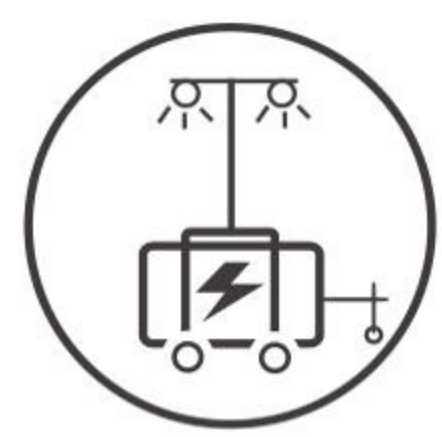


MPMC GROUP OF COMPANIES



Generator Sets



Lighting Towers



Hybrid Energy



Mobile Power Plant



Cold Chain Tech

WWW.MPMC-GROUP.COM



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Generator Sets for ISO Reefer Containers



Global Expert of Mobile Hybrid Power Solutions with Worldwide Service

World Leading Cloud Power and Smart Energy Provider of Comprehensive Solutions

With more reliable, more intelligent and more considerate service, MPMC provides "More Power, More Confidence" to global customers.



120 Countries

Products are exported to 120 countries



53 Types

Three categories of 53 types of products



12000 Sets

Annual production capacity



50 Specialists

50 solution experts focused on different applications



77 Patents

3 invention patents and 74 utility model patents

MPMC POWERTECH CORP. (hereafter MPMC) is an international high-tech enterprise established in the Year 2008. As a world-class smart cloud hybrid energy solution provider, MPMC manufactures and distributes intelligent generator sets, mobile lighting towers, hybrid micro-power stations and other smart cloud energy management solutions worldwide.

Collaborated with Shanghai CIMC Generating Set Co., Ltd., a specialist in designing generator sets for cold-chain transportation, MPMC Cold Chain Technology has devoted itself to developing and manufacturing diesel generator sets for ISO reefer containers applying to various scenarios of over-the-road and railway transportation.

Taking full advantages of its independent R&D, productive intellectual property, full-process manufacturing and global marketing & services, MPMC has established holding subsidiaries and offices in the USA, South Africa, Panama, UK, UAE, Netherlands and China. Up to now, distributors of MPMC have covered a wide range of countries & regions in the Americas, Europe, Oceania, Africa, Middle East and Southeast Asia.

Since the Year 2010, MPMC has been qualified by Quality system ISO9001, environmental management system ISO14001 and health & safety management system OHSAS18001. MPMC products have been qualified by the European Union (CE) certification and Tyre certification (TLC).



Partners



MPMC owns the most advanced manufacturing facilities

Excellent manufacturing capability is not only the assurance of product quality, but also the assurance of customer confidence.

- Factory covers an area of nearly 34000m²
- Most advanced manufacturing equipments
- Excellent product inspection system
- 5S LEAN philosophy running through the whole manufacturing process
- PDM、ERP and management system

				
34000 m ²	5S system	9001 ISO	14001 ISO	18001 OHSAS
Factory covers	5S management system	Quality system certified	System certification	System certification



MPMC has the most advanced modern manufacturing equipments in power generation industry



Eco-friendly & intelligent powder coating line

Automatic powder coating lines

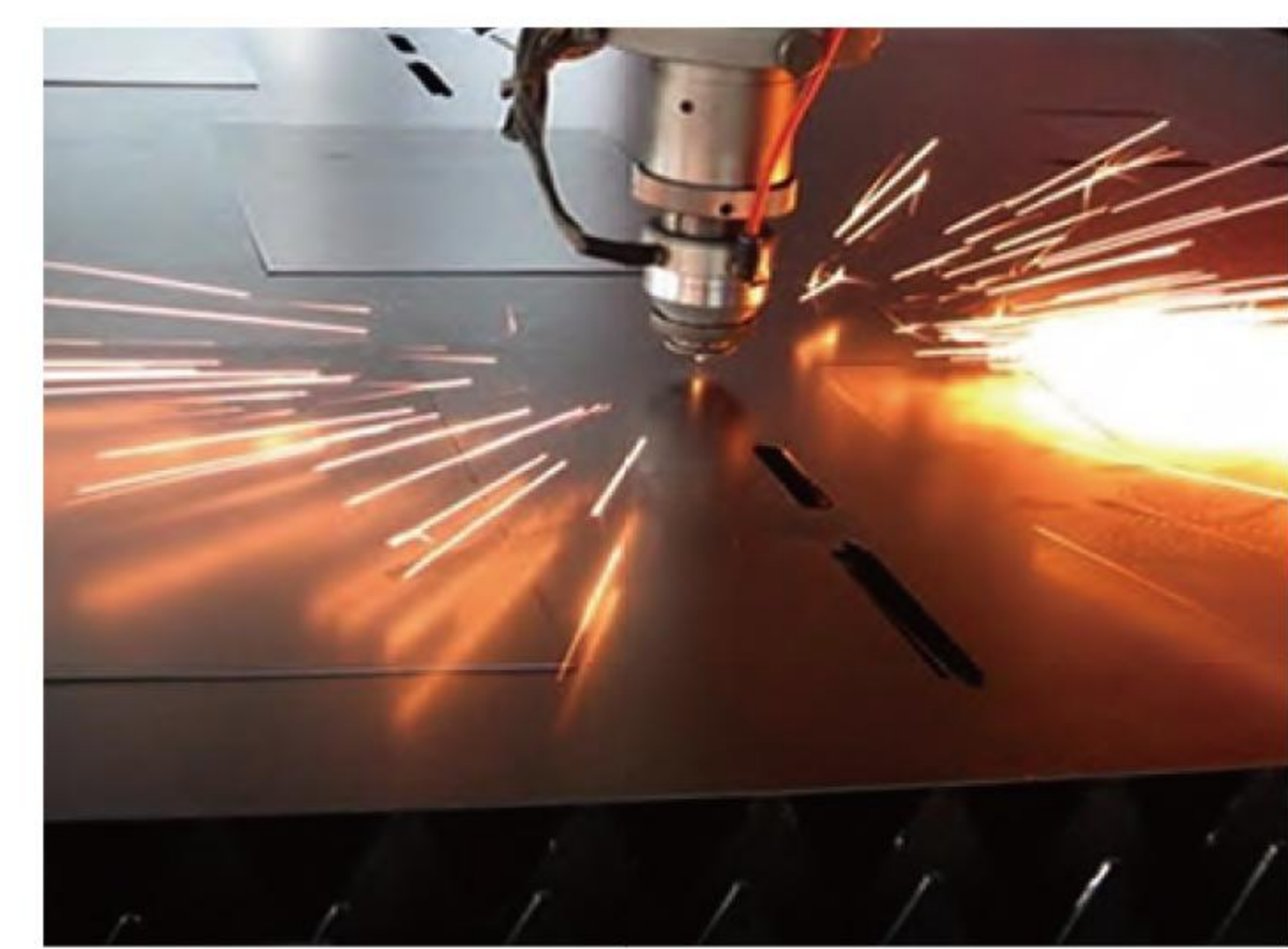
CNC laser cutting machine

Precision cutting by CNC

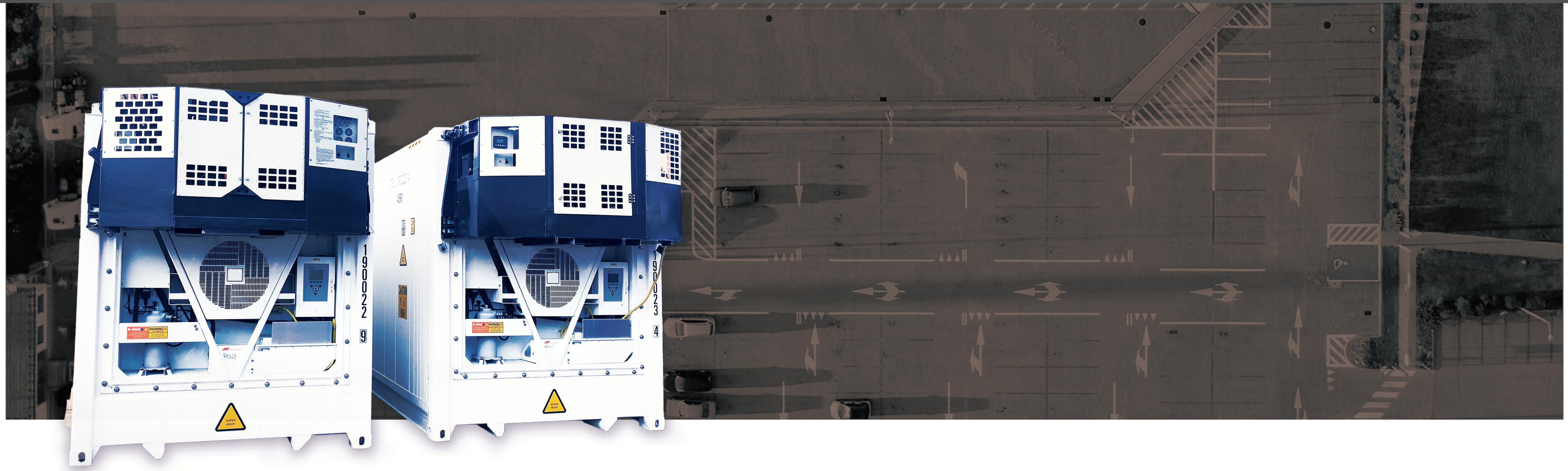
CNC bending machine

Perfect testing rooms

Engine storage area (upto 600 stocks)



MPMC Generator Sets for ISO Reefer Container



The high-strength canopy and anti-lean installation of MPMC generator sets for ISO reefer container highlight reliability and stability of power supply for thermal containers on over-the-road transportation.



Advantages

- 1 Ensuring powerful starting performance and continuous steady power supply to refrigerated containers.
- 2 User-friendly design. Easy to install/un-installed. Convenient operation and maintenance.
- 3 Weather resistance
- 4 Collision-resistant as the generator set is completely welded steel structural assembly designed to take $\geq 5g$'s acceleration forces in all directions.
- 5 Fuel duration: 10+ days.
- 6 Cycle run system to lower fuel consumption by 30%-40%
- 7 Cloud monitoring system for remote monitoring, diagnose and maintenance.
- 8 Fire-proof system.
- 9 Emission regulation: U.S. Tier 3 / EU Stage 3 / China Off-Road Stage 3 etc.

Main configuration

Engine Manufacturer	PERKINS	KUBOTA	LD	PERKINS
Engine Type	404D-22G	V2203-E2BG	4L22BD-RF1	403F-15TG
Exhaust emission level	U.S. EPA Tier 3	EU Stage 3 and China Off Road Stage 3	NA	U.S. EPA Tier 4 Final
Generator Manufacturer	SHANGHAI CIMC GENERATING SET CO., LTD			
Generator Type	RF-15-CIMC-FS Permanent magnet excitation			
Radiator tank	Aluminium plate structure radiator, low water level alarm with supplementary water tank			
Air cleaner	Heavy-duty oil bath filter air cleaner			
Starting battery	12V-90AH, 730CCA, maintenance-free battery (M10 Bolt electrode joint)			
control system	Parameters with EG-1 control system LCD control panel with SCGC4010NC/SCGC4100LT Optional: 1) Cloud Monitoring System 2) Cycle Run			

MPMC Generator Sets for ISO Reefer Container

Composition of Generator Sets

Engine

Vertical in-line 4 cylinders, 1800r/min, water-cooled

Generator

Rated power 15 kW, 460 V, 60 Hz, Insulation class-H, IP 56

Dedicated high strength frame, fuel tank and panels

Control panel and output panel

12V-90AH, 730CCA, maintenance-free battery

Heavy-duty oil bath filter air cleaner

Exhaust pipes and mufflers

Cooling fan and Dedicated plate structure radiator



Rated Output

Rated Output

15 kW, 460 V, 60 Hz, 3-phases

Reefer container measured power

6.5~7.5 kW

ISO 1496~2 (GB/T 7392)

Thermal containers & Specification and testing,

9.2.1 The nominal voltage between phases on the power socket should be considered under three-phase and three-wire AC power supply in the design.

a. 50 Hz, 360 V ~ 460 V

b. 60 Hz, 400 V ~ 500 V

Frequency Deviation: $\pm 2.5\%$

9.2.2 Under rated conditions, the maximum load of electrical equipment shall not exceed

18.75kva and the power consumption shall not exceed 15kW

Environment Temperature

Startup: -20 ~ +50°C

Operation: -40°C ~ +55°C

Relative Humidity: $\leq 100\%$

Altitude: ≤ 4000 m

Resistance: Wind, Sand, Rain, Snow, Haze, Salt-spray, Acid rain, Sandstorm etc.

Acceleration forces:

Under the circumstances of vehicle vibration, "g" as in acceleration of gravity.

X-Y-Z Vibration Test

Vertical vibration acceleration $\leq 2g$

Horizontal vibration acceleration $\leq 2g$

Longitudinal vibration acceleration $\leq 3g$





- Clip-On
- Pin-Mount
- Rear-Cab
- Under-slung
- Side-Mount



ISO Reefer Containers

Diesel Generator Sets

Generator



Engine



RF - 15 - CIMC - FS



404D-22G



V2203-E2BG



4L22BD-RF1

Generator	
Model	RF-15-CIMC-FS
Manufacturer	SHANGHAI CIMC GENERATING SET CO., LTD
Excitation Method	Permanent magnet excitation
IP Grade	IP56
Insulation Class	H

Engine			
Manufacturer	PERKINS	KUBOTA	LD
Emission Regulation	U.S.EPA Tier 3	EU Stage 3 and China Off Road Stage 3	NA
Water Temperature Switch	112 ± 2 °C (Belt)	112 ± 2 °C (KUS)	97 ± 2 °C (KUS)
Model	404D-22G	V2203-E2BG	4L22BD-RF1
Type	Vertical in-line, 4-cycle, water-cooled diesel engine	Vertical in-line, 4-cycle, water-cooled diesel engine	Vertical in-line, 4-cycle, water-cooled diesel engine
Number of Cylinders	4	4	4
Stroke	100 mm	92.4 mm	95 mm
Total Displacement	2.216 L	2.197 L	2.156 L
Standby Output	24 kW	24.2 kW	23 kW
Continuous Output	22 kW	20.2 kW	21 kW
Rated Speed	1800 r/min	1800 r/min	1800 r/min
Coolant Volume	10 L (Including reserve tank)	10 L (Including reserve tank)	10 L (Including reserve tank)
Oil Tank Capacity	10 L	10 L	6 L
Fuel Consumption	1.7~3.0 L/h (Loading reefer container)	1.7~3.0 L/h (Loading reefer container)	1.7~3.0 L/h (Loading reefer container)
Air Cleaner Type	Heavy-duty oil bath filter air cleaner	Heavy-duty oil bath filter air cleaner	Heavy-duty oil bath filter air cleaner
Starting System	12VDC-2.0kW Starting motor	12VDC-1.4kW Starting motor	12VDC-3.2kW Starting motor
Starting Aid	12VDC Glow plug	12VDC Glow plug	12VDC ,380W Air heater
Charging Generator	12V-65A Charging generator	12V-40A Charging generator	DC14V-350W Charging generator

MPMC Clip-On Generator Set for ISO Reefer Containers



Diesel



-40~55°C



60 Hz

15 kW
460 V
1800 r/min

Advantages

- 1 Ensuring continuous steady power supply to refrigerated containers
- 2 User-friendly operation and easy maintenance
- 3 High reliability and long lifespan
- 4 Patented products

Key Features

- 1 Power Range: 15kW (18.75kVA)
- 2 Fuel Tank Capacity: 410L / 440L
- 3 Radiator: Plate structural aluminum radiator
- 4 Emission Regulation: U.S. EPA Tier 3 / EU Stage & China Off-Road Stage 3
- 5 Engine: Perkins / Kubota / LD 4 cylinders, 1800r/min
- 6 Total Engine Displacement: 2.156L ~ 2.216L
- 7 Air Cleaner: Heavy-duty oil bath filter air cleaner
- 8 Coolant Volume: 10L (Including reserve tank)
- 9 Generator Excitation: Permanent Magnet Excitation
- 10 Control System: Instrument meters / LCD Control Panel

MPMC Clip-on generator sets for Reefer Container are well designed with **compact structure** by **high rates of efficiency** and **long lifespan** for all refrigerated container units in over-the-road transportation, move with the reefer container.

Details

Mounting to the upper front structure of an ISO reefer container, MPMC Clip-on generator sets could be install/uninstall in a few minutes because the unit incorporates quick connections to the upper container corner castings with locking clip as well as attaching points on the side near the bottom that helps increasing safety by anchoring it to the container.

The gensets are completely welded steel structural assembly designed to take $\geq 5g$'s acceleration forces in all directions.

The forklift pockets are provided at the bottom of the generator set. The forklift pocket ends are close to prevent refrigeration unit damage.



MPMC Clip-On Generator Set for ISO Reefer Containers



CE Certificate



ISO 9001 Quality System Certified



ISO 14001 System Certification



ISO 45001 System Certification

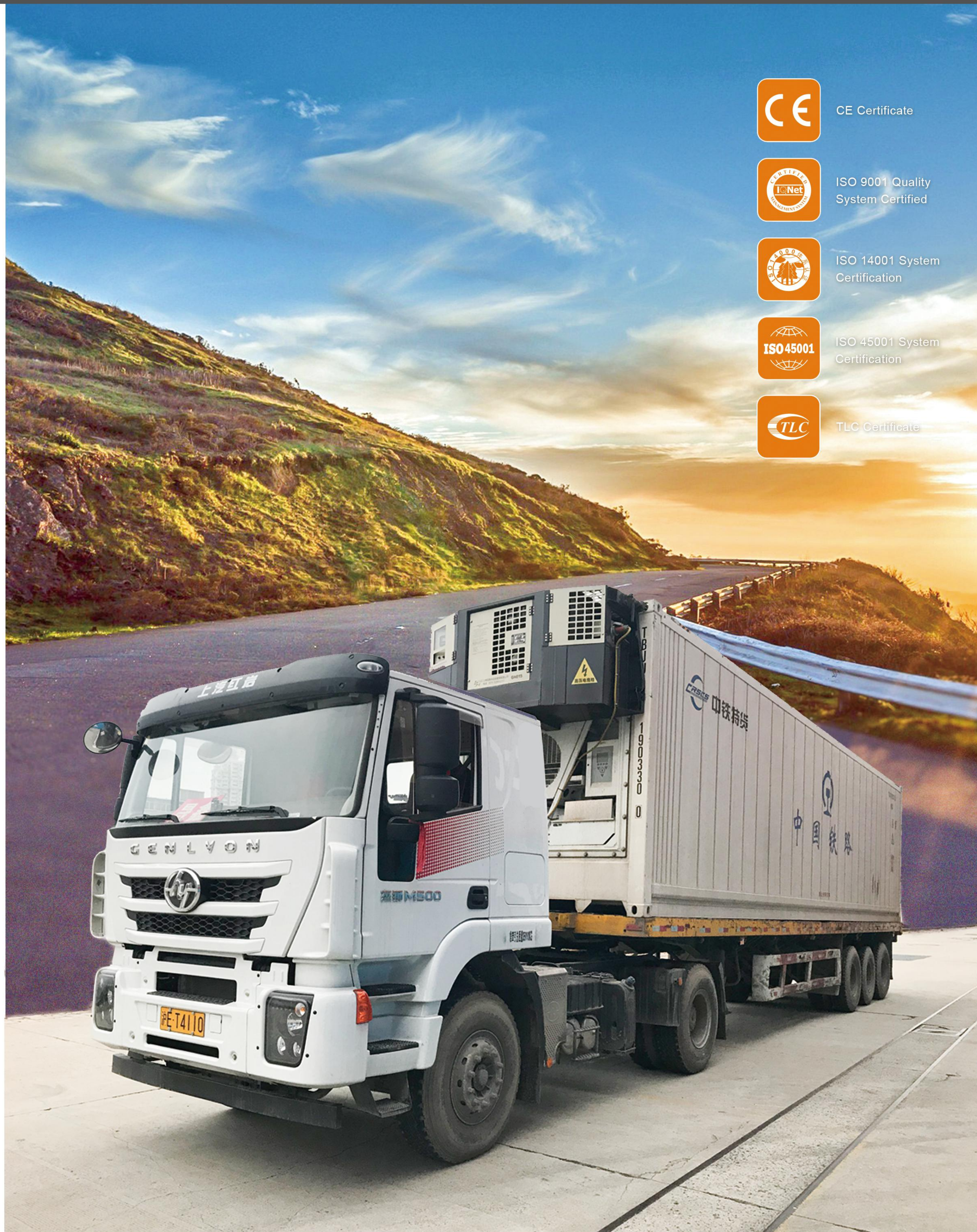


TLC Certificate

60 Hz Diesel Genset | Three-Phase
Clip-On

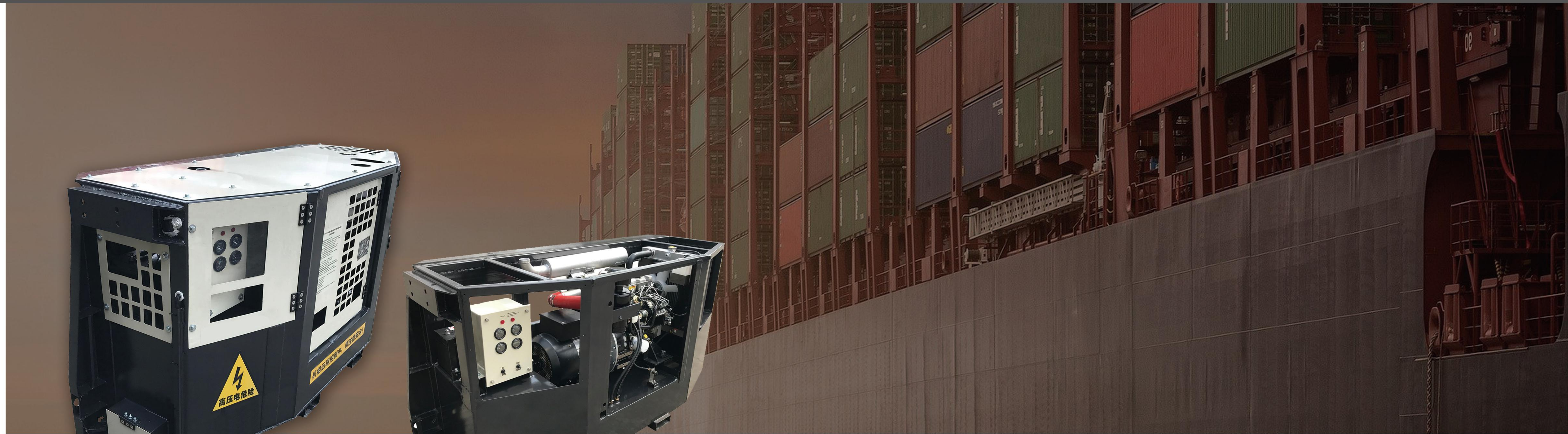


Items		MCCT-1GP (C)	MCCT-1GK (C)	MCCT-1GL (C)
Emission Regulation		U.S. EPA Tier 3	EU Stage 3 and China Off Road Stage 3	NA
Rated Power		15 kW (18.75 kVA)		
Rated Voltage		460 V		
Rated Frequency		60 Hz		
Overall Dimension	Length	2320 mm		
	Width	690 mm		
	Height	1100 mm		
Weight		980 kg (Without oil and coolant)		
Fuel Tank Capacity		410 L	410 L	440 L
Fuel Consumption		1.7~3.0 L/h (Loading reefer container)		
Oil Tank Capacity		10 L		6 L
Coolant Volume		10 L (Including reserve tank)		
Operation Temperature Range		-40°C~55°C		
Engine	Model	404D-22G	V2203-E2BG	4L22BD-RF1
	Manufacturer	PERKINS	KUBOTA	LD
Generator	Model	RF-15-CIMC-FS		
	Manufacturer	SHANGHAI CIMC GENERATING SET CO., LTD		
	Excitation Method	Permanent magnet excitation		
Control System	Control Unit	EG-1	SCGC4010NC or SCGC4100LT	
	Instrument	Hour meter, temperature gauge, oil pressure, DC voltmeter, indicator.		LCD
	Protection Feature	Low oil pressure, high coolant temperature, low coolant level, generator short circuit or over load.		Low oil pressure, high coolant temperature, low coolant level, over load, over/under engine speed, high/ low AC voltage, low fuel level, etc
	Generator Set Control	ON/ OFF switch START/ PREHEART switch		ON/ OFF switch START/ PREHEAT switch CYCLE RUN/ STOP CYCLE switch



MPMC Pin-Mount Generator Set for ISO reefer containers

Diesel -40~55°C 60 Hz 15 kw 460 V 1800 r/min

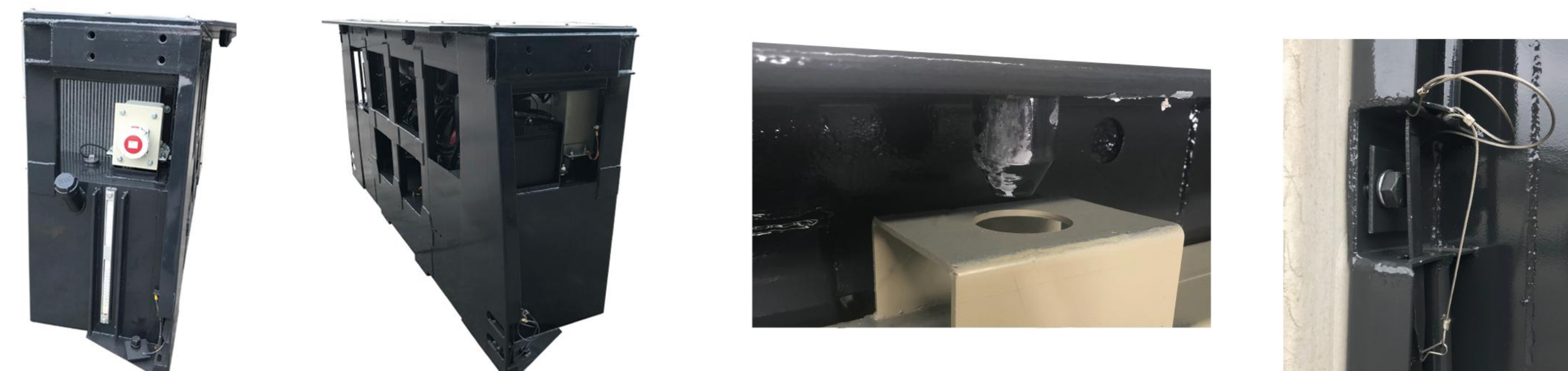


Key Features

- ❶ Power Range: 15kW (18.75kVA)
- ❷ Fuel Tank Capacity: 410L / 440L
- ❸ Operation Temperature Range: -40°C~55°C
- ❹ Radiator: Plate structural aluminum radiator
- ❺ Emission Regulation: U.S. EPA Tier 3 / EU Stage 3 & China Off-Road Stage 3 / NA
- ❻ Engine: Perkins / Kubota / LD 4 cylinders, 1800r/min
- ❼ Total Engine Displacement: 2.156L ~ 2.216L
- ❽ Air Cleaner: Heavy-duty oil bath filter air cleaner
- ❾ Coolant Volume: 10L (Including reserve tank)
- ❿ Generator: SHANGHAI CIMC GENERATING SET CO., LTD
- ⓫ Generator Excitation: Permanent Magnet Excitation
- ⓬ Control System: Instrument meters / LCD Control Panel

Mounting Instruction

Mounting to the upper front structure of an ISO reefer container, MPMC Pin-mount generator sets could be installed/uninstalled in a few minutes because the unit incorporates quick connections to the top mounting holes of the reefer container with mounting pin, as well as attaching points on the side near the bottom that helps increasing safety by anchoring it to the container.



MPMC Pin-Mount Generator Set for ISO reefer containers



CE Certificate



ISO 9001 Quality System Certified



ISO 14001 System Certification



ISO 45001 System Certification



TLC Certificate

60 Hz Diesel Genset | Three-Phase
Pin-Mount



Items		MCCT-1GPA (C)	MCCT-1GKA (C)	MCCT-1GLA (C)
Emission Regulation		U.S. EPA Tier 3	EU Stage 3 and China Off Road Stage 3	NA
Rated Power		15 kW (18.75 kVA)		
Rated Voltage		460 V		
Rated Frequency		60 Hz		
Overall dimension	Length	2320 mm		
	Width	811(689+122) mm	690 mm	
	Height	1100 mm		
Weight		980 kg (Without oil and coolant)		
Fuel Tank Capacity		410 L	410 L	440 L
Fuel Consumption		1.7~3.0 L/h (Loading reefer container)		
Oil Tank Capacity		10 L	6 L	
Coolant Volume		10 L (Including reserve tank)		
Operation Temperature Range		-40°C~55°C		
Engine	Model	404D-22G	V2203-E2BG	4L22BD-RF1
	Manufacturer	PERKINS	KUBOTA	LD
Generator	Model	RF-15-CIMC-FS		
	Manufacturer	SHANGHAI CIMC GENERATING SET CO., LTD		
	Excitation Method	Permanent magnet excitation		
Control System	Control Unit	EG-1	SCGC4010NC or SCGC4100LT	
	Instrument	Hour meter, temperature gauge, oil pressure, DC voltmeter, indicator.	LCD	
	Protection Feature	Low oil pressure, high coolant temperature, low coolant level, generator short circuit or over load.	Low oil pressure, high coolant temperature, low coolant level, over load, over/under engine speed, high/ low AC voltage, low fuel level, etc	
	Generator Set Control	ON/ OFF switch START/ PREHEART switch	ON/ OFF switch START/ PREHEAT switch CYCLE RUN/ STOP CYCLE switch	

MPMC Rear-cab Generator Set for ISO Reefer Containers



Diesel



-40~55°C



60 Hz

15 kW
460 V
1800 r/min

Key Features

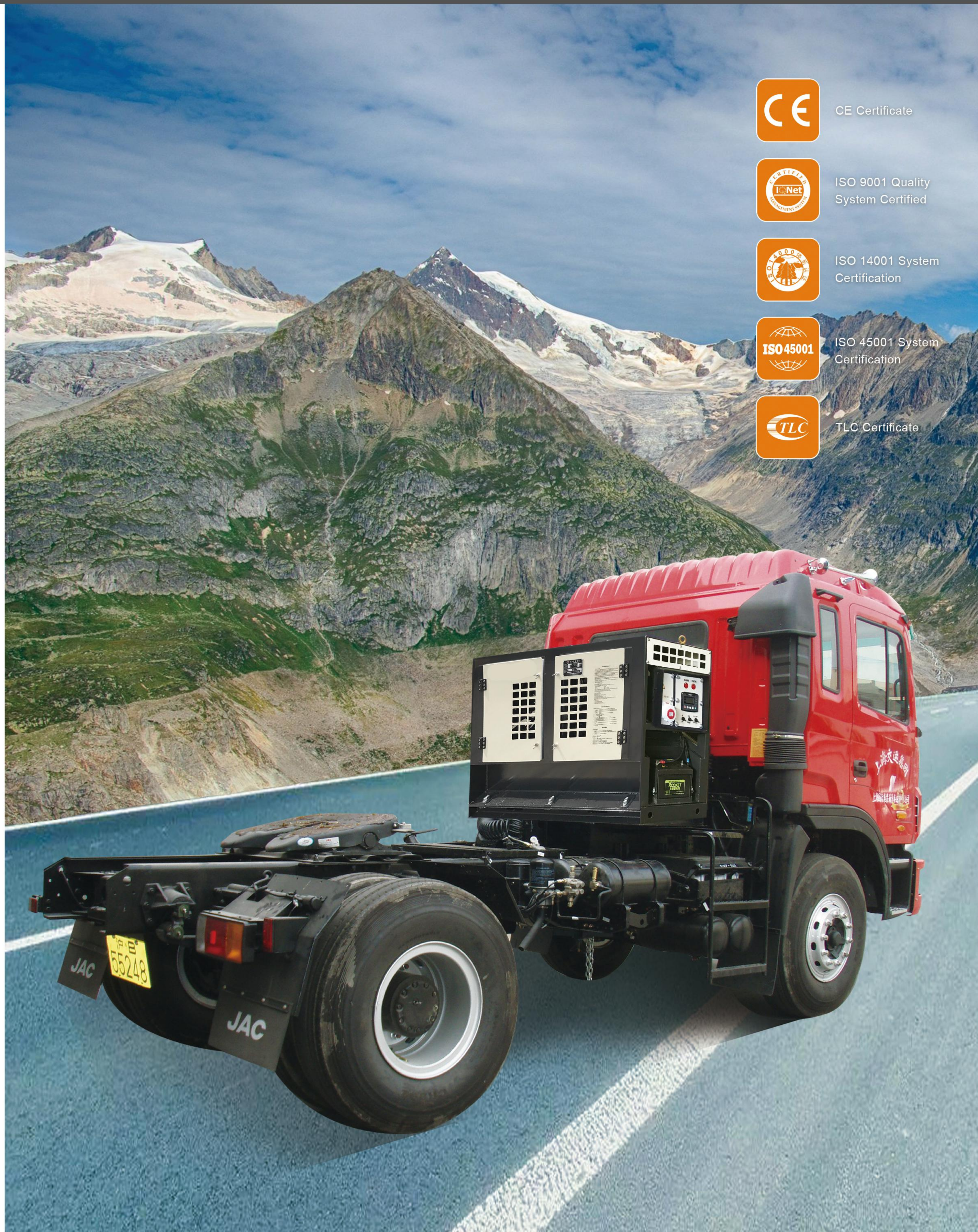
- ① Power Range: 15kW (18.75kVA)
- ② Fuel Tank Capacity: 170L
- ③ Operation Temperature Range: -40°C~55°C
- ④ Radiator: Plate structural aluminum radiator
- ⑤ Emission Regulation: U.S. EPA Tier 3 / EU Stage 3 and China Off Road Stage 3 / NA
- ⑥ Engine: Perkins / Kubota / LD 4 cylinders, 1800r/min
- ⑦ Total Engine Displacement: 2.156L ~ 2.216L
- ⑧ Air Cleaner: Heavy-duty oil bath filter air cleaner
- ⑨ Coolant Volume: 10L (Including reserve tank)
- ⑩ Generator: SHANGHAI CIMC GENERATING SET CO., LTD
- ⑪ Generator Excitation: Permanent Magnet Excitation
- ⑫ Control System: Instrument meters / LCD Control Panel

Mounting Instruction

MPMC Rear-cab generator sets are mounted to rear-cab of container trucks with the auxiliary steel structure installation frame and 6 – M16 bolts for easy installation and removal. Two M16 lifting eyes are provided at the top of the generator set.



MPMC Rear-cab Generator Set for ISO Reefer Containers



CE Certificate



ISO 9001 Quality System Certified



ISO 14001 System Certification



ISO 45001 System Certification



TLC Certificate

60 Hz Diesel Genset | Three-Phase
Rear-Cab



Items		MCCT-2GP (C)	MCCT-2GK (C)	MCCT-2GL (C)
Emission Regulation		U.S. EPA Tier 3	EU Stage 3 and China Off Road Stage 3	NA
Rated Power		15 kW (18.75kVA)		
Rated Voltage		460 V		
Rated Frequency		60 Hz		
Overall Dimension	Length	1550 (1480+70) mm		
	Width	660 mm		
	Height	1040 mm		
Weight		750 kg (Without oil and coolant)		
Fuel Tank Capacity		170 L		
Fuel Consumption		1.7~3.0 L/h (Loading reefer container)		
Oil Tank Capacity		10 L		6 L
Coolant Volume		10 L (Including reserve tank)		
Operation Temperature Range		-40°C~55°C		
Engine	Model	404D-22G	V2203-E2BG	4L22BD-RF1
	Manufacturer	PERKINS	KUBOTA	LD
Generator	Model	RF-15-CIMC-FS		
	Manufacturer	SHANGHAI CIMC GENERATING SET CO., LTD		
	Excitation Method	Permanent magnet excitation		
Control System	Control Unit	EG-1	SCGC4010NC or SCGC4100LT	
	Instrument	Hour meter, temperature gauge, oil pressure, DC voltmeter, indicator.		LCD
	Protection Feature	Low oil pressure, high coolant temperature, low coolant level, generator short circuit or over load.		Low oil pressure, high coolant temperature, low coolant level, over load, over/under engine speed, high/ low AC voltage, low fuel level, etc
	Generator Set Control	ON/ OFF switch START/ PREHEART switch		ON/ OFF switch START/ PREHEAT switch CYCLE RUN/ STOP CYCLE switch

MPMC Under-slung Generator Set for ISO reefer container



Diesel



-40~55°C



60 Hz

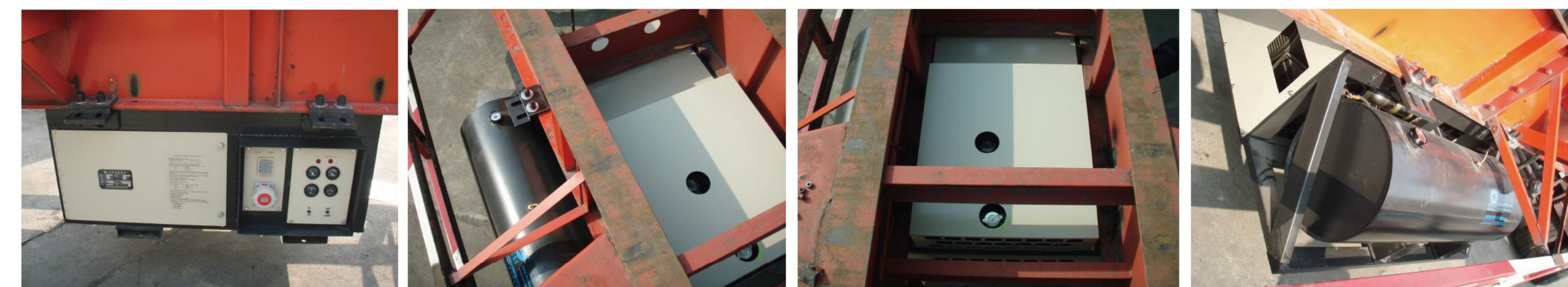
15 kW
460 V
1800 r/min

Key Features

- ① Power Range: 15kW (18.75kVA)
- ② Fuel Tank Capacity: 190L
- ③ Operation Temperature Range: -40°C~55°C
- ④ Radiator: Plate structural aluminum radiator
- ⑤ Emission Regulation: U.S. EPA Tier 3 / EU Stage 3 and China Off Road Stage 3 / NA
- ⑥ Engine: Perkins / Kubota / LD 4 cylinders, 1800r/min
- ⑦ Total Engine Displacement: 2.156L ~ 2.216L
- ⑧ Air Cleaner: Heavy-duty oil bath filter air cleaner
- ⑨ Coolant Volume: 10L (Including reserve tank)
- ⑩ Generator: SHANGHAI CIMC GENERATING SET CO., LTD
- ⑪ Generator Excitation: Permanent Magnet Excitation
- ⑫ Control System: Instrument meters / LCD Control Panel

Mounting Instruction

MPMC Under-slung generator sets are center-mounted to the chassis with 4 sets of mounting clamps and 8 - M20 bolts for easy installation and removal.



MPMC Under-slung Generator Set for ISO reefer container



CE Certificate



ISO 9001 Quality System Certified



ISO 14001 System Certification



ISO 45001 System Certification



TLC Certificate

60 Hz Diesel Genset | Three-Phase
Under-Slung



Items		MCCT-3GP (C)	MCCT-3GK (C)	MCCT-3GL (C)
Emission Regulation		U.S. EPA Tier 3	EU Stage 3 and China Off Road Stage 3	NA
Rated Power		15 kW (18.75kVA)		
Rated Voltage		460 V		
Rated Frequency		60 Hz		
Overall Dimension	Length	1450 (25+1400+25) mm		1450 (1400+50) mm
	Width	1640 mm		
	Height	855 (585+270) mm	860 (585+275) mm	805 (585+220) mm
Weight		780 kg (Without oil and coolant)		
Fuel Tank Capacity		190 L		
Fuel Consumption		1.7~3.0 L/h (Loading reefer container)		
Oil Tank Capacity		10 L	6 L	
Coolant Volume		10 L (Including reserve tank)		
Operation Temperature Range		-40°C~55°C		
Engine	Model	404D-22G	V2203-E2BG	4L22BD-RF1
	Manufacturer	PERKINS	KUBOTA	LD
Generator	Model	RF-15-CIMC-FS		
	Manufacturer	SHANGHAI CIMC GENERATING SET CO., LTD		
	Excitation Method	Permanent magnet excitation		
Control System	Control Unit	EG-1	SCGC4010NC or SCGC4100LT	
	Instrument	Hour meter, temperature gauge, oil pressure, DC voltmeter, indicator.		LCD
	Protection Feature	Low oil pressure, high coolant temperature, low coolant level, generator short circuit or over load.		Low oil pressure, high coolant temperature, low coolant level, over load, over/under engine speed, high/ low AC voltage, low fuel level, etc
	Generator Set Control	ON/ OFF switch START/ PREHEART switch		ON/ OFF switch START/ PREHEAT switch CYCLE RUN/ STOP CYCLE switch



MPMC Side-Mount Generator Set for ISO reefer container

 Diesel
  -40~55°C
  60 Hz
  15 kw
460 V
1800 r/min



Key Features

- ❶ Power Range: 15kW (18.75kVA)
- ❷ Fuel Tank Capacity: 145L
- ❸ Operation Temperature Range: -40°C~55°C
- ❹ Radiator: Plate structural aluminum radiator
- ❺ Emission Regulation: U.S. EPA Tier 3 / EU Stage 3 and China Off Road Stage 3 / NA
- ❻ Engine: Perkins / Kubota / LD 4 cylinders, 1800r/min
- ❼ Total Engine Displacement: 2.156L ~ 2.216L
- ❽ Air Cleaner: Heavy-duty oil bath filter air cleaner
- ❾ Coolant Volume: 10L (Including reserve tank)
- ❿ Generator: SHANGHAI CIMC GENERATING SET CO., LTD
- ⓫ Generator Excitation: Permanent Magnet Excitation
- ⓬ Control System: Instrument meters / LCD Control Panel

Mounting Instruction

MPMC Side-mount generator sets are side-mounted to the chassis with 4 sets of mounting clamps, 2 sets of mounting arms and 8 - M20 bolts for easy installation and removal.



MPMC Side-Mount Generator Set for ISO reefer container



CE Certificate



ISO 9001 Quality System Certified



ISO 14001 System Certification



ISO 45001 System Certification



TLC Certificate

60 Hz Diesel Genset | Three-Phase
Side-Mount



Items		MCCT-3GPS (C)	MCCT-3GKS (C)	MCCT-3GLS (C)
Emission Regulation		U.S. EPA Tier 3	EU Stage 3 and China Off Road Stage 3	NA
Rated Power		15 kW (18.75kVA)		
Rated Voltage		460 V		
Rated Frequency		60 Hz		
Overall dimension	Length	1660 (160+1340+160) mm		
	Width	1150 mm(Single beam installation), 1880 mm(Double beam installation)		
	Height	855 (585+270) mm	865 (585+280) mm	855 (585+270) mm
Weight		780 kg (Without oil and coolant)		
Fuel Tank Capacity		145 L		
Fuel Consumption		1.7~3.0 L/h (Loading reefer container)		
Oil Tank Capacity		10 L	6 L	
Coolant Volume		10 L (Including reserve tank)		
Operation Temperature Range		-40°C~55°C		
Engine	Model	404D-22G	V2203-E2BG	4L22BD-RF1
	Manufacturer	PERKINS	KUBOTA	LD
Generator	Model	RF-15-CIMC-FS		
	Manufacturer	SHANGHAI CIMC GENERATING SET CO., LTD		
	Excitation Method	Permanent magnet excitation		
Control System	Control Unit	EG-1	SCGC4010NC or SCGC4100LT	
	Instrument	Hour meter, temperature gauge, oil pressure, DC voltmeter, indicator.	LCD	
	Protection Feature	Low oil pressure, high coolant temperature, low coolant level, generator short circuit or over load.	Low oil pressure, high coolant temperature, low coolant level, over load, over/under engine speed, high/ low AC voltage, low fuel level, etc	
	Generator Set Control	ON/ OFF switch START/ PREHEART switch	ON/ OFF switch START/ PREHEAT switch CYCLE RUN/ STOP CYCLE switch	

MPMC SCGC-1GPAR Generator Set

For Railway ISO Reefer Container Transportation



Advantages

- 1 Separate 12V-120AH batteries for startup & cloud monitoring
- 2 Cycle run system
- 3 Auto-start function
- 4 Pin-mount(Prime)&Clip-on(Auxiliary)
- 5 10s of signal alert before startup within 15m
- 6 Flame proof muffler
- 7 Shock resistance
- 8 Railway safety credential

Mounted to the upper front structure of an ISO reefer container, SCGC-1GPAR series of generator set is **born for railway ISO reefer container transportation.**

It incorporates quick connections to the top mounting holes of the reefer container with mounting pin and to the upper container corner casting with locking clip, as well as attaching points on the side near the bottom that helps increasing safety by anchoring it to the container.

The genset is **completely welded steel structural** assembly designed to take **≥5g's acceleration forces in all directions.** The forklift pocket ends are enclosed to prevent refrigeration unit damage.

Engine



Control system

SCGC4010NC or SCGC4100LT



MPMC SCGC-1GPAR Generator Set

For Railway ISO Reefer Container Transportation



60 Diesel Genset | Three-Phase
Hz Railway

Perkins

Items		SCGC-1GPAR
Emission Regulation		U.S. EPA Tier 3
Rated Power		15 kW (18.75kVA)
Rated Voltage		460 V
Rated Frequency		60 Hz
Overall Dimension	Length	2320 mm
	Width	811(689+122) mm
	Height	1100 mm
Weight		980 kg (Without oil and coolant)
Fuel Tank Capacity		425 L
Fuel Consumption		1.7~3.0 L/h (Loading reefer container)
Oil Tank Capacity		10 L
Coolant Volume		10 L (Including reserve tank)
Operation Temperature Range		-40°C~55°C
Engine	Model	404D-22G
	Manufacturer	PERKINS
Generator	Model	RF-15-CIMC-FS
	Manufacturer	SHANGHAI CIMC GENERATING SET CO., LTD
	Excitation Method	Permanent magnet excitation
Control System	Control Unit	SCGC4010NC / SCGC4100LT
	Instrument	LCD
	Protection Feature	Low oil pressure, high coolant temperature, low coolant level, over load, over/ under engine speed, high/ low AC voltage, low fuel level, etc.
	Generator Set Control	ON/ OFF switch RUN/ STOP switch CYCLE RUN/ STOP CYCLE switch

MPMC Power Pack For Reefer Containers



MCCT-4 & MCCT-5 Key Features

- ① MCCT-4 & MCCT-5 Series power pack are specifically designed for railway / freighter and refrigerated yard at docks. The power pack supplies electrical power for ISO container refrigeration systems.
- ② The power pack is powered by water-cooled, heavy-duty, industrial type CUMMINS diesel engine that is closed couple via SAE flexible disk/flange coupling to the MARTHON brush-less, synchronous, self-regulated alternator.
- ③ The generator set frame is insulated from the container floor by anti-vibration mountings.
- ④ The safety shutdown system and the electricity measuring data are provided by HGM6110 controller.
- ⑤ The power pack is manufactured and rated according to continuous power output as outlined in ISO-8528, overload power in accordance with ISO-3046.

MCCT-4



■ Railway transportation

MCCT-5



■ Refrigerated container yard
 ■ Docks
 ■ Freighter

MPMC Power Pack For Reefer Containers

60 Hz Diesel Genset | Three-Phase
MCCT-4 Power Pack



Power Pack Model	MCCT-4-620H	MCCT-4-725H	MCCT-4-750H	MCCT-4-800H	MCCT-4-900H
Rated Output (kW)	620	725	750	800	900
Rated Voltage	460V				
Rated Frequency	60 Hz				
Receptacle Quantity	62	72	74	80	90
Overall Dimension	40ft ISO container (L:12192mm, W:2438mm, H:2896mm)				
Weight	16000 kg				
Fuel Tank Capacity	1000 L				
Engine Model	KT38-G	KTA38-G2	KTA38-G2B	KT38-G2A	KTA38-G4
Manufacturer	Cummins				
Rated Output (kW)	679	809	830	915	1007
Rated Speed	1800 r/min				
Fuel Consumption	196g/kW.h at 100% Rated power				
Coolant Capacity	290 ~ 310 L				
Oil Tank Capacity	114 ~ 140 L				
Generator Model	MX-H-620-4	MX-H-725-4	MX-H-750-4	MX-H-800-4	MX-H-900-4
Manufacturer	Marathon				
Insulation Class	H/H				
Drip Proof	IP22				
Control Unit	HGM6110				
Instrument	Hour meter, temperature gauge, oil pressure gauge and LCD				
Protection Feature	Low oil pressure, High coolant temperature, Low coolant level, Over speed, Under speed, High voltage, Low voltage, over current				
Generator Set Control	"IDLE/RUN" switch, "START/STOP" switch, "EMERGENCY STOP" switch				

60 Hz Diesel Genset | Three-Phase
MCCT-5 Power Pack



Power Pack Model	MCCT-5-350H	MCCT-5-400H	MCCT-5-450H	MCCT-5-470H	MCCT-5-500H
Rated Output (kW)	350	400	450	470	500
Rated Voltage	460V				
Rated Frequency	60 Hz				
Receptacle Quantity	34	40	44	46	50
Overall Dimension	20ft ISO container (L:6058mm, W:2438mm, H:2591mm)				
Weight	9000 kg				
Fuel Tank Capacity	2000 ~ 2500 L				
Engine Model	KTA19-G2	KTA19-G3	KTA19-G4	KTAA19-G5	KTAA19-G6A
Manufacturer	Cummins				
Rated Output (kW)	392	463	507	533	590
Rated Speed	1800 r/min				
Fuel Consumption	196g/kW.h at 100% Rated power				
Coolant Capacity	150 ~ 200 L				
Oil Tank Capacity	38 ~ 50 L				
Generator Model	MP-H-350-4	MP-H-400-4	MP-H-450-4	MP-H-470-4	MP-H-500-4
Manufacturer	Marathon				
Insulation Class	H/H				
Drip Proof	IP22				
Control Unit	HGM6110NC				
Instrument	Hour meter, temperature gauge, oil pressure gauge and LCD				
Protection Feature	Low oil pressure, High coolant temperature, Low coolant level, Over speed, Under speed, High voltage, Low voltage, over current				
Generator Set Control	"IDLE/RUN" switch, "START/STOP" switch, "EMERGENCY STOP" switch				

MPMC provides customers in-time, professional, and point to point after sales service with technically qualified team and wide service network.



- ★ Head office in Shanghai
- ★ Manufacturing base in Jiangsu

- ★ USA Branch
- ★ UAE Office
- ★ UK Office

Strong and wide service network makes customers more satisfied

MPMC has numbers of senior technicians with over 10 years' experience on average, and qualified staff responsible for before and after sales service.



24^{hours}



1500^{hours}



Super Quality, fully trusted by 14 applications in more than 115 countries all over the world