



11

**TIPS
AND
TRICKS**

**to use Airconditioner and
Yet Save Money**

Dhananjay Sham Pathak

Welcome to this



Small E-Book on

“11 Tips and Tricks on using Air-Conditioners and yet, Save Money.”

First of all, thank you for downloading this small E-Book for your Benefit. Please treat this as my personal Gift that You will surely enjoy which is a result of my 15 Years of Observations & 3 Months of Writing.

You may find this E-Book small in size but it has so many benefits which are not only permanent but will give you a life long help.

Having said that I will suggest you to please keep checking Emails that I will send to You. Similarly You are requested to please like my Company's FaceBook Page that is available at <https://www.facebook.com/SudhanEnterprises> This will make sure You get more Tips and latest information on regular basis.

Assuming that you already have an Air Conditioner, I have not written anything about the Star Rating or Power Consumption. Normally more Star means lesser Power Consumption. Very shortly, I will write another E-Book on '*How to Buy an Air Conditioner*', typically a Buyer's Guide.

This being an E-Book on "*Tips and Tricks*" I have not mentioned anything about Star Rating of an Inverter-AC compared to regularly used Rotary Compressor based AC.

In case you wish to communicate with me for any Question or Query about this eBook or your Air Conditioner, You may contact me on my Email: info@sudhanenterprises.com or on +919594780005 barring Thursday being our Weekly Holiday.

So without wasting much of your time, let me take you to Your *GIFT*.

Enjoy.

Dhananjay Sham Pathak





- Tip No. 1 : Just Clean Your AC Filters and Let money Flow in Your Pockets!
- Tip No. 2 : Thermostat: Your Ultimate weapon to Prevent Electricity Losses.
Let Thermostat act as Police to Protect Electrical Thefts by Your Air Conditioner.
- Tip No. 3 : Say NO to Ceiling Fan when You want to keep AC ON.
- Tip No. 4 : How to get more Cooling form the SAME AC? Here is Solution!
Amplify the Cooling Effect of your AC by using the Wall Fan.
- Tip No. 5 : How to Protect Your AC and Increase its Performance using Stabilizer?
- Tip No. 6 : Use Dark Curtains to avoid Heat due to Direct Sunlight.
- Tip No. 7 : The Ultimate Solution to Increase Efficiency is to cover the Outdoor Unit with Shed and see the increase in the efficiency of AC .
- Tip No. 8 : Always have Natural Ventilation fully, before starting the Air Conditioner in your Home / Office or Car.
- Tip No. 9 : Always set the Temperature of Thermostat between 24 to 28 Degree Celsius in Summer and 22 to 24 Degree Celsius in Winter, but never keep it at 18 Degree Celsius.
- Tip No.10 : Keep at least 2 to 3 feet distance from Outdoor Unit to Wall.
- Tip No.11 : Close all Slits in the Room / Office
- Videos explaining the Concepts.

Tip No.1 :
**Always, I repeat,
Always keep your AC Filters Clean & Un-choked.**



Just Clean Your AC Filters and Let money Flow in Your Pockets!

The Filters of AC's are like its Nostrils. The fresh Air from the Room is sucked from here. Dust and Dirt which is suspended in the Air, also get sucked occasionally. This makes the Filters full of Dust and Dirt.



This deposition of dust causes hindrance to the air that is sucked inside. If it is not cleaned periodically then more and more area is covered by dust which reduces the cooling efficiency drastically.

This is the main reason You start losing your Money.

Inspite of running AC, for a longer time cooling is not upto the mark.
Hence You should take timely action on it.

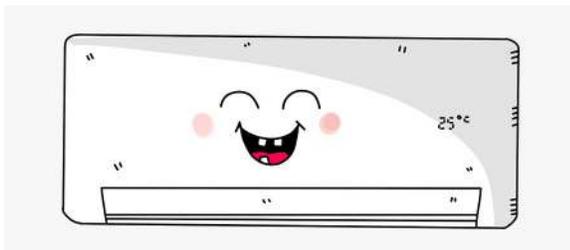
It is said that about 80% of the Air Conditioners stop working properly if those Air Filters are not cleaned. Since cooling is not done upto the mark, more and more time is required to keep the Compressor of AC ON to keep it in running condition.

This is how the Electrical Bill is increased as Thermostat can't sense the Temperature properly [since Cooling is not upto the mark as desired and set by us]. Hence it does not stop, the Compressor of AC, which then keeps on working and consuming lot of Electricity.

Action Suggested :

Please keep the Filters of your AC clean by Dusting, Spraying Air and Washing them with normal mild soapy Water.

This will always help your AC to increase its efficiency to the maximum level.





Tip No.2 :

Always check whether Thermostat is working perfectly. Else be ready to waste your Money.

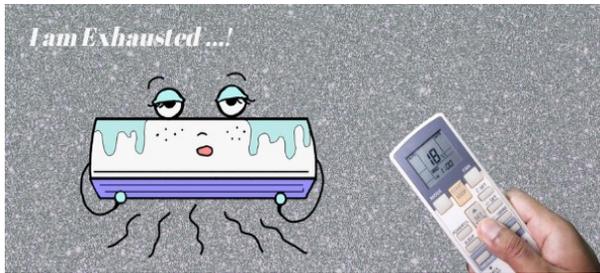
Thermostat, Your Ultimate Weapon to Prevent Electricity Losses.

I know you must be wondering now what the heck is this Thermostat and what is its significance for you. So here it goes :

Thermostat is the device which switches OFF or ON the Compressor of your AC when it attains a desired cooling (certain temperature). *Not very clear. OK, I will explain you.*

When you start the AC normally, You set a desired temperature, may be 22 Degree Centigrade or 24 Degree Centigrade, using your remote control. So in a way you are telling your AC to automatically be switched off once the temperature in your Room/ Office attains 24 Degree Centigrade, which was the set Temperature to cut off the AC .

You want Your Air Conditioner to stop further cooling since the required cooling is attained.



However if by dust or by faulty sensing or faulty Thermostat, your AC Compressor won't be stopped by Thermostat, Your AC will be working and wasting Electricity by cooling additionally which was not desired. (It was 22 Degree Centigrade as you wanted initially.)

Stop Your Electrical Wastage of your Air Conditioner by faulty Thermostat.

So you will have the next Question popping in your mind that is how do I know if my Thermostat is working properly or not?

The Answer is very Simple.

You set the Temperature at 28* or 29* in the night may be after 8 pm.

You may notice that either your AC Compressor will not start or it will start cooling for some time and it will stop cooling in 5 to 10 minutes depending on the surrounding in your room.

If this start and stop of Thermostat, that is start and end of cooling is observed then it is a good news that your Thermostat is in working condition. Give a party to your friend.

However if your AC keeps on cooling even after 1 hour is over then there is a great chance that the Thermostat is either faulty or the Sensor is unable to feel the Temperature due to dust or dirt.

As of now you must have understood that faulty Thermostat will keep your AC 'ON' even after the desired Temperature is attained and will WASTE your Electricity and thus waste your Money.

Action Suggested :

In this case it is better to call qualified and experienced AC Technician to Service the AC and specifically test the Thermostat.

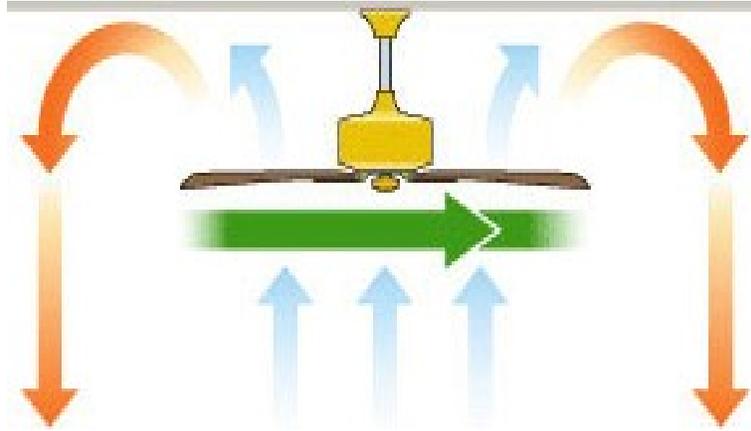


Let Thermostat act as Police to Protect Electrical Thefts of your Air Conditioner.

Tip No.3 :

Never use Ceiling Fan while AC is ON as it is a Reducing Factor.

Say NO to Ceiling Fan When You want to Keep AC ON.



Let me first tell you something about Hot/Warm Air and cool Air. The hot or warmer Air is lighter than Cool Air. That is why you will find that the hot Air will rise higher and remains suspended at the upper surface of your Room or Office while Cool Air will remain in the lower surface.



When you start Ceiling Fan, the hot Air present at the top is pushed downwards and thereby it gets mixed with cool Air. Thus this process continues and slowing the cooling of AC is affected. Hence you need to keep your AC ON for a longer period of time to achieve the desired cooling.

So avoid using AC and Ceiling Fan simultaneously.

Action Suggested :

Do not use ceiling fan while you use AC

Tip No.4: Use Stand or Wall Fan while using AC as it is Multiplied Factor. This will not only circulate cool Air properly but will increase cooling.

How to get more Cooling form the SAME AC? Here is how!

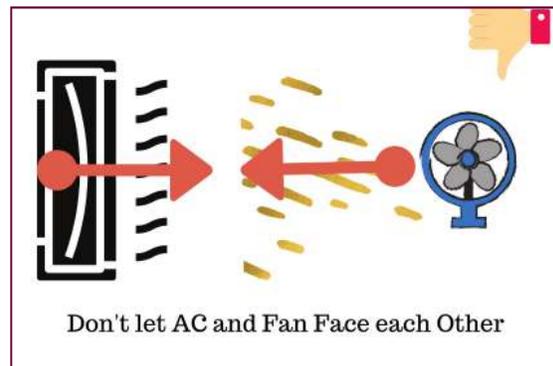
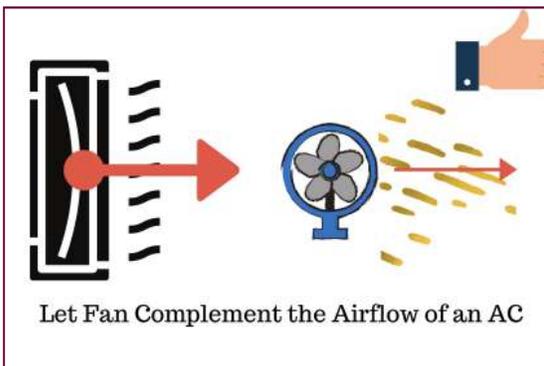
If you have read my last Tip of not using Ceiling Fan while using AC, you may be wondering why I am suggesting the use of Stand, Pedestal or Wall Fan to be used in conjunction with AC.

Let me tell you about the difference between Ceiling and Wall Fan.

While Ceiling Fan pushes hot Air from top to bottom, up & down and circulate Air, the Wall or Stand Fan circulates the Air within the same height or area. Thereby cool and hot Air is not mixed while you use Wall/Stand Fan with AC instead of Ceiling Fan.

On the contrary if the Fan is set to circulate Air with the 90 degree angle with AC you will achieve more circulation and faster cooling. Here you need to note the point. Never put a Stand Fan in such a position where it's Air and AC's Air cross each other. It will have a negative effect.

I have used this Technique many a times in Summer and sometimes I felt like putting the AC Off due to much increased cooling that is done by AC alone. See the Images.



Don't believe. Just do it yourself and experience it.

***Amplify the cooling effect of your AC by using the Wall Fan.
Say YES to Wall Fan When You want to Keep AC ON.***



**You have to wear
Sweaters, when
you use Wall Fan
in conjunction
with AC**

Action Suggested :

If required use wall, pedestal or stand fan while you use your AC to amplify the cooling effect.

Tip No.5: Use Stabilizer to increase efficiency of your AC.



How to Protect your AC and Increase its Performance using Stabilizer?

For any Electrical Appliance Stable Voltage is a prime requirement. However due to improper Electrical Distribution, more load is placed on the Transformers. The Transformer's function is to isolate the incoming supply and protect you from sudden Voltage spikes and give you a stable Voltage between 215 to 235 Volts. 230 Volts being the ideal one.

However in practical World, depending on the area exposed for cooling, the load connected, Voltage can vary between 170 Volts to 270 Volts. 170 Volts is an example of very Low Voltage while 270 Volts and above Voltage is considered as high and dangerous.

It is better choice to connect a Stabilizer to your AC as Stabilizer with its tapping and Electronic Circuit keeps tab on incoming voltage and give your ac a stabilized Voltage.

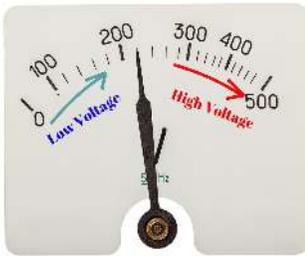
The Interactive Circuit of the Stabilizer adds OR subtracts the incoming Voltage so as to give your AC a stable range of Voltage between 220 Volts to 240 Volts.

Most of the Stabilizers also have one facility of High Voltage Cutout and 3 Minutes Delay Timer.

Let me explain what is High Voltage Cutout ...

Whenever Voltage goes more than 280 Volts, The automatic High Voltage cutout stops electric current that is going to your air conditioner, thus saves your AC and the possible Damage. This way you are saved from the repair costs in the future that may arise from the damage due to high voltage.

Now understand what is a 3 minutes Delay Timer is and how it functions.



Whenever there is power failure, the AC stops working. If Electricity resumes immediately then the AC will start Automatically provided you have kept it ON.

Whenever power resumes all electrical load which is kept on starts immediately. This puts pressure due to increased demand by all Appliances that causes Voltage Fluctuation between 190 Volts and 240 volts.

The 3 Minutes Delay Timer prohibits AC to start immediately when power resumes and allows it to start only after 3 Minutes when most of other Electrical Appliances demand is settled. Thus the AC automatically gets Stabilized Voltage so it is better to have a Stabilizer with High Voltage cutout delay function.



Stable and proper Voltage always increase the efficiency and life of the Compressor of your AC.

As you are happy and comfortable in a good temperature range between 23 to 26 degree centigrade your efficiency increases. Similarly when your AC has got a stable Voltage between 220 to 240 Volts its efficiency increases and its performance and life Increases automatically.



Action Suggested :

Install a suitable Stabilizer for your Air Conditioner.

If You use Stabilizer You will get better performance from your AC.

Tip No.6 :
Cover your Glass Window with dark coloured Curtains to avoid direct Sunlight.

Use Dark Curtains to avoid heat due to Direct Sunlight.



Now this may not be an important tip to save your money by increasing AC efficiency. It is a sort of indirect Technique to increase efficiency.

It is a well known fact that direct sunlight brings in heat with it and this causes the temperature of your room to increase and it becomes little bit warmer. So your AC needs to work a little bit more, consuming more energy.

The dark colored curtains that prohibit solar radiation to enter into your room or office This will help to retain temperature of the room or cooling.



ROOM WITHOUT CURTAINS

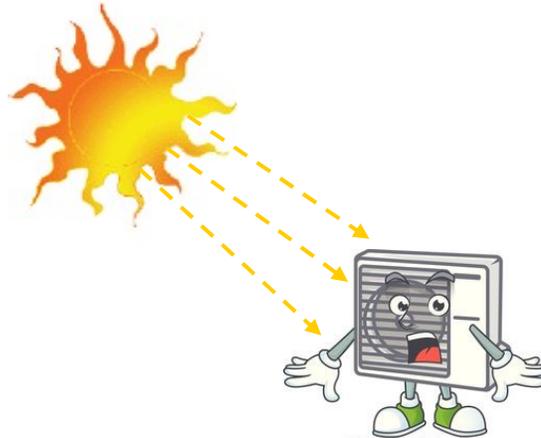


ROOM WITH CURTAINS

Action Suggested : Use Curtains to avoid direct Sunlight.

**Tip No.7:
Cover the Outdoor Unit with Tree, Shed made up of
Wood / Cardboard to avoid direct Sunlight.**

The Ultimate Solution to Increase Efficiency is to cover the Outdoor Unit with Shed.



It is the Outdoor Unit which exchanges the heat with atmosphere.
The Outdoor Unit has got fins that gives out heat and lets the gas flowing through it loose heat to the atmosphere and become cooler.

So anytime when the Compressor of your AC is 'ON' it is always generating heat.
The lesser heat generated here, more is the efficiency. Offcourse you can't eliminate heat generation here however you may do a little bit from your side by preventing direct sunlight falling on this Unit.

If you can place your Outdoor Unit under the shed of a tree that will be the best option. However if that is not possible then do your little bit by preventing direct sunlight to fall on Outdoor Unit by creating an artificial shed or by placing it under wooden or cardboard shed.

Protect your Outdoor Unit with Shed & see the AC Efficiency going UP.

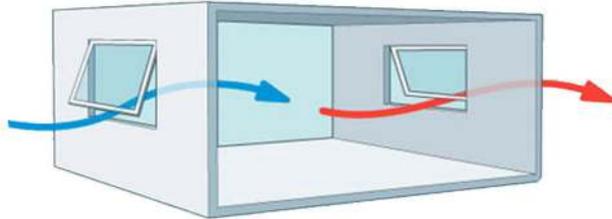


Action Suggested :

Place your Outdoor Unit under the Natural Shed of tree or Artificial Shed created by you.

Tip No.8
Always have Natural Ventilation fully, before starting
Air-Conditioner in your Home/Office or Car

NATURAL VENTILATION



This Tip may not always save Electricity however it may help to keep your Room healthier and hygienic.

When we use AC for prolonged time and then switch it off, keeping the Room/Office closed, there are two things which are missing, that is oxygen and moisture. Both of them are very necessary and useful for us but often it is found that many people just start AC again, without letting in the fresh natural air inside room. It starts giving an odour to the Room/Office.

The Room/Office starts stinking mostly in Summer season. It happens that the Air inside the Room becomes stale or contains very less amount of Oxygen. Sometimes moisture content and temperature is also high when you switched off AC previous day. So, on the next day when You start the AC before opening Windows first and hence thereby preventing fresh air with moisture to come in.

Some people feel suffocated or don't feel fresh. They may also complain that their eyes and skin have becomes dry and are itching. These are all signs of less moisture or humidity in that area.

Are you aware that an Air Conditioner acts as a Dehumidifier?

This fact is not known to most of us which may lead to undesirable results.

In this case, I observed that Drinking Water and Washing our Eyes/Face with Water definitely helps.

I would like to know what are your Observations in this case.

Please do follow the steps given below to have better atmosphere, before you restart your AC:

1. Open the Doors and Windows of your Room/Office. And let it remain open for at least 5 to 10 minutes for the fresh air to come in. This will replace the stale Air & Carbon Dioxide present inside the room with fresh air that has lot of Oxygen and moisture content required for human body.
2. Start all Ceiling Fans and Wall Fans so that this fresh Air will circulate everywhere in your Room/ Office and help in normal atmospheric condition.
3. After about 10 minutes start AC and gradually put off all Ceiling Fans once the Compressor of AC starts. Running Ceiling Fan will not help cooling much. In my previous Section, I have already mentioned, why Ceiling Fans should be avoided?
4. If your Office is without Windows or or have no window (unfortunately which is the case most of the times) then you are left with only one option and i.e. keep the Door open for 15 Minutes while the Compressor of AC is ON.

These are the Suggestions for a normal Window AC as the Advanced System of Split AC already has a built-in facility to replace stale air or addition of fresh air with adequate oxygen and moisture content.

It is observed that when you restart AC with fresh air which is normally of lower temperature, cooling is faster. Thus you get little saving in Electricity.

You may observe this phenomena more for the car is parked under the sun for quite a long time. In that case also it becomes a good choice to first lower all your car window glasses and start moving for about a minute or two to let fresh air come in which is cooler than the inside hot air.



Then after 2 minutes start your Car AC and feel the difference. This way your Car also gets cooler quickly, which is my observation.

My Question to you all , have you observed the same?

So the next time when you start your Vehicle parked under scorching sun, don't just put ON your AC while your Car Windows are closed. You will not only save fuel but achieve fast cooling by acting on my tip.

Please share your experience on it on my email dp1023@gmail.com

Action Suggested :

Open the Doors and Windows and let fresh Air with moisture come inside.

After 5 minutes restart your AC.

This Tip is applicable both for your Room/Office or Car.



Tip No.9 : Always set Thermostat Temperature setting between 24 to 28°Celsius in Summer & 22 to 24°Celsius in Winter, but never keep it at 18°Celsius



How much should be the temperature ideally for my AC?
What is the best temperature do I set for my Air Conditioner?
This is the Question, I get it almost from everyone.
Hence considering this I am trying to answer.
But before that let us look at the two basic facts of human being.

Before coming to the conclusion, I feel we should get Answers for two Questions.

- *What is the normal temperature of the human body?*
- *What should be the most recommended temperature so that human being can stay comfortable and enjoy the atmosphere?*

According to medical encyclopedia [medlinepus.gov] the normal temperature of the human being is 37°Celsius or 98° Fahrenheit.

Then the Question arises, What should be an ideal temperature for human being to stay happy, active and comfortable. The temperature is between 24 to 28°Celsius during summer and 22 to 24°Celsius in the Winter.

I have seen lot of people while starting their AC, put a temperature of 18°Celsius to have fast cooling, but according to me it is foolish thing to do so. In this case your AC will not cool any faster. It will cool at the same rate, but will run longer till that time it reaches the desired low temperature.

Since assuming the average Temperature outside is between 30 to 38° Celsius, you will feel comfortable even if you keep temperature at 27°Celsius if you want air to be conditioned and not chilled.

Obviously the choice is Yours.



When you put AC on 18°Celsius during summer, be assured that in normal circumstances your AC compressor will constantly work which will give you a financial shock when you get electricity bill. In addition to that since the compressor will never stop means it will not get the rest & cool itself. This puts too much of pressure on compressor and then there is chance that its life and efficiency will be reduced drastically.

Ideally the Compressor should work for 15 to 20 minutes and rest for at least 5 to 10 minutes. This will keep it in healthy condition. I know it is an ideal condition and lot of factors such as room size, AC tonnage, the heat load, geographical location, the atmosphere etc matters..

Still I have observed that during summer time I can keep my AC on 28 degree Celsius and I feel very comfortable.

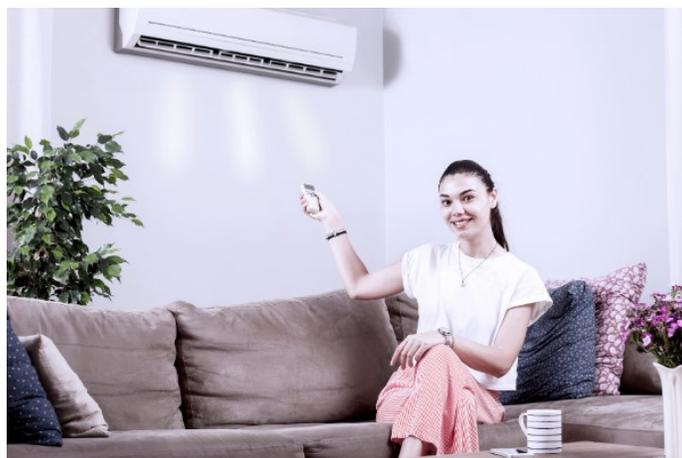
It is not chilled but really cool and comfortable. Of course that is my choice. You may prefer 24 or 26°Celsius as per your choice, & that is fine with me. But my Suggestion is keep your AC Thermostat Temperature between 24 to 28°Celsius, during night and between 26 to 28°Celsius during day.

This Trick itself will save upto 40% of your Electrical Bills.

Action Suggested :

Never set your Temperature at 18°Celsius rather set it between 24 to 28°Celsius in Summer and between 22 to 24°Celsius in Winter. I am considering here Temperature of Kalyan Dombivli or even Mumbai, Navi Mumbai.

Chilled Person vs Comfortable and Happy Person sitting in AC



What YOU will CHOOSE?

Tip No.10

Keep at least 2 to 3 feet distance from Outdoor Unit to Wall.
{Let there be space for exhaust for Air}



It is the Outdoor Unit which contains Compressor and tubings that contains hot gases.
The Fan inside the unit blows high pressure air so as to throw hot air into the front area.
This helps in getting the Gas inside tube loose heat to the outside atmosphere.

Most of the time it is observed that due to lack of space of 2 to 3 feet to throw its exhaust of hot air,
the efficiency of outdoor unit reduces.

This keeps surrounding temperature of outdoor unit high. Hence minimum 2 feet distance should be
kept from outdoor/condenser unit and wall.

Similarly the level between the indoor unit and outdoor unit should not be more than 3 feet. Since if
indoor unit level is too high the some part of compressor power is used to pump the refrigerant against
the gravity that affects the performance.

Images : Outdoor Condenser Unit

Distance to be maintained

Action Suggested :

Keep at least 2 to 3 feet distance from Outdoor Unit to Wall.

Tip No.11

Close all Slits in the Room / Office



It is better to seal all the Slits or places from where cool air may escape.

However careful we are still having small escape for the cool air within the room or office to outside atmosphere.

It is very difficult task to find out these small leakages but we have to find out and close them.

This tip may not save your electricity substantially but will add to a smaller extent to save electricity.

Action Suggested :

find and close all the leakages

You will like Video's that will be beneficial to You:

A] Which are the Benefits of Air-Conditioner Services?

<https://www.youtube.com/watch?v=6YAO9dRstwA>



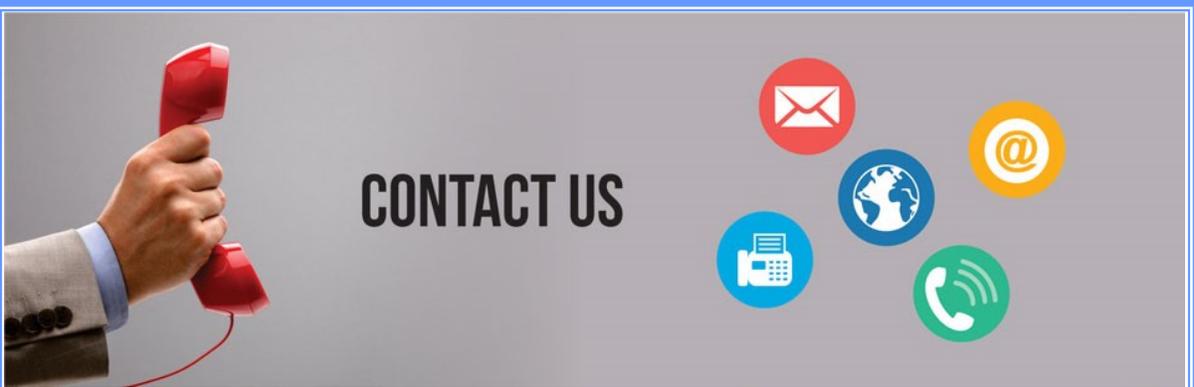
B] How Jet Wash Service done while putting Jacket on AC?

<https://www.youtube.com/watch?v=nknGeKQF64E>



C] How Your Paid AC AMC becomes FREE for You? Don't believe, Check this Video to find out HOW. <https://www.youtube.com/watch?v=tgJ4Iprk7ko>





The Core Activities of my Company

Sudhan Enterprises is engaged in Trading/Sales, After-Sales-Service & Annual Maintenance Contract of Power Inverters, UPS, Batteries, Air-Conditioners.

The Company is located at following address at Kalyan:



We keep you Cool & Comfortable

SUDHAN ENTERPRISES

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Disclaimer

This E-Book is written purely for information purpose only with specific air conditioner users in the mind who essentially use window and split ac at their homes and Offices, Big Malls, Hospitals, Hotels and Corporate Offices use Ductable AC, Chiller Plant or other advanced Technical Cooling solutions. So for those people some of the tips may not be relevant. These advanced cooling system have already factored in lack of fresh air, level of oxygen and moisture control in their solutions. So some of the content in this e-book is not applicable to them.

Moreover, I have written this E-Book from my own observations, understanding and the remedies possible in that given situation and atmosphere. The sole purpose of this E-Book is to make aware similar kind of people like me so that they can get the Benefits.

NO CLAIM of any sort is made by me. The Tips and action suggested is purely informational given to help you, however all of them are optional to use. Please use your own discretion. You may seek Professional Advice before acting on my Tips and Tricks.

Please note that me, my Office, our Staff can't be held responsible for any kind of loss / problems / event that might happen due to any action on the Advice given.