

1. Installation and Operation Tips

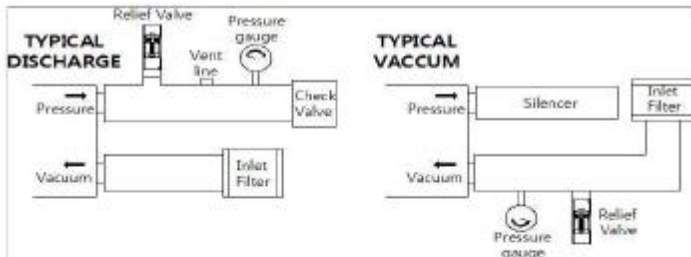
1-1 Main Check Points before Operation

- (1) Make sure that there is not any foreign substances in the blower.  
In case of small-sized blower, you can tell if there is any by swinging the product or spinning the cooling fan after uncovering the motor in the back using a screw driver.
- (2) Make sure all the pipes and vales are properly installed to your blower.
- (3) Make sure valves are fully opened.
- (4) Make sure that you are applying correct input power and wiring.  
Wiring must be done with firmly fastened bolts. Wiring and insulation condition must be double checked when using a insulation tape.

1-2 Main Check Points during Operation

- (1) Check the motor's rotating direction.  
With looking at your blower from where the motor is located, it must rotate clockwise. If it rotates counterclockwise, in case of three-phase power, two out of three wirings must be changed and reconnected.
- (2) Check noise or vibration upon running.  
If there is any noise or vibration, stop operating immediately, check and remove troubling factors referring to emergency measure methods.
- (3) When the motor starts to operate, check no-load current and compare the value with that of the nameplate on your blower. If it exceeds the stated rated current, inspection your blower and remove troubling factors.
- (4) Measure rated pressure using a pressure gauge. Check if your blower gets too hot.

1-3 Relief Valve Installation



Applying vacuum filter is strongly recommended to prevent small foreign objects vacuuming into the blower when the blower is used for discharge purpose.

1-4 Piping

- (1) The diameter of pipes back of outlet should be one size larger than that of outlet to mitigate pressure loss factors. If small-sized tubes must be used, the portion whose pressure may be lost by friction should be considered.
- (2) If main pipe is installed to outlet with force, the outlet and main body joint may be damaged and result in air leakage. Using the flexible hose can facilitate tube connection.
- (3) Check the direction of the check valve before installing.
- (4) If you are planning to install additional silencers, they should be directly connected to the inlet and the outlet to reduce noise.
- (5) Before pipe connection, remove foreign substances from the inside of the pipe.

1-5 Wiring Diagram

CONNECTION								
6cable		9cable		9cable		12cable		
Low Volt	High Volt	Low Volt	High Volt	Low Volt	High Volt	Low Volt	High Volt	Low Volt
220v	380-440v	220v	440v	220v	440v	220v	380v	440v
RST	RST	RST	RST	RST	RST	RST	RST	RST
123	123	123	123	123	123			
						645	789	121011
645	6-4-5	789	456	645	456			
						789	456	456
		4-5-6	789	789	789			
						121011	12-10-11	789

2. Routine Check Points during Operation

Check Point	Checking Method	Trouble shooting
Motor/Blower Bearing Noise	Hearing	Stop operating and replace bearing.
Motor/Blower Heating	Gauge, Hand Feeling	Check and remove overload factors.
Blower Vibration	Naked Eyes, Hand Feeling	Check if the blower is fixed firmly. In case of rotating vibration, stop operating.
Current Value Check	Gauge	In case of over-current, remove troubling factors by adjusting pressure level
Vacuum Filter	Naked Eyes	Remove foreign substances and dust.
Air Pressure level	Gauge	Check that the blower operates within rated pressure.
Pipe Leak	Naked Eyes/Hearing, Hand Feeling	When leaking is detected, take airtight measures.
Motor Operation Status	Hand Feeling, Hearing	Check if there is any hearing and noise.

3. Check Points by Main Troubling Factors and Emergency Measure Methods

Main Troubles	Check Points	Trouble shooting
Stop during operating	Unable to turn the motor fan even with a tool	Immediately stop operating and consult with technician
	Able to turn the motor fan	Check if the circuit breaker in the switchboard is overloaded
	Check electric factors using a tester (Check whether a toner burns out)	
Reduction of air flow	Suction filter	Remove foreign substances from the filter
	Pipe leakage	Take airtight measures for leaked pipe
Abnormal noise	Pressure gauge	Check if the motor is overloaded
	Heating	Check if the motor is overloaded
Overheating	Pressure gauge	Check if the motor is overloaded

4. Safety Notes

	Attached to the terminal box. Pay special attention that the blower does not get damaged or burnt due to improper connection. If wiring method is marked to the inside of the terminal box cover, refer to the wiring diagram with reference to wiring of contract product. Wiring must be performed in conformity to wiring diagram by certified persons.
	Attached to the terminal box. Pay special attention to electricity. If three-phase power is used and so working pressure is applicable to 220 V ~440V, it may cause deadly human injury or a fire by short circuit and electric leakage. Wiring must be performed in conformity to wiring diagram by certified persons.
	Attached to the impeller cover front of the product. Special caution is required to prevent you from being burnt by high heat.

