

DIESEL GENERATING SET 1500RPM

PP22Y

Prime Power Potencia continua Kontinuierliche Leistung		Stand-by Power Potencia de emergencia Leistung im Notfall	
kVA	kW	kVA	kW
20	16	22	17,6



Dimensions – Dimensiones - Dimensionen

Kg	L (mm)	LW (mm)	H (mm)
850	1750	730	955

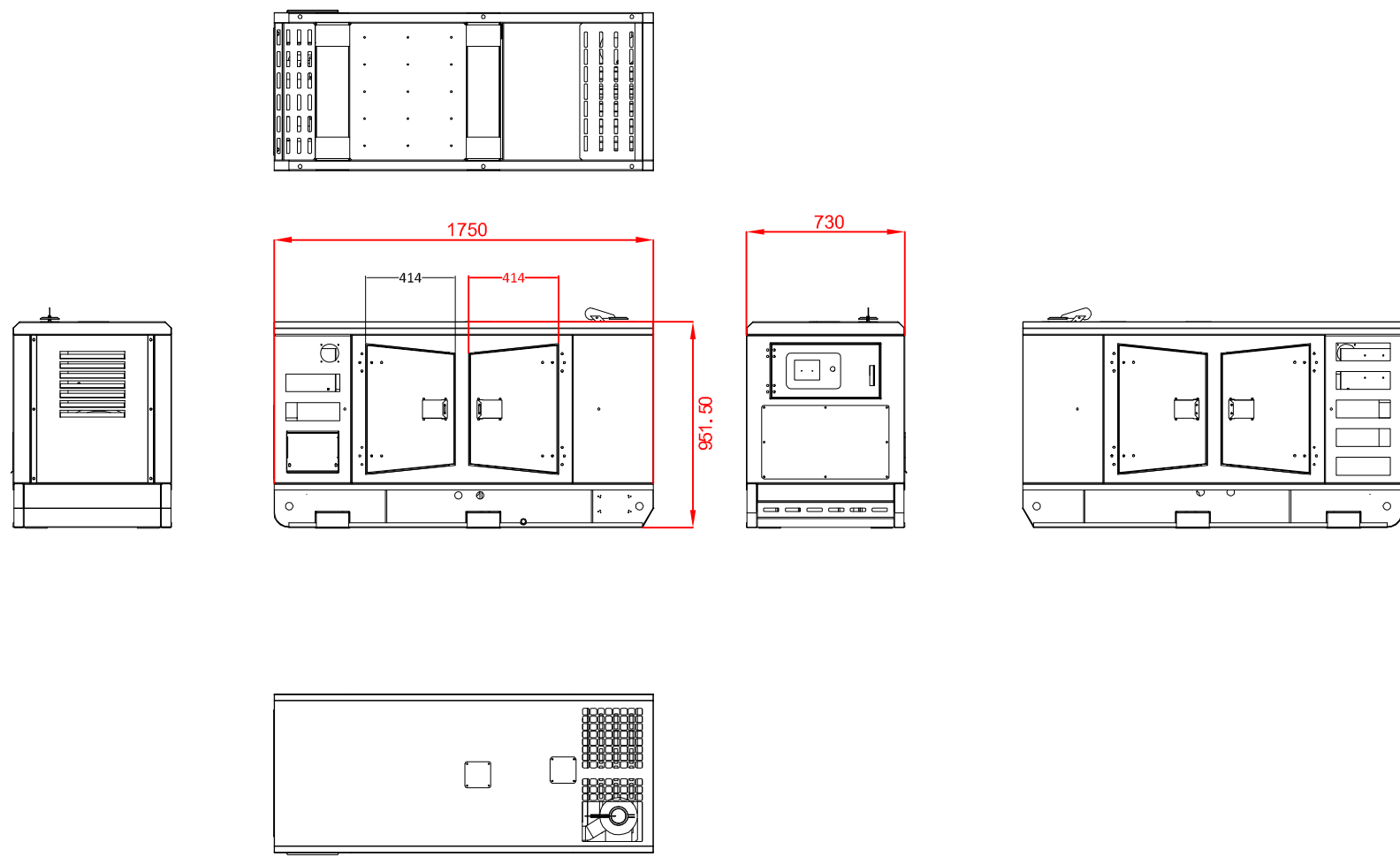
TECHNICAL DETAILS – FICHA TÉCNICA – TECHNISCHE DATEN

Voltage – Tensión – Spannung	400	V
Frequency – Frecuencia – Häufigkeit	50	Hz
RPM – Rpm – U/min	1500	min
Power Factor – Potencia del motor – Motorleistung	0,8	φ
Sound level – Nivel de ruido - Lärm	70	Db(A) @ 7mt
Engine – Motor – Motor	Yangdong YSD490D	
Governor – Regulador - Regelung	Mechanical Mécanico Mecanisch	
Nr. of cylind. – N.ro de cilindros. – Nr. Zylinder	4	
Displacement – Sistema de arranque del motor – Hubraum	2540	Cc
Cooling system – Refrigeración - Abkühlung	Water – Agua – Wasser	
Engine Net power – Potencia del motor – Motorenergie	30,9 (23,1)	Hp (kW)
Consumption – Consumo – Konsum @ 50-75-100%	3-4-5,5	Lt/Hr
Tank capacity – Capacidad del depósito – Tankinhalt	47	Lt
Alternator – Alternador – Alternator	Premium Power	
AVR type – Tipo de AVR– AVR Type	SX460	
Control unit – Unidad de control - Steuergerät	DSE4520MKII	
Circuit breaker – Interruptor - Stromschalter	4P	
Battery Charger – Cargador de baterías – Akkuladegerät	INCLUDED	
Battery switch – Desconectador de baterias – Batterieschalter	INCLUDED	

Condizioni ambientali – Enviromental conditions – Conditions enviromentales
40°C – 1000mslm – 60% humidity

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* MEASURES ARE INDICATIVE.

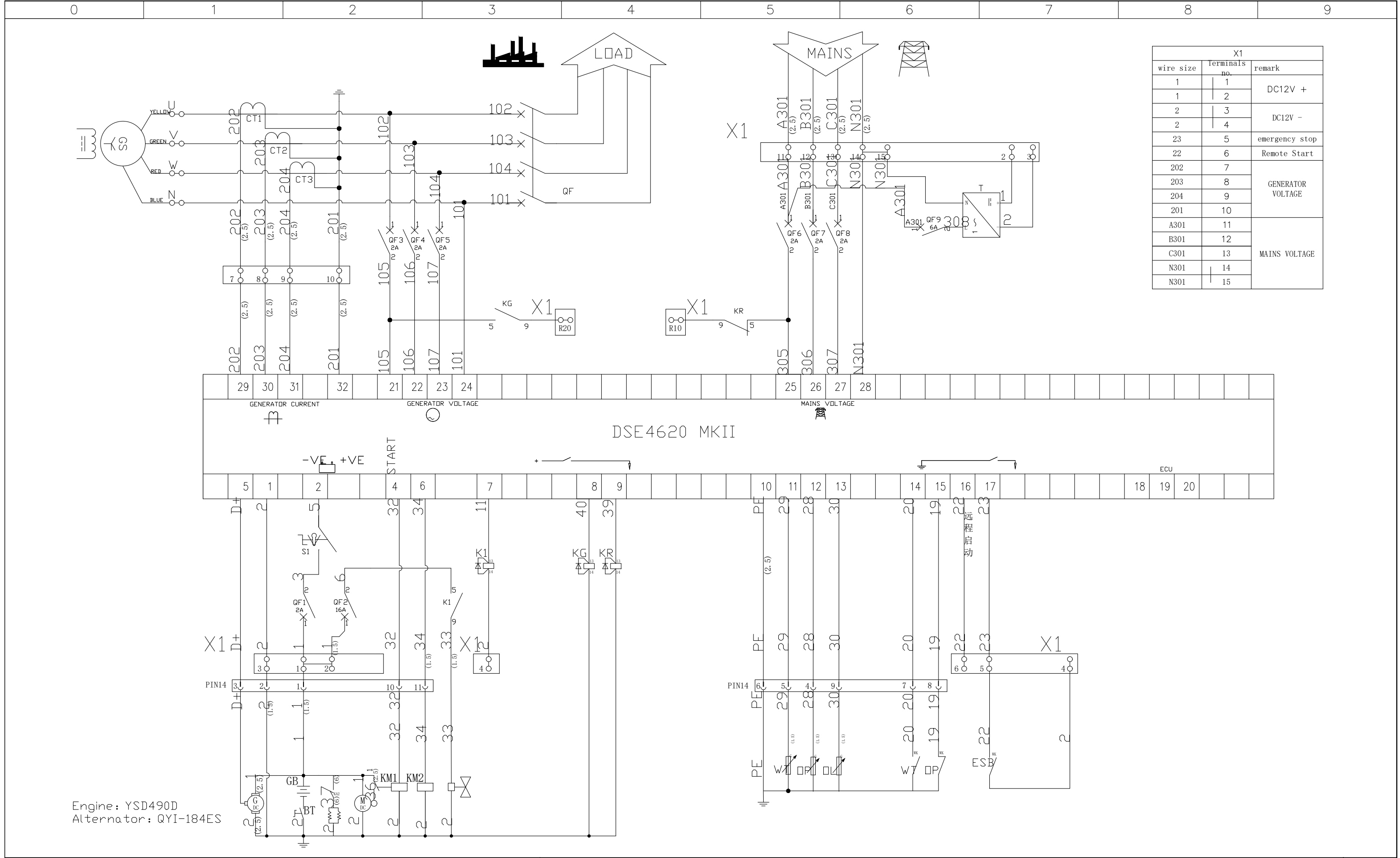
AI TERMINI DI LEGGE, AI SENSI DEGLI ART. 9 E 99 DELLA LEGGE 633 DEL 22/02/1978, CI RISERVIAMO LA PROPRIETÀ DI QUESTO DISEGNO CON DIVIETO DI RIPRODURLO E DI RENDERLO NOTO, ANCHE IN PARTE, SENZA NOSTRA AUTORIZZAZIONE SCRITTA.
* SONO VALIDE SOLO LE MISURE QUOTATE
* LE MISURE SONO INDICATIVE



TITOLO/TITLE:
PP22Y MECHANICAL DRAWING

NOTE/NOTES:

DATA/DATE 22/08/2022	DISEG./DRAWN BY M.SCARSELLA	N. DIS/DRAWING CODE	
REVISIONE REVISION	Descrizione Rev. Rev. description	N. FOGLIO/N° SHEET	



Engine: YSD490D
Alternator: QYI-184ES



Dis. N.	E276-22	Impianto	QUADRO ELETTRICO TABLEAU ELECTRIQUE	Ordine STANDARD	FOGLIO 1
CAD	SPAC	Denominazione	PP22Y		SEGUE /
Esecutore	SA			Data 25/08/22	

YSD490D ENGINE TECHNICAL DATA SHEET

1. Engine Ratings for Generator application		YSD490D	
Engine Rated Speed	rpm	1500	1800
Generator set Frequency	Hz	50	60
Engine Prime Power (PRP)	kW	21	25
Engine Continuous Power (COP)	kW	21	25
Cooling Fan Power Consumption (kW)	kW	1,5	2
Engine Net Prime Output (PRP)	kW	19,2	22,7
Engine Net Continuous Output (COP)	kW	19,2	22,7
2. General Specification			
Length	mm	716	
Width	mm	530	
Height	mm	670	
Engine Dry Weight w/o Cooling System	kg	230	
Aspiration Type		Nature	
Injection Type		Direct	
Configuration		Vertical	
No. of Cylinders		4	
Displacement	liters	2,54	
Bore	mm	90	
Stroke	mm	100	
Compression Ratio		18	
Piston Speed	m/s	5.0/6.0	
Rotation Direction (from flywheel)		Anti-clockwise	
Number of Flywheel Teeth		119	
Flywheel House Size		SAE4	
3. Lubrication System			
Lube Oil Specification		CD 15W-40	
Oil Capacity	liters	8	
Max. Permissible Oil Temperature	°C	120	
Low Oil Pressure Warning	kPa	100	
Low Oil Pressure Shutdown	kPa	80	
Oil consumption (as % of fuel consumption)		0,75%	
4. Cooling System			
Coolant Capacity for Engine	Liters	5	
Max. Permissible Temperature	°C	90	
Max. Coolant Warning Temperature	°C	95	
Max. Coolant Shutdown Temperature	°C	98	

Thermostat Open Temperature	°C	72	
Radiator Cooling Flow	m³/min	≥62	≥73
Flow of Coolant pump	m³/h	≥9.98	≥11.98
Heat dissipation (engine radiator)	kW	15,75	18,75
Heat dissipation (convection)	kW	13,2	15,62

5. Fuel System

Governor Type		Mechanical	
Fuel Consumption at 25% of generator set prime output	l/h	1,87	2,14
Fuel Consumption at 50% of generator set prime output	l/h	3,34	3,89
Fuel Consumption at 75% of generator set prime output	l/h	4,66	5,43
Fuel Consumption at 100% of generator set prime output	l/h	5,96	6,35
Lowest Fuel Consumption Ratio	g/kW.hr	240	6,95

6. Intake & Exhaust System (On Standby Output)

Combustion Air Consumption	m³/min	1,42	1,71
Max. Intake Restriction	kPa	3,5	
Max. Exhaust Temperature (Before Turbo)	°C	/	/
Max. Exhaust Temperature (After Turbo)	°C	500	500
Max. Exhaust Back Pressure	kPa	6	
Exhaust Gas Flow	m³/min	3,68	4,42
Exhaust Flange Diameter	mm	74	

7. Electrical System

Charging Alternator Voltage	V	14
Charging Alternator Capacity	A	25
Starting Voltage	V	12
Starting Motor Capacity	KW	3,5
Minimum Battery Capacity	Ah	120
Minimum Ambient Temperature for Unaided Cold Start	°C	-10

Note :

1. All engine parameters are in accordance with ISO3046, ISO8528
2. All engine parameters are based on 25°C / 100kPa environment condition
3. No power decrease with below 40°C environment temperature and 1500 meter altitude
4. More than 40°C and 1500m above sea level , decrease 0.5% per 1°C , and 4% per 300m.
5. At calorific value 42700 kJ/kg + 5%, density 0,835 kg/dm3 , temperature 280 K
6. Above data is only the testing data in our laboratory, it can't used to be the data on all contract