



MODEL
HSY-20 T6
HS | STATIONARY RANGE
Standard soundproofing
Powered by YANMAR

- HS20
- WATER-COOLED
- THREE PHASE
- 60 HZ
- DIESEL

Generating Rates



SERVICE		PRP	ESP
Power	kVA	21	23
Power	kW	16,7	18,3
Rated Speed	r.p.m.	1.800	
Main voltage	V	480/277	
Available Voltages	V	208/120 - 220/127 - 380/220 - 416/240 - 440/254	
Rated at power factor	Cos Phi	0,8	

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HIMOINSA Company with quality certification ISO 9001
HIMOINSA gensets are compliant with EC mark which includes the following directives:

- 2006/42/CE Machinery safety.
- 2014/30/UE Electromagnetic compatibility.
- 2014/35/UE electrical equipment designed for use within certain voltage limits
- 2000/14/EC Sound Power level. Noise emissions outdoor equipment. (amended by 2005/88/EC)
- EN 12100, EN 13857, EN 60204

Ambient conditions of reference according to ISO 8528-1:2020 normative: 1000 mbar, 25°C, 30% relative humidity.

Limited-time running power (LTP):

According to ISO 8528-1:2020, Prime power is the maximum power which a generating set is capable of delivering continuously whilst supplying a variable electrical load when operated for an unlimited number of hours per year under the agreed operating conditions with the maintenance intervals and procedures being carried out as prescribed by the manufacturer. The permissible average power output (Ppp) over 24 h of operation shall not exceed 70 % of the PRP.

Emergency Standby Power (ESP):

According to ISO 8528-1:2020, Emergency standby power is the maximum power available during a variable electrical power sequence, under the stated operating conditions, for which a generating set is capable of delivering in the event of a utility power outage or under test conditions for up to 200 h of operation per year with the maintenance intervals and procedures being carried out as prescribed by the manufacturers. The permissible average power output over 24 h of operation shall not exceed 70 % of the ESP

"Class G2" performance according to the load impact test according to ISO 8528-5:2020

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CHANGZHOU 213164 JIANGSU PROVINCE P.R. CHINA

Engine Specifications 1.800 r.p.m.

ENGINE		PRP	ESP
Rated Engine Output	kW	19,6	21,6
Manufacturer		YANMAR	
Model		4TNV88BGGEH	
Engine Type		4-stroke diesel	
Injection Type		Direct	
Aspiration Type		Natural	
Number of cylinders and arrangement		4-L	
Bore and Stroke	mm	88 x 90	
Displacement	L	2,19	
Cooling System		Coolant	
Lube Oil Specifications		SAE 3 class 10W30 / API grade CD,CF	
Compression Ratio		19,1	
Lube oil consumption with full load	g/kWh	0,27	
Total oil capacity	L	7,4	
Total coolant capacity	L	5,5	
Governor	Type	Mechanical	
Air Filter	Type	Dry	
Inner diameter exhaust pipe	mm	51,6	

Generator

Generator		
Manufacturer		HIMOINSA
Poles	No.	4
Connection type (standard)		Star-series
Mounting type		S-4 7,5"
Insulation	Class	H class
Enclosure (according IEC-34-5)		IP23
Exciter system		Self-excited, brushless
Voltage regulator		A.V.R. (Electronic)
Bracket type		Single bearing
Coupling system		Flexible disc
Coating type		Standard (Vacuum impregnation)

Application Data

Exhaust System		
Maximum exhaust temperature	°C	530
Exhaust Gas Flow	m ³ /min	5,59
Maximum allowed back pressure	mm H ₂ O	1300
Exhaust Flange Size (external diameter)	mm	60

Necessary Amount Of Air		
Intake air flow	m ³ /h	106,43
Cooling Air Flow	m ³ /s	0,987
Alternator fan air flow	m ³ /s	0,122

Starting System		
Starting power	kW	1,4
Starting power	CV	1,9
Recommended battery	Ah	92
Auxiliary Voltage	Vdc	12

Fuel System		
Fuel Oil Specifications		Diesel
Fuel Tank	L	115
Other fuel tank capacities	L	165, 215, 265, 460, 0
Fuel Consumption ESP	l/h	5,95
Fuel Consumption 100% PRP	l/h	5,38
Fuel Consumption 70 % PRP	l/h	3,88
Fuel Consumption 50 % PRP	l/h	3

Dimensions



HS20 Weight and Dimensions		
(L) Length	mm	1.980
(H) Height	mm	1.270
(W) Width	mm	750
Maximum shipping volume	m ³	1,89
(*) Weight with liquids in radiator and sump	kg	640
Fuel tank capacity	L	115
Autonomy (70% PRP)	Hours	30
Autonomy (100% PRP)	Hours	21
Sound pressure level	dB(A)@7m	71 ± 2,4
Sound pressure level with attenuation system	dB(A)@7m	68 ± 2,4

(*) (with standard accessories)

Himoinsa China has the right to modify any feature without prior notice.

Weights and dimensions based on standard products. Illustrations may include optional equipment.

Technical data described in this catalogue correspond to the available information at the moment of printing.

Industrial design under patent.

STANDARD VERSION (Steel tank)

Local Distributor

Dimensions of Other Available Versions

Weight and Dimensions		
(L) Length	mm	1.980
(H) Height	mm	1.320
(W) Width	mm	750
Maximum shipping volume	m ³	1,96
(*) Weight with liquids in radiator and sump	kg	Ask
Fuel tank capacity	L	165
Autonomy (70% PRP)	Hours	43
Autonomy (100% PRP)	Hours	31
Sound pressure level	dB(A)@7m	71 ± 2,4
Sound pressure level with attenuation system	dB(A)@7m	68 ± 2,4
(*) (with standard accessories)		
Weight and Dimensions		
(L) Length	mm	1.980
(H) Height	mm	1.370
(W) Width	mm	750
Maximum shipping volume	m ³	2,03
(*) Weight with liquids in radiator and sump	kg	Ask
Fuel tank capacity	L	215
Autonomy (70% PRP)	Hours	55
Autonomy (100% PRP)	Hours	40
Sound pressure level	dB(A)@7m	71 ± 2,4
Sound pressure level with attenuation system	dB(A)@7m	68 ± 2,4
(*) (with standard accessories)		
Weight and Dimensions		
(L) Length	mm	1.980
(H) Height	mm	1.420
(W) Width	mm	750
Maximum shipping volume	m ³	2,11
(*) Weight with liquids in radiator and sump	kg	Ask
Fuel tank capacity	L	265
Autonomy (70% PRP)	Hours	68
Autonomy (100% PRP)	Hours	49
Sound pressure level	dB(A)@7m	71 ± 2,4
Sound pressure level with attenuation system	dB(A)@7m	68 ± 2,4
(*) (with standard accessories)		

OPTIONAL VERSION (Steel tank)

OPTIONAL VERSION (Steel tank)

OPTIONAL VERSION (Steel tank)

Dimensions of Other Available Versions

Weight and Dimensions		
(L) Length	mm	1.980
(H) Height	mm	1.620
(W) Width	mm	750
Maximum shipping volume	m ³	2,41
(*) Weight with liquids in radiator and sump	kg	Ask
Fuel tank capacity	L	460
Autonomy (70% PRP)	Hours	119
Autonomy (100% PRP)	Hours	86
Sound pressure level	dB(A)@7m	71 ± 2,4
Sound pressure level with attenuation system	dB(A)@7m	68 ± 2,4

(*) (with standard accessories)

OPTIONAL VERSION (Steel tank)

Weight and Dimensions		
(L) Length	mm	1.980
(H) Height	mm	1.120
(W) Width	mm	750
Maximum shipping volume	m ³	1,66
(*) Weight with liquids in radiator and sump	kg	Ask
Sound pressure level	dB(A)@7m	71 ± 2,4
Sound pressure level with attenuation system	dB(A)@7m	68 ± 2,4

(*) (with standard accessories)

OPTIONAL VERSION (Steel tank)

CONTROL PANEL MODEL

AS7

Automatic control panel *WITHOUT* Transfer Switch and *WITHOUT* mains control with M7X unit. Digital control unit M7X



AS7 + CC2

Automatic control panel *WITH* transfer switch and *WITH* mains control. The display will be on the genset and on the cabinet. Digital control unit M7X+CEC7



+



AS5

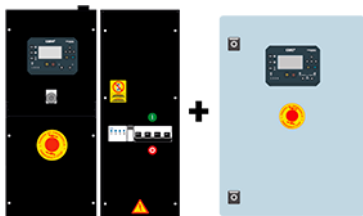
Automatic panel *WITHOUT* transfer switch and *WITHOUT* mains control with CEM8 unit. (*) AS5 as optional with CEA8 unit. Automatic panel without transfer switch and *WITH* mains control. Digital control unit CEM8 CEA8



CONTROL PANEL MODEL

AS5 + CC2

Automatic panel WITH transfer switch and with mains control. The display will be on the genset and on the cabinet. Digital control unit CEM8+CEC8



CC2

Himoinsa Switching cabinet WITH display. Digital control unit CEC8



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Controller features (I)

- : Standard
- x : Not included
- : Optional

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Generator Readings	M7X	CEC 7	M7X+CEC7	CEM 8
Voltage between phases	•	•	•	•
Voltage between neutral and phase	•	•	•	•
Current intensities	•	•	•	•
Frequency	•	•	•	•
Apparent power (Kva)	•	•	•	•
Active power (Kw)	•	•	•	•
Reactive power (kVAr)	•	•	•	•
Power factor	•	•	•	•
Mains Readings	M7X	CEC 7	M7X+CEC7	CEM 8
Voltage between phases	x	•	•	x
Voltage between phases and neutral	x	•	•	x
Current intensities	x	•	•	x
Frequency	x	•	•	x
Apparent power	x	x	x	x
Active power	x	x	x	x
Reactive power	x	x	x	x
Power factor	x	x	x	x
Engine Readings	M7X	CEC 7	M7X+CEC7	CEM 8
Coolant temperature	•	x	•	•
Oil pressure	•	x	•	•
Fuel level (%)	•	x	•	•
Battery voltage	•	x	•	•
R.P.M.	•	x	•	•
Battery charge alternator voltage	•	x	•	•
Engine Protections	M7X	CEC 7	M7X+CEC7	CEM 8
High water temperature	•	x	•	•
High water temperature by sensor	•	x	•	•
Low water temperature by sensor	•	x	•	•
Low oil pressure	•	x	•	•
Low oil pressure by sensor	•	x	•	•
Low water level	•	x	•	•
Unexpected shutdown	•	x	•	•

Controller features (II)

- : Standard
- x : Not included
- : Optional

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Engine Protections	M7X	CEC 7	M7X+CEC7	CEM 8
Fuel storage	•	x	•	•
Fuel storage by sensor	•	x	•	•
Stop failure	•	x	•	•
Battery voltage failure	•	x	•	•
Battery charge alternator failure	•	x	•	•
Overspeed	•	x	•	•
Underspeed	•	x	•	•
Start failure	•	x	•	•
Emergency stop	•	•	•	•
Alternator Protections	M7X	CEC 7	M7X+CEC7	CEM 8
High frequency	•	•	•	•
Low frequency	•	•	•	•
High voltage	•	•	•	•
Low voltage	•	•	•	•
Short-circuit	•	x	•	•
Asymmetry between phases	•	•	•	•
Incorrect phase sequence	•	•	•	•
Inverse power	•	x	•	•
Overload	•	x	•	•
Genset signal drop	•	•	•	•
Counters	M7X	CEC 7	M7X+CEC7	CEM 8
Total hour counter	•	•	•	•
Partial hour counter	•	•	•	•
Kilowatt meter	•	•	•	•
Starts valid counters	•	•	•	•
Starts failure counters	•	•	•	•
Maintenance	•	•	•	•
Communications	M7X	CEC 7	M7X+CEC7	CEM 8
RS232	x	•	•	x
RS485	x	•	•	•
Modbus IP	x	•	•	•
Modbus	x	•	•	•

Controller features (III)

- : Standard
- x : Not included
- : Optional

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Communications	M7X	CEC 7	M7X+CEC7	CEM 8
CCLAN	x	x	x	•
Software for PC	x	•	•	•
Analogue modem	x	•	•	•
GSM/GPRS modem	x	•	•	x
Remote screen	x	x	x	•
Tele signal	x	x	x	•
J1939	• M7XJ	x	• M7XJ	•
Features	M7X	CEC 7	M7X+CEC7	CEM 8
Alarm history	• (100)	• (100)	• (100)	•
External start	•	•	•	•
Start inhibition	•	•	•	•
Mains failure start	x	•	•	x
Start under normative EJP	•	x	•	•
Pre-heating engine control	•	x	•	•
Genset contactor activation	•	•	•	•
Mains & Genset contactor activation	x	•	•	x
Fuel transfer control	•	x	•	•
Engine temperature control	•	x	•	•
Manual override	•	x	•	•
Programmable alarms	•	x	•	•
Genset start function in test mode	•	•	•	•
Programmable outputs	•	x	•	•
Multilingual	x	•	•	•
Special Functions	M7X	CEC 7	M7X+CEC7	CEM 8
GPS Positioning	x	x	x	x
Synchronisation	x	x	x	x
Mains synchronization	x	x	x	x
Second Zero elimination	x	x	x	x
RAM7	x	x	x	•
Remote screen	x	x	x	•

Generator set features

Engine

- Diesel engine
- 4-stroke cycle
- Water-cooled
- 12V electrical system
- Dry air filter
- Radiator with pusher fan
- Hot parts protection
- Moving parts protection

Alternator

- Self-excited and self-regulated
- IP23 protection
- H class insulation

Electrical system

- Electric control and power panel with measurements devices and control unit (according to necessity and configuration)
- Adjustable earth leakage protection
- Battery charger (standard on gensets with automatic control panels)
- Heating resistor (standard on sets with automatic control panels)
- Battery charger alternator with ground connection
- Starter battery/ies installed (cables and bracket included)
- Ground connection electrical installation with connection ready for ground spike (not supplied)
- Optional :
 - Battery Switch
 - Leakage detector
 - Optional Battery (Optima)

Soundproofed version

- Steel chassis
- Lower power cable outlet with aluminum cover
- Side auxiliary cable outlet with aluminum cover
- Modular tank and retention tray system. Allows easy removal and / or maintenance of the equipment
- Wide access to the engine compartment because of a removable door
- Fuel tank in retention tray

Generator set features

Soundproofed version

- Soundproofing with foam and polyurethane film
 - 4 side lifting points
 - Anti-vibration shock absorbers
 - Fuel tank
 - Fuel level gauge
 - External emergency stop switch
 - Bodywork made from high quality steel plate
 - High mechanical strength
 - Epoxy polyester powder coating
 - Full access for maintenance (water, oil and filters, no need to remove the canopy)
 - Versatility to assemble a high capacity chassis with a metallic fuel tank
 - IP Protection according to ISO 8528-13:2016
- Optional :
- Manual oil extraction pump
 - Noise reduction kit
 - Retention Tray
 - Manual oil drain pump
 - Fuel transfer pump

PDF Summary

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