



**03 Sparkle Avenue, Near Chate School (Katraj) Pune-Satara Road, Katraj
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PASSIVE HARMONIC FILTER (PHF)



Trusted Partner in PQS

ABOUT US

We are “**Surya Systems**” started in 2016 with the theme of “**Trusted Partner in Power quality Solutions**”.

We are bounded to customer for our best services at reasonable price & best quality product in the market.

We have a facility of systems study & solutions designed for power quality problems.

HARMONIC TRANSIENT SUPPRESSION

- Limits harmonic distortion & improves power factor
- Meets IEEE-519 1992
- Protects drives & other sensitive equipment's
- Improves energy efficiency

TYPICAL PROBLEMS, SUPERIOR SOLUTIONS WITH PHF

Power quality has degraded over time due to the increased use of non-linear loads.

The IEEE-519 standard for harmonic distortion was developed to address this problem.

HARMONICS AND POWER QUALITY

If non-linear loads represent a significant portion of the entire installed load, this distortion begins to cause problems throughout the electrical system

- Transformer and distribution equipment overheating.
- Random breaker tripping
- Sensitive equipment may fail completely
- Poor power factor
- Reduced system efficiency

PASSIVE HARMONIC FILTER

- This is a broad band hybrid filter
- The PHF not only limit current distortions to Less than 8% (6-8% typical on load>85%) it also corrects power factor to 0.999(at load>60%)
- Eliminates nuisance tripping
- Increase drive uptime
- Improves power factor
- Improves system efficiency & reliability
- Extends equipment life

MEETING IEEE- 519 RECOMMENDATIONS ON HARMONICS

The PHF provides a cost effective solution allowing the user to meet IEEE-519 requirements.

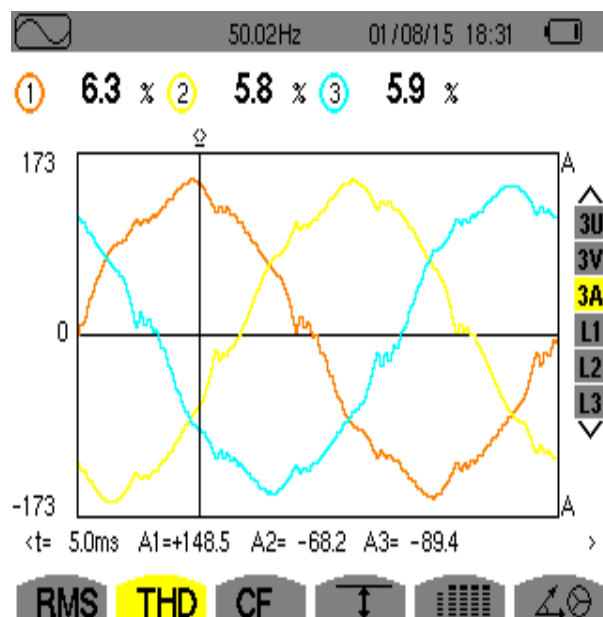
- Our PHF filters considerably reduce harmonic current to (THID<8% at any load conditions) & therefore basically convert a non-linear load. This fact eliminates the risk of problems due to non-linear load. Lower harmonic currents help to relieve the entire electrical installation & help to postpone expensive electrical system up-gradation when retrofitting additional non-linear consumers.
- KVA Demand gets reduced so distribution transformer utilization is improved.
- Last but not the least, lower harmonic currents cases less harmonic voltages when flowing through system impedance so other sensitive consumers(e.g. electro medical devices) connected to the same branch of the electrical system are not compromised in their functionality.
- So in essence, the annual saving enabled by our PHF filters are first & foremost.

TYPICAL APPLICATIONS INCLUDE

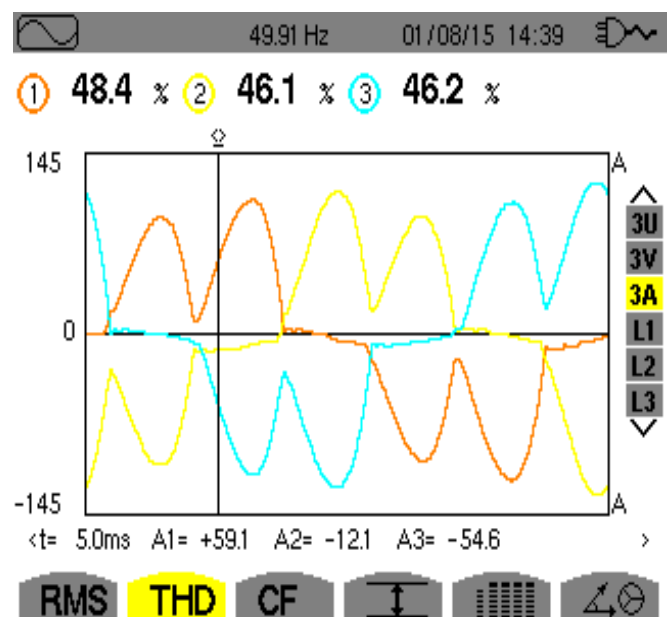
1. Oil & gas Pumps
2. Irrigation fields, farms
3. Water Pumping
4. HVAC
5. Steel Industry
6. Pulp/paper industry
7. Pharma Industry
8. Machining
9. Chilling Plants
10. Extruders
11. Waste water treatment plants
12. Commercial building
13. Hospitals
14. Airports

IMPROVEMENT IN POWER QUALITY WITH HTS FILTER

90KW Compressor VFD input with PHF Filter



90KW Compressor VFD input without PHF Filter



PHF FILTERS

1. Save Money
2. Save space
3. Reduce energy losses

OUR OTHER PRODUCTS & CUSTOMERS

Customer:


1. Kirloskar Pneumatic Co. Ltd:

- Reduce Harmonics from 40% to 8% in their screw compressor KES-35 & KES-45 model
- Also get Saving of 10% in KVA

2. MRF Goa:








- **Reduced Harmonics.**
- **Benefited by 4% reduction in KWh Value.**

Other Products:



SPECIALISTS IN POWER QUALITY COMPONENTS
MV POWER FACTOR CORRECTION & HARMONIC FILTERING $U_{RMS} = 230V \dots 12KV$

C O M P O N E N T S **S O L U T I O N S**

Dry Type LV/MV Power Capacitor 	Detuning Reactor 	I/O Chokes 	Passive Harmonics Filter 
Thyristor Switch 	Power Factor Controller 	Power quality solution 	

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