

– DIESEL GENERATING SET

TC90T 90 KVA

– POWERED BY CUMMINS 4BTA3.9-G11

**INDUSTRIAL STANDBY & PRIME
POWER SOLUTION**



SILENT TYPE



OPEN TYPE

STANDBY (ESP)

90

kVA // 72 kW

PRIME (PRP)

80

kVA // 64 kW

VOLTAGE // 3Φ

400_V

127 A @ 50 Hz

NOISE @ 7M

≤ 80 ± 2

dB(A) // Silent

ELECTRICAL SPECIFICATIONS

01 //
ELECTRICAL

Model	TC90T
Frequency	50 Hz
Phases / Wires	3 Phase, 4 Wire
Voltage	400 / 230 V
Rated Current	127 A
Rated Speed	1500 r/min
Power Factor (cos φ)	0.8
Fuel Consumption @ 100%	17.6 L/h
Engine	Cummins 4BTA3.9-G11
Alternator	Stamford UCI 224G
Control Module	DSE 7320 MKII

WEIGHT & DIMENSIONS

02 //
PHYSICAL

– OPEN TYPE

L 1800 ×
W 820 ×
H 1355 mm

968 KG
Tank: 158 L

– SILENT TYPE

L 2396 ×
W 1056 ×
H 1723 mm

1334 KG
Tank: 158 L

STANDARDS GB/T 2820-2009 // ISO 8528 // CE //
CNAS // IAF

– STANDARD INCLUDED

Engine, alternator, cooling system, base frame (excl. fuel tank), shock absorber, air intake, control box with mains floating charge, plastic fan blades.

– OPTIONAL ADD-ONS

Base frame with fuel tank, water jacket heater, fuel water separator, fuel heater, level sensors, switch box, auto-fueling system, battery frame, anti-condensation heater.

– ACCESSORIES BUNDLED

Silencer, bellow, exhaust silencing system accessories (matching engine), battery, starting cord assembly, gen-set documentation, tools matched to engine.

ENG.

MANUFACTURER: CUMMINS // 4-CYLINDER IN-LINE // TURBOCHARGED

POWER PLANT

4-STROKE DIESEL

CUMMINS

4BTA3.9-G11

80 KW @ 1500 RPM

ENGINE CORE

01 //
POWER PLANT

Manufacturer	CUMMINS
Model	4BTA3.9-G11
Engine Speed (rated)	1500 RPM
Cylinder / Arrangement	4 / L (Inline)
Displacement	3.9 L
Bore × Stroke	102 × 120 mm
Compression Ratio	17.3 : 1
Max Standby Power @ Rated	80 kW
Frequency Regulation	± 1%
Governor Type	Electrical
Aspiration / Cooling	Turbocharged

FUEL / OIL / AIR

02 //
CONSUMABLES

Fuel Consumption @ 100% PRP	17.6 L / h
Fuel Consumption @ 75% PRP	13.2 L / h
Fuel Consumption @ 50% PRP	9.1 L / h
Fuel Consumption @ 25% PRP	5.3 L / h
Total Oil Capacity w/ Filters	16.4 L
Engine Air Flow	70 L/s
Exhaust Gas Flow	134 L/s
Exhaust Temperature	548 °C
Max Back Pressure	10 kPa
Radiator & Engine Capacity	29.0 L
Max Water Temperature	104 °C

– KEY ENGINE ADVANTAGES

- ▶ **Cummins engines:** advanced design, reliable performance and durable continuous operation.
- ▶ High combustion efficiency and low fuel consumption, engineered for continuous running.
- ▶ Globally available Cummins service parts and authorised service network.
- ▶ Alloy-steel block and connecting rods for high durability under load.
- ▶ P/T pump injection technology — low cost and complete combustion.
- ▶ Proven platform operating across industrial, construction and agricultural applications.

ALT.

MANUFACTURER: CUMMINS GENERATOR TECHNOLOGIES // BRUSHLESS AVR // IP23
CLASS H

3-PHASE AC

BRUSHLESS SHUNT

IP23 / CLASS H

STAMFORD

UCI 224G

CORE CONFIGURATION

01 //
BUILD

Manufacturer	STAMFORD
Type	UCI 224G
Number of Phases	3
Power Factor (cos φ)	0.8
Pole Count	4
Bearing	1 (Single)
Coupling	Direct
Exciter Type	Brushless SHUNT

ELECTRICAL / PROTECTION

02 //
PROTECTION

Insulation Class / Temp Rise	H / H
Degree of Protection	IP 23
AVR Model	AS440
Altitude Rating	≤ 1000 m
Winding Pitch	2/3
Winding Leads	6 / 12
Voltage Regulation	± 1.0 %
Overspeed Capability	2250 r/min (1 min)

– STAMFORD ALTERNATOR QUALITY PROGRAM

- ▶ Utilising wire-wound (random-wound) technology – industry benchmark for all gen-set configurations.
- ▶ IP21, IP22, IP23 and IP44 enclosure protection options available.
- ▶ Manufactured under ISO 9001 and ISO 14001 certified environments.
- ▶ Brushless excitation with AVR – maintenance-free, high-reliability voltage control.
- ▶ Ideal for marine/offshore, UPS, telecoms, construction and continuous/standby power.
- ▶ Licensed service network across Southeast Asia for parts and warranty support.

STANDARDS GB755 // BS5000 Part 3 // VDE 0530 // NEMA MG1-22 // IEC-34 // CSA C22-100 // AS1359

CTRL.
 AUTO START & AUTO MAINS FAILURE (AMF) CONTROL MODULE // IP65 //
 ETHERNET-READY

AMF + AUTO START
GEN-SET CONTROLLER

IP65 / 250-EVENT LOG

DEEPSEA

DSE 7320 MKII

PHYSICAL SPECS

01 //
 DIMENSIONS

Overall Size	240 × 181 × 42 mm
Overall (imperial)	9.4" × 7.1" × 1.6"
Panel Cutout	220 × 160 mm
Panel Cutout (imperial)	8.7" × 6.3"
Weight	400 g
Ingress Protection	IP65 (with gasket)
Display	132 × 64 px • 4-line LCD
Inputs / Outputs	9 / 8 Configurable
Event Log	250 Events
Operating Temperature	–30 to +70 °C

MKII ENHANCEMENTS

02 //
 UPGRADES

Processing Power	Upgraded CPU
USB Host Port	Type-A (Firmware)
USB Device Port	Type-B (PC Config)
Front Editing	PIN Protected
Config Suite	v2 Compatible
Tier 4 CAN Support	Enhanced
Backward Mounting	Identical Cutout
Languages	Multi-lingual
DSENet® Expansion	Supported
Real-Time Clock	Battery Backed-up

– CORE FEATURES

- 4-Line back-lit LCD text display
- Five-key menu navigation
- Front panel editing with PIN protection
- Customisable status screens & power save
- Up to 3 remote display units
- Tier 4 CAN engine support
- CAN & Magnetic Pick-up sensing
- Integral PLC editor

– PROTECTION & MONITORING

- kW & kVAr protection
- Reverse power (kW & kVAr) protection
- Unbalanced load protection
- Independent earth fault trip
- Charge alternator failure alarm
- Fuel usage monitor & low-fuel alarms
- LED and LCD alarm indication
- 3 configurable maintenance alarms

– LOAD & POWER CONTROL

- Automatic load transfer (AMF)
- Load shedding & dummy load outputs
- Power monitoring (kWh, kVAr, kVAh)
- Manual speed control (CAN engines)
- Manual fuel pump control
- Engine exerciser schedule
- Idle control for starting & stopping
- Multiple date/time scheduler

– CONNECTIVITY & SOFTWARE

- USB host + device connectivity
- RS232 & RS485 communications
- Configurable Gencomm pages
- Remote SCADA monitoring via PC software
- Advanced SMS messaging (start/stop via SMS)
- Ethernet via DSE860/865 modules
- Licence-free DSE Config Suite PC software
- DSENet® expansion compatible