

Minimal Vibration and Low Noise Submersible Roots Blower

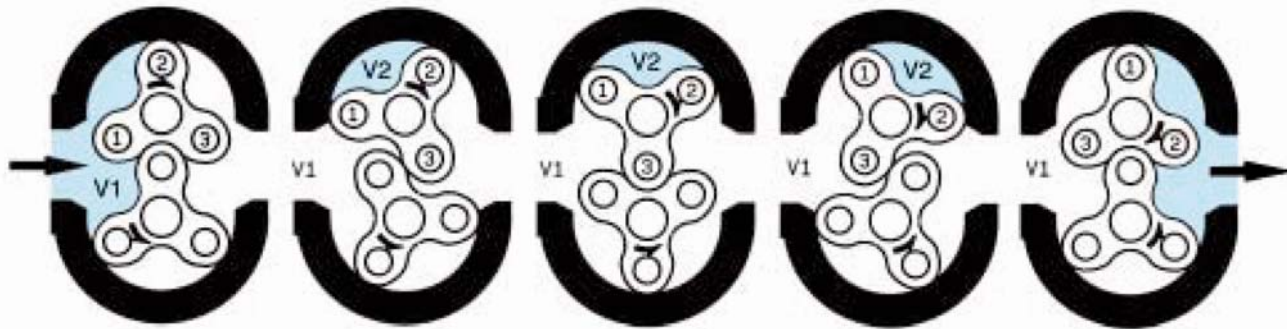
ISO 9001



Specializing in the manufacturing of Roots blowers

The Characteristic of the TRUN-DEAN Blower:

- * The air compartment and the side cover of our blower has a flange and groove rim, which can not only strengthen the blower's operational functions but also prevent eccentric phenomenal resulting from the fastening of the stud, which may shorten the life of the blower.
- * To reduce man-made errors, enhance the precision of the leave-wheel, and to promote the blower efficiently, our rotor uses the most advanced--one time work process Four- Shaft method.

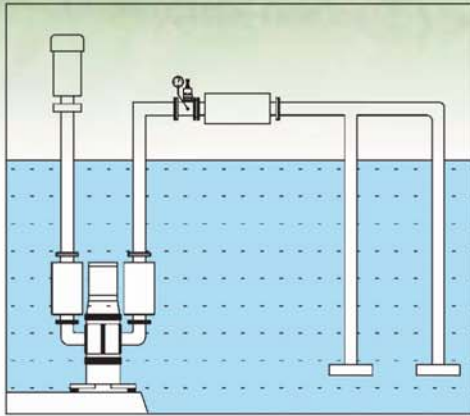


Principle of the Blower Operation:

There are two sets of rotors in the air compartment of the blower body, when the rotors operate in opposite directions they suck in air to balance the pressure created due to the volume V1 change on the inlet side. And the air of the volume V2 will be sent out thru the outlet side and the high pressure will be created thru the outlet mouth.

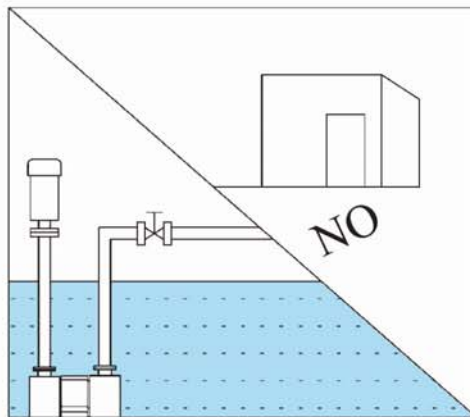
Also, there is no need to apply any lubrication between the two rotors because of the existing gap between them which gives no worry about the possibility of friction. It runs well at high speed and produces clean air. It also can be used in vacuum circumstances.

Features of the Roots blower



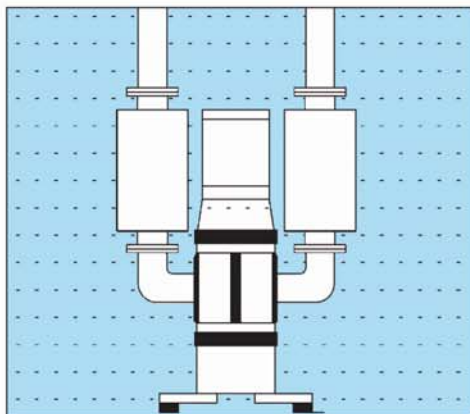
Quietness

Because of its submersibility under water, there will be not much noise from the machine when in use.



No need for a silencer

Because it is under water, the created noise will be very low; there will be no need for a silencer. Under-water can mean space-saving.

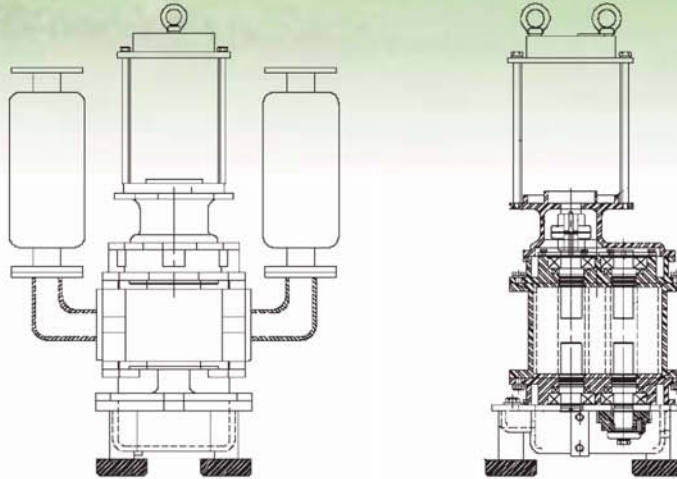


Strong structure, Worry free

- ✦ The direct connection between the motor and the blower can avoid the inconvenience of traditionally-done belt adjustment.
- ✦ The O-ring closure of the motor and the machine means worry free on the water leakage.
- ✦ Because of the overheat result the motor stopped, just cleanse outer surface to make the cooling back.

Easy installation; easy assembly; labor-and-space saving; quietness.

Structural diagram for the submersible blower

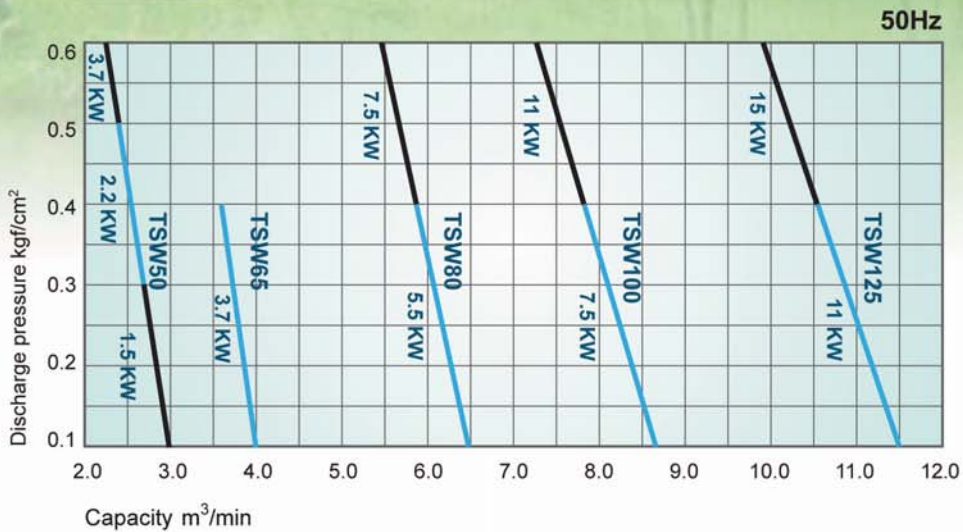


NO.	Name	Material	NO.	Name	Material
1	Casing of Motor	SUS304	12	Rotor	FC250
2	Coupling	FCD500	13	TC oil seal	NBR
3	Bearing base	FC250	14	Bearing	SUJ2
4	Drive shaft	S45C	15	" S " Ring	SK7
5	Main body	FC250	16	Gear box	FC250
6	Lubrication plug	SS400	17	Washer	S45C
7	Oil drain plug	SS400	18	Oil splasher	SS400
8	Motor cover	NBRJ	19	Vibration cushion	Rubber
9	Key	S45C	20	Pipe flange	FC250
10	Connecting base	FC250	21	Gear	SNCM21
11	Driven shaft	SCM440	22	Silencer	SS400

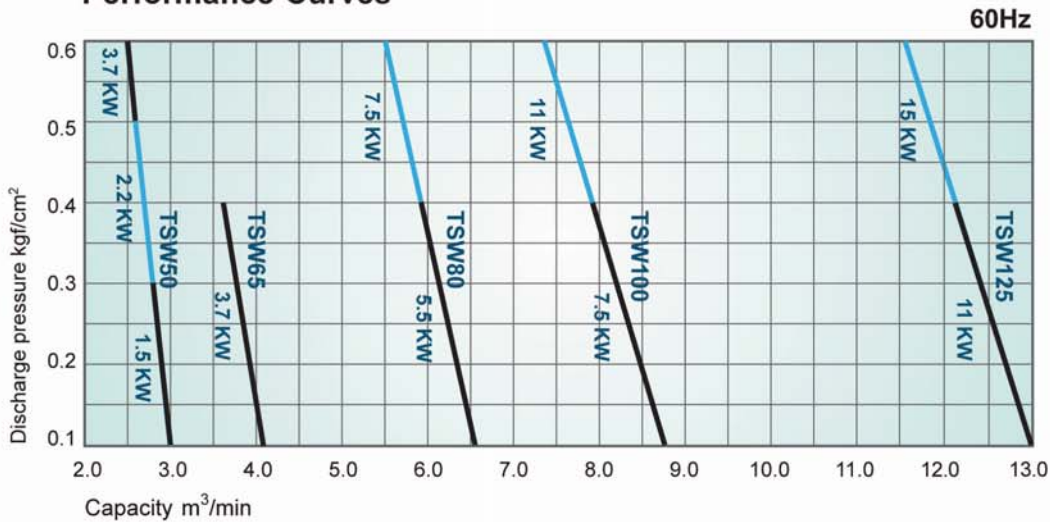
Function table for the TSW line submersible blower

Model	Bore	Power HP	Kgf/cm ² , m ³ /min						Pressure kgf/cm ² , Capacity m ³ /min						Weight (kg)
			50 Hz						60 Hz						
			0.1	0.2	0.3	0.4	0.5	0.6	0.1	0.2	0.3	0.4	0.5	0.6	
TSW5015	2"	2	2.94	2.84	2.74				3.04	2.94	2.83				115
TSW5022	2"	3	2.94	2.84	2.74	2.64	2.53		3.04	2.94	2.83	2.73	2.62		
TSW5037	2"	5	2.94	2.84	2.74	2.64	2.53	2.44	3.04	2.94	2.83	2.73	2.62	2.52	
TSW6537	2.5"	5	3.99	3.85	3.71	3.56			4.09	3.95	3.75	3.59			130
TSW8055	3"	7.5	6.47	6.27	6.07	5.87			6.59	6.39	6.19	5.99			210
TSW8075	3"	10	6.47	6.27	6.07	5.87	5.68	5.48	6.59	6.39	6.19	5.99	5.81	5.62	
TSW10075	4"	10	8.66	8.36	8.07	7.79			8.75	8.46	8.17	7.89			280
TSW10011	4"	15	8.66	8.36	8.07	7.79	7.50	7.22	8.75	8.46	8.17	7.89	7.61	7.34	
TSW12511	5"	15	12.44	12.22	11.89	11.45			12.99	12.66	12.33	12.01			400
TSW12515	5"	20	12.44	12.22	11.89	11.45	11.12	10.79	12.99	12.66	12.33	12.01	11.67	11.34	

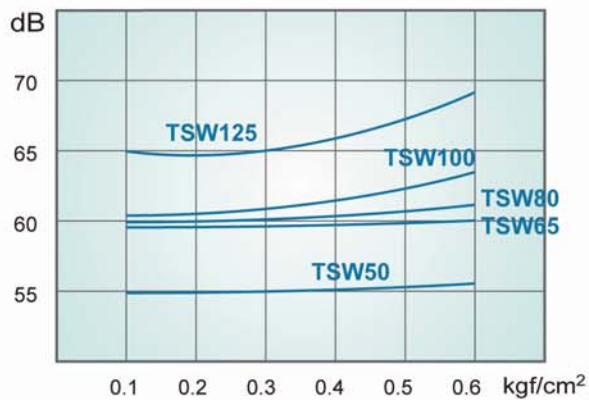
Performance-Curves



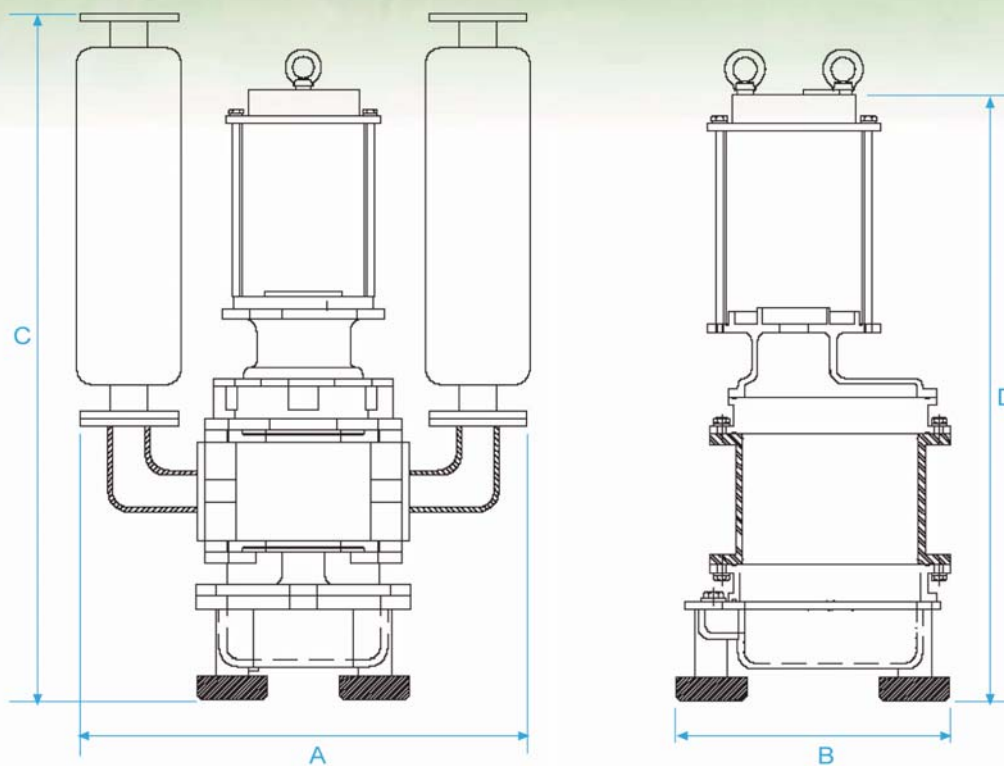
Performance-Curves



Noise Levels



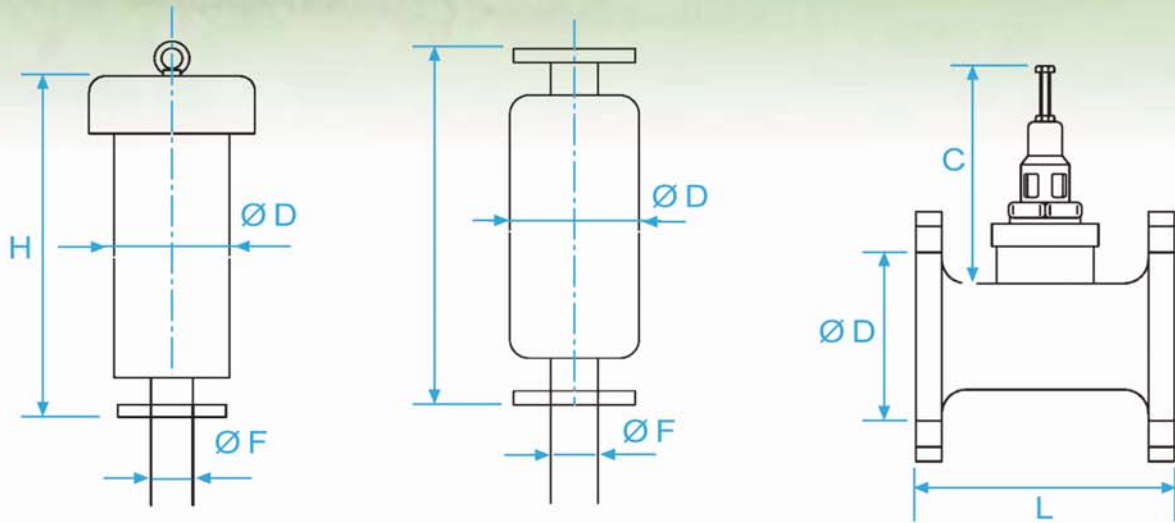
Dimensions



Unit/mm

TYPE	HP	A	B	C	D
TSW 5015	2	650	340	840	775
TSW 5022	3	650	340	840	775
TSW 5037	5	650	340	840	775
TSW 6537	5	675	340	870	835
TSW 8055	7.5	775	425	1200	870
TSW 8075	10	775	425	1200	870
TSW 10075	10	880	425	1280	870
TSW 10011	15	880	425	1280	870
TSW 12511	15	955	425	1340	1090
TSW 12515	20	955	425	1340	1090

Dimensions of the Accessories



Suction Silencer

TYPE	H	F	D	Weight KG
SS-50	765	50	166	13
SS-65	780	65	216	13
SS-80	780	80	216	23
SS-100	780	100	268	23
SS-125	1395	125	321	59

Unit/mm

Discharge Silencer

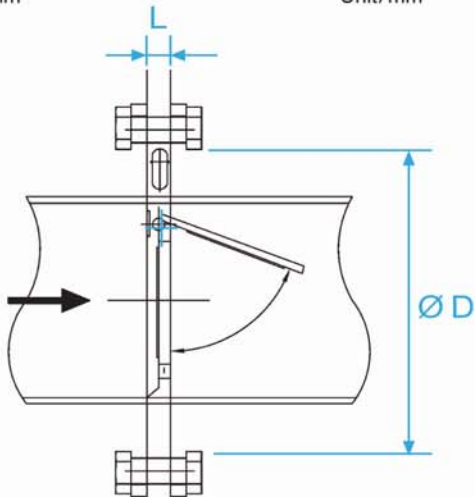
TYPE	H	F	D	Weight KG
DS-50	480	50	166	14
DS-65	480	65	216	24
DS-80	780	80	208	24
DS-100	780	100	268	31
DS-125	780	125	321	45

Unit/mm

Short Pipe Safety Valve

TYPE	L	D	C	Weight KG
TJ-50	160	50	132	7
TJ-65	160	65	132	10
TJ-80	160	80	150	12
TJ-100	160	100	150	17
TJ-125	200	125	150	20

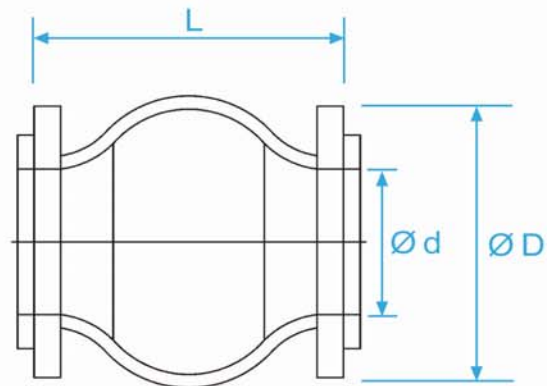
Unit/mm



Check Valve

TYPE	D	L
AC-50	106	16
AC-65	125	16
AC-80	133	16
AC-100	158	16
AC-125	189	16

Unit/mm

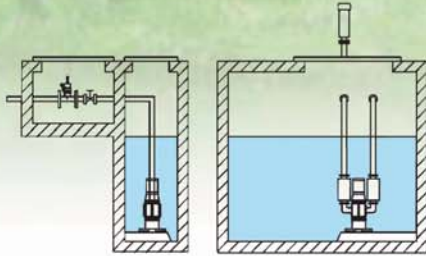


Flexible Joint

TYPE	D	d	L	Weight KG
FJ-50	155	50	85	4
FJ-65	175	65	110	5
FJ-80	185	80	110	6
FJ-100	210	100	110	8
FJ-125	250	125	165	10

Unit/mm

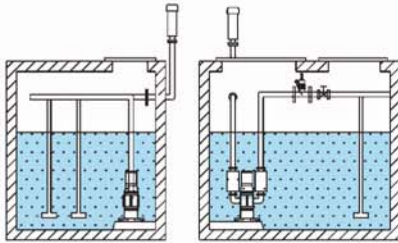
Where to use



Passage trough, Foam-removing trough, Blow trough

Advantage: 1. Shallow water installation easy for maintenance.
2. The oil change can be easily done in the trough after the water is out.

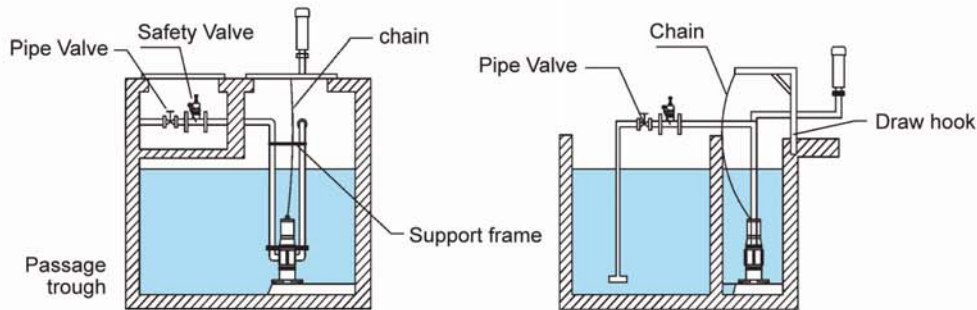
Caution: 1. Must keep the minimum water level.
2. Must keep the water temp below 32 °C .



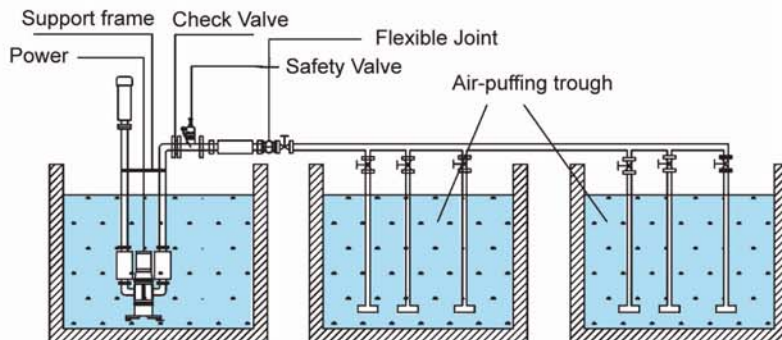
Air-puffing trough

Advantage: 1. Easy assembly parts.
2. Doesn't require a similar place next to the blower for installation.

Caution: 1. During installation, keep away from the return current.
2. Bubbles should not enter the blower.



Installation diagram



Installation

1. Lower the body into the trough bottom with the chain.
2. Don't tighten the chain; fix its end to the hook.
3. Fix the inlet and outlet pipes with pipe clips.
4. To remove easily, keep a hook with a hole for use.
5. To start, keep the safety valve to its fullest then adjust.

Things to note for installation

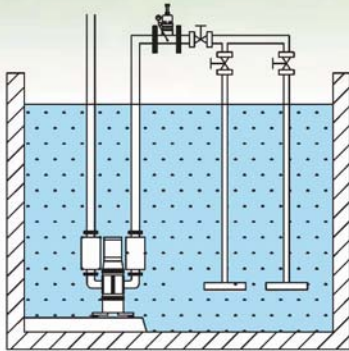


Diagram 1

1. Find a place for easy access to the machine, and to avoid the return wind current when the machine stops, a stop-return tap is necessary, which should be located higher than the air-puffing trough.
2. Raise the machine base to avoid any possible dust .
3. If the machine has to be in a dusty surrounding to keep the cooling function normal a special device (see the graph) should be around the blower to avoid the dust.

For safety reason there should be an emergency leak-brake valve when the machine is installed.

Notice on the air intake and out take

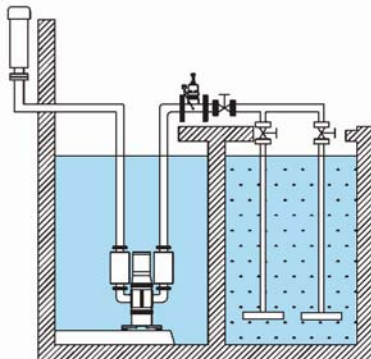


Diagram 2

1. The air inlet muffer should be vertically installed and should be placed outdoors to avoid the indoor damp air (sec diagram 1).
2. The air inlet muffer should be at least 1 M above the ground and in an open space for easy clean work later.
3. In diagram 2, the device should be away from damp air.
4. Keep a regular weekly check of 30 minutes warm up, or daily 30 minutes in damping place on the spare machine.