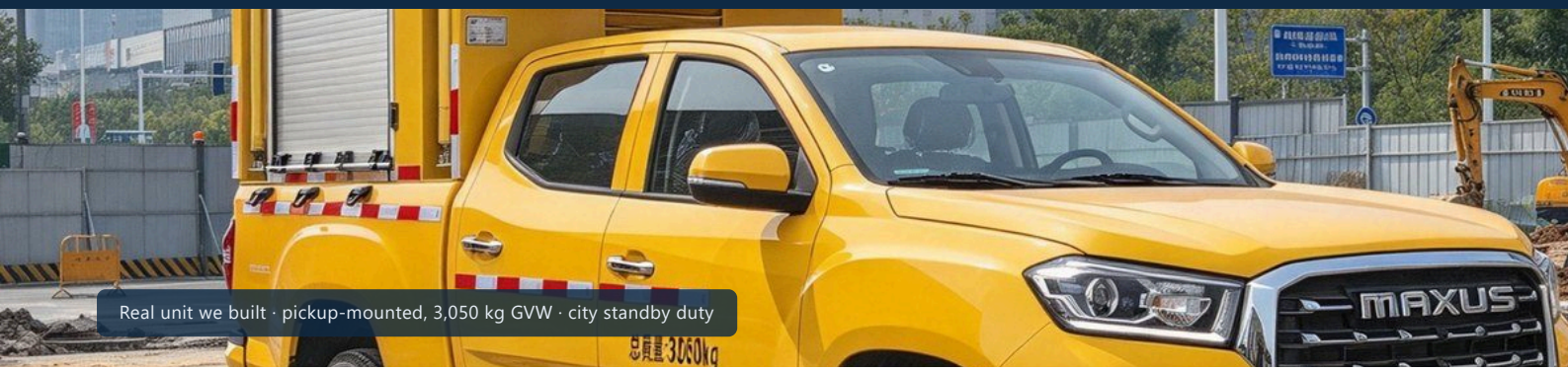


Real unit we built · pickup-mounted, 3,050 kg GVW · city standby duty

HEALTHCARE · STANDBY & TEMPORARY SUPPLY

Hospital standby power, sized on what cannot stop

A mobile unit is not power from zero — it covers the fixed set that failed, the overhaul window, or the wing still being commissioned.

The number that matters is critical plus fire load, not transformer kVA. A 400–600 bed hospital lands at 200–500 kW, because theatres, ICU, blood bank, medical lifts and fire loads are only 25–35% of installed capacity. The UPS owns the first 15–30 minutes; the vehicle owns the hours after it.

LOAD TIERS IN A GENERAL HOSPITAL

Load tier	Share	Interruption	Vehicle carries
Vital — theatres, ICU, blood bank, DSA	20–30%	0 s (UPS)	After the battery
Fire — pumps, smoke extract, fire lifts	10–15%	≤15 s	Yes, first
Essential — lifts, lab, imaging	20–25%	≤30 s	Capacity-dependent
General — HVAC, kitchen, laundry	35–45%	1–2 h	Normally no

WHAT DECIDES THE PROJECT

- **Connection point.** A rapid connection box means no mains outage; a spare LV breaker costs 5–15 minutes of downtime.
- **Exhaust and noise.** Keep 10 m from ward windows and fresh-air intakes; 55 dB(A) at the boundary against 65–70 dB(A) at 7 m.
- **Harmonics.** CT, MRI and inverter chillers push THDi to 25–35% — derate the set to 0.85 before sizing.
- **Acceptance.** 100% for 2 h plus 110% for 1 h, two transfer drills including one at night, 8 h endurance with a refuel.

200–500 kW
typical mobile rating for 400–600 beds

≤15 s
fire loads restored after transfer

25–35%
of installed capacity is critical + fire

Set and controls

Engine and alternator for mobile duty, deep-sea controller, full-load test before shipment.

On-board electrical

Switchgear, cable reel, quick connectors, earthing kit, outriggers.

Documents

English manual, wiring diagram, load-test report, spare parts list.

TALK TO AN ENGINEER, NOT A CALL CENTRE

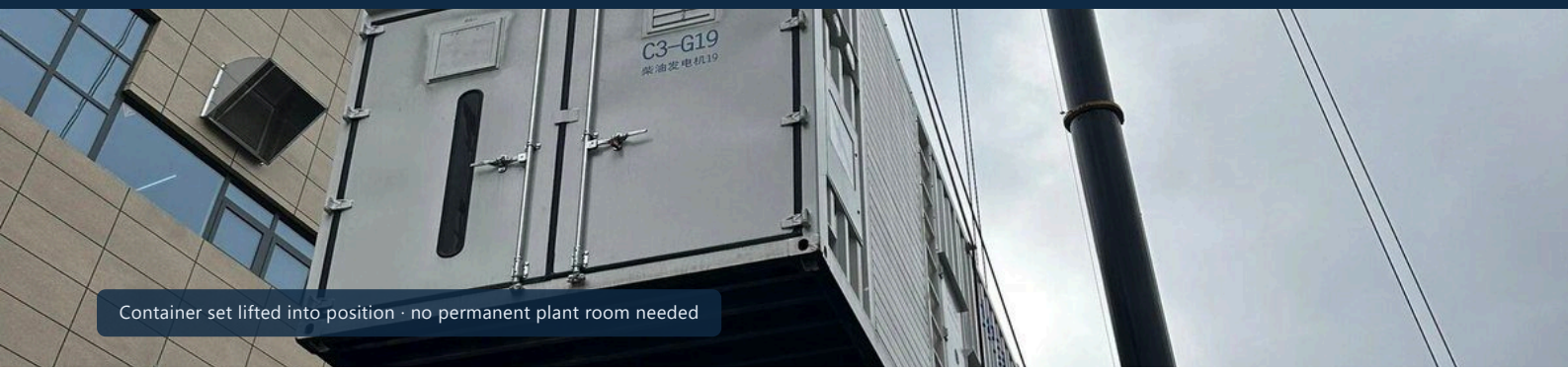
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QL8899@hotmail.com · WhatsApp / WeChat: same number

Liuzhou, Guangxi, China · FOB Qinzhou / Fangchenggang / Shenzhen
50 / 60 Hz · CE configurations on request · English manuals and load-test report

Full page & specs

Indicative scope and ratings for discussion, not a quotation. Final selection follows the hospital load calculation and site survey. Prices on request, FOB China, valid 30 days, excluding freight, duties and taxes.



Container set lifted into position · no permanent plant room needed

DATA CENTRES · OUTAGE, OVERHAUL & EXPANSION

Data centre backup power: the UPS step sets the size

N+1 generation still fails together. A mobile unit is the independent source that shares no fuel path, control system or safety boundary with the campus.

Total kW is not the constraint — the step load is. 1 MW of IT at PUE 1.4 needs 1,600–2,000 kW of mobile generation, because the rectifiers can jump from 0 to 80% in 100 ms. Size at 1.4–1.6× the UPS rating unless the UPS has a confirmed walk-in ramp.

SIZING AGAINST UPS STEP LOAD

UPS rating	Rectifier load	Set without ramp	Set with walk-in
400 kVA	360 kW	500–630 kW	400–500 kW
800 kVA	720 kW	1,000–1,250 kW	800–1,000 kW
1,200 kVA	1,080 kW	1,600–2,000 kW	1,250–1,600 kW
2 × 800 kVA	1,440 kW	2 × 1,000 kW	2 × 800 kW
2 × 1,000 kVA	1,800 kW	2,500–3,000 kW	2,000–2,500 kW

WHAT DECIDES THE PROJECT

- **Harmonics.** Six-pulse rectifiers give 25–30% THDi; derate to 0.85 above 20% and 0.70–0.75 above 30%. Specify PMG or AREP excitation.
- **10 kV connection.** Three actions before energising: phase check, protection coordination, anti-islanding with back-feed interlock.
- **Chiller plant.** 30–40% of site load; delay it 30–60 s in the BMS so the start does not coincide with the UPS step.
- **Cable.** At 1 MW, LV needs 4 × (3 × 240) mm² at 3–4% drop per 100 m; 10 kV needs 3 × 95 mm² at under 0.5%.

1.4–1.6×
UPS rating without a walk-in ramp

0.85
derating factor at 25–30% THDi

<0.5%
volt drop per 100 m on 10 kV

Set and controls

Engine and alternator for mobile duty, deep-sea controller, full-load test before shipment.

On-board electrical

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Documents

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Ratings are engineering ranges for discussion; final sizing follows the UPS manufacturer generator-compatibility table and a site step test. Prices on request, FOB China, valid 30 days, excluding freight and duties.



Trailer-mounted stations · split between stage, FOH and broadcast

CONCERTS · FESTIVALS · STADIUM EVENTS

Event power: sizing that avoids a blackout

A site loses schedule when the power fails; a show loses the audience and the broadcast. Load profile, transfer speed and noise decide it.

A 5,000-capacity outdoor show lands at 350–500 kW — two 250 kW in parallel or one 500 kW, plus a UPS on the mixing desk, radio mics, timing and broadcast. Never add up nameplate wattages: lighting runs at 60–70% simultaneity while triac dimmers pull power factor below 0.7.

LOAD BY VENUE TYPE

Venue	Lighting	Audio + LED	Design load
Club / atrium 500	60–100 kW	30–50 kW	120–180 kW · 1 × 200
Festival 5,000	200–300 kW	80–120 kW	350–500 kW · 2 × 250
Stadium 30,000	500–800 kW	200–300 kW	800–1,200 kW · 2 × 630
Broadcast	+100–150 kW	+80 kW	reserve 200 · own bus + UPS

WHAT DECIDES THE PROJECT

- **Three factors.** Simultaneity 0.6–0.7, power factor 0.7, margin 1.15 — up to 40% away from the nameplate sum.
- **Transfer.** Audio ≤10 ms on UPS, lighting ≤0.5 s, LED walls 1–2 s. Two independent buses, never paralleled with mains.
- **Noise.** Boundaries are typically 55 dB(A) at night: 50 m plus a 2 m barrier, not thicker canopy panels.
- **Cable.** 185 mm² drops 1.8% per 100 m at 200 kW; beyond 150 m step up or split the generation.

350–500 kW
design load for a 5,000-capacity show

≤10 ms
audio transfer on UPS

50 m
minimum vehicle-to-audience distance

Set and controls

Engine and alternator for mobile duty, deep-sea controller, full-load test before shipment.

On-board electrical

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Documents

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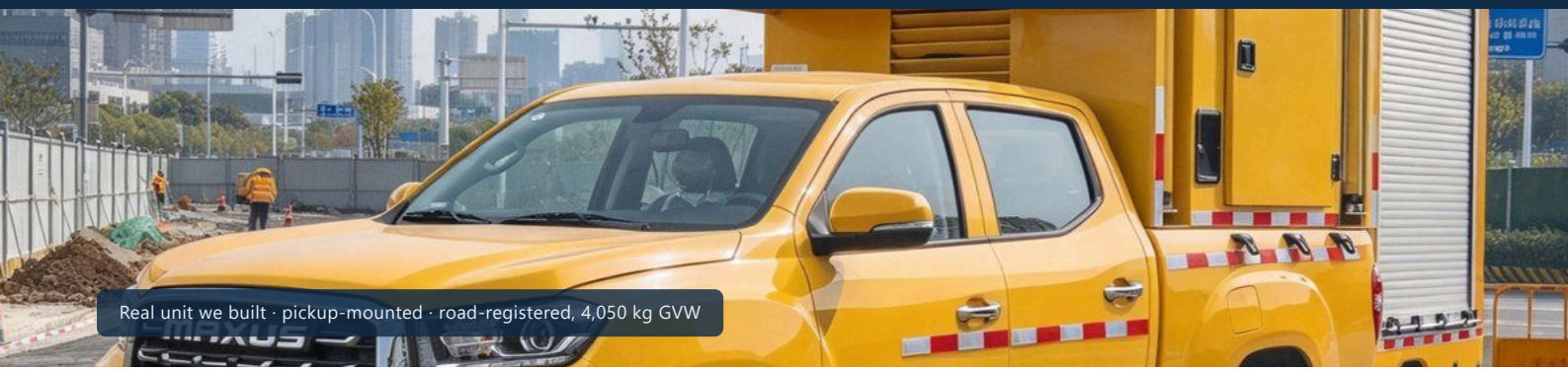
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Load figures assume a conventional lighting rig; confirm against the lighting plot and LED area. Prices on request, FOB China, valid 30 days, excluding freight, duties and local permits.



Real unit we built · pickup-mounted · road-registered, 4,050 kg GVW

DISASTER RESPONSE · FIELD CAMPS · BORDER POSTS

Emergency response power: minutes to first load

In response work the metric is not kilowatts. It is how long between arrival and load — and whether the unit starts at −25 °C with dust in the intake.

> **Task sets the rating, not the fleet size:** 30–80 kW for command and comms, 50–100 kW for a field medical point, 100–200 kW for a camp, 200–400 kW for equipment support. A pre-heated trailer unit is on load in about 10 minutes with two people.

RATING AND FORMAT BY TASK

Task	Rating	Format	Endurance
Command post / comms relay	30–80 kW	Pickup or trailer	24 h+
Field medical point	50–100 kW	Trailer, acoustic canopy	12–24 h
Border post / checkpoint	20–50 kW	Trailer or cart	8–12 h
Displacement camp	100–200 kW	Truck-mounted	12–24 h
Heavy equipment support	200–400 kW	Medium truck / container	8–12 h

WHAT DECIDES THE PROJECT

- **Connectors decide the clock.** Aviation plugs on pre-made cable take 5–10 minutes; bolted lugs take 30–60 and need tools and torque.
- **Environment.** −25 °C cold start with jacket and oil heaters, IP5X with cyclone pre-cleaner, C4 corrosion for coastal duty, baffled tank for off-road transport.
- **Redundancy.** Two 200 kW units survive better than one 400 kW: lose one and half the critical load still runs. Paralleling needs check-sync, not a cable joint.
- **Export.** Sets ship under HS 8502; trailers avoid vehicle approval in most markets. Defence or police end use is handled with end-user documentation and export-control clearance.

10 min
to first load, pre-heated trailer, two people

−25 °C
cold start with heater package

HS 8502
export classification for generating sets

Set and controls

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For discussion only. Defence, border and government emergency projects are subject to end-user documentation and export-control review before quotation. Prices on request, FOB China, valid 30 days.