

AQT



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Diesel Power Generation
Control System & Power Solutions



AQT-820

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

Output Rating:

PRIME:		STANDBY:	
50 Hz—1500 Rpm	400 V, 3ph		
746 kVA	597 kW	820 kVA	656 kW
60 Hz—1800 Rpm	480 V, 3ph		
750 kVA	600 kW	825 kVA	660 kW

ENGINE SPECIFICATIONS

Engine Make	PERKINS
Engine Model	4006-23TAG2A
No. of Cylinders	6 vertical in-line
Cycle	4 Stroke
Aspiration	Turbocharged & air to air charged cooled
Cooling Method	Water cooled
Governing Type	Electronic
Governing Class	G2 - ISO 8528 Part 1
Compression Ratio	13.6;1
Displacement	22.9 L
Bore/Stroke	160 x 190 mm
Dynamic Charging Alternator	55AMP, 24V

ALTERNATOR SPECIFICATIONS

Alternator Make	Leroy Somer STAMFORD AQT
Alternator Model	TAL-049-B
Number of Poles	4
Number of Winding Leads	6
Type of Bearing	Single Bearing
Insulation Class - Temp Rise	Cont. H - 125/40 C
Ingress Protection Rating	IP 23
Excitation System	Self Excited
AVR Model	R150

Comply with 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	± 1%
Harmonic Coefficient THF	< 2%
Tel. influence TIF	< 50
Cooling air flow	1.0 m³/ Sec

Powered By:



Diesel Generator



LEROY-SOMER

mecc alte



Standard Specifications:

6- Fuel Tank:

Capacity of fuel tank is for 8 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	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	78db(A) @ 7 mt

Control System:

Large back-lit text display
(4-Line back-lit LCD 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 (kW h, kVA h, kVAR h)
Generator/load current monitoring and protection
Generator overload protection (kW)
Breaker control via fascia buttons

Fuel and start outputs, configurable when using CAN
8 configurable DC outputs
9configurable analogue/digital inputs
Automatically transfers between mains (utility) and generator (DSE7320 MKII only)
Increased input and output expansion capability via DSENet@
IP65 rating (with optional gasket) offers increased resistance to water ingress
DIGITAL INPUTS
ANALOGUE INPUT



DSE7320 MKII

AUTO START & AUTO MAINS
FAILURE CONTROL

Dimensions:

Type	Length (mm)	Width (mm)	Height (mm)	Fuel Tank (L)	Weight (KG)
OPEN	4300	1750	2200	1170	6300
CLOSED	6000	2440	2590	1170	9300



Engine:



Perkins heavy duty high performance industrial type diesel engine.

COOLING SYSTEM

Total Coolant Capacity (L)	105 L
Cooling Fan Air Flow	870 m ³ / min
Radiator Fan Load	26 kW
Heat Radiation to Room (PRP)	55 kW
Heat Radiation to Room (ESP)	76 kW

LUBRICATION SYSTEM

Oil Filter Type	Spin-On Full Flow
Total Oil Capacity	113.4 L
Oil Type	API-CH-4 or ACEA E5

EXHAUST SYSTEM

Muffler Type	Industrial Grade
Max. Back Pressure	6 kPa
Exhaust Gas Flow (PRP/ESP)	180 m ³ / min
Exhaust Gas Temperature	≤ 430 °C

FUEL SYSTEM

Recommended Fuel	Class A2 Diesel
Fuel Consumption Standby	173 L/hr
Fuel Consumption 100% PRP	157 L/hr
Fuel Consumption 75% PRP	127 L/hr
Fuel Consumption 50% PRP	121 L/hr

AIR SYSTEM

Air Filter Type	Paper Element
Combustion Air Flow (PRP)	64 m ³ /min
Combustion Air Flow (ESP)	71 m ³ /min
Max Air Filter Intake Restriction	3.7 kPa

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 ⇨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
- 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, 416/240V, 220/127V, 208/120V