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Diesel Generator Sets Powered by Yuchai



ASSEMBLY

- ※ The engine and alternator are close coupled by means of an SAE flange. A full torsional analysis has been carried out to guarantee no harmful vibration will occur.
- ※ Anti-vibration pads are affixed between engine alternator feet and the base frame. Thus ensuring complete vibration isolation of the rotating assemblies and enabling the machine to be placed on an uneven surface without any detrimental effects.
- ※ For durability and corrosion resistance, all iron and steel surfaces of canopy fabrications have been treated for coating by grit blast cleaning. Then covered by special three layers painting which provides an excellent corrosion resistant surface.

WARRANTY

- ※ YICHEONG Company provides one-source responsibility for the generator set and accessories. Each YICHEONG generating set has been got through 2 hours Load test for running 0% ,25%,50%,75%,100% and 110% load, all protective devices and control function are simulated and checked before despatch.
- ※ Engine and Alternator are guaranteed for a period of 12 months from the date of commissioning or 18 months from shipping, whichever occurs first.
- ※ Convenience for operation and maintenance, backed by YUCHAI global service network.

Specifications may change without notice.

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INTERNATIONAL STANDARD

3 W 4 P, 50hz @ 1500rpm, 400/230V
(380/220V, 415/240V are for optional)

60HZ, 1800RPM, 208V, 480V are different technical data

Scope supply:

- Yuchai Diesel Engine with radiator and fan.
- Reliable AC brushless alternator, single bearing.
- Heavy duty steel frame with vibration-damping.
- Base service fuel tank.
- Lead acid batteries with cable for starter.
- Industrial silencer & flexible exhaust below.
- Mounted Control panel mounted.

Engine (Powerful & Stable)

Compact Engine, light weight, strong power, long time service

- World named brand in the line of Engine, invested by USA.
- Heavy duty & durable 4-stroke water cooled industrial engine, stable running, longer service time.
- Fuel injection pump, low consumption.
- 4-cy, 6-cy in line, Light weight, compact structure.
- Turbocharged intercooler, naturally aspirated.
- Air/fuel/oil filters, start motor, battery charging alternator 24VDC, tool kits box, manual booklet & certificate.

The 2/3 pitch design avoids excessive neutral currents. With the 2/3 pitch and carefully selected pole and tooth designs, ensures very low waveform distortion.

Brushless alternator with brushless pilot exciter for excellent load response.

The insulation system is class H, easy parallelling with mains or other generators, standard 2/3 pitch stator windings avoid excessive neutral currents.

Backed by worldwide service network.

BENEFITS

- ※ Reliable service working, powerful, attractive appearance.
- ※ Low running cost (diesel fuel & oil, maintenance)
- ※ Easy for commissioning, operation and maintenace.

CONTROL SYSTEM/PROTECTION

※ Controllers are available for all applications. It contains DeepSea, Smartgen or other famous brands. According to their different functions, the control systems can be specified into key start controller, digital auto-start controller and PCRC three remote control systems. See controller features inside.

CRITERION

- ※ ISO8528, GB/T2820, ISO3046, BS4999, BS5514, BS5000
- ※ EN12601:2001, EN60034-22:1997, EN60204-1:2006
- ※ ISO9001:2000, ISO14001:2004, SGS, TLC

ALTERNATOR (Reliable)

Voltage regulation

Voltage regulation maintained with in $\pm 0.5\%$ as follow:

- Power factor between 0.8-1.0 lagging.
- From no load to full load, any steady load.
- Speed droop variation under 5%.

Frequency/Speed undulation

- 0-100% load, Frequency/Speed Droop Ratio $< 5\%$.
- 25-100% load, any steady load undulation $< 0.25\%$.

Effect factor of telecom

- TIF(MAMG1-22) < 50 ; THF(BS EN60034) $< 2\%$

CONTROL SYSTEM

1. Standard: HGM170HC Key Start

Providing the standard functions as follows:

(Also can be made according to the customers' special requirements)

- ※ Start/Stop controller, Emergency stop pushbutton
- ※ Ampere meter, Voltmeter and selector switch, Frequency meter/Water temperature gauge/Oil pressure gauge/Hour counter/Battery voltage meter.
- ※ Alarm System: Over speed, High Engine Temperature, Low Oil Pressure, Charge Failure
- ※ Protection System: Over speed, High Engine Temperature, Low Oil Pressure, Emergency Stop. And the other protection function presetting.



HGM170HC

2.Option: Smartgen HGM6110 Digital Auto Start
3.Option: Smartgen HGM6120 Digital Auto Start (AMF)
(Option assembled with the ATS)

DigitalAuto-start Generator controller integrating digital,intelligent and network techniques is used for automatic control system of diesel generator. It can carry out functions including automatic start/stop, data measure and alarming.Optionally assembled with the ATS, it can carry out auto-switching between the outer power and generating set power.(AMF)

Functions:

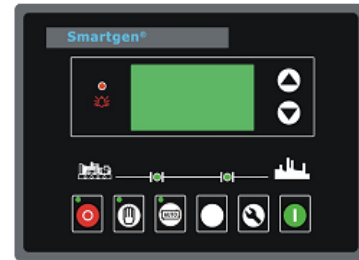
- ※ Automatic Start/Stop
- ※ 3 start attempts failure and Automatic Crank Disconnect
- ※ Parameters display(V/A/Hz/Hour)
- ※ Engine monitoring and protection
- ※ Charge alternator exciting and Charge alternator fail alarm
- ※ Running hour counting
- ※ Settings can be adjustable via key buttons on front panel

Warning:

- ※ Alternator Under/Over Voltage
- ※ Alternator Under/Over Frequency
- ※ Mains Under/Over Voltage
- ※ Mains Under/Over Frequency
- ※ Under/Over Speed
- ※ Low Oil Pressure Pre-Alarm
- ※ High Engine Temp. Pre-Alarm
- ※ High/Low Battery Voltage
- ※ Over-current
- ※ Periodic maintenance

Shutdown:

- ※ Loss of Speed Signal
- ※ Alternator Under/Over Voltage
- ※ Alternator Under/Over Frequency
- ※ Mains Under/Over Voltage
- ※ Mains Under/Over Frequency
- ※ Under/Over Speed
- ※ Low Oil Pressure
- ※ High Engine Temperature



HGM6110



HGM6120



Standard Control Panel

Optional Parts:

Engine	Alternator	Canony	Fuel System
<ul style="list-style-type: none"> ● Coolant & oil heater ● Mains Electricity Battery Charger 	<ul style="list-style-type: none"> ● PMG alternator ● Anti-damp/Anti-corrosion treatment 	<ul style="list-style-type: none"> ● Super silent(65-68Db@7m) ● Normal silent(75-78Db@7m) ● Trailer (mobile) 	<ul style="list-style-type: none"> ● Low fuel level alarm ● Automatic fuel feeding system
Lubricating System	Control Panel	Exhaust Gas System	Cooling System
<ul style="list-style-type: none"> ● Oil with the machine 	<ul style="list-style-type: none"> ● Auto-paralleling cabinet ● Auto Transfer/changeover Switch (ATS) 	<ul style="list-style-type: none"> ● Protection board from hotness ● Low frequency silencer 	<ul style="list-style-type: none"> ● Front heat protection ● 50°C radiator ● Coolant(-30°C)



Circuit Breaker



Paralleling System



ATS



Super silent canopy



50hz, 1500rpm, 380-415V

Genset Model	Prime power		Standby		Engine model	Alternator model	Dimension (L*W*H mm)		Fuel L/h
	KW	KVA	KW	KVA			Open type	Super silent	
YC12G	12	15	13.2	16.5	YC2108D	GM-12-4	1350*750*1200	1900*1000*1500	4.2
YC14G	14.4	18	16	20	YC2108D	GM-16-4	1350*750*1200	1900*1000*1500	4.7
YC20G	20	25	22	27.5	YC2115D	GM-20-4	1380*750*1200	1900*1000*1500	6.3
YC24G	24	30	26.4	33	YC2115ZD	GM-24-4	1450*750*1200	1950*1000*1500	7.5
YC32G	32	40	35.2	44	YC4D60-D21	GM-32-4	1900*780*1300	2500*1000*1550	8.9
YC36G	36	45	40	50	YC4D60-D21	MP-40-4	1900*780*1300	2500*1000*1550	9.4
YC40G	40	50	44	55	YC4D85Z-D20	MP-40-4	1950*800*1350	2550*1020*1550	11.2
YC48G	48	60	52.8	66	YC4D85Z-D20	MP-48-4	1950*800*1350	2550*1020*1550	11.8
YC64G	64	80	70.4	88	YC6B100-D20	MP-64-4	2300*800*1380	2900*1080*1650	18
YC72G	72	90	80	100	YC6B135Z-D20	MP-70-4	2350*800*1380	2950*1100*1650	20.5
YC80G	80	100	88	110	YC6B135Z-D20	MP-80-4	2350*800*1380	2950*1100*1650	21
YC90G	90	112.5	100	125	YC6B155L-D21	MP-90-4	2480*820*1380	3000*1120*1650	22.6
YC100G	100	125	110	138	YC6B170L-D20	MP-104-4	2600*820*1380	3250*1120*1650	25
YC110G	110	137.5	120	150	YC6B170L-D20	MP-120-4	2620*820*1380	3250*1120*1650	26.1
YC120G	120	150	132	165	YC6A210L-D20	MP-120-4	2650*950*1500	3300*1150*1680	28.4
YC128G	128	160	140	175	YC6A210L-D20	MP-140-4	2650*950*1500	3300*1150*1680	29.2
YC160G	160	200	176	220	YC6M285L-D20	MP-160-4	2800*950*1500	3600*1250*1700	34
YC180G	180	225	200	250	YC6M285L-D20	MP-180-4	2800*950*1500	3600*1250*1700	41
YC200G	200	250	220	275	YC6M350L-D20	MP-200-4	3000*1100*1750	3900*1400*1800	46
YC220G	220	275	240	300	YC6M350L-D20	MP-220-4	3000*1100*1750	3900*1400*1800	53
YC240G	240	300	264	330	YC6MK390L-D20	MP-240-4	3200*1150*1800	4000*1400*1850	68
YC300G	300	375	330	412.5	YC6T550L-D21	MP-300-4	3450*1250*1800	4200*1450*1850	70
YC320G	320	400	352	440	YC6T550L-D21	MP-320-4	3450*1250*1800	4300*1450*1900	72
YC360G	360	450	400	500	YC6T600L-D20	MP-350-4	3500*1250*1800	4600*1450*1900	90
YC400G	440	500	440	550	YC6T660L-D20	MP-400-4	3650*1400*1950	4800*1600*2000	98
YC500G	500	625	550	687.5	YC6C900L-D20	G355L-500	4200*1500*2100		116
YC560G	560	700	616	770	YC6C900L-D20	MX-560-4	4200*1500*2100		128
YC600G	600	750	660	825	YC6C1020L-D20	MX-600-4	4400*1550*2100		140
YC640G	640	800	704	880	YC6C1020L-D20	G400S-640	4400*1550*2100		152

60hz, 1800rpm, 208V, 440V, 480V

YC36G6	36	45	40	50	YC4D60-D21	GM-31-4	1800*760*1200	2450*1000*1550	9.2
YC40G6	40	50	44	55	YC4D60-D21	GM-39-4	1800*760*1200	2450*1000*1550	10.6
YC50G6	50	62.5	55	69	YC4D75Z-D20	MP-45-4	1850*760*1200	2500*1000*1550	12.4
YC60G6	60	75	66	82.5	YC4D90Z-D20	MP-58-4	1950*800*1200	2550*1050*1600	13.8
YC70G6	70	88	77	96	YC6B105-D10	MP-68-4	2300*820*1300	2900*1080*1650	18.9
YC80G6	80	100	88	110	YC6B120Z-D20	MP-84-4	2350*820*1300	2950*1100*1650	19.6
YC100G6	100	125	110	137.5	YC6B145L-D20	MP-102-4	2350*820*1300	2950*1100*1650	23
YC120G6	120	150	132	165	YC6B185L-D20	MP-130-4	2600*850*1350	3250*1120*1650	26
YC145G6	145	181	160	200	YC6A225L-D20	MP-151-4	2650*850*1350	3300*1150*1680	31
YC180G6	180	225	200	250	YC6M285L-D20	MP-177-4	2900*1100*1800	3800*1400*1800	44
YC200G6	200	250	220	275	YC6M320L-D21	MP-200-4	3000*1100*1800	3900*1400*1800	47
YC212G6	212	265	232	290	YC6M320L-D21	MP-212-4	3000*1100*1800	3900*1400*1800	50

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