) **Initial period of warranty – Parts and Labor.** Anest Iwata Air Engineering warrants and represents all products shall be free from defects for the first twelve (12) months from the date of shipment by Anest Iwata Air Engineering, or five thousand (5,000) hours of use, whichever occurs first. During such warranty period, Anest Iwata Air Engineering shall be fully liable for all defects in the products (the “product defects”), i.e., all costs of repair or replacement, which may include “in and out” charges, so long as the products are located in the continental United States, and the products are reasonably located and accessible by service personnel for removal. “In and out” charges include the costs of removing a product from buyer’s equipment for repair or replacement.
- (c) **Coverage.** The above mentioned warranty applies to Anest Iwata Air Engineering manufactured units or systems only.
- (d) **Exceptions.** Notwithstanding anything to the contrary herein, Anest Iwata Air Engineering shall have no warranty obligations with respect to products:
 - (i) That have not been installed in accordance with Anest Iwata Air Engineering’s Written specifications and instructions;
 - (ii) That have not been maintained in accordance with Anest Iwata Air Engineering’s written instructions;
 - (iii) that have been materially modified without the prior written approval of Anest Iwata Air Engineering; or
 - (iv) That experience failures resulting from operation, either intentional or otherwise, in excess of rated capacities or in an otherwise improper manner.
- (e) The warranty provided herein shall not apply to: (i) any defects arising from corrosion, abrasion, use of insoluble lubricants, or negligent attendance to or faulty operation of the products; (ii) ordinary wear and tear of the products; or (iii) defects arising from abnormal conditions of temperature, dirt or corrosive matter; (iv) any OEM component which is shipped by Anest Iwata Air Engineering with the original manufacturer’s warranty, which shall be the sole applicable warranty for such component.

Limitation of liability. TO THE EXTENT ALLOWABLE UNDER APPLICABLE LAW, NOT WITHSTANDING ANYTHING TO THE CONTRARY HEREIN, UNDER NO CIRCUMSTANCES SHALL ANEST IWATA AIR ENGINEERING BE LIABLE FOR ANY INCIDENTAL, CONSEQUENTIAL, PUNITIVE, SPECULATIVE OR INDIRECT LOSSES OR DAMAGES WHATSOEVER ARISING OUT OF OR IN ANY WAY RELATED TO ANY OF THE PRODUCTS OR GOODS SOLD OR AGREED TO BE SOLD BY ANEST IWATA AIR ENGINEERING TO BUYER. TO THE EXTENT ALLOWABLE UNDER APPLICABLE LAW, ANEST IWATA AIR ENGINEERING’S LIABILITY IN ALL EVENTS IS LIMITED TO AND SHALL NOT EXCEED THE PURCHASE PRICE PAID.

Warranty Disclaimer. Anest Iwata Air Engineering has made a diligent effort to illustrate and describe the products in this literature accurately; however, such illustrations and descriptions are for the sole purpose of identification, and do not express or imply a warranty that the products are merchantable, or fit for a particular purpose, or that the products will necessarily conform to the illustrations or descriptions.

Product Suitability. Many jurisdictions have codes and regulations governing sales, construction, installation, and/or use of products for certain purposes, which may vary from those in neighboring areas. While Anest Iwata Air Engineering attempts to assure that its products comply with such codes, it cannot guarantee compliance, and cannot be responsible for how the product is installed or used. Before purchase and use of a product, please review the product applications, and national and local codes and regulations, and be sure that the product, installation, and use will comply with them.

Claims. Claims pertaining to the products, with the exception of warranty claims, must be filed with Anest Iwata Air Engineering within 6 months of the invoice date, or they will not be honored. Prices, discounts, and terms are subject to change without notice or as stipulated in specific product quotations. All agreements are contingent upon strikes, accidents, or other causes beyond our control. All shipments are carefully inspected and counted before leaving the factory. Please inspect carefully any receipt of products noting any discrepancy or damage on the carrier’s freight bill at the time of delivery. Discrepancies or damage which obviously occurred in transit are the carrier’s responsibility and related claims should be made promptly directly to the carrier. Returned products will not be accepted without prior written authorization by Anest Iwata Air Engineering and deductions from invoices for shortage or damage claims will not be allowed. **UNLESS OTHERWISE AGREED TO IN WRITING, THESE TERMS AND CONDITIONS WILL CONTROL IN ANY TRANSACTION WITH ANEST IWATA AIR ENGINEERING** Any different or conflicting terms as may appear on any order form now or later submitted by the buyer. All orders are subject to acceptance by Anest Iwata Air Engineering.

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