FHC

FIRE & HAZARD CONTROL EQUIPMENT CO

SAUDI MADE

POWER YOU CAN TRUST

GENERATOR PROFILE

WWW.FHCMFG.COM

INTRODUCTION

FHC provides tailored power solutions with high-performance diesel engines for generator sets whether it's Stationary (Fixed) or Mobile Generator sets in order to meet & satisfy our customer's demands & requirements by covering all the ranges from 50 KVA to 3000 KVA.

FHC also has the ability to offer customized units upon customer's needs in our production facility located in Dammam 2nd industry city as we manufactured the Generator trailer (Mobile Generator) & other generator accessories like Diesel Tanks.

Assuring our customers that every Generator set complies with the most rigid levels of quality, efficiency & safety, whether it is an automatic emergency standby Generator or a generator set for prime full load applications.

FHC engineering department consists of a fully dedicated team of engineers using the latest software & hardware to guarantee the reliability of our product in the most difficult applications.

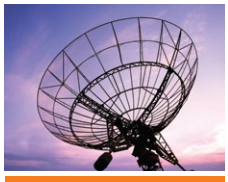
FHC is providing a rental Generators as well to help our customers to focus on their business and move away from the hassle of procuring, maintaining and operating their equipment.

FHC Diesel Generators are powered by the high quality engines as Perkins', VOLVO PENTA, MTU, SCANIA and DOOSAN Coupled with the well-known reliable alternators such as Mecc alte, MARELLI, LEROY SOMER & STAMFORD.

WE SERVE

FHC offers power solution in the following sectors

Oil and Gas


Telecom

Construction

Transportation

Government

Industry

FHC has complete (Mechanical/Electrical) workshops & spare parts around the kingdom to respond immediately to any service support.

STAMFORD power generation

DOOSAN

SCANIA

VOLVO PENTA

mtu

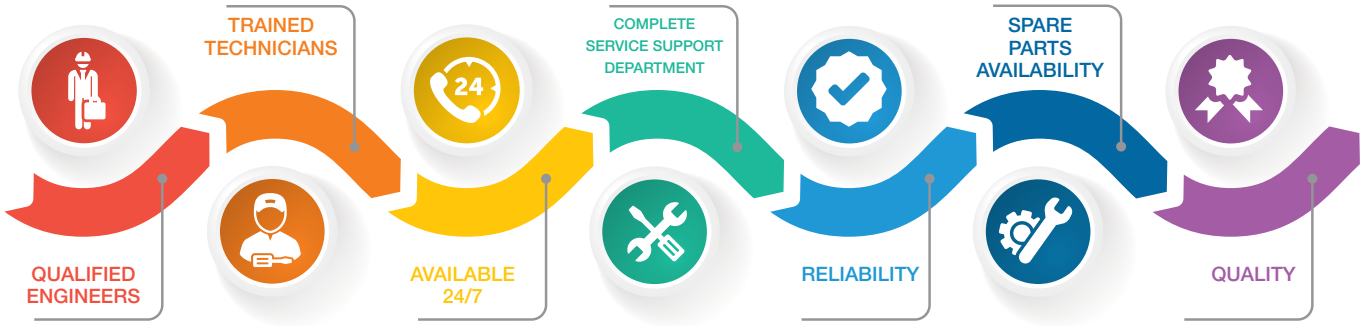
OUR GOAL

Support our client by offering a reliable complete power solution to meet your needs as we work closely with you to formulate & implement high-quality Generator sets that exceed your expectations and more!

OUR TARGET

Is to offer a complete power solution to meet our customer needs as we work closely with them to formulate and implement high-quality generator sets that exceed their expectations.

SALES SERVICES



GENERATOR ACCESSORIES

Control Panel

To control all necessary functions for the protection and control of the diesel engine as well as the measurement of the current and voltage values.

Automatic Transfer Switch (ATS)

Automatically transfers a power supply from its primary source to a backup source when it senses a failure. Following the failure, the ATS automatically invokes the backup source to minimize power supply disruptions.

Manual Transfer Switch (MTS)

Power is made available from your generator at the flip of a switch, quickly swapping designated circuits over to generator power in the event of an emergency or outage.

Fuel Tank

Our Generator has been manufactured and designed to have a base fuel tank which allows the generator to operate for 8 hours at full load, We also offer a separate daily and weekly diesel tanks with different capacities and shapes (Rectangular or Cylindrical) whether it is made of carbon steel or stainless steel all to be provided with a level gauge and all its fittings.

Sound Proof Canopies

Our Generator Enclosures are manufactured to the highest specifications. We can supply either simple weatherproof enclosures or acoustic enclosures, Allowing the maximum aspiration and cooling airflow required.

Synchronization

For some of the application that requires connecting more than one generator together, our generators can be operated to work in parallel.

Trailer

In our plant we can manufacture trailers for our gen-sets and provide mobile generators as per our customers' need.

Remote Monitoring System (RMS)

Grant access to unlimited people through a software on PC and smartphone/tablet application (IOS/Android) to manual provision to Activate/deactivate the complete system & Monitoring of all system parameters, working hours & fuel level provided inside the canopy control compartment..

FHC GENERATOR RATINGS

GENERAL MODEL	ENGINE MAKE	ENGINE MODEL	STANDBY (KW)	PRIME (KW)
PE0009SWD	PERKINS	403D - 11G	10	9
PE0015SWD	PERKINS	403A - 15G2	15	14
PE0020SWD	PERKINS	404A - 22G	20	19
PE0030SWD	PERKINS	1103A - 33G	30	28
PE0045SWD	PERKINS	1103A - 33TG1	48	44
PE0060SWD	PERKINS	1103A - 33TG2	60	54
PE0065SWD	PERKINS	1104A - 44TG1	65	59
PE0080SWD	PERKINS	1104A - 44TG2	80	73
PE0100SWD	PERKINS	1104C - 70TAG2	96	88
PE0130SWD	PERKINS	1106A - 70TG1	134	122
PE0150SWD	PERKINS	1106A - 70TAG2	148	136
PE0180SWD	PERKINS	1106A - 70TAG3	172	156
PE0200SWD	PERKINS	1506A - E88TAG1	220	200
PE0250SWD	PERKINS	1506A - E88TAG3	256	232
PE0280SWD	PERKINS	1506A - E88TAG4	288	260
PE0300SWD	PERKINS	1506A - E88TAG5	308	280
PE0350SWD	PERKINS	2206A - E13TAG2	352	320
PE0450SWD	PERKINS	2506C - E15TAG1	448	404
PE0620SWD	PERKINS	2806C - E15TAG1A	560	512
PE0750SWD	PERKINS	4006 - 23TAG2A	672	608
PE0800SWD	PERKINS	4006 - 23TAG3A	760	760
PE01020SWD	PERKINS	4008TAG2	880	880

GENERAL MODEL	ENGINE MAKE	ENGINE MODEL	STANDBY (KW)	PRIME (KW)
MT0200SWD	MTU	6R1600G10S	196	180
MT0230SWD	MTU	6R1600G20S	220	200
MT0270SWD	MTU	8V1600G10S	265	248
MT0300SWD	MTU	8V1600G20S	304	276
MT0410SWD	MTU	10V1600G10S	400	360
MT0450SWD	MTU	10V1600G20S	448	408
MT0500SWD	MTU	12V1600G10S	496	448
MT0570SWD	MTU	12V1600G20S	552	504
MT0630SWD	MTU	12V2000685	600	544
MT0680SWD	MTU	16V2000G45	704	640

GENERAL MODEL	ENGINE MAKE	ENGINE MODEL	STANDBY (KW)	PRIME (KW)
VO0130SWD	VOLVO PENTA	TAD532GE	116	105
VO0150SWD	VOLVO PENTA	TAD731GE	140	128
VO0180SWD	VOLVO PENTA	TAD732GE	172	156
VO0200SWD	VOLVO PENTA	TAD733GE	196	180
VO0250SWD	VOLVO PENTA	TAD734GE	220	200
VO0300SWD	VOLVO PENTA	TAD1341GE	296	268
VO0350SWD	VOLVO PENTA	TAD1342GE	352	320
VO0410SWD	VOLVO PENTA	TAD1344GE	408	368
VO0500SWD	VOLVO PENTA	TAD1641GE	504	456
VO0570SWD	VOLVO PENTA	TAD1642GE	552	504
VO0630SWD	VOLVO PENTA	TWD1643GE	608	552

GENERAL MODEL	ENGINE MAKE	ENGINE MODEL	STANDBY (KW)	PRIME (KW)
DO0270SWD	DOOSAN	P126TI	265	248
DO0300SWD	DOOSAN	P126TI-II	304	276
DO0410SWD	DOOSAN	P158LE	400	360
DO0450SWD	DOOSAN	DP158LC	448	408
DO0500SWD	DOOSAN	DP158LD	496	448
DO0570SWD	DOOSAN	DP180LA	552	504
DO0630SWD	DOOSAN	DP180LB	600	544
DO0680SWD	DOOSAN	DP222LB	704	640
DO0750SWD	DOOSAN	DP222LC	760	688

RATING CONDITIONS AND DEFINITIONS

- The above rating represents the generator set performance capabilities at 60 Hz, 1800 RPM @ 40'C & up to 1000 Meter above Sea level,
In addition, we provide the generator set performance capabilities as per client requirement to service the maximum ambient conditions.

- Standby Power: Is application to heavy duty diesel generator sets and are subject to normal varying load factors used in the event of utility power failure and other emergency application. The generator set may be operated continuously until normal power is restored.

- Prime Power: Is application to heavy duty diesel generator sets when used as utility type and are subject to normal varying load conditions with intermittent overload of 10 % for one hour during every 12 hours of operation.

- The Matching Alternator leads are reconnectable type to suit your voltage requirements from 220V to 480V systems.

PROJECTS REFERENCE

Trailer Mounted Generators 500KW

Project: SEC Emergency Diesel Generators
Customer: Saudi Electricity Company
Location: Jouf / Saudi Arabia
Generator Type & Power Size: Mobile Generator 500 KW
Year: 2016

General Description

- Brushless synchronous AC Generator of prime power rating 500 KW (625 KVA at 0.8 PF), Y connected, 4-pole rotor, single-bearing, drip-proof construction.
- Voltage: 230/400 Volt and 127/230 Volt + 5%
- 60HZ, 3-phase, 4-wire, 1800RPM
- Conforms to BS 5000 or NEMA MG1-22 or CS 22.2 standards.
- 10% overload available for 1 hour in one 12-hours period.
- Directly coupled to the engine via a flexible coupling.
- AC exciter and full wave rectifier mounted on common rotor shaft.
- Solid state automatic voltage regulator with built-in protection against sustained over excitation.
- Class “H” insulation system
- Epoxy-coated stator windings
- Electronic governor for isochronous frequency regulation
- Block loading capacity 40% of rated power.
- The Low Voltage (LV) system neutral conductor is multiple grounded at points remote from the points of connection of generator. The minimum distance between the nearest LV neutral ground and any part of the metal works grounding system at the point of connection of the generator shall be 3 meters.
- Maximum neutral current can reach 20% of the average phase current.
- The complete generator mounted on Fifth-Wheel type semitrailer configuration fully equipped for on-off road travel at safe towing speed of 50KPH and designed with suitable dimensions.

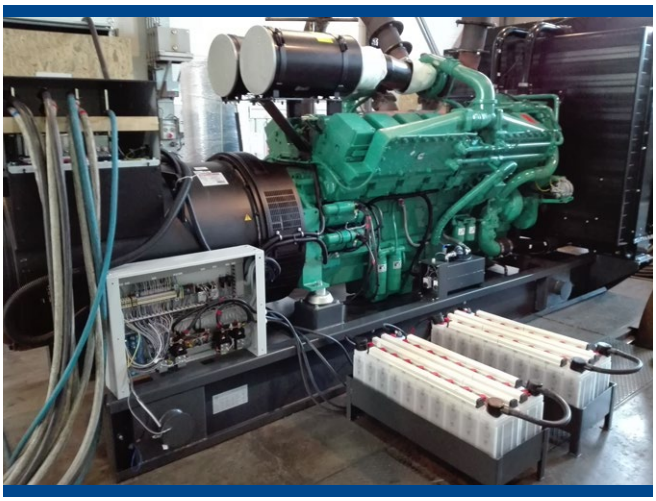
Fixed Generators 1500KW

Project: SABIC SOLA Jubail Truck Terminal
Customer: SABIC
Location: Jubail / Saudi Arabia
Generator Type & Power Size: Generator 1500 KW
Year: 2017

General Description

Diesel Generating set model CU1500SWD optimized for harsh ambient conditions, supplied with:

- Cummins Water Cooled Diesel engine – KTA50-G3
- Stamford Alternator – PI734C in class H/F
- 3 phase sensing AVR MX321 with PMG
- 6 X PT100 for windings temperature reading
- 1 X PT100 for bearing temperature reading
- Alternator Anti Condensation Heater
- Automatic Synchronizing Control Panel
- DGS Motorized Circuit Breaker – ACB 2500Amps
- Control Panel Heater
- Battery charger with – fault diagnostic system
- AC Voltmeter and AC Ammeter, digital and analogue type with phase-selector switches.
- Engine - Water temperature gauge.
- Engine - Lubricating-Oil Pressure gauge
- Earth leakage protection 64/S
- Built-in fuel tank
- Engine Jacket Water Heater
- Hard wired Free contacts for remote alarms/signals
- Dual Starting System (Electric And Pneumatic)
- Ni-Cd starting batteries
- Automatic Fuel Refilling Kit



Truck Mounted Generators 200KW

Project: SEC Emergency Diesel Generators
Customer: Saudi Electricity Company
Location: Dhahran – Jubail – Ahsa - Jouf / Saudi Arabia
Generator Type & Power Size: Truck Generator 200 KW
Year: 2018

General Description

Diesel Generating set model VO0250SWD optimized for harsh ambient conditions, able to work up to 55°C and 500mt ASL without deration, with:

- Volvo Water Cooled Diesel engine – TAD 1341 GE
- Marelli Alternator – MJB 315 SA4
- Automatic Control Panel according to SEC requirements
- Distribution Panel
- Sound and Weather proof canopy 90dB(A)@ 1mt
- Built-in fuel tank – 400 lts
- Motorized cable reels
- Automatic Voltage Change Over Switch (OPTIONAL)
- Oil pressure gauge
- Low oil level transmitter
- Coolant temperature gauge
- Low water level transmitter
- Fuel level gauge

The complete generator mounted on INTERNATIONAL Truck 4x2 Model 4300 SBA.

Truck Mounted Generators 500&1000KW

Project: SEC Emergency Diesel Generators
Customer: Saudi Electricity Company
Location: Riyadh – Jeddah – Abha - Dammam / Saudi Arabia
Generator Type & Power Size: Truck Generator 500 KW & 1000 KW
Year: 2019

General Description

Diesel Generating set model SC0500SWD MT1000SWD optimized for harsh ambient conditions, able to work up to 55°C and 500mt ASL without deration, with:

- 500KW: Scania Water Cooled Diesel engine – DC16072A 02-11
- 500KW: MTU Water Cooled Diesel engine – 18V 2000 685
- 500KW: Meccalte Alternator - Eco 40 2L
- 1000KW: Meccalte Alternator – Eco 43 VL4
- Automatic Control Panel according to SEC requirements
- Distribution Panel
- Sound and Weather proof canopy 90dB(A)@ 1mt
- Built-in fuel tank – 1500 lts / 3000 lts
- Motorized cable reels
- Automatic Voltage Change Over Switch (OPTIONAL)
- Oil pressure gauge
- Low oil level transmitter
- Coolant temperature gauge
- Low water level transmitter
- Fuel level gauge

The complete generator mounted on SCANIA Truck 6x4 Model P360B6X4HZ.

Fixed Generators 150KW

Project: SEC Haradh 380/230KV BSP & EXPANSION
Customer: Saudi Electricity Company
Location: Haradh / Saudi Arabia
Generator Type & Power Size: Generator 160 KW
Year: 2019

General Description

Diesel Generating set model DO0150SWD optimized for harsh ambient conditions,

- Electronic Speed Management
- Electric Starting 12 VDC
- Alternator Single bearing, Self-excited & Self-Regulated, Brushless with automatic voltage regulator, Isolation/Temperature rise class H/H, Mechanical Protection IP 23.
- Skidbase made by steel beams pressure-twisted and electro-welded, with anti-vibration mountings.
- Radiator with blowing fan Mechanically Driven above diesel engine complete of connection pipelines, thermostatic valve & circulation pump, the whole system mounted on genset skidbase.
- Lead type starting battery.
- Stainless steel exhaust gas elastic joint, for connection between engine exhaust has outlets & exhaust pipeline.
- Lifting points.
- Electric automatic start/stop control panel model PSC-1.
- Low Voltage Automatic circuit breaker 4-pole 400 Amps.
- Zincate Steel Soundproof Canopy able to guarantee a residual maximum noise level of 80 ± 3 dB(A) at 1 Meters.
- Built-in Fuel Tank 1000 Liters For Operation of 24 Hours on Full Load.

Fixed Generators 350KW

Project: SABIC Technology Center
Customer: SABIC
Location: Jubail / Saudi Arabia
Generator Type & Power Size: Generator 320 KW
Year: 2020

General Description

Diesel Generating set model PE0350SWD optimized for harsh ambient conditions,

- diesel engine PERKINS water-cooled, electronic speed management,
- electric starting 24 Vdc
- alternator MECCALTE ECO 40-2S4, self-excited and self-regulated, brushless with automatic voltage regulator, isolation class H / temperature rise class B, PMG, Space Heater, PT100 on windings and bearings for temperatures control and digital gauges on the front of the DG control panel mechanical protection IP 23, single-bearing.
- Radiator with blowing fan mechanically driven by above diesel engine complete of connection pipelines, thermostatic valve and circulation pump, the whole system mounted on genset skidbase;
- Starting battery, lead type (1 set);
- Stainless steel exhaust gas elastic joint, for the connection between engine exhaust gas outlets and exhaust pipeline;
- Lifting points;
- Painting cycle and colour according to our standard;
- Electrical control panel for automatic operation “PSC-1” / DSE 7320 type, mounted on the skidbase, with a programmable microprocessor card (through pushbuttons).
- The control panel logic is capable also of controlling and monitoring the generator set.
- Low voltage automatic circuit breaker 4-poles in fixed configuration with manual control.
- Out air conveyor (metal) to be positioned between engine radiator and outlet window of the room (maximum distance radiator-wall around 1,5 meter)
- Exhaust gas pipeline (std iron made) including:
- Residential muffler
- Linear pipeline portions (for a total length of around maximum 5 meters)
- N°2 90° curves
- Fixing supports
- Thermal insulation material “tape” of enough length to cover all the exhaust gas path
- Dummy load (resistive) 125 kW / 480 V / 3 poles / 60 Hz mounted in 1 enclosure, separated from the above DG, stainless steel AISI 304 not painted having protection degree IP23/IP54.
- Dedicated circuit breaker (fixed configuration, with manual control) for dummy load above mentioned with interlock to the main EDG breaker.

Truck Mounted Generators 200&500&1000KW

Project: SEC Mega 99 Generator Project
Customer: Saudi Electricity Company
Location: Riyadh – Jeddah – Abha - Dammam / Saudi Arabia
Generator Type & Power Size: Truck Generator 200 KW & 500 KW & 1000 KW
Year: 2022

- General Description
- Diesel Generating set model SC0500SWD MT1000SWD optimized for harsh ambient conditions, able to work up to 55°C and 500mt ASL without deration, with:
-
- 500KW: Scania Water Cooled Diesel engine – DC16072A 02-11
- 500KW: MTU Water Cooled Diesel engine – 18V 2000 685
- 500KW: Meccalte Alternator - Eco 40 2L
- 1000KW: Meccalte Alternator – Eco 43 VL4
- Automatic Control Panel according to SEC requirements
- Distribution Panel
- Sound and Weather proof canopy 90dB(A)@ 1mt
- Built-in fuel tank – 1500 lts / 3000 lts
- Motorized cable reels
- Automatic Voltage Change Over Switch (OPTIONAL)
- Oil pressure gauge
- Low oil level transmitter
- Coolant temperature gauge
- Low water level transmitter
- Fuel level gauge

The complete generator mounted on SCANIA Truck 6x4 Model P360B6X4HZ.

Fixed Generators 75KW

Project: SWCC New City Feeder Water Transmission System
Customer: SWCC
Location: Qunfudah / Saudi Arabia
Generator Type & Power Size: Generator 75 KW
Year: 2022

General Description

Diesel Generating set model VO0085SWD optimized for harsh ambient conditions,

- GENERATING SET our type VO0085SWD with the following technical features and accessories:
- VOLVO PENTA TAD 530 GE, turbocharged, water-cooled, turbocharged, electronic speed management, electric starting 24 Vdc
- alternator MARELLI MXB-E 225 SB4, self-excited and self-regulated, brushless with automatic voltage regulator, isolation class H / temperature rise class H, space Heater, mechanical protection IP 23, single-bearing. Configuration on skidbase made by steel beams pressure-twisted and electro-welded, with antivibration mountings. Arranged for manual and automatic operation and equipped with:
- Radiator with blowing fan mechanically driven by above diesel engine complete of connection pipelines, thermostatic valve and circulation pump, the whole system mounted on genset skidbase;
- Starting battery, lead type (1 set);
- Stainless steel exhaust gas elastic joint, for the connection between engine exhaust gas outlets and exhaust pipeline;
- Exhaust gas muffler, residential type, supplied loose
- Electrical control panel IP41 protection degree for automatic operation DSE 7320 type, mounted on the skidbase, with a programmable microprocessor card.
- LCD display interface to show alarms, predispositions and electric parameters.
- Fully automatic battery charger with automatic cross-over point;
- Control circuit for engine jacket water preheating system;
- RS485 serial interface for remote control trough MODBUS protocol;
- Daily fuel tank 800 litres capacity, suitable for more than 24 hours of autonomy with DG running at full load,
- Exhaust gas pipeline (std iron made) including: o Linear pipeline portions (for a total length of around maximum 10 meters) o N°2 90° curves o Fixing supports o Thermal insulation material “tape” of enough length to cover all the exhaust gas path
- Fuel pipes for connection DG to the fuel day tank including both feeding line and injectors return line.

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