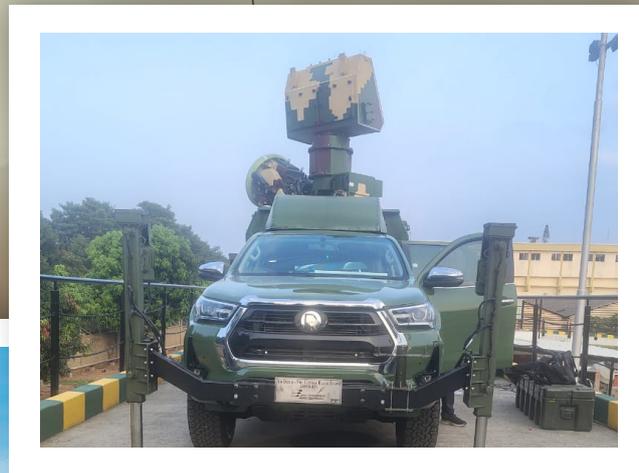


PHPL Defence Solution

Powering Missions, Securing Global Futures.



Perfect House Pvt. Ltd. (PHPL)

Company Overview –

Perfect House Pvt. Ltd. (PHPL) is a distinguished name in the field of energy systems and defence technology solutions. Established in **1957**, PHPL has been at the forefront of India's industrial and defence infrastructure growth for over six decades. Headquartered in Maharashtra, with **five advanced manufacturing facilities in Satara**, we have built a legacy of trust, innovation, and reliability, serving clients in both the public and private sectors.

We specialize in the design, manufacturing, and integration of **rugged power solutions** and **engineering systems** for mission-critical applications. Our expertise spans across **diesel, petrol and solar-based power generation, defence-grade automation systems, mobile field solutions**, and **custom-built military platforms**. As a **trusted Original Equipment Manufacturer (OEM)** partner to several global brands and a **recognized defence supplier**, PHPL is committed to advancing India's self-reliant defence capabilities under the "Make in India" initiative.

Our focus is on delivering **tailor-made, field-proven systems** that perform reliably under extreme environmental conditions—ensuring power availability, operational continuity, and security where it matters the most.

Core Offerings & Capabilities

Comprehensive Power Generation Solutions

PHPL's power systems are designed for **durability, mobility, and operational continuity**, especially in demanding field and combat scenarios. Our engineering focus is on delivering power solutions that perform reliably in **critical, remote, and hostile environments**.

Product Range:

- **Portable Gensets (1–5 kVA)**
Lightweight, field-deployable units designed for quick deployment and emergency response scenarios. Ideal for communication hubs, forward operating bases, and temporary field operations.
- **Standard Diesel Gensets (5–125 kVA)**
Engineered for heavy-duty defence applications such as Radars, Launchers, Tanks & Gun platforms, mobile hospitals, field offices, and tactical control centers. These units offer high uptime and ease of maintenance in challenging conditions.
- **High Horse Power Diesel Generators (Upto 4000 kVA)**
Designed for **large-scale power demands**, these generators serve **strategic installations, airbases, missile sites, and logistics hubs**. Built with advanced control systems, high fuel efficiency, and superior load handling capabilities, these systems are suitable for grid-independent operations and mission-critical infrastructures.
- **Twin Genset**
Static/trailer mounted Dual-generator systems with synchronization/Dual-AMF Panels for uninterrupted, redundant power. These are ideal for long-duration missions requiring 24x7 operations, load sharing, backup assurance and seamless load transfer during operation, maintenance or failure.

Special Defence Projects & Mission Vehicles

We collaborate with clients for customized engineering solutions:

- Tactical vehicle-based energy hubs
- Modular field shelters with integrated systems
- UAV launch and control trailers
- Command and surveillance vehicles

Sample Platform Specifications:

GVW: Up to 6,500 kg

Drive: Full-time 6x6 AWD

Height: 190 cm (low-profile for urban navigation)

Chassis: Modular to accommodate multiple payload types

Trailer Systems

To support mobile units and forward-operating bases, we manufacture **custom trailers with payload capacity upto 6 Tonne. Milgrade approved trailers also available.**

- **Two-Wheeled Trailers:** Lightweight, compact, and suitable for field lighting, communications, and rapid logistics deployments.
- **Four-Wheeled Trailers:** High-load trailers designed for extended field usage, long-term infrastructure support, and modular installations.

Battery Charging and Energy Management Systems

Integrated battery charging systems that enhance operational sustainability and energy resilience:

- **MIL-Grade DC Chargers:** Remote control-enabled, designed for armoured vehicles, field shelters, and equipment bays.
- **Smart Charging Systems:** Battery health analytics, voltage/current monitoring, and predictive maintenance features.
- **Solar-Integrated Modules:** For silent, emission-free charging in remote operations or covert missions.

Advanced Defence Equipment Portfolio

Beyond energy systems, PHPL manufactures and integrates cutting-edge equipment for modern warfare and defence logistics:

- **Thermal Imagers:**
 - o **Cooled:** High-resolution thermal optics for long-range precision and reconnaissance.
 - o **Uncooled:** Lightweight, cost-effective solutions for navigation and perimeter monitoring.
- **Unmanned Aerial Vehicles (UAVs):** For ISR (Intelligence, Surveillance & Reconnaissance) missions, equipped with HD video, GPS, and night vision.
- **Outboard Motors:** Designed for rapid maritime deployment, amphibious operations, and special naval missions.
- **Mobile Lighting Towers (MLTs):** High-lumen, fuel-efficient towers for night-time base operations, airfields, and emergency zones.

Strategic Defence Engagements & Credentials

Defence Supplier Accreditation

- Registered and approved by **Directorate General of Quality Assurance (DGQA)**, **Directorate General of Ordnance Services (DGOS)**, and **Indian Air Force Headquarters (Air HQ)**.
- Active participation in classified and open tenders, with a successful track record of supply and service to Indian defence establishments.

Training & Technical Support Programs

We provide specialized training to defence personnel for:

- Genset operations and diagnostics
- Predictive and preventive maintenance
- Tactical energy deployment and troubleshooting

Environmental Validation & Testing

All defence-grade equipment undergoes rigorous field and lab testing in compliance to various Standards such as CQAL 640, JSS 55555, JSS 6115, MIL STD 461 etc:

- Validated for operation from **-40°C to +70°C**
- Dust, humidity, salt spray, and vibration tested
- Proven reliability in **Arctic, Desert, and Tropical** theatres

Our Defence-Centric Engineering Solutions

Rugged Diesel Generator Sets

Built for uninterrupted power supply in challenging environment.

Key Defence Applications:

Missile launch platforms
Remote radar stations
Mobile command and control vehicles
Emergency field hospitals

Salient Features:

Low acoustic and infrared signature
Fuel-optimized for long field missions
High-altitude adaptability
Compact for helicopter/airlift deployment

Advanced Automation & Control Panels

Automation solutions that ensure **situational awareness, operational continuity, and power safety.**

Features:

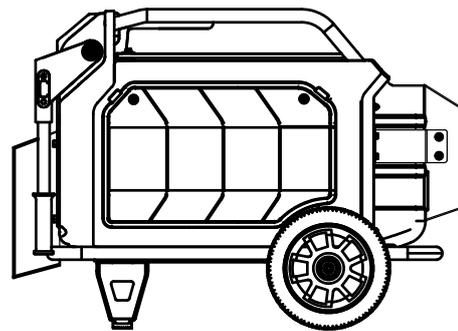
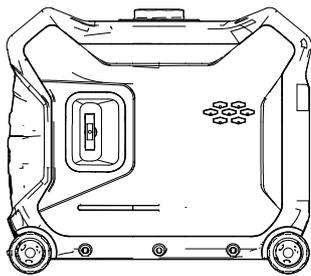
Redundant microprocessor control
SCADA compatibility
EMI-hardened enclosure design
Remote diagnostics via secure protocols

Capabilities:

- EMI/RFI shielding
- Dual redundant power pathways
- Load sharing and failover systems
- Adaptive control algorithms

Technical Specifications - 0.75kVA - 20 kVA (Petrol)

Prime Rating at rated rpm (as per ISO8528) ¹	kVA	0.75	0.80	2.8	5	7	10-20
	kW	0.6	0.64	2.24	4	5.6	8-16
Frequency		50	50	50	50	50	50
Power Factor		0.8	0.8	0.8	0.8	0.8	0.8
Voltage		230 (1φ)	230 (1φ)	230 (1φ)	230 (1φ) & 415 (3φ)	230 (1φ) & 415 (3φ)	230 (1φ) & 415 (3φ)
Governing class (As per ISO 8528 Part-V)		G2	G2	G2	G2	G2	G2
Noise level as per latest CPCB Norms	dBA	<86	<86	<86	<86	<86	<86
Oil Alert System		Yes	Yes	Yes	Yes	Yes	Yes
Displacement CC		98	56	208	389	982	999
Fuel tank capacity (Standard DG set)	Ltrs	7.5	7.5	10 / 12.5	14 / 20	20	108
Weight of genset with canopy (approx..)^	Dry	Kg	45	45	45	90	325
	Wet (w/o fuel)	Kg	47	47	47	95	330
Overall dimensions of genset ^ (Approx)^	Length	mm	455	336	600	700	1350
	Width	mm	360	327	450	510	750
	Height	mm	375	306	510	550	1058
Manual / Electrical Battery Starting Voltage	Volts-DC	Electric (12V) / Manual	Electric (12V)				

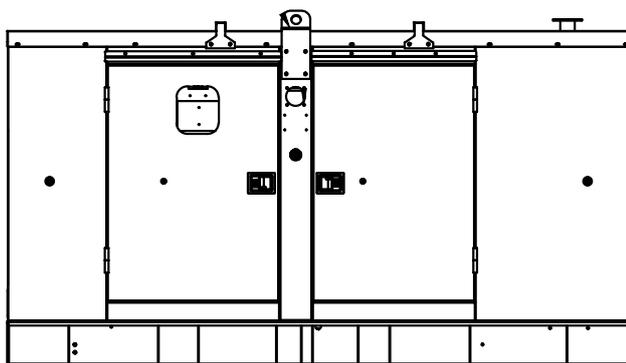
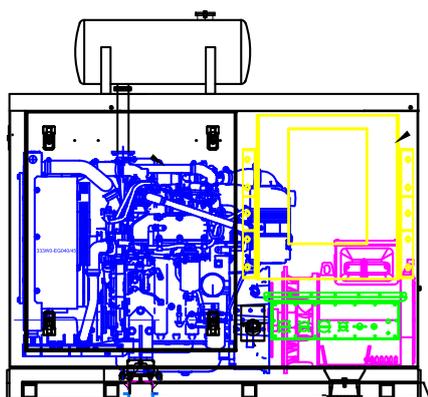


NOTES:

- 1) Standard PG Set Dimensions & Weight Are Mentioned Above - Same Can Be Customized As Per Requirements
- 2) ^ Tolerance Apply
- 3) Weights mentioned are for handling & Transportation only
- 4) Emission & Noise - As per Latest CPCB Norms
- 5) Compliance to Defence Standards - JSS 6115-27, JSS 55555, CQAL 640 & EMI-EMC as per MIL STD 461.
- 6) Above specification are subject to change without prior notice due to continuous technical developments.
- 7) For intermediate ratings & site operating conditions kindly contact PHPL directly.
- 8) **In-service variants available.**

Technical Specifications - 10 kVA - 62.5 kVA (Diesel)

GENSET										
Power (kVA)	10	15	20	25	30	35	40	45	50	62.5
Genset model	PECH-10-SP / Equivalent	PECH-15-SP / Equivalent	PECH-20-SP / Equivalent	PECH-25-SP / Equivalent	PECH-30-SP / Equivalent	PECH-35-SP / Equivalent	PECH-40-SP / Equivalent	PECH-45-SP / Equivalent	PECH-50-SP / Equivalent	PECH-62.5-SP / Equivalent
Duty	Prime	Prime	Prime	Prime	Prime	Prime	Prime	Prime	Prime	Prime
Control Panel	Option Available for AMF / ATS / Synchronisation / Manual Control									
Acoustic Insulation	PU FR-Acoustic Foam									
DG Dimensions in mm	STANDARD DG SET DIMENSIONS & WEIGHT ARE MENTIONED BELOW - SAME CAN BE CUSTOMIZED AS PER REQUIREMENTS									
L (approx.) [^]	1800	1800	2050	2050	2250	2250	2350	2350	2500	2500
B (approx.) [^]	900	900	900	900	1000	1000	1000	1000	1100	1100
H (approx.) [^]	1275	1275	1275	1275	1425	1425	1425	1425	1575	1575
Fuel Tank Capacity (ltr).	75	80	100	100	100	100	100	100	125	125
Weight of DG Set (Kg) (approx.) [^]	890	900	910	1050	1200	1225	1270	1330	1470	1470
ENGINE										
Engine Model	115A0-EG010 / Equivalent	220A0-EG015 / Equivalent	329A0-EG025 / Equivalent	329A0-EG025 / Equivalent	329A0-EG030 / Equivalent	329A0-EG035 / Equivalent	333W0-EG040 / Equivalent	333W0-EG045 / Equivalent	333W0-EG060 / Equivalent	333W0-EG060 / Equivalent
No. of Cylinders	1	2	3	3	3	3	3	3	3	3
Aspiration	Naturally Aspirated / Turbo Charged					Turbo Charged Inter-cooled				
Reference Standard	Engine-BS:5514, ISO:3046, IS:10000, Genset - ISO:8528									
Displacement (cc)	1558	1963	2945	2945	2945	2945	3298	3298	3298	3298
Compression Ratio	18:01	17:01	17:01	17:01	17:01	17:01	17.5:1	17.5:1	17.5:1	17.5:1
Type/Class of Governing	Mechanical/G2					Electronic/G3				
Bore x Stroke (mm)	115x150	100x125	100x125	100x125	100x125	100x125	108x120	108x120	108x120	108x120
Type of Cooling	Air Cooled						Water Cooled			
Lub Oil Sump Capacity (with filters)	7.5	8	9.5	9.5	9.5	9.5	7.5	7.5	7.5	7.5
Engine Electrical System	12V									
ALTERNATOR										
Phase	1 Phase-2 wire / 3 Phase-4 wire									
Voltage	240 V AC / 415 V AC									
Power Alternator Type	Single Bearing, Brushless, Single/Three Phase, Insulation Class H, Voltage regulation +/- 1%, make - CG/Leroy Somer/Macalste/Stamford/ Equivalent									
Power Factor	0.8 lag									
Insulation Class	Class H									
Rated Speed / Frequency	1500 RPM / 50 Hz									



NOTES:

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- 8) **In-service variants available.**

Technical Specifications - 82.5 kVA - 320 kVA (Diesel)

Prime Rating at rated rpm (as per ISO8528) ¹		kVA	82.5	100	125	140	160	200	250	320
		kW	66	80	100	112	128	160	200	256
Genset Model			PHPL - 82.5 / Equivalent	PHPL - 100 / Equivalent	PHPL - 125 / Equivalent	PHPL - 140 / Equivalent	PHPL - 160 / Equivalent	PHPL - 200 / Equivalent	PHPL - 250 / Equivalent	PHPL - 320 / Equivalent
Duty			Prime							
Frequency			50	50	50	50	50	50	50	50
Power Factor			0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
Voltage			415 (3φ)							
Governing class (As per ISO 8528 Part-V)			G3							
Noise level		dB(A)	<75							
Fuel Consumption*	At 100% Load	Ltrs/hr	17.0	21.9	25.5	31	36.6	48.1	55.7	69.7
	At 75% Load		13.2	16.9	19.9	24	27.7	37.4	42.3	53.8
	At 50% Load		8.9	12	14.1	17	19.1	26.4	30.5	36
Fuel tank capacity (Standard DG set)		Ltrs	200	230	230	315	400	400	600	600
DG Dimensions in mm			STANDARD DG SET DIMENSIONS & WEIGHT ARE MENTIONED BELOW - SAME CAN BE CUSTOMIZED AS PER REQUIREMENTS							
Weight of genset with canopy (approx.) [^]	Dry	Kg	1800	2170	2200	2590	2980	3080	3990	4090
	Wet (w/o fuel)	Kg	1860	2230	2260	2655	3050	3150	4100	4200
Overall dimensions of genset [^]	Length	mm	3200	3200	3200	3700	4200	4200	4750	4750
	Width	mm	1350	1350	1350	1400	1450	1450	1700	1700
	Height	mm	1595	1800	1800	1850	1900	1900	2005	2005
Electrical Battery Starting Voltage		Volts-DC	12 / 24							
ENGINE (approx.)[^]										
Rated output (Prime Continuous rating as per ISO 8528-1)		kW	77	115	115	147	147	184	228	279
		HP	105	156	156	200	200	250	310	380
No. of cylinder		Number	4	4	4	6	6	6	6	6
Cubic capacity ²		Ltrs	4.80	4.30	4.30	7	6.50	6.50	8.86	8.86
Bore x Stroke		mm	110 x 125	105 x 125	105 x 125	105 x 125	105 x 125	105 x 125	118 x 135	118 x 135
Rated Speed		RPM	1500	1500	1500	1500	1500	1500	1500	1500
Aspiration		NA/TC/TA	TA	TA	TA	TA	TA	TA	TA	TA
Lube Oil change period		hrs.	500	500	500	500	500	500	500	500
Lube oil Sump Capacity (max)		Ltrs	10	14	14	25	25	25	27	27
Coolant Capacity (Engine + radiator)		Ltrs	13	15	15	44	44	44	35	35
Adblue/ DEF capacity		Ltrs	25	25	25	45	45	45	45	45
ALTERNATOR (approx.)[^]										
Insulation Class			Class H							
Phase			3 Phase-4 wire							
Voltage			415 V AC							
Power Alternator Type			Three Phase, Insulation Class H, Voltage regulation +/- 1%, make - CG/Leroy Somer/Macalthe/Stamford/Equivalent							
Power Factor			0.8 lag							
Insulation Class			Class H							
Rated Speed / Frequency			1500 RPM / 50 Hz							

NOTES:

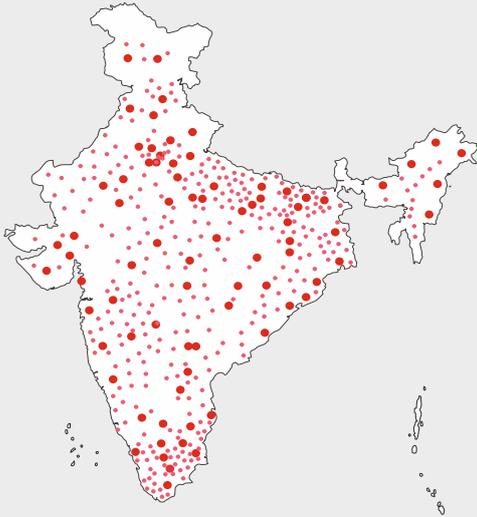
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- 8) **In-service variants available.**

Technical Specifications - 400 kVA - 4000 kVA (Diesel)

Prime Rating at rated rpm (as per ISO8528)		kVA	400	500	625	750	1010 - 4000
		kW	320	400	500	600	808 - 3000
Genset Model			PHPL - 400 / Equivalent	PHPL - 500 / Equivalent	PHPL - 625 / Equivalent	PHPL - 750 / Equivalent	PHPL / Equivalent
Frequency			50	50	50	50	50
Power Factor			0.8	0.8	0.8	0.8	0.8
Voltage			415 (3 ϕ)				
Governing class (As per ISO 8528 Part-V)			G3				
Noise level		dB(A)	<75				
Fuel Consumption* (approx)	At 100% Load	Ltrs/hr	86.9	105.6	130.5	154	Multiple
	At 75% Load		65.1	82.6	98.6	126.4	Multiple
	At 50% Load		46.0	58.6	66.2	89.7	Multiple
Fuel tank capacity (Standard DG set)		Ltrs	850	850	990	990	990
DG Dimensions in mm			STANDARD DG SET DIMENSIONS & WEIGHT ARE MENTIONED BELOW - SAME CAN BE CUSTOMIZED AS PER REQUIREMENTS				
Weight of genset with can	Dry	Kg	6220	6240	8150	8760	Multiple
	Wet (w/o fuel)	Kg	6350	6430	8450	9050	Multiple
Overall dimensions of genset ^	Length	mm	5575	5575	6500	6800	Multiple
	Width	mm	2125	2125	2125	2300	Multiple
	Height	mm	2610	2610	2710	2715	Multiple
Electrical Battery Starting Voltage		Volts-DC	24				
ENGINE (approx.)^							
Rated output (Prime Continuous rating as per ISO8528)		kW	360	447	561	662	Multiple
		HP	490	608	763	900	Multiple
No. of cylinder		Number	8	8	10	12	Multiple
Cubic capacity ²		Ltrs	15.92	15.92	19.90	23.88	Multiple
Bore x Stroke		mm	130 x 150	130 x 150	130 x 150	130 x 150	Multiple
Rated Speed		RPM	1500	1500	1500	1500	Multiple
Aspiration		NA/TC/TA	TA	TA	TA	TA	Multiple
Lube Oil change period		hrs.	500	500	500	500	Multiple
Lube oil Sump Capacity (max)		Ltrs	40	40	50	73	Multiple
Coolant Capacity (Engine + radiator)		Ltrs	55	60	72	145	Multiple
Adblue/ DEF capacity		Ltrs	45 x 2	45 x 2	45 x 2	45 x 2	Multiple
ALTERNATOR (approx.)^							
Insulation Class			Class H				
Phase			3 Phase-4 wire				
Voltage			415 V AC				
Power Alternator Type			Phase, Insulation Class H, Voltage regulation +/- 1%, make - CG/Leroy Somer/Macalste/Stamford/Equi				
Power Factor			0.8 lag				
Insulation Class			Class H				
Rated Speed / Frequency			1500 RPM / 50 Hz				

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✉ marketing.defence@perfectgenset.com

Factories

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