

Grid-first EV Charging Technology

Prime Grid Gateway

The Prime Grid Gateway (Prime) is the core of the Kwetta charging solution. The Prime unit combines a Ring Main Unit (RMU), transformer, power electronics, high voltage (HV) metering and supporting equipment in a single robust stainless steel enclosure.

Each Prime can provide eight DC charging channels supporting up to 8x 200 kW dispensers (this can be increased to 32 or more dispensers where dynamic sequential charging is used for fleet vehicles). The DC output channels from a Prime can be used individually, or joined together to support 400 kW, 600 kW, 800 kW or even 1.2 MW outlets.

Battery Energy Storage System

Kwetta's 261 kWh Battery Energy Storage System (BESS) provides scalable, on-site energy storage engineered for high-power charging and site power management. Each unit delivers up to 165 kW peak and 130 kW continuous output, pairing directly with Prime, leveraging its power electronics, to enable EV charging grid offset, local network support, and future grid services.



Sky Series Charging Dispensers

Kwetta Sky Pillar: Dual 1.2 MW Liquid-Cooled Cable MCS/CCS2
400 kW Liquid-Cooled Cable CCS2
Dual 2x 200 kW CCS2

Kwetta Sky Pod: 200/400 kW CCS2 Gantry

Kwetta Sky Hook: Dual 2x 200 kW CCS2
200 kW CCS2
100 kW CHAdeMO

Kwetta's Sky Series EV charging dispensers provide flexible, DC-fed vehicle connection points designed for high-power fleet and infrastructure charging. Supporting applications from depot charging through to megawatt-scale deployments, the Sky Series enables scalable infrastructure for buses, trucks, and commercial vehicles.

Sky Hook is Kwetta's flagship dispenser, designed for CPOs delivering high-throughput public charging, with Dual Sky Hook adapted for overnight depot charging. Sky Pillar serves heavy-duty truck charging, while Sky Pod's mountable gantry design suits depot fleet charging rows, keeping the depot floor clear of standing infrastructure if required.

Sky Series dispensers are engineered for long-life operation in demanding conditions and are suitable for both indoor and outdoor installations.



Kwetta Hardware

Engineered for reliability



Long-life assets

- High-quality hardware components sourced from expert suppliers and leading manufacturers
- Global supply chain network giving flexibility to adapt sourcing
- Prime Grid Gateway: 20-year design life
- Grid Power Modules: 10-year, concurrently maintainable, upgradable
- Sky Series dispensers: 10-year industrial-grade build

Resilient architecture

- Supports N-1 redundancy across grid, power & dispensers
- Graceful degradation: faults isolate, charging continues
- Enable Megawatt scale sites
- Integrated security features

Smart monitoring

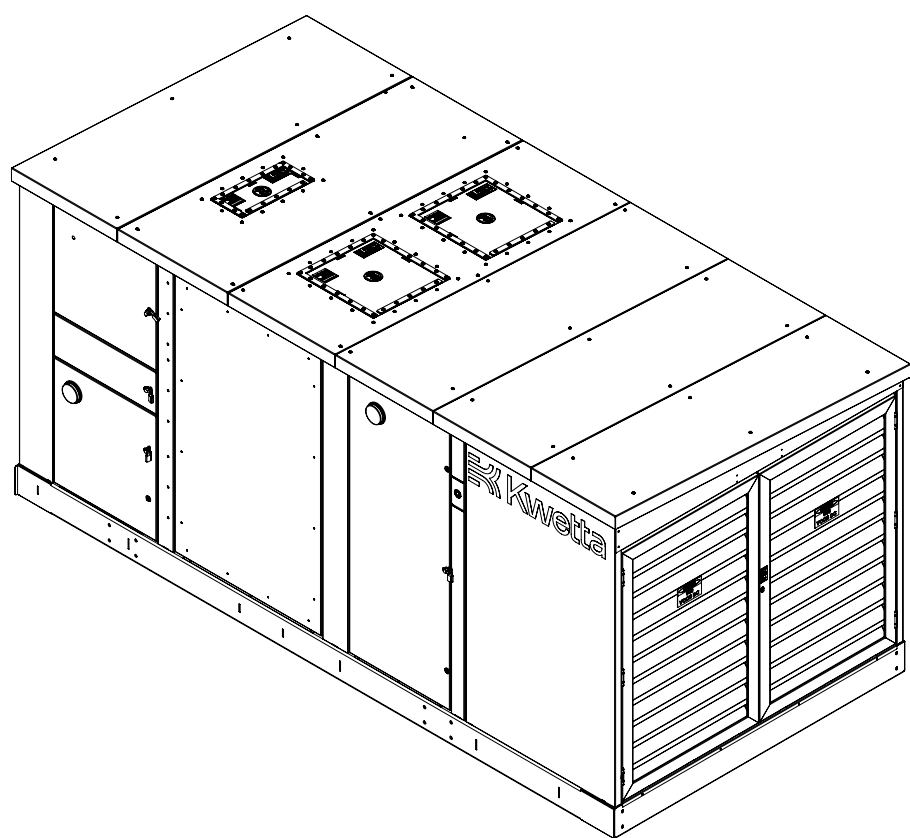
- Integrated protection, metering & power quality monitoring
- Environmental sensors (temperature, humidity, smoke, pressure)
- Intelligent airflow & filter monitoring for proactive servicing
- Continuous remote visibility into system health

Proven performance

- Continuous full power operation -25 °C to +50 °C without derating
- HALT validated: -45 °C to +100 °C temperature cycled, Vibration tested up to 50 Grms
- HASS screened: GPM Burn In at +55 °C
- 99.8% uptime in current deployments

Kwetta Prime Grid Gateway 1.2 MW

(Prime) Specifications



High Voltage Input

Nominal Input Voltage	6 to 22 kV
Max Prime units per HV Connection	10 at 11 kV 20 at 22 kV
Max Working Voltage [Ur]	10 kV-class: 12 kV 20 kV-class: 24 kV
Power Frequency Withstand [Ud]	10 kV class: 28 kV 20 kV class: 50 kV
BIL	10 kV-class: 75 kV 20 kV-class: 125 kV
Short-time current [Ith]	20 kA for 1 s
Rated dynamic current [Idyn]	Up to 2.5x Ir
Rated frequency [Fr]	50 Hz ±10%
Rated power	1.2 MVA
Power factor at full load	0.99
Total Harmonic Distortion (THDi)	<2.2%
Idle power	2.5 kW
HV interface	Eaton Xiria 24 kV, 630 A RMU
Revenue metering	Optional Distribution Network approved HV AC metering with dedicated distribution metering enclosure.

Low Voltage DC Output

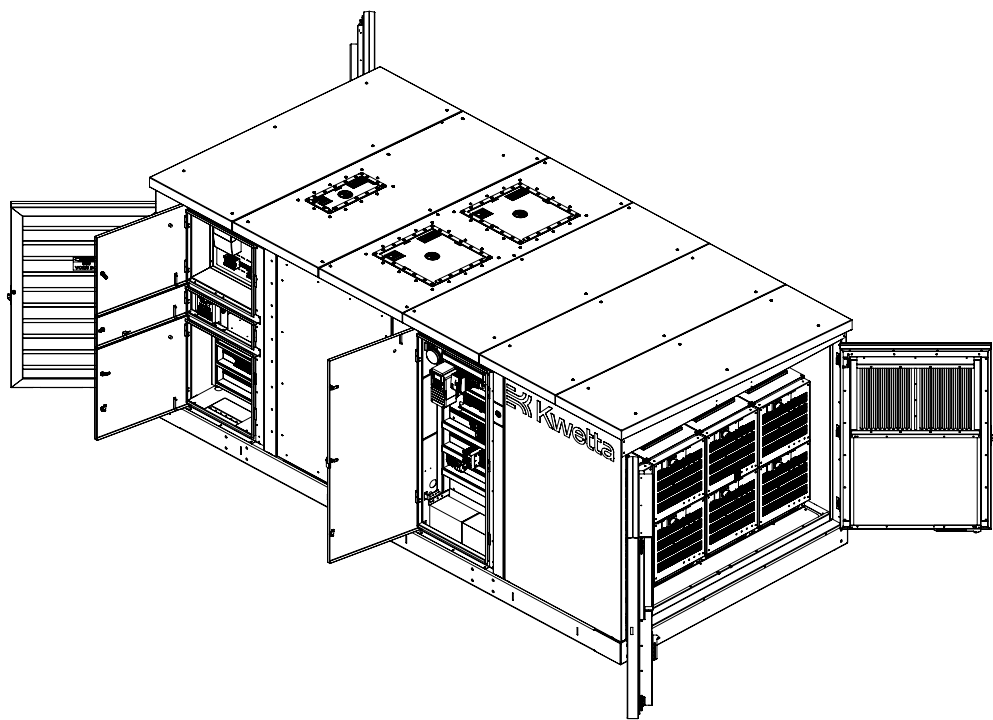
Number of charging stations	Up to 8x charging station channels
Rated current	500 A per charging station channel continuous
Rated power	200 kW per charging station channel continuous
Voltage range	0 to 920 V DC
Efficiency at full load	>97% from AC LV (for comparison) >96% HV to DC

Low Voltage DC Output - MCS > 1000 V

Number of charging stations	Up to 4x charging station channels
Rated current	500 A per charging channel. Channels can be paralleled
Rated power	400 kW per charging channel
Voltage range	0 to 1500 V DC
Efficiency at full load	>97% from AC LV (for comparison) >96% from HV (total system)

Kwetta Prime Grid Gateway 1.2 MW

(Prime) Specifications (Continued)



Low Voltage AC Output

Output Voltage**	400 V AC $\pm 10\%$ 3 Phase TN-C-S 50 Hz
Included Distribution Board Rated Power	20 A (14 kVA) MCB. 10 poles of spare DIN rail space
External Auxiliary Supply	Supported option; must be specified at time of order Max Breaker Rating 150 kVA (~215 A at 400 V AC)

[**] Note: Voltage characteristics are common with, and tied to, the same characteristics on the HV input

Mechanical

Conforms to	EN 13155:2020 (Non-fixed load lifting attachments)
Length	4.5 m
Width	2.2 m
Height	2.15 m
Weight	6,500 kg
Materials	Base: Hot Dip Galvanised steel Enclosure panels: AISI304 Stainless steel

Environmental

Degree of protection	IP54
Nominal temperature	+25 °C
Operating temperature without derating	-25 °C to +50 °C
Sound pressure level (at 1 m)	Less than 60 dB(A) at full load
Ambient air humidity	< 95% relative humidity
Max altitude without derating	+2000 m
Storage temperature	-40 °C to +70 °C
Enclosure rating	Suitable for outdoor use
Impact Rating	IK10

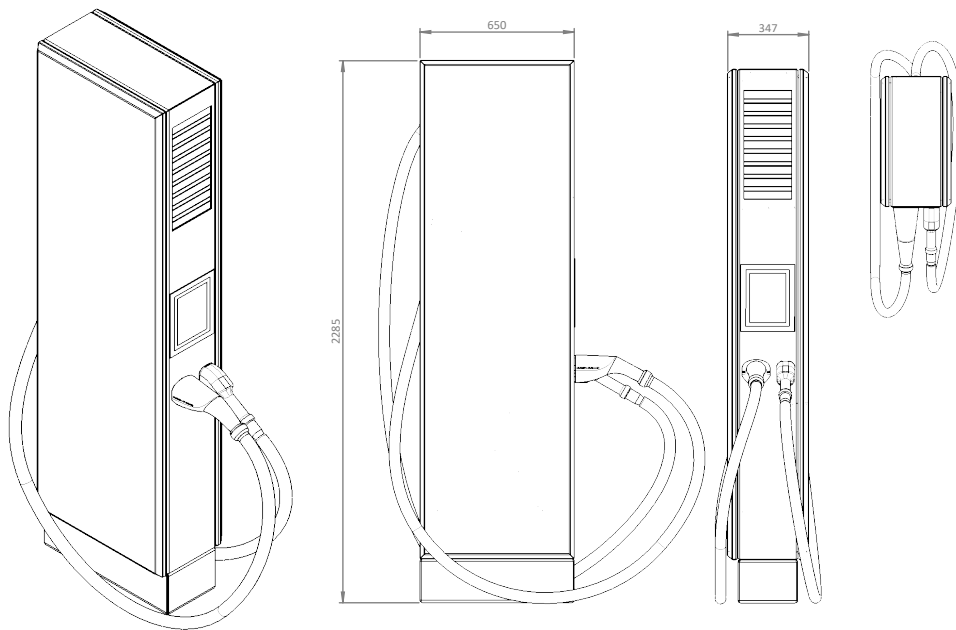
Compliance

General	IEC 61851-1:2017 IEC 61851-23:2014 IEC 61936-1:2010 IEC 62271-202 CE
Transformer	IEC 60076 dry-type
Switchgear	IEC 62271-200 Eaton Xiria

Connections and protocols

Cellular / GPS	LTE, 4G, GSM
Ethernet	RJ45 or Fibre

Kwetta Dual Sky Pillar 1.2 MW Liquid-Cooled MCS/CCS2 (DSP1200) Specifications



Electrical

Rated Current	1.2 MW / 1500 A MCS + 600 kW / 750 A or 2x 400 kW 500 A CCS2 liquid-cooled cables (Huber+Suhner)
Rated Voltage	Up to 1000 V
Rated Power	1.2 MW Single MCS 2x 600 kW - MCS & CCS2 can operate concurrently with split power
Maximum distance from Prime	100 m standard, can be increased based on site layout
DC outputs from Prime	2
Vehicle connector type	CCS2/MCS
Human Machine Interface (HMI)	10" LCD screen, PCAP, 1000 nit
RFID Interface	NFC, ISO14443A/B, ISO15693, ISO18000-3 MIFARE

Environmental

Degree of protection	IP55
Nominal temperature	+25 °C
Rated temperature without derating	-25 °C to +50 °C
Sound pressure level (at 1 m)	Less than 60 dB(A) at full load
Ambient air humidity	< 95% relative humidity
Enclosure rating	Suitable for outdoor use
Construction material	All external components 304 Stainless
Impact Rating	IK10

Compliance

Conforms to	IEC 61851-1:2017 IEC 61851-23:2014 CE
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Connections and protocols

Ethernet	RJ45 or Fibre
OCPP	1.6j / 2.0
Vehicle connectors	DIN SPEC 70121 ISO 15118 IEC 62196-2 Type 2 (CCS2)

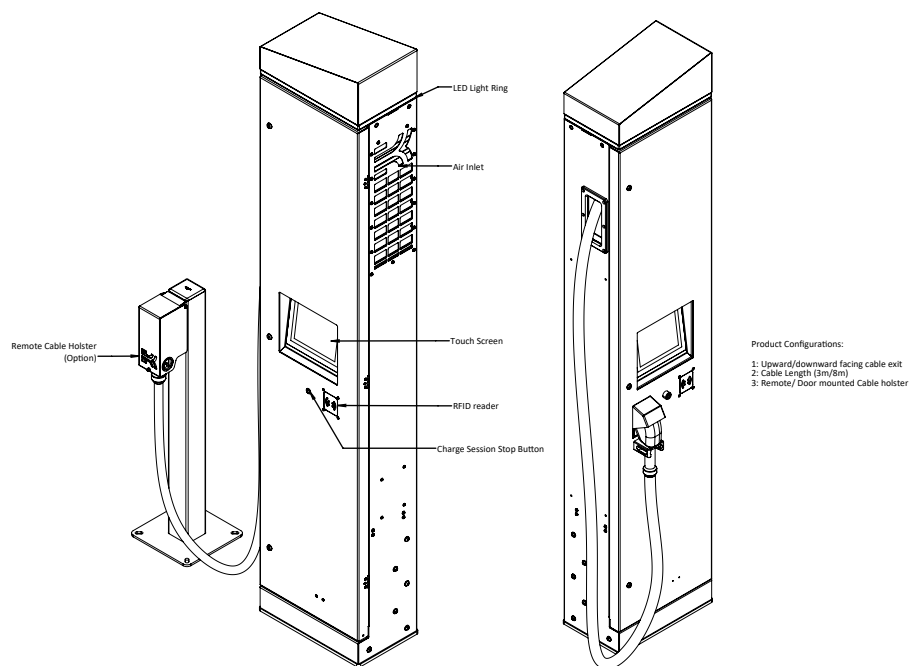
Mechanical

Width	0.65 m
Height	2.285 m
Depth	0.347 m
Weight	200 kg
Max cable length	3 m

AC Input

Auxiliary power	220 ~ 240 V ac 50/60 Hz, L/N/PE 5 kW
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Kwetta Sky Pillar 400 kW Liquid-Cooled CCS2 (SK400) Specifications



Electrical

Rated Current	400 kW CCS2: 500 A continuous liquid-cooled cable (Huber+Suhner)
Rated Voltage	Up to 1000 V
Rated Power	400 kW
Maximum distance from Prime	100 m standard, can be increased based on site layout
DC outputs from Prime	2
Vehicle connector type	CCS2
Human Machine Interface (HMI)	10" LCD screen, PCAP, 1000 nit
RFID Interface	NFC, ISO14443A/B, ISO15693, ISO18000-3 MIFARE

Environmental

Degree of protection	IP55
Nominal temperature	+25 °C
Rated temperature without derating	-25 °C to +50 °C
Sound pressure level (at 1 m)	Less than 60 dB(A) at full load
Ambient air humidity	< 95% relative humidity
Enclosure rating	Suitable for outdoor use
Construction material	All external components 304 Stainless
Impact Rating	IK10

Compliance

Conforms to	IEC 61851-1:2017 IEC 61851-23:2014 CE
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Mechanical

Width	0.51 m
Height	2.62 m
Depth	0.31 m
Weight	220 kg
Max cable length	Short cable variant: 3.5 m Long cable variant: 8.0 m

Connections and protocols

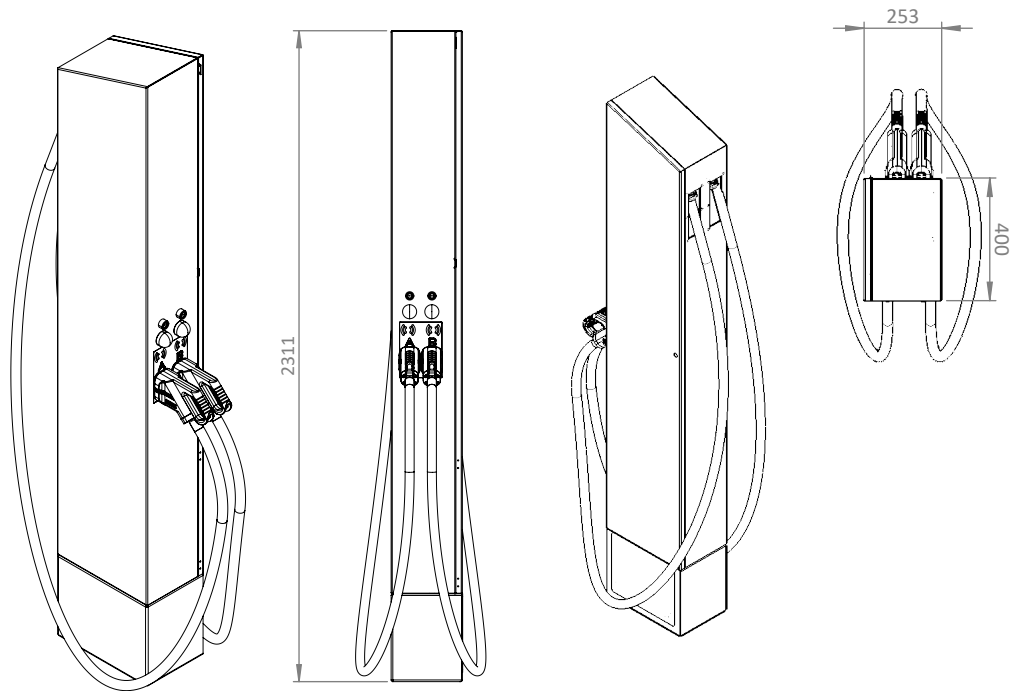
Ethernet	RJ45 or Fibre
OCPP	1.6j / 2.0
Vehicle connectors	DIN SPEC 70121 ISO 15118 IEC 62196-2 Type 2 (CCS2)

AC Input

Auxiliary power	220 ~ 240 V ac 50/60 Hz, L/N/PE 5 kW
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Kwetta Dual Sky Pillar 2x 200/400 kW CCS2

(DSP200/400) Specifications



Electrical

Rated Current	2x 250 A continuous, up to 500 A 2x 375 A continuous, up to 500 A
Rated Voltage	Up to 920 V
Rated Power	2x 200 kW 2x 400 kW
Maximum distance from Prime	100 m standard, can be increased based on site layout
DC outputs from Prime	1 per 200 kW plug 2 per 400 kW plug
Vehicle connector type	2x CCS2 dry-cable
RFID Interface	NFC, ISO14443A/B, ISO15693, ISO18000-3 MIFARE

Environmental

Degree of protection	IP55
Nominal temperature	+25 °C
Rated temperature without derating	-25 °C to +50°C
Sound pressure level (at 1 m)	Less than 50 dB(A) at full load
Ambient air humidity	< 95% relative humidity
Enclosure rating	Suitable for outdoor use
Impact Rating	IK10

Compliance

Conforms to	AS/NZS 3820:2020 IEC 61851-1:2017
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Mechanical

Width	0.253 m
Height	2.311 m
Depth	0.40 m
Weight	150 kg
Max cable length	6.1 m (detached) 2.2 m (managed)

Connections and protocols

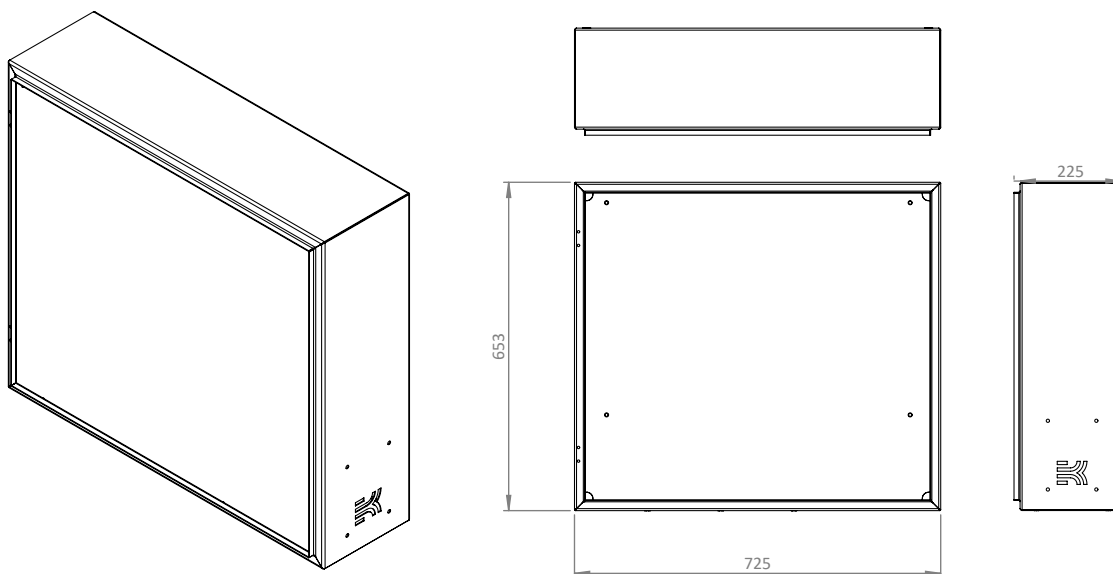
Ethernet	RJ45 or fibre with converter
OCPP	1.6j / 2.0
Vehicle connectors	DIN SPEC 70121 ISO 15118 IEC 62196-2 Type 2 (CCS2)

AC Input

Auxiliary power	220 ~ 240 V ac 50/60 Hz, L/N/PE 5 kW
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Kwetta Sky Pod 200/400 kW CCS2 Gantry

(SP200/SP400) Specifications



Electrical

Rated Current	250 A continuous, up to 500 A 375 A continuous, up to 500 A
Rated Voltage	Up to 920 V
Rated Power	Up to 200 kW Up to 400 kW
Maximum distance from Prime	100 m standard, can be increased based on site layout
Vehicle connector type	CCS2
Human Machine Interface (HMI)	Status lights with external mounting options
RFID Interface	N/A

Environmental

Degree of protection	IP56
Nominal temperature	+25 °C
Rated temperature without derating	-25 °C to +50 °C
Sound pressure level (at 1 m)	Less than 50 dB(A) at full load
Ambient air humidity	< 95% relative humidity
Enclosure rating	Suitable for outdoor use

Compliance

Conforms to	AS/NZS 3820:2020 IEC 61851-1:2017
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Connections and protocols

Ethernet	RJ45 or Fibre with converter
OCPP	1.6j / 2.0
Vehicle connectors	SAE J1772 DIN SPEC 70121 ISO 15118

Cabinet Mechanical

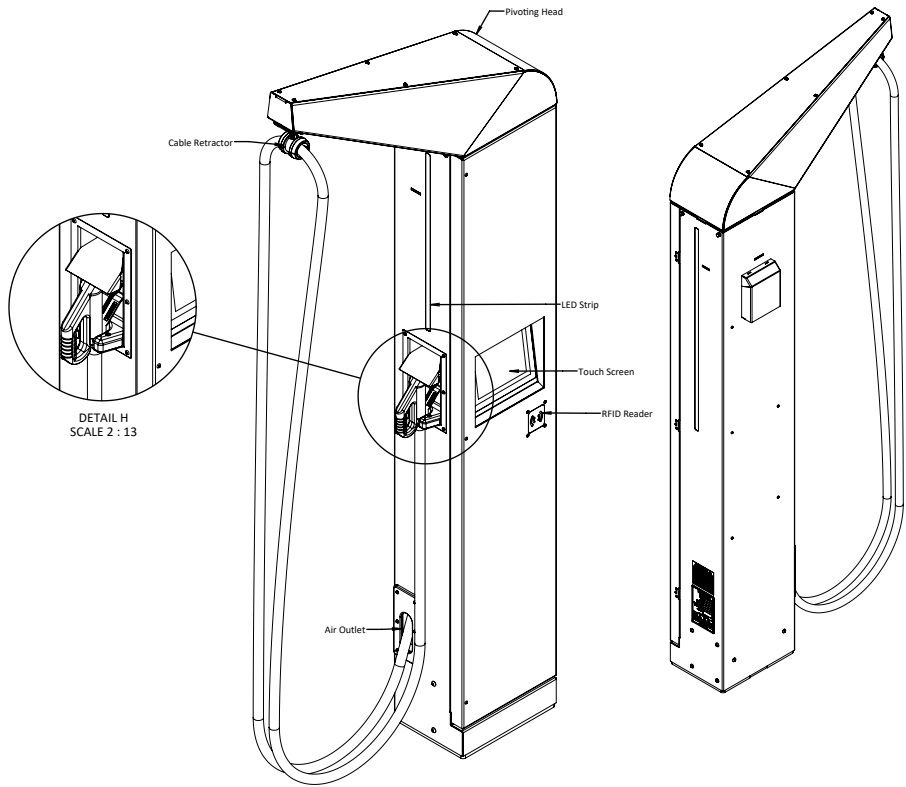
Width	0.725 m
Depth	0.225 m
Height	0.653 m
Weight	Cabinet: 35 kg 250 A Cable: 23 kg 375 A Cable: 33.6 kg
Max cable length	10 m
Construction Material	316 Stainless Steel

AC Input

Auxiliary power	220 ~ 240 V ac 50/60 Hz, L/N/PE 5 kW
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Kwetta Sky Hook 200 kW CCS2

(SK200) Specifications



Electrical

Rated Current	250 A continuous, up to 500 A
Rated Voltage	Up to 920 V
Rated Power	Up to 200 kW
Maximum distance from Prime	100 m standard, can be increased based on site layout
DC outputs from Prime	1
Vehicle connector type	CCS2
Human Machine Interface (HMI)	10" LCD screen, PCAP, 1000 nit
RFID Interface	NFC, ISO14443A/B, ISO15693, ISO18000-3 MIFARE

Environmental

Degree of protection	IP54
Nominal temperature	+25 °C
Rated temperature without derating	-25 °C to +50 °C
Sound pressure level (at 1 m)	Less than 50 dB(A) at full load
Ambient air humidity	< 95% relative humidity
Enclosure rating	Suitable for outdoor use
Impact Rating	IK10

Compliance

Conforms to	IEC 61851-1:2017 IEC 61851-23:2014 CE
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Mechanical

Width	1.06 m
Depth	0.30 m
Height	2.76 m
Weight	150 kg
Max cable reach	6.1 m

Connections and protocols

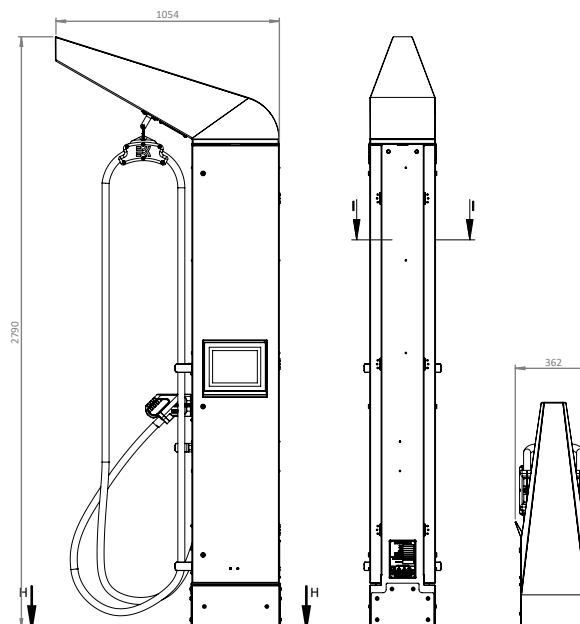
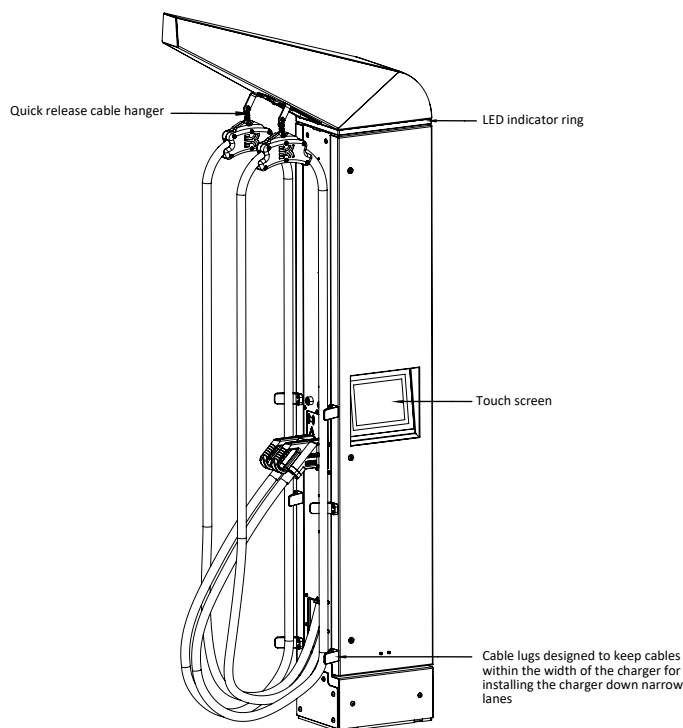
Ethernet	RJ45 or Fibre
OCPP	1.6j / 2.0
Vehicle connectors	DIN SPEC 70121 ISO 15118 IEC 62196-2 Type 2 (CCS2)

AC Input

Auxiliary power	220 ~ 240 V ac 50/60 Hz, L/N/PE 5 kW
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Kwetta Dual Sky Hook 200 kW CCS2

(DSK200) Specifications



Electrical

Rated Current	2x 250 A continuous, up to 500 A
Rated Voltage	Up to 920 V
Rated Power	Up to 2x 200 kW
Maximum distance from Prime	100 m standard, can be increased based on site layout
DC outputs from Prime	2
Vehicle connector type	2x CCS2 dry-cable
RFID Interface	NFC, ISO14443A/B, ISO15693, ISO18000-3 MIFARE

Environmental

Degree of protection	IP55
Nominal temperature	+25 °C
Rated temperature without derating	-25 °C to +50°C
Sound pressure level (at 1 m)	Less than 50 dB(A) at full load
Ambient air humidity	< 95% relative humidity
Enclosure rating	Suitable for outdoor use
Impact Rating	IK10

Compliance

Conforms to	AS/NZS 3820:2020 IEC 61851-1:2017
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Connections and protocols

Ethernet	RJ45 or fibre with converter
OCPP	1.6j / 2.0
Vehicle connectors	DIN SPEC 70121 ISO 15118 IEC 62196-2 Type 2 (CCS2)

Mechanical

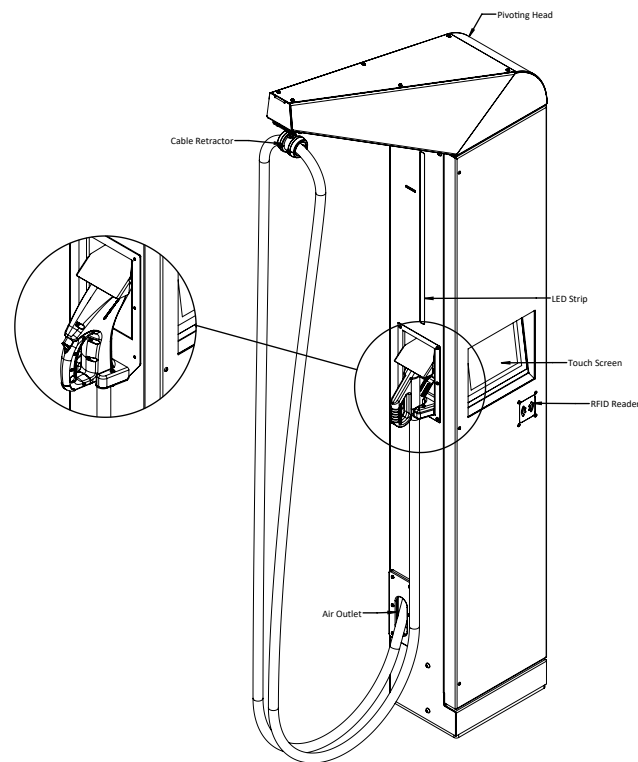
Depth	0.36 m
Height	2.80 m
Length	1.05 m
Weight	150 kg
Max cable length	6.1 m (detached) 2.2 m (managed)

AC Input

Auxiliary power	220 ~ 240 V ac 50/60 Hz, L/N/PE 5 kW
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Kwetta Sky Hook 100 kW CHAdeMO

(SK100) Specifications



Electrical

Rated Current	200 A continuous
Rated Voltage	Up to 500 V
Rated Power	Up to 100 kW
Maximum distance from Prime	100 m standard, can be increased based on site layout
DC outputs from Prime	1
Vehicle connector type	CHAdeMO
Human Machine Interface (HMI)	10" LCD screen, PCAP, 1000 nit
RFID Interface	NFC, ISO14443A/B, ISO15693, ISO18000-3 MIFARE

Environmental

Degree of protection	IP54
Nominal temperature	+25 °C
Rated temperature without derating	-25 °C to +40 °C
Sound pressure level (at 1 m)	Less than 50 dB(A) at full load
Ambient air humidity	< 95% relative humidity
Enclosure rating	Suitable for outdoor use
Impact Rating	IK10

Compliance

Conforms to	IEC 61851-1:2017 IEC 61851-23:2014 CHAdeMO 1.2ed5 CE
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Mechanical

Width	1.06 m
Depth	0.30 m
Height	2.76 m
Weight	150 kg
Max cable reach	6.1 m

Connections and protocols

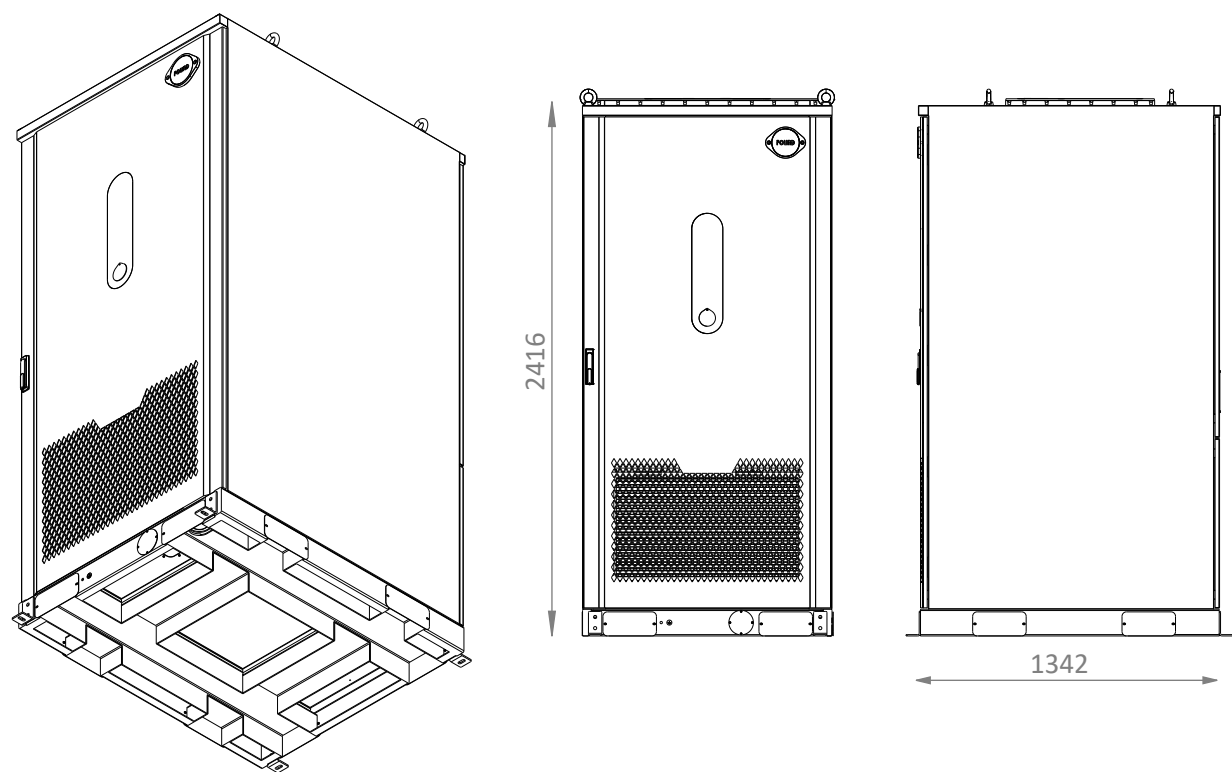
Ethernet	RJ45 or Fibre
OCPP	1.6j / 2.0
Vehicle connectors	IEC 62196-3 Configuration AA (CHAdeMO)

AC Input

Auxiliary power	220 ~ 240 V ac 50/60 Hz, L/N/PE 5 kW
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Battery Energy Storage System 261 kWh

(BESS261) Specifications



DC Input / Output

Minimum DC Channels from Prime	1
Nominal Voltage	832 V
Rated Current	200 A max
Supported Prime connection types	Parallel Series
Maximum units per Prime (Parallel)	8
Maximum units per DC Output (Series)	Site specific – Sized to use case

AC Input

Auxiliary Power, per battery	220 ~ 240 V ac 50/60 Hz, L/N/PE 5 kW
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Use Cases

Supported Use Cases	No Grid export: - EV Charging Grid Offset - Site / Local private network Grid Offset
Future Use Cases	Grid export - FCAS - Instantaneous reserves - Flexibility / DSO Markets - Arbitrage

Unit Operating Parameters

Cell Chemistry	Lithium iron phosphate
Operating Voltage	728 V to 920 V
Maximum Power Output	165 kW (to 10% SoC)
Continuous rated Power Output	130 kW (to 10% SoC)
Rated Energy Capacity	261 kWh
Maximum Depth of Discharge	95%
Round Trip Efficiency	~ 90%
Cycle Times	40 min at 165 kW 4 hours continuous at 130 kW
Cycle Life	>8000, (25°C, 95%DoD, 70%SoH)
Expected Lifetime (to 70% State of Health)	8,000 equivalent cycles or up to 10 years
Maximum distance from Prime	100 m standard Up to 200 m upon request

Battery Energy Storage System 261 kWh

(BESS261) Specifications (Continued)

Environmental

Degree of protection (Cabinet)	IP54
Degree of protection (Battery Pack)	IP67
Nominal temperature	+25 °C
Operating temperature	-30 °C to +55 °C (note derating from >45 °C)
Ambient air humidity	5% - 95% Non-Condensing
Enclosure rating	Suitable for outdoor use
Cooling System	Liquid (heat pump) with forced air heat exchange
Airflow	Front to Back
Airflow clearance	1000 mm

Compliance

Security and Safety	UL1973 / UN38.3 / IEC 62619 / IEC62477 / UL9540A
EMC	IEC/EN 61000-6-2/4
Regional Compliance	AS/NZS5139 & Battery Installation Best Practice Guide

Mechanical

Width	1119 mm
Depth	1342 mm
Height	2416 mm
Weight	2,500 kg
Colour	RAL 7035

Safety

BMS Protection	Cell voltage, current & temperature monitoring
Temperature Management	Integrated heat-pump heating & cooling
Energy Inhibit	Installed - On cabinet
Fault current protection & isolator	Battery module fuses & HV control box
Cell Protection	Individual battery cell protection: - over / under voltage - over / under temperature
Fire suppression & Control	Integrated aerosol fire suppression, smoke detection, and explosion relief panel

Grid-first EV Charging Solutions

HIGH-VOLTAGE POWER UNIT		POWER	CONNECTOR	COOLING	MODEL NAME	DESCRIPTION
Kwetta Prime Grid Gateway		6 - 22 kV 1.2 MW			Prime	The core of the Kwetta charging solution, the Prime unit is a vertically integrated solution that combines a Ring Main Unit (RMU) for high voltage input, HV Utility Metering, a 1.2MW transformer, the power electronics for DC charging, plus all the supporting equipment in a single compact stainless steel enclosure.
DC FAST-CHARGING DISPENSERS						
Kwetta Sky Pillar		400 kW	CCS2	Liquid	SK400	A ground-mounted dispenser with industrial liquid-cooled cables built for heavy-duty truck charging.
Kwetta Dual Sky Pillar		2x 200 kW 2x 400 kW 1.2 MW (or 2x 600kW)	CCS2 CCS2 MCS + CCS2	Air Air Liquid	DSP200 DSP400 DSP1200	Two fully independent charging cables in a single pillar-form enclosure for sites requiring dual concurrent heavy-duty charging. DSP1200 can charge at 1.2 MW MCS, or power split & delivered concurrently with MCS & CCS2 at 600 kW each.
Kwetta Sky Pod		200 kW - 400 kW	CCS2	Air	SP200 SP400	A gantry-mountable dispenser for depot fleet charging rows, keeping the depot floor clear of standing infrastructure.
Kwetta Sky Hook		100 kW 200 kW	CHAdeMO CCS2	Air	SK100 SK200	A flexible charging dispenser designed specifically for CPOs delivering high-throughput public charging.
Kwetta Dual Sky Hook		2x 200 kW	CCS2	Air	DSK200	Two fully independent charging dispensers integrated into a single enclosure, purpose-built for overnight bus depot charging. Each unit operates separately, removing single points of failure and improving depot reliability.
POWER CONVERSION MODULES						
Kwetta Grid Power Module		200 kW 1.6 MW Max. Per Prime			GPM	The intelligent power and grid system housed within Prime, managing power conversion and grid constraints in real time.
INTEGRATED ACCESSORIES						
BESS		261 kWh 8 Max. Per Prime			BESS261	A scalable battery energy storage system that stores grid energy and releases it on demand, buffering peak load and unlocking charging capacity beyond what the grid connection alone can supply.
Services						
GRID OPTIMISATION SERVICES		TYPE				
Kwetta Grid Key		YEARLY SUBSCRIPTION		Helps you get more from your charging network, cutting up-front and ongoing costs, saving connection time, and unlocking new revenue streams. <i>Dynamic flexibility; STATCOM; Virtual inertia; Harmonic cancellation</i>		
HARDWARE MANAGEMENT SOFTWARE						
Kwetta Intel Portal		YEARLY SUBSCRIPTION		A web-based platform giving operators real-time visibility across their entire charging estate — live status, analytics, fault diagnosis, and site-level controls from a single view.		
SERVICE & MAINTENANCE PLANS						
Kwetta Halo		YEARLY SUBSCRIPTION		Comprehensive service and maintenance services. Covers warranty, field service, preventive maintenance, and spare parts support.		
Kwetta Halo Plus		Enhanced service coverage with faster response and priority support. Includes 24/7 monitoring, accelerated SLAs, and dedicated spare parts.				

