

# PRISTINE POWER SYSTEM

**Pristine**  
Electrical Panels

## Product Catalogue

### QUALITY POLICY

We at Pristine Power System are committed to manufacture world-class medium Voltage Switchgear Panels.

### OUR VALUE

Customer First, Commitment, Excellence and Team Work.

### OUR PERFORMANCE

Revenue growth is the most important driver for progression. Our goal is to drive growth through customer satisfaction.

Electrical LT Panels



We at Pristine Group of Companies are committed to manufacture World-Class "Pristine" make TTA & PTTA Electrical Panels.

\*Switchgear Partner 



Unique

& Outstanding Features of  
'Pristine' APFC Panels :-

**Pristine**  
Electrical Panels



**SALIENT FEATURES:**

- Optimum Power Quality.
- Each stage independently monitored, protected and activated.
- Automatic P.F. Improvement by microprocessor based Controller.
- Smooth surge less capacitor switching allowing unlimited switching operations.
- Reduction in brush current.
- Reduction in KW/KVA. Demand & KWH Consumption and related charges.
- Power factor, Voltage, Current display.
- Incorporates industry approved standard components.
- Integrated modular system (expandable).
- Interlock facility for capacitor bank Module.
- Incorporates heavy duty low loss M.P.P/all P.P/M.D/Gas filed capacitors.
- Broad band harmonic filtering, Virtually maintenance free.

**OPTIONAL FEATURES:**

- Display of all Electrical Parameters like Voltage, Frequency, Current, Power Factor, Phase Angle, Active Power Reactive Power, Apparent Power, etc. of all three phase.
- RS 232 C Serial interface facility provided to read out Various Instantaneous electrical parameters.
- Balanced-capacity release in KVA and more cost effective than any other device in the market.
- User defined computer regular with FCP (Fast Computerized Program System)
- Indication/Alarm for faulty stages.
- For facilities with high harmonic contents, the panels are incorporated with reactor filters to offset the resonance effect thereby reducing the high inrush currents and increasing the life of capacitor.

**Why Only Pristine APFC's**  
**Makes Sense ?**

Commercial and industrial consumers in many parts of the country can virtually eliminate utility penalty charges for low power factor by installing Pristine APFC Panels. In addition to saving on your power bill, you will stabilize line voltage, reduce internal line losses and heat build-up, and increase the available capacity of incoming supply lines and transformers. The Pristine APFC panels senses the changes in load and automatically brings about just the right amount of correction to raise your power factor about your utilities penalty threshold. Pristine panels surpasses all other power factor solutions in terms of performance, reliability, ease of installation and cost effectiveness.

**Unsurpassed Performance**

Pristine system continually senses load conditions & automatically brings the target range to 0.99 or minimum 0.95 design target.

**User Benefits**

Better efficiency of operation for motors & other equipments. Load current reduction, cool operation.

**Fast & Easy Installation**

Highly compact and modular arrangement enables easy installation.

**Faster Payback**

Fast recovery of initial investment in electricity charges.

**Product Warranty**

The system carry manufactures' one year repair warranty/ replacement warranty.





**Power Capacitors**

**CAPACITORS:**

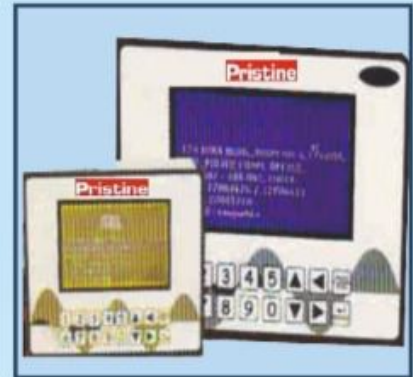
Pristine APFC panels comes with a range of capacitors keeping in mind the actual load facility considerations. Capacitors including MPP/ALLPP/Mixed dielectric & gas filled. Capable of withstanding higher overload and transient overvoltage to with stand all frequent multi step switching in order to achieve a smooth run. All capacitors have built in fuse elements and surge suppression



**Thyristor / Reactors**

**THYRISTOR / REACTORS:**

For facilities with high harmonic contents, Pristine panels are provided with reactor circuit to suppress switching inrush current and reduce harmonics which improves capacitors life, and of all switchgear and accessories as well. The reactors are open panel mounting type of required capacity to meet with optimum performance. Special design for with-standing high surges can be supplied as optional.



**APFC Relays up to 16 steps**

**SWITCHING:**

The panel is based on Thyristorised / Electronic Switching system for smooth zero cross-firing to achieve dynamic power factor correction where in the switching & the controlling device used have a fast responses with 20 - 40 ms. Incoming switching is carried out by MCCB for small ratings & ACB for higher ratings. The master ACB /MCCB checks its main operating parameters such as overloads, short-circuit, etc.

SPECIFICATIONS	M.D TYPE	ALL P.P TYPE	HEAVY DUTY MPPTYPE	MPP TYPE/ GAS FILLED	MPP TYPE
RATED AC VOLTAGE	415/440 V	415/440 V	415/440 V	415/440 V	415/440 V
FREQUENCY(Hz)	50	50	50	50	50
No. OF PHASES	Three	Three	Three	Three/Single	Three/Single
RANGE	2KVAR to 25 KVAR	2KVAR to 25 KVAR	2KVAR to 25 KVAR	2KVAR to 25 KVAR	1KVAR to 25 KVAR
INSULATION LEVEL	Power frequency 1 Min. withstand -3KV	Power frequency 1 Min. withstand -3KV	Power frequency 1 Min. withstand -3KV	Power frequency 1 Min. withstand -3KV	Power frequency 1 Min. withstand -2.5KV
TEMPERATURECATEGORY	Max. 55 C	Max. 55 C	Max. 55 C	Max. 55 C	Max. 55 C
DIELETRIC	Tissue paper+ biaxially poly film +oil	Biaxially hazy P.P film + Aluminum foil	2 layer of hazy film	Single layer of BOPP film	Biaxially hazy oriented P.P film
ELECTRODES	High purity, annealed aluminium condenser foil	High purity, aluminum foil	Vaccum deposited metal alloy with re -inforced edge	Vaccum deposited metal alloy with re -inforced edge	Vaccum deposited metal alloy with re -inforced edge
LOSSES	≤0.5WKVAR	≤0.5WKVAR	≤0.5WKVAR	≤0.5WKVAR	≤0.5WKVAR
SAFETYFEATURE	Internal fuses	Internal fuses	Self heating	Self heating	Self heating-rigid resin encapsulated
OUTPUTTOLERANCES	0 to 10%	0 to 10%	0 to 10%	0 to 10%	0 to 10%
INRUSH CURRENT	Max. 200 x 1n	Max. 200 x 1n	Max. 100 x 1n	Max. 100 x 1n	Max. 100 x 1n
DISCHARGEDEVICE	Resistor	Resistor	Resistor	Resistor	Resistor
TESTS	Routine/type test	Routine/type test	Routine/type test	Routine/type test	Routine/type test
PROBABLELIFE EXPECTANCY	Static life ≥150000 hrs.	Static life ≥100000 hrs.	Static life ≥70000 hrs.	Static life ≥50000 hrs.	Static life ≥30000 hrs.
CONTAINERTYPE	Box Type	Box Type / Cylindrical	Box Type / Cylindrical	Box Type / Cylindrical	Box Type / Cylindrical



Low Power Factor?

Poor Power Quality?

High Electrical Bills? Harmonics?

Heavy Loss of Power ?

Pristine Power System Provide comprehensive electrical measurements of your facilities distribution system with power analyzer and reveals to you existing problems in your electrical system.

**For Effective Solutions, Depend on us .....insists on Pristine Product.**



## Quality is Our Core Product

**Pristine** is one of the trustworthy manufacturer, Supplier & exporter for electrical LT Panels/PCC/MCC/APFC/AMF/ Synchronizing Panels & Distribution board Feeder Pillars etc.








Original Power Factor cosØ1	Reqd. Power Factor 0.80	Reqd. Power Factor 0.82	Reqd. Power Factor 0.84	Reqd. Power Factor 0.86	Reqd. Power Factor 0.88	Reqd. Power Factor 0.90	Reqd. Power Factor 0.91	Reqd. Power Factor 0.92	Reqd. Power Factor 0.93	Reqd. Power Factor 0.94	Reqd. Power Factor 0.95	Reqd. Power Factor 0.96	Reqd. Power Factor 0.97	Reqd. Power Factor 0.98	Reqd. Power Factor 0.99	Reqd. Power Factor 1.0
0.70	0.270	0.322	0.374	0.427	0.480	0.536	0.564	0.594	0.625	0.657	0.691	0.728	0.769	0.817	0.877	1.020
0.71	0.242	0.294	0.346	0.399	0.452	0.508	0.536	0.566	0.597	0.629	0.633	0.700	0.741	0.789	0.849	0.992
0.72	0.214	0.266	0.318	0.371	0.424	0.480	0.508	0.538	0.569	0.601	0.635	0.672	0.713	0.761	0.821	0.964
0.73	0.186	0.238	0.290	0.343	0.396	0.452	0.480	0.510	0.541	0.573	0.607	0.644	0.685	0.733	0.793	0.936
0.74	0.159	0.211	0.263	0.316	0.369	0.425	0.453	0.483	0.514	0.546	0.580	0.617	0.658	0.706	0.766	0.909
0.75	0.132	0.184	0.236	0.289	0.342	0.398	0.426	0.456	0.487	0.519	0.553	0.590	0.631	0.679	0.739	0.882
0.76	0.105	0.157	0.209	0.262	0.315	0.371	0.399	0.429	0.460	0.492	0.526	0.563	0.604	0.652	0.712	0.855
0.77	0.079	0.131	0.183	0.236	0.289	0.345	0.373	0.403	0.434	0.466	0.500	0.537	0.578	0.626	0.686	0.829
0.78	0.052	0.104	0.156	0.209	0.262	0.318	0.346	0.376	0.407	0.439	0.473	0.510	0.551	0.599	0.659	0.802
0.79	0.026	0.078	0.130	0.183	0.236	0.292	0.320	0.350	0.381	0.413	0.447	0.484	0.525	0.573	0.633	0.776
0.80	0.000	0.052	0.104	0.157	0.209	0.266	0.294	0.324	0.355	0.387	0.421	0.458	0.499	0.547	0.609	0.750
0.81		0.026	0.078	0.131	0.184	0.240	0.268	0.298	0.329	0.361	0.395	0.432	0.473	0.521	0.581	0.724
0.82		0.000	0.052	0.105	0.158	0.214	0.242	0.272	0.303	0.335	0.369	0.406	0.447	0.495	0.555	0.698
0.83			0.026	0.079	0.132	0.188	0.216	0.246	0.277	0.309	0.343	0.380	0.421	0.469	0.529	0.672
0.84			0.000	0.053	0.106	0.162	0.190	0.220	0.251	0.283	0.317	0.354	0.395	0.443	0.503	0.646
0.85				0.027	0.080	0.136	0.164	0.194	0.225	0.257	0.291	0.328	0.369	0.417	0.477	0.620
0.86				0.000	0.052	0.109	0.137	0.167	0.198	0.230	0.264	0.301	0.342	0.390	0.450	0.593
0.87					0.027	0.083	0.111	0.141	0.172	0.204	0.238	0.275	0.316	0.364	0.424	0.567
0.88					0.000	0.056	0.084	0.114	0.145	0.177	0.211	0.248	0.289	0.337	0.397	0.540
0.89						0.028	0.056	0.086	0.117	0.149	0.183	0.220	0.261	0.309	0.369	0.512
0.90						0.000	0.028	0.058	0.089	0.121	0.155	0.192	0.233	0.281	0.341	0.484
0.91								0.027	0.058	0.090	0.124	0.161	0.203	0.250	0.310	0.453
0.92									0.031	0.063	0.097	0.134	0.176	0.223	0.283	0.426
0.93										0.032	0.066	0.103	0.145	0.192	0.252	0.395
0.94											0.034	0.071	0.113	0.160	0.220	0.363
0.95												0.037	0.079	0.126	0.186	0.329
0.96													0.042	0.089	0.149	0.292
0.97														0.047	0.107	0.250
0.98															0.060	0.203
0.99																0.143

The table gives the KW multiplier factors for calculating the capacitors kVAr from KW for improvement of original power factors cos Ø1 to final power factor cos Ø2

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Example	
Inductive Load	100 KW
Original Power Factor cosØ1	0.75
Final Power factor cosØ2	0.95
From the chart KW multiplier factor	0.553
APFC Panel Value (CapacitorkVAr)	= KW x multiplier factor
	= 100 x 0.553
	= 53.3 kVAr say 50 kVAr

# PRISTINE POWER SYSTEM

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Our Residents Engineers

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