

HYUNDAI POWER PRODUCTS

GENERATOR SPECIFICATION

Equipment Type : **HD400SG**

Capacity : Prime 280kW / Standby 320kW , 50Hz , 230/400V

: Prime 350kVA / Standby 400kVA , 50Hz , 230/400V



3P 4W	50Hz	230/400V	Open / Soundproof		
A	2018	FOR PROPOSAL	Y.J.J	H.S.M	L.W.J
REV.	DATE	APPLICATION	DESIGN BY	CHECKED BY	APPROVED BY

All Days | Safty | Reliable | Stability



HYUNDAI
POWER PRODUCTS

1. GENERAL DESCRIPTION

1.1. SCOPE

This specification describes of generator set together with its accessories which are to be installed in the generator set.

1.2. APPLIED STANDARD

1.2.1 KS (KOREAN INDUSTRIAL STANDARDS) / CE

1.2.2 IEC 60034, 60227-3

(STANDARDS OF IEC ELECTRICAL MANUFACTURERS COOPERATIVE)

1.3. OPERATION CONDITIONS

The equipment shall be designed and manufactured taking account of the following site conditions.

1.3.1 Ambient temperature : min. -10℃, max 40℃

1.3.2 Relative humidity : less than 85%

1.3.3 Altitude : less than 1000m from sea level

1.4. UNIT

The metric system shall be applied to all of designing works, instruments such as gauges, etc.

1.5. PAINTING

After cleaning dust, foreign element, oxide scale, and contaminations, the surfaces shall be degreased with solvent.

Painting be carried out on the procedure prime coat, under coat and finishing coat.

The color of frame shall be a follows.

1.5.1 Generator main body : Maker standard

1.5.2 Canopy & control panel : Maker standard

2. COMPOSITION

2.1. Diesel engine

2.2. Ac synchronous generator

2.3. Generator control panel(Installed on the generator)

2.4. Accessories and Others

2.5. Dim / Weight Open Type : 3150*1220*2050mm / 3100kg
 (L*W*H) / kg Silent Type : 4200*1380*2250mm / 4100kg

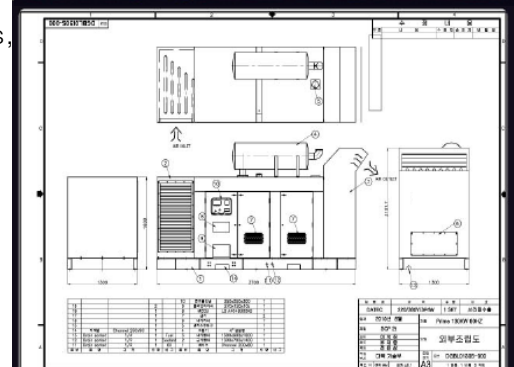
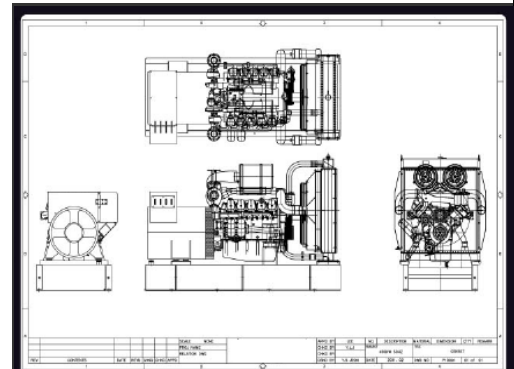
3. TECHNICAL SPECIFICATION AND CHARACTERISTICS

3.1. Diesel Engine

3.1.1 Model : HY1080-F3 (HYUNDAI Brand)

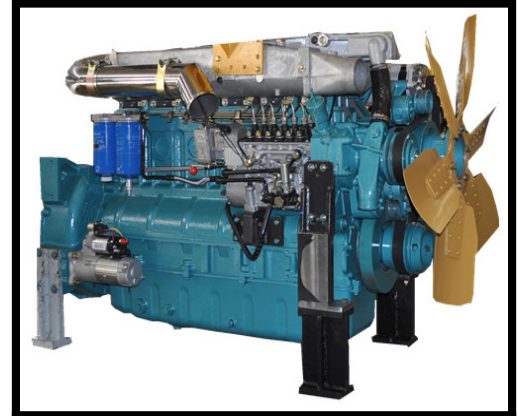
3.1.2 Speed : 1500rpm

3.1.3 Gross Stand by : 478 ps (352 kw)
 Prime : 435 ps (320 kw)



- 3.1.4 Fuel : Diesel
- 3.1.5 Engine Type : 6-Cylinder, Turbo-Charged
- 3.1.6 Bore x Stroke : 126 x 155 mm
- 3.1.7 Displacement : 11.59 lit
- 3.1.8 Governor : Electric type
- 3.1.9 Starting Method : Battery starting (DC24V)
- 3.1.10 Battery Charging Alternator : 28volt , 36amps
- 3.1.11 Cooling Method : Radiator water cooling
- 3.1.12 Lubrication Oil Capacity : 24 liters
- 3.1.13 Fuel Capacity : 550 Liters (approx)
- 3.1.12 Fuel Consumption :

50%	43	
(lit./hr)	75%	60
	100%	78



3.2. Ac Synchronous Generator

- 3.2.1 Mode I : HY400AL (HYUNDAI Brand)
- 3.2.2 Capacity (Prime / Standby) : 280/ 320kW
- 3.2.3 Volt : 230/400V
- 3.2.4 Frequency : 50Hz
- 3.2.5 Power factor : Lag. 0.8PF
- 3.2.6 Phase : 3 φ 4 W
- 3.2.7 Pole : 4 pole
- 3.2.8 Insulation : "H" Class / Enclosure : IP 23
- 3.2.9 Cooling method : Air cooled self-ventilation
- 3.2.10 Excitation method : Brushless self exciting / AVR
- 3.2.11 Power efficiency : 93.3%
- 3.2.12 Current : 544



3.3. Generator Control Panel

- 3.3.1 Control Panel
- 3.3.2 GCU(Generator Control Unit : Neo-GCP10
 - AC Volt / AMP
 - kW / kVA / PF
 - Frequency/RPM
 - Run hour
 - Cooling Water Temperature
 - Lube Oil Pressure
 - Battery Voltage (DC-V)
 - Auto - Stop - Menu (switch)
 - Fault indicator
- 3.3.3 A.V.R
- 3.3.4 EPB (Emergency Push Button)
- 3.3.5 Current Transient
- 3.3.6 MCCB / ACB (Option)
- 3.3.7 Voltage Meter



4. ENGINE SAFETY AND ALARM DEVICE

When following engine trouble is occurred, engine automatically shutdown and turn on trouble check lamp.

- 4.1. High coolant temperature auto shutdown 103°C degree over.
- 4.2. Low oil pressure auto shutdown 0.7 Kg/cm² under
- 4.3. Over-speed auto shutdown 120% over
- 4.4. 3 times of engine starting failures

5. GENERATOR CHARACTERISTICS

- 5.1. Voltage regulation : Less than ±2%
- 5.2. Frequency variation : Less than ±5%
- 5.3. Waveform distortion : Less than 5% at no load
rated voltage, rated frequency.
- 5.4. Voltage adjusting range : More than ±5%

6. TEST AND INSPECTIONS

The following tests and inspections shall be carried out at the manufacturer's shop in accordance with the relevant rules.

- 6.1. Construction inspection.
- 6.2. Measurement of winding resistance.
- 6.3. No load saturation test.
- 6.4. Voltage regulation test.
- 6.5. Wave form distortion measurement.
- 6.6. 110% over load test.
- 6.7. Temperature rise test
- 6.8. Insulation resistance
- 6.9. Dielectric strength (Between terminal and earth AC 60HZ 1 Minute)
Armature Winding : $2E + 1000(V)$ (Min : 1500V)
E : Generator rated voltage
- 6.10. Circuit Test
Shutdown test by Engine or generator trouble.
- 6.11. Painting
Primer / Enamel coating finish (1, 2nd) / High temperature baking
- 6.11. Noise Test (Level II)
75d(B)A at 7m distance @ non load

7. ACCESSORIES/DOCUMENTS

- 7.1 Exhaust silencer ----- 1 EA
- 7.2 Flexible pipe ----- 1 EA
- 7.3 Battery (200AH) ----- 2 EA
- 7.4 Battery holder and cable ----- 1 SET
- 7.5 Battery charger ----- 1 EA
- 7.6 Basement Fuel tank (Option) ----- 1 EA
- 7.7 Fuel hose (Attached) ----- 1 SET
- 7.8 Cooling water heater (Option) ----- 1 EA
- 7.9 Tool Set ----- 1 SET
- 7.10 Spare Part(Fuel, Oil filter) (Option) ----- 1 SET
- 7.11 User's Manual, Test Reports, Parts Book ---- 1 SET

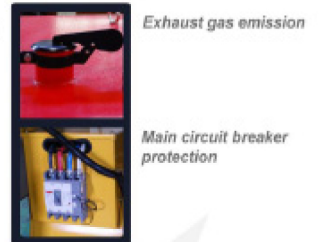
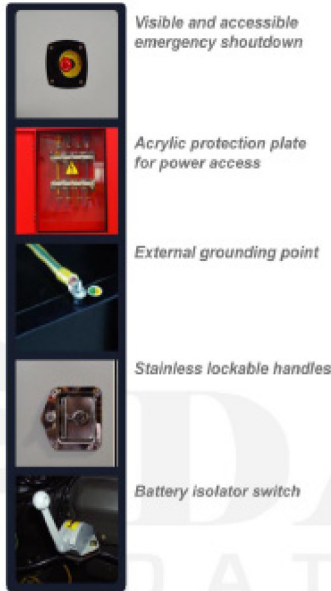


8. DETAILS

FACILITY OF HANDING AND RELIABILITY



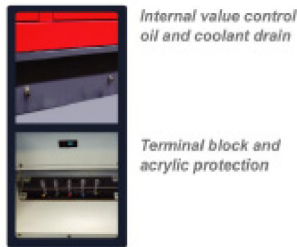
SAFETY AND SECURITY



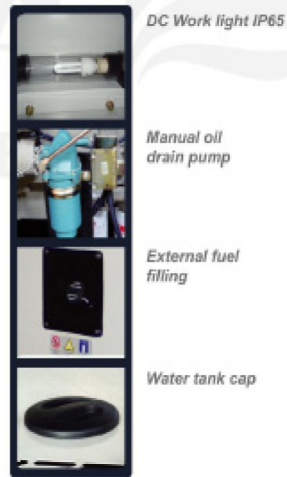
SILENT



MORE EASY USE



MORE EASY USE



OPTIONAL KIT



9. DIFFERENT TYPES OF DESIGN



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