

Diesel generating set

AGLC20P

400V/50Hz Main power/Cummins 4B3.9-G2



ISO14001:2015

ISO9001 :2015

OHSAS 18001:2007

Product features

// Operative norm:

- ISO 8528:AC generator set driven by reciprocating internal combustion engine
- IEC 60034-1:Basic technical requirements for rotating motors
- YD/T 502: Communication diesel generator set
- GB/T 20136-2006 General test method for internal combustion engine power stations

// Merit:

- ◇ Integrated building block structure design, small volume, compact structure, sophisticated technology;
- ◇ Few parts, light weight, low failure rate and low maintenance cost;
- ◇ Supercharging and supercharging intercooling technology as the leading products, strong power;
- ◇ High-performance damping system and rigid base, small vibration;
- ◇ Efficient fuel supply system and air intake system, fuel atomization and air mixing more fully, more complete combustion, lower emissions;
- ◇ Standardized design, comprehensive and intelligent products, parts and components have strong versatility, easy installation and easy maintenance;
- ◇ maintenance-free battery, with fast start performance;

Technical parameters of the unit

// Generator set

Generator model:	AGLC20P	Main power(kW):	20
Standby power(kW):	22	unit capacity(kVA):	25
Rated speed(rpm):	1500	Rated frequency(Hz):	50
voltage(V):	400	rated current(A):	36.1
Power factor(cos ϕ):	0.8(lag)	Wiring mode:	3 phase 4 wire
Generator weight (kg)	750	Minimum smoke pipe diameter (mm)	1 $\times$ ϕ 64
air intake(m ³ /min):	59.5	Air exhaust(m ³ /min):	57.5
Generator size(mm):	2105*1000*1300	Recommended base size(mm):	2300L $\times$ 1200W

Unit performance index (G2)

Parameter		unit	Performance index
Frequency drop		%	≤ 5
Steady state frequency band		%	≤ 1.5
Relative frequency setting drop range		%	≥ 3.5
Relative frequency setting rise range		%	≥ 2.5
Transient frequency deviation	100% sudden power reduction	%	$\leq +12$
	Surge power		≤ -10
Frequency recovery time		s	≤ 5
Relative frequency tolerance band		%	2
Steady-state voltage deviation		%	$\leq \pm 2.5$
Voltage unbalance degree		%	1
Transient voltage deviation	100% sudden power reduction	%	$\leq +25$
	Surge power		≤ -20
Voltage recovery time		s	≤ 6
Voltage modulation		%	0.3
Relative voltage setting range		%	$\leq \pm 5$
Voltage setting rate of change		%/s	0.2~1
Telephone harmonic factor	THF	%	< 2
Telephone influence factor	TIF	—	< 50

Engine technical parameters

// Engine

Manufacturer:..... Cummins
Model:..... 4B3.9-G2
Engine structure:..... four-stroke
Number :..... 4/L
Displacement:L..... 3.9
Cylinder diameter:mm..... 102
Stroke:mm..... 120
Compression ratio:..... 18.0: 1
Speed:rpm..... 1500
Primary/standby power :kW..... 24/27
Speed regulation mode::..... E
Cooling method:..... closed water cooling
Dry weight (engine only) : kg..... 308

// Start the system

Starting rated power:kW..... 6
Starting rated voltage:V..... DC24

// Fuel system

Fuel injection form: high pressure

// Fuel consumption

Engine output	L/h	g/kwh
100%	6.7	229
75%	5.2	240
50%	3.9	275
25%	2.7	374

// Intake system

Maximum allowable intake resistance
(clean filter element) : kPa..... 3.7

Intake air flow: m³/min..... 1.968

// Lubrication system

Total lubrication system capacity: L 10.9

Maximum allowable oil temperature : °C 121

// Cooling system

Engine coolant volume: L..... 19

Coolant flow: L/min..... 132

// Exhaust system

Maximum exhaust back pressure: kPa..... 10

Exhaust flow: kg/min..... 4.05

Exhaust temperature: °C..... 380

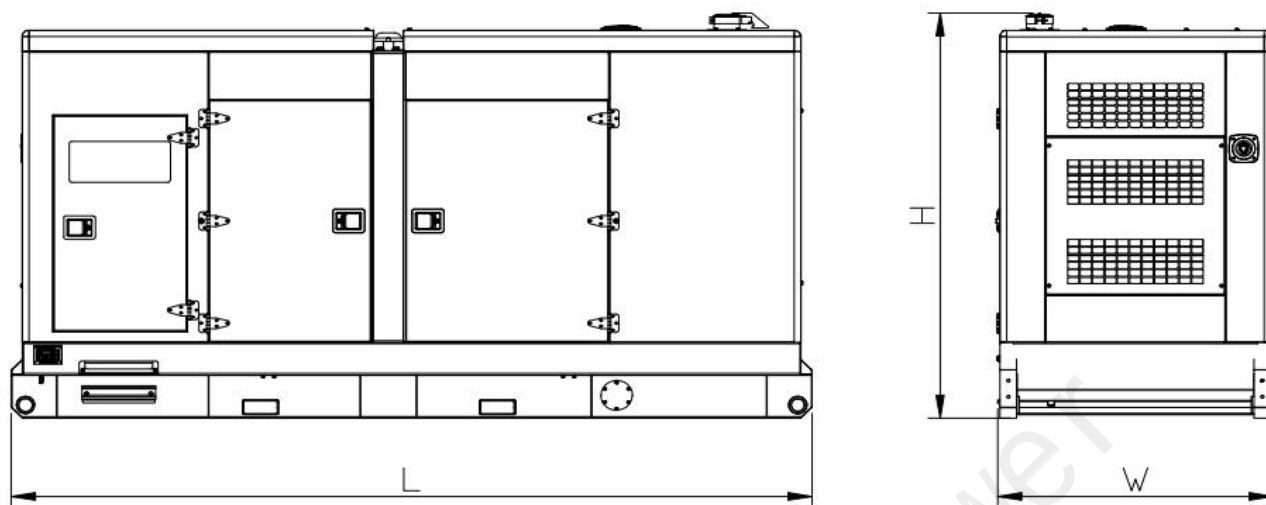
Technical parameters of generator

//Dynamo

*50Hz, AC400V, cos φ =0.8

MODEL	Rated power (kW)	Standby power (kW)	Mechanical efficiency (%)	Insulation	Class of protect	Weight (kg)
LEROYSOMER: TAL-A40G	20	21.6	82.9	H/H	IP21	150

Size and weight



* The above figure is for reference only, the actual size and weight are subject to the final design drawing.

Model	Engine model	size (L×W×H) (mm)	Dry weight (kg)	Wet weight (kg)
AGLC20P	4B3.9-G2	2105*1000*1300	700	729

Special instructions

// Main power (PRP) is the maximum power that the unit can run continuously with variable load under standard environment (atmospheric pressure, relative humidity, ambient temperature), and the overload of 10% is allowed to run for 1h every 12h.

// Working conditions and power correction:

Altitude: $\leq 1500\text{m}$ ($> 1500\text{m}$), need to do power correction; Power reduction by 10% per 1000m increase)

Ambient temperature: 40°C (when $> 40^{\circ}\text{C}$, power correction is required)

Relative humidity: $\leq 60\%$

When the field use conditions of the diesel generator set do not meet the above conditions, the output power of the unit should be corrected, and the final correction coefficient, please refer to the detailed technical data of the corresponding engine and generator.

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