

R.A HYBRID POWER SYSTEM

AN EFFICIENT ROTARY POWER CONVERSION SYSTEM



Get Optimum Power Generation at Lowest Cost



ComAp 



30kW to 500kW
R.P.C.S Power Packs

www.raeng.com

**Regulated 3-phase 400VAc output
Distortion free Power Source
Isolation from grid
Clean Harmonics free electricity
Constant power factor
Zero carbon emission**

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R.A HYBRID POWER SYSTEM



R.P.C.S

WHAT IS ROTARY POWER CONVERSION SYSTEM

The ROTARY POWER CONVERSION SYSTEM is a part of R.A Hybrid system and is not like common hybrid system.

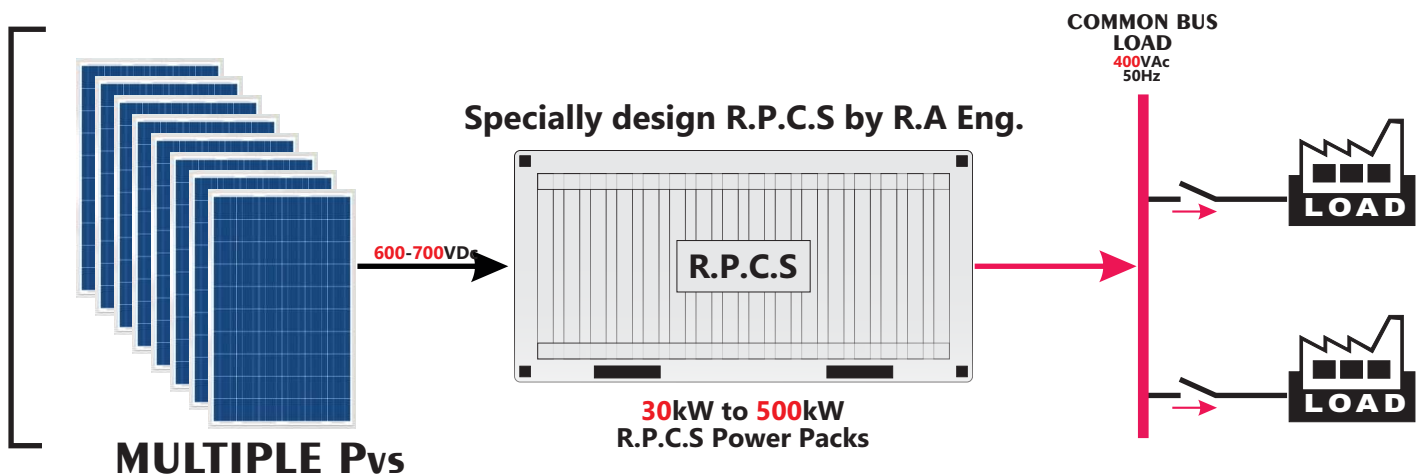
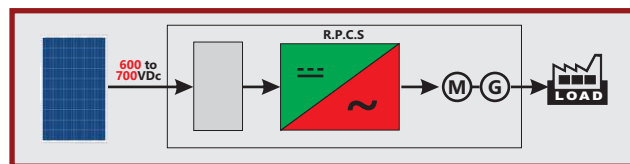
This system doesn't need the batteries but can be added as additional benefit.

You can run only PV power until sunlight is available.

The solar power is directly converted to 3 Phase Ac power with controlled power factor.

There is no need grid or diesel power.

System Philosophy

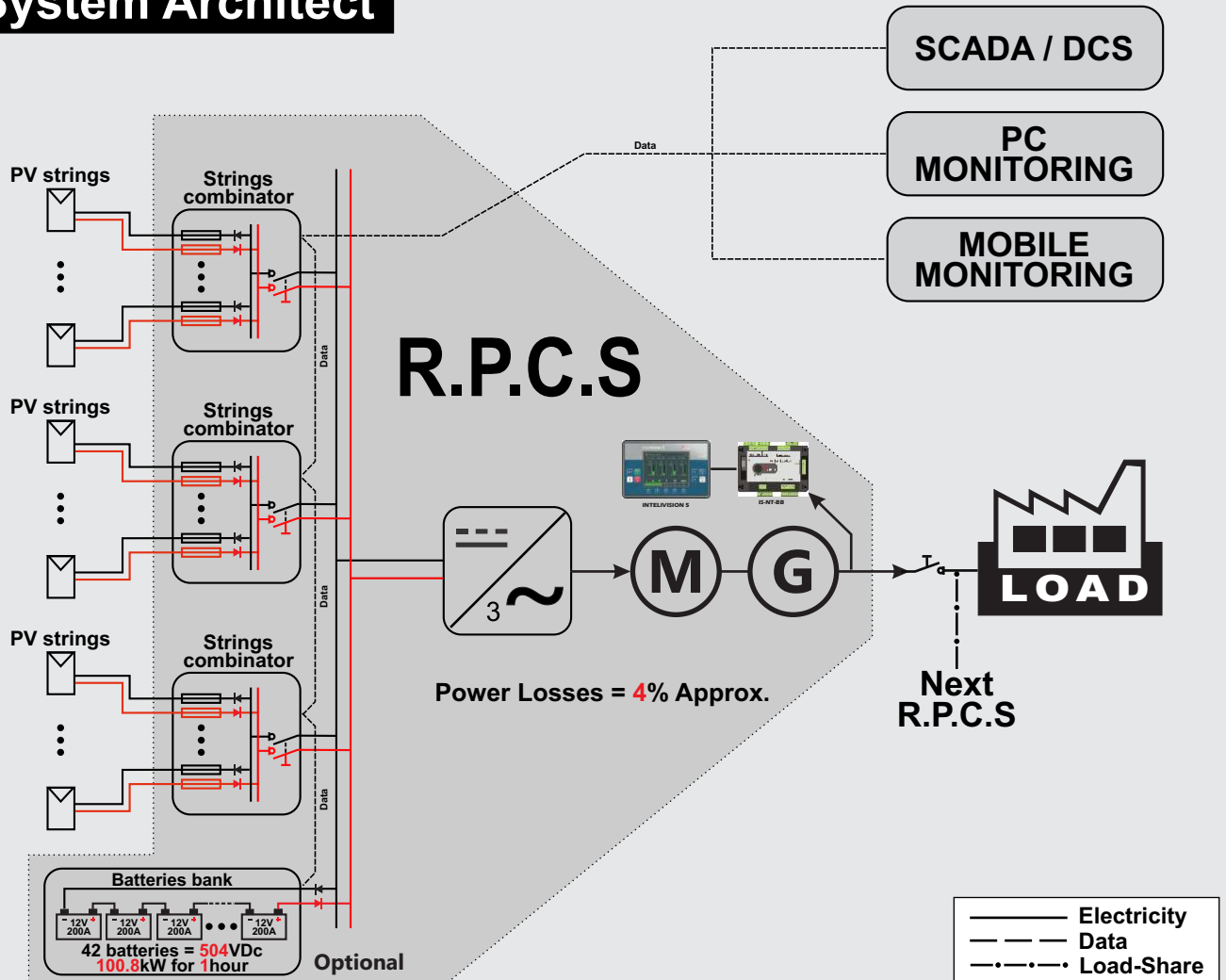


R.A's Green Series rotary power converters are designed after the decades of expertise in the field of power generation.

This system converts the solar generated DC power to 3-phase AC power without the need of batteries and the sensing of grid supply.

The system is modular designed and multiple units can be parallel as per requirement of the project.

System Architect



RPCS (Rotary Power Conversion System) System Visual

Here is the visual representation of a high-performance backup generator. RPCS delivers similar efficiency without the need for fuel, offering a clean, reliable, and cost-effective solution.



R.A HYBRID POWER SYSTEM



OPERATION PHILOSOPHY	PRIORITY
①	SOLAR
②	GRID
③	BESS
④	DIESEL
⑤	GAS

SYSTEM SLD

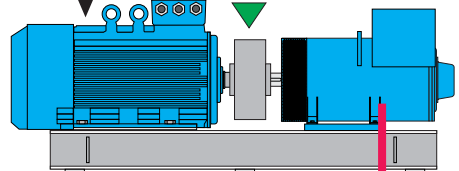
DC BUS
500VDC

AC BUS
500VAc
50Hz

MULTIPLE (UPTO 60) MOTOR GENERATORS PARALLEL ON AC BUS

500kW

FLY WEIGHT
for short time backup



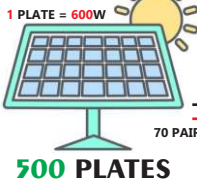
COMMON BUS
LOAD
400VAc
50Hz



MULTIPLE AC POWER SOURCES

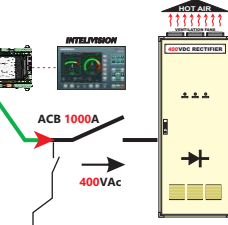
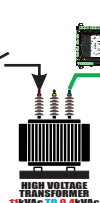
①

~300kW



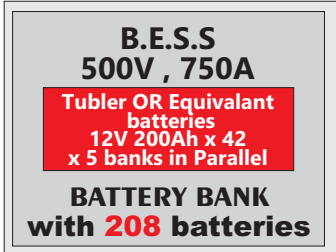
(OPTIONAL)

②



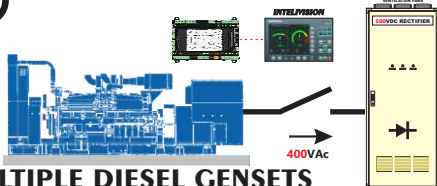
③

~500kW (Dc) for 1 hour

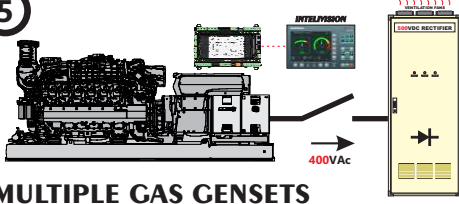


Additional BESS
As per required power

④



⑤



R.A HYBRID POWER SYSTEM

**RPCS (Rotary Power Conversion System) –
The Future of Power, With the Smoke free Country**



Smart Power Backup When Grid Failure – No Fuel, No Hassle!

Solar inverter built-in in the system, if you have a 500kW DC system or up to a 500kW. there is no need for an additional inverter after the RPCS installation.

What is RPCS?

RPCS (Rotary Power Conversion System) is a rotary Grid-based power solution designed to provide uninterrupted electricity during power of Failure without using Diesel, gas, or any other fuel — a smarter, more cost-effective alternative to traditional generators.

Why Choose RPCS?

- ✓ Runs Without Fuel: No need for diesel, or gas — ever.
- ✓ 50% Cost Savings: Cut your power cost in half compared to diesel solutions.
- ✓ High Efficiency:
Long-lasting energy output that powers your needs reliably.
- ✓ Eco-Friendly: Zero emissions, 100% sustainable.
- ✓ Low Maintenance Cost: Set it up and forget it. It's built to last.
- ✓ Smart Investment: Pay back your investment through energy savings!

2-Year Complete Warranty

We stand by our product. If any battery or part is damaged within 2 years, we'll replace or repair it — free of cost.

Cost Comparison

Standard Diesel Generator Usage Cost	RPCS (Rotary Power Conversion System) Cost Model
Rs $0.28 \times 500\text{KW} \times 273 \text{ days} \times 1 = 38,220$ Per Hour cost $\times 10,000$ Hours total life = 382,200,000 High cost + New Diesel Generator Cost Approximately 25 million PKR	Rs 35 From Grid Per Kw $\times 500\text{KW} \times 10,000$ Hours = 175,000,000 Half the cost for 10 years + System Approximately Price 38 million PKR Rs We deliver 1 hour per day. We have an option for up to 4 hours

Ready to Make the Switch?

Say goodbye to rising fuel prices and unreliable power. With RPCS, you get clean, reliable, and affordable energy — built for the future.



RPCS Uninterruptible Power Supply – Key Futures

- 1. 0 Switching Time – Instantly switches to backup with no delay.**
- 2. No ATS Needed – Continuously running without automatic transfer switch.**
- 3. Grid Power Purification – Power surge (spike) – Harmonic distortion – Power sag – Undervoltage (brownout) – Overvoltage – Electrical line noise – Frequency variation– Switching transient.**
- 4. Instant Backup Power – Keeps systems running during outages.**
- 5. Safe Shutdown – Allows time to save work before full shutdown.**
- 6. Clean Power Output – Ensures stable electricity for sensitive devices.**
- 7. No more loss of production.**
- 8. Productivity increased.**
- 9. Profitability ensured.**
- 10. No more wastage of raw material.**
- 11. Reduced wastage.**
- 12. Reduced unnecessary cost.**
- 13. No more loss of man-hours.**
- 14. No time loss on re-start of processes.**
- 15. Equipment protected from power issues.**
- 16. Equipment preserved.**
- 17. Reduced unnecessary breakdown & maintenance**

ComAp 

ABB
SIEMENS

GOVERNORS
AMERICA
CORP.



For more details please click the link below
www.raeng.com



Thanks for your time
(R.A. Engineering)