V-GUARD - BUYING GUIDE FOR VOLTAGE STABILIZERS

Voltage fluctuations are common and quiet high in our power lines. They harm your electrical appliances like television, refrigerator, air conditioner etc. and affect your valuable equipment critically, even leaving them in to a permanently damaged condition. A carefully selected, right kind of stabilizer can get you out of this problem. It prevents undesirable voltage fluctuations to enter in to your electrical appliances, thus making its operations trouble free. V-Guard, with an experience of more than three decades in the industry, offers a series of stabilizers carefully crafted to meet various application demands in your daily life. Our stabilizers are designed and manufactured with latest technology and stringent quality measures to safeguard all types of your electrical appliances from crucial voltage fluctuations. It does never be a pay, when it comes, your valuable equipment shocks you with a breakdown pay.

What does a Voltage Stabilizer do? How does it protect your appliances?

Stabilizers (often termed as Automatic and Safe Voltage Regulators) are static devises to stabilize your utility voltage before feeding to the connected equipment. It recognizes the voltage fluctuations in the utility and regulates it internally to deliver a consistent range of output voltage, if your utility voltage is low; your stabilizer senses it, boosts it to the required level of voltage and then feeds to the connected equipment to work without troubles. This happens vice versa in case of a high voltage that appears in the utility line.

The stabilizers get this done by using an electronic circuitry, which changes the required taps of an inbuilt auto transformer with the help of high quality electromagnetic relays to generate the desirable voltage. If the Voltage to be supplied is not within the range, a mechanism switches the required transformer tap, thereby bringing the Voltage supply within a safe range.

Thus the stabilizer acts as a safe guard between your equipment and utility, by continuously monitoring and stabilizing the voltage fluctuations that appear in the utility. It ensures that your valuable appliance receives a consistent stabilized range of voltage as its input for a trouble free operation and long operational life.

How can I choose a right sized stabilizer for my application?

Selection of a right stabilizer suiting your applications is critical. The key areas to be considered critically are the nature, power consumption range of your application and the level of voltage fluctuations that are experienced in your locality.

You need to know the rating of the equipment to be protected - the ratings are normally mentioned as **KW**, **KVA** or in **Amps** .You will also need to know the nominal line voltage and frequency.

Here are few simple tips to select a stabilizer:

- Check the voltage, current & power rating of the device. It is written on the specification sticker near power socket else check the user manual.
- In India standard service voltage will be 230VAC, 50 Hz.
- To get the maximum power - Multiply "230 x Max rated Current" of all the equipment that are to be connected to the stabilizer. Add a 20-25% safety margin to arrive at stabilizer rating. If you have plans to add more devices later, you can keep buffer for them.
- You should also consider the surge current which flows when you switch on the device.
- In case the Voltage Stabilizer has a rating in watts also, assume a power factor of 0.8 **(W=V*A*pf)**.

The most important thing is to know the nature of the load connected to the stabilizer. First you must note down the power (or Watts) for all the appliances that will be connected to a stabilizer. The sum total of the power consumption (or Watts) will give you the load on the stabilizer in watts. But most stabilizer sizes are in VA (Volt Ampere) or kVA (kilo Volt Ampere which is equal to 1000 Volt Ampere). Although to get the actual VA (or Volt Ampere) from Watts (W) you will have to do some measurements, but to give a rough approximation, you can increase the Watts value by 20% to get the approximate VA size that you may need.

So for e.g. if sum of Watts connected to your stabilizer is 1000 then you can take a 1200 VA or 1.2 kVA stabilizer. (Please note that 20% is suitable for residential systems and may not work in industries if your power factor is bad).

Usually a stabilizer comes with different working ranges (working range is the voltage range in which the stabilizer operates/stabilizes the input utility voltage and provides a desirable output voltage). It's important to choose your stabilizer suiting the voltage fluctuations in your locality.

Make an idea of the level of power fluctuations that are common in your location. (E.g. extremely low/high voltage areas, moderate high/low voltage area etc.). You have to choose the working range of your stabilizers that will address the demands of your location. For instance, you might need to choose the stabilizer with a wide working range, if your location experiences extremely low/high voltage fluctuations.

What salient features should you look for in a Voltage Stabilizer?

a. Mounting

Since a Voltage Stabilizer works with electric power, there is always a risk of your Stabilizer getting wet or damaged when placed on the ground or anywhere unsafe. This is why most stabilizers can be wall mounted or placed at a higher level, to not only protect it from any damage but to also protect your family, especially small children, from being exposed to risk of electric shock.

b. Indicators

Indicators display the voltage which has been regulated in order to supply power to the appliance. Newer models are also enabled with LED indicators.

c. Time Delay Systems

This feature enables a time lapse so that the inbuilt compressor (in case of a refrigerator or air conditioner etc.) gets sufficient time to balance the current flow, when a short duration power cut occurs.

d. Digitized

Making the function of a stabilizer more accurate and reliable, a lot of the latest models are digitized. What's interesting about these newer models is that not only are they digitized, but they also adapt themselves to a variety of devices. So all you have to do is shift the stabilizer from one device to another to get it to work. Most of them will also connect and adapt to generators if installed.

e. Overload Protection

The overload protection feature turns off the stabilizer output completely in case of short circuit or any kind of burn-out due to overload occurs.

Most of our stabilizers are provided with a 3-5 year warranty so that you can enjoy safe and sufficient protection for your appliances for longer. Always remember to choose a stabilizer crafted particularly for your home appliance. We hope you make a good decision.

Do modern refrigerators/air conditioners come with in-built Voltage stabilization?

Modern appliances (mostly refrigerators and air conditioners) do come with a bigger Voltage range for operation, **i.e.** if in past, refrigerators worked well only between 200-240V, now they have a bigger range of 170-290V. Refrigerator comes with inbuilt high & low voltage cutoff but **they do not come with in-built Voltage Stabilizers**. Using Voltage Stabilizer with such appliances may not be necessary unless voltage in your area shoots up or down much above or below the limit in which the appliance can operate.

Are there different stabilizers for different appliances?

Voltage Stabilizers are optimally engineered depending on the appliance which they are going to be used for. They are classified on the basis of the energy limit and the features of a particular appliance. Every appliance in our house has a certain energy limit. Keeping those specific limits in mind, the concerned stabilizers are engineered. The different types of Stabilizers are-

a. Stabilizer for Air Conditioner
b. Digital Stabilizer (LCD TV/LED TV/ Music Systems)
c. Stabilizer for Refrigerators
d. Stabilizers for CRT TV, Music Systems
e. Stabilizers for Washing Machine, Treadmill, Oven
f. Mainline Stabilizers

Click here to view our range of Voltage Stabilizers classified according to the usage pattern and equipment.

How should you decide which Stabilizer suits your needs?

First and foremost, you need to calculate the total power consumed by your appliances when connected to the stabilizer, especially when switched on. It is important to understand the power consumed while switching on the appliances connected to the stabilizer because the appliances or device will consume double the amount of power on start-up than it does while working.

Here's a table indicating the Wattage requirement of some commonly used electric appliances.

Sub-Category	Model	Capacity in VA	Working Range	Appliances
Stabilizer for AC	VG 400	2700	170V – 270V	AC Up to 1.5 Ton AC or 18,000 Btu/Hr.
	VG 500	3350	170V – 270V	AC up to 2 Ton or 24,000 Btu/Hr.
	VS 400	2700	170V – 280V	AC up to 1.5 Ton AC or 18,000 Btu/Hr.
	VS 500	3350	170V – 280V	AC up to 2 Ton or 24,000 Btu/Hr.
	VND 400	3000	150V-285V	AC up to 1.5 Ton or 18,000 Btu/Hr.
	VND 500	3700	150V-285V	AC up to 2 Ton or 24,000 Btu/Hr.
	VND 400 Digital	2800	150V-290V	AC up to 1.5 Ton or 18,000 Btu/Hr.
	VD 400 Digital	2800	150V-290V	AC up to 1.5 Ton or 18,000 Btu/Hr.
	VWR 400	3000	130V-300V	AC up to 1.5 Ton or 18,000 Btu/Hr.
	VGB 500	3800	130V-300V	AC up to 2 Ton or 24,000 Btu/Hr.
	VEW 400 Digital	3000	90V-300V	AC up to 1.5 Ton or 18,000 Btu/Hr.
	VGX 400	3000	130V-300V	AC up to 1.5 Ton or 18,000 Btu/Hr.
Digital Stabilizers (LED/LCD TV)	Mini Crystal	320	90V-290V	One LCD/LED TV Up to 81.3cm & DVD/DTH
	VG Crystal	480	90V-290V	One LCD/LED/ 3D TV Up to 107cm &Home Theater, DVD/DTH
	Crystal Plus	720	90V-290V	One LCD/LED/3D TV Up to 117cm & Home Theater, DVD/DTH
	Digi 200	1380	140V-295V	LCD/LED/3D/Plasma TV+DVD/DTH +Home Theater System or Photostat Machine
Stabilizers for Refrigerators	VG 50	500	135V-280V	One Refrigerator up to 300 Ltrs.
	VGSD 50	500	130V-290V	One Refrigerator up to 300 Ltrs.
	VGSJW 50	500	90V-260V	One Refrigerator up to 300 Ltrs.
	VEW 50	500	90V-280V	One Refrigerator up to 300 Ltrs.
	VEB 50	500	70V-300V	One Refrigerator up to 300 Ltrs.
	VG 100	1000	135V-280V	One Deep Freezer up to 4 Amps /Refrigerator up to600 Ltrs.
	VGSD 100	1000	130V-290V	One Deep Freezer up to 4 Amps /Refrigerator up to600 Ltrs.
	VGSJW 100	1000	90V-260V	One Deep Freezer up to 4 Amps /Refrigerator up to600 Ltrs.
	VG 150	1500	150V-280V	One Deep Freezer up to 6 Amps/Refrigerator/Air cooler/0.5 TON AC/800 VA DIGITAL UPS

	VEW 150	1500	100V-300V	One Deep Freezer up to 6 Amps/Refrigerator/Air cooler/0.5 TON AC/800 VA DIGITAL UPS
Stabilizers for CRT TV, Music Systems	VGD 20	200	90V-300V	One 63 cm TV or One TV up to 53 cm + DVD/DTH
	VG 30	250	135V-290V	One 73 cm TV or One TV up to 63 cm + DVD/DTH & Music System
	VGD 30	250	90V-300V	One 73 cm TV or One TV up to 63 cm + DVD/DTH & Music System
Stabilizers for Washing Machines, Treadmill & Ovens	VM 300	2000	150V - 280V	One Microwave oven/Treadmill/washing Machine
	VM 500	3500	150V - 280V	One Microwave oven/Treadmill/washing Machine
Mainline Stabilizers	VGMW 500 Digital	3700	90V - 300V	Main Line
	VGMW 200	1500	100V - 300V	Main Line
	VGMW 300	2300	100V - 300V	Main Line
	VGMEW 500	3800	70V - 280V	Main Line
	VGMW 1000	7300	120V - 280V	Main Line

References:

You might have more queries about investing on a suitable Voltage Stabilizer for your home. Please visit our FAQs section on V-Guard website to know more. For any further queries, please feel free to write to our Customer Care. You can also reach our customer care using the following contact numbers.

There you have it! Our complete Voltage Stabilizer buying guide. Equipped with this, we are sure you will be in a position to make a wise decision about purchasing a Voltage Stabilizer that best suits your needs.