# Diesel generating set

## AGLW90P

380V/60Hz Main power/WEICHAI WP4.1D115E201

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: | AGLW90P | Main power(kW): | 90 |
| Standby power(kW): | 100 | unit capacity(kVA): | 112.5 |
| Rated speed(rpm): | 1800 | Rated frequency(Hz): | 60 |
| Rated voltage(V): | 380 | rated current(A): | 170.9 |
| Power factor(cos φ): | 0.8(lag) | Wiring mode: | 3 phase 4 wire |
| Generator weight (kg) | 1550 | Minimum smoke pipe diameter (mm) | 1×φ80 |
| Air intake(m³/min): | 209.3 | Air exhaust(m³/min): | 202.6 |

Generator size(mm): 3375L×1170W×1782H  Recommended base size(mm): 2800L×1200W

## Unit performance index (G2)

| Parameter | | unit | Oerformance 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 | % | ≤+12 |
| | Surge power | | ≤-10 |
| Frequency recovery time | | s | ≤5 |
| Relative frequency tolerance band | | % | 2 |
| Steady-state voltage deviation | | % | ≤±2.5 |
| Voltage unbalance degree | | % | 1 |
| Transient voltage deviation | 100% sudden power reduction | % | ≤+25 |
| | Surge power | | ≤-20 |
| Voltage recovery time | | s | ≤6 |
| Voltage modulation | | % | 0.3 |
| Relative voltage setting range | | % | ≤±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: WEICHAI

Model: WP4.1D115E201

Engine structure: four-stroke

Number : 4/L

Displacement:L 4.087

Cylinder diameter:mm 105

Stroke:mm 118

Compression ratio: 17.5: 1

Speed:rpm 1800

Primary/standby power ::kW 106/116

Speed regulation mode:: E

Cooling method: closed water cooling

Dry weight (engine only) : kg 400

## // Start the system

Starting rated power:kW 6

Starting rated voltage:V DC24

## // Fuel system

Fuel injection form: high pressure common rail

## // Fuel consumption

| Engine output | L/h | g/kwh |
|---|---|---|
| 100% | 27 | 211 |
| 75% | 20 | 212 |
| 50% | 14 | 219 |
| 25% | 8 | 248 |

## // Intake system

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

Intake air flow: $m^3$/min 6.72

## // Lubrication system

Total lubrication system capacity: L 16.4

Maximum allowable oil temperature :℃121

## // Cooling system

Engine coolant volume: L 26

Coolant flow: L/min 120

## // Exhaust system

Maximum exhaust back pressure: kPa 10

Exhaust flow: kg/min 18.3

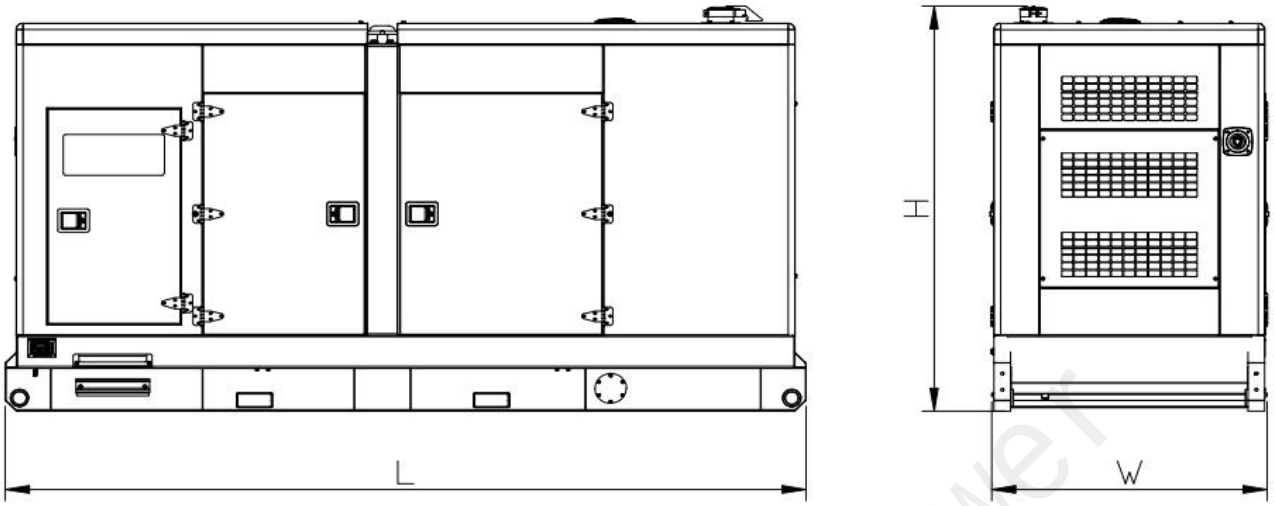
Exhaust temperature:℃ 540

# Technical parameters of generator

//Dynamo *60Hz, AC380V, cos Φ=0.8

| MODEL | Rated power(kW) | Standby power(kW) | Mechanical efficien | Insulation | Class of protect | Weight(kg) |
|---|---|---|---|---|---|---|
| FISTALL: QYI224GM | 90 | 113 | 92.8 | H/H | IP21 | 420 |
| | | | | | | |

## 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) |
|---|---|---|---|---|
| AGLW90P | WP4.1D115E201 | 3375×1170×1782 | 1510 | 1550 |

## 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: ≤1500m (> 1500m), need to do power correction; Power reduction by 10% per 1000m increase)

Ambient temperature: 40℃ (when > 40℃, power correction is required)

Relative humidity: ≤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.

SHANGHAI AGRIPOWER INTIL CO., LTD
Bldg 38th,No.900 Haili Rd,
Jinshan District,Shanghai 201508.China
T: +86 21 67290268 F: +86 21 67290269
Web: www.china-agripower.com