

# AQT-450 GENERATING SET

(TECHNICAL DATA SHEET)

# **Standard Specifications:**

### 1- Prime Rating:

Unlimited hours usage, with an average load factor of 80% over each 24 hour period. 10% overload is available for 1 hour in every 12 hours operation. 0 overload is permitted on standby power.

### 2- Standby Rating:

Limited to 500 hours annual usage, with an average load factor of 80% of the published standby power rating over each 24 hour period. Up to 300 hours of annual usage may be run continuously. No overload is permitted on standby power.

### 3- Engine:

Perkins, including air filters, fuel filters, oil filter, starting motor and charging alternator etc.

4- Alternator Type: brushless AC alternator

5- Radiator: 50°C, fan protective shroud

# Powered By: © Perkins\* Diesel Generator , LEROY-SOMER meccalte



# "We deliver power, service and solutions in exactly the way you want."

# **Output Rating:**

I	0				
PRIME:		STANDBY:			
50 Hz—1500	Rpm 400 V, 3ph				
400 kVA	320 kW	450 kVA	360 kW		
60 Hz-1800	Rpm 480 V, 3ph				
400 kVA	320 kW	438 kVA	350 kW		
ENGINE SPEC	FICATIONS				
Engine Make		PERKINS			
Engine Model		2206A-E13TAG3	2206A-E13TAG3		
No. of Cylinders		6 vertical in-line	6 vertical in-line		
Cycle		4 Stroke	4 Stroke		
Aspiration		Turbocharged & air to air charged cooled			
Cooling Method		Water cooled	Water cooled		
Governing Type		Electronic	Electronic		
Governing Class		G2 - ISO 8528 Pa	G2 - ISO 8528 Part 1		
Compression Ratio		16.3:1			
Displacement		12.5 L			
Bore/Stroke		130 x 157 mm			
Dynamic Charging Alternator		70AMP, 24V	70AMP, 24V		
ALTERNATOR	SPECIFICATIONS				
Alternator Make		AQT I Leroy Som	AQT I Leroy Somer   STAMFORD		
Alternator Model		AQT I TAL-047-A   HC444F			
Number of Poles		4			
Number of Winding Leads		6	-		
Type of Bearing			Single Bearing		
Insulation Class - Temp Rise Ingress Protection Rating			Cont. H - 125/40 Č		
Excitation System		IP 23 Self Excited			
AVR Model			R150		
		N130			
COMPLY WIT	H STANDARDS				

ISO 3046, BS 5514, DIN 6271, NEMA-MGI, DIN EN, BS 5000, IEC 60034, IEC 60947-2

	ALTERNATOR OPERATING DATA
Over speed	2250 rpm
Voltage Regulation	<u>+</u> 1%
Harmonic Coefficient THF	< 2%
Tel. influence TIF	< 50
Cooling air flow	0.9 m3/ Sec

# **Standard Specifications:**

### 6- Fuel Tank:

Capacity of fuel tank is for 8-10 hours running Built in fuel tank up to 800 kVA

### 7- Circuit Breaker:

3 pole LS MCCB

### 8- Control system alarms:

- Over and Under Speed
- Low and High Battery Volt.
- Start and Stop Failure
- Over Current
- Under / Over Generator Voltage
- Low Oil Pressure
- Emergency stop
- High engine temperature

### 9- Warranty policy:

- AQT GENERATOR products has a warranty for 12 Months or 1000 hours whichever occurs first against any manufacturing defects
- Wearing parts (filters), incorrect man made operation, maintenance failures are excluded from the warranty policy

### Acoustic Enclosure Specifications:

Enclosure Type	Acoustic & Weather Proof		
Drainage Provision	Fuel and Water Drainage		
Transportation	Tested Single Point Lifting Facility & Forklift Pockets		
Ingress Protection Rating	IP 23		
Lifting	ISO Standard Lifting		
Canopy RAL Color	TAL 9010		
Base frame RAL Color	RAL 9011		
Noise Pressure level @ 7m 70db(A) @ 7mt			

# **Control System:**

- Large back-lit text display Multiple display languages
- DSENET expansion compatible
- Data logging facility
- Fully configurable via PC using USB communication
- Front panel configuration
- Efficient power save mode
- 3 phase generator sensing

Accumulated power monitoring (kWh, kVA h, kVA h)

- Generator/load current monitoring and protection (kW)
- Breaker contol via fascia buttons
- Fuel and start outputs, configurable using can
- 4 configurable DC outputs
- 4 configurable analogue/digital inputs
- Automatically transfers between mains (utility) and generator

**AQT GENERATOR** 

- Increased input and output expansion capability via dsenet IP65 rating (with optional gasket) offer
- IP65 rating (with optional gasket) offers increased resistance to water ingress
- Digital inputs; Analogue Inputs

DSE6110 MKII

FAILURE CONTROL

AUTO START & AUTO MAINS



# **Dimensions:**

Туре	Length (mm)	Width (mm)	Height (mm)	Fuel Tank (L)	Weight (KG)
OPEN	3515	1250	2204	730	3097
CLOSED	4200	1500	2200	730	4620



# **Engine**:



Perkins heavy duty high performance industrial type diesel engine.

COOLING SYSTEM		
Total Coolant Capacity (L)	51.4 L	
Cooling Fan Air Flow	654 m3/ min	
Radiator Fan Load	14 kW	
Heat Radiation to Room (PRP)	36.8 kW	
Heat Radiation to Room (ESP)	37.6 kW	
LUBRICATION SYSTEM		
Oil Filter Type	Spin-On Full Flow	
Total Oil Capacity	40 L	
Oil Type	API-CH-4 or ACEA E5	
EXHAUST SYSTEM		
Muffler Type	Industrial Grade	
Max. Back Pressure	10 kPa	
Exhaust Gas Flow (PRP/ESP)	72 /75.8 m3/ min	
Exhaust Gas Temperature	< 630 0C	
FUEL SYSTEM		
Recommended Fuel	Class A2 Diesel	
Fuel Consumption Standby	94 L/hr	
Fuel Consumption 100% PRP	93 L/hr	
Fuel Consumption 75% PRP	85 L/hr	
Fuel Consumption 50% PRP	65 L/hr	
AIR SYSTEM		
Air Filter Type	Paper Element	
Combustion Air Flow (PRP)	26.7 m3/min	
Combustion Air Flow (ESP)	27.6 m3/min	

# **Optional configurations:**

### Engine accessories:

- Heavy-duty air filter
- Coolant heater
- Lubricant oil heater
- Fuel and Water Separator
- Lube oil rotary pump

#### **Alternator And Accessories:**

- Leroy somer/stamford
- Anti condensation heater
- PMG + AVR  $\diamondsuit$  Double bearing
- alternator High voltage \_\_ kV
- RTDs for Bearing and winding

### **Cooling System:**

- 55 degree Radiator
- Remote Radiator

#### **Control System:**

- AMF
- Parallel
- Practical type in low temperature environment
- Control Screen Heater
- Remote Annunciators
- Other (Comp, DEIF)

#### **Circuit Breaker:**

- 3/4 poles
- Fixed/handcart type
- Π Electric mechanism

#### Automatic Transfer Switch (ATS):

- ATS cabinet
- Contractor type ATS
- Motorized changeover type ATS

#### **Start Battery:**

- Nickel-cadmium battery
- Maintenance-free battery
- Battery charger and selector switch
- Charging current meter

### **External Fuel Tank:**

- Single /double wall fuel tank (500-5000 L)
- Fuel Transfer pump

### **Exhaust Muffler:**

- Residential grade
  - Critical grade
- Hospital grade

#### Available for voltages :

400/230V, 480/277V, 380/220V, 440/254V, П 416/240V,220/127V, 208/120V

QT GENERATOR

### **Our Success**

We owe our success to our hardworking, highly skilled and committed employees. Our core focus lies in providing customized integrated products and services with well-established infrastructure, equipment and manpower to support and provide the turn key solutions for various industries. We provide the latest in power generator technology equipment, allowing us to give our customers the best product and the best possible service.

### **Objectives**

Our objective is to serve customers to the utmost by providing them with the best-in-class electric generators, reliable door to door delivery, and after sales service at competitive market prices.

"We continue to build our solid reputation for excellence and response, while delivering reliable and tailored solutions to meet the customer's requirements".



At AQT Generators, we take pride in being a dynamic force in the realm of diesel generator sets, offering an extensive range of international brands renowned for their reliability and performance. Our commitment to excellence is reflected in our partnerships with world-famous engine manufacturers such as Perkins and Cummins, coupled with top-notch alternators from Stamford and Leroy Somer.





Office 204, Al Owais Building, Port Saeed, Plot No. 388-0, Dubai, UAE Call Us: +971 4 547 1703 Email: info@aqtgenerators.com

## FOLLOW US ON OUR SOCIAL MEDIA ACCOUNTS

