

GIPUZKOAKO INGENIARITZA ESKOLA
ESCUELA DE INGENIERÍA DE GIPUZKOA

EIBAR

TFG : ESTUDIO DE VIABILIDAD DE LA IMPLEMENTACIÓN DE
ENERGÍAS RENOVABLES EN EL BARCO AITA MARI

DOCUMENTO N° 4: ANEXOS

Grado: Grado en Ingeniería de Energías Renovables

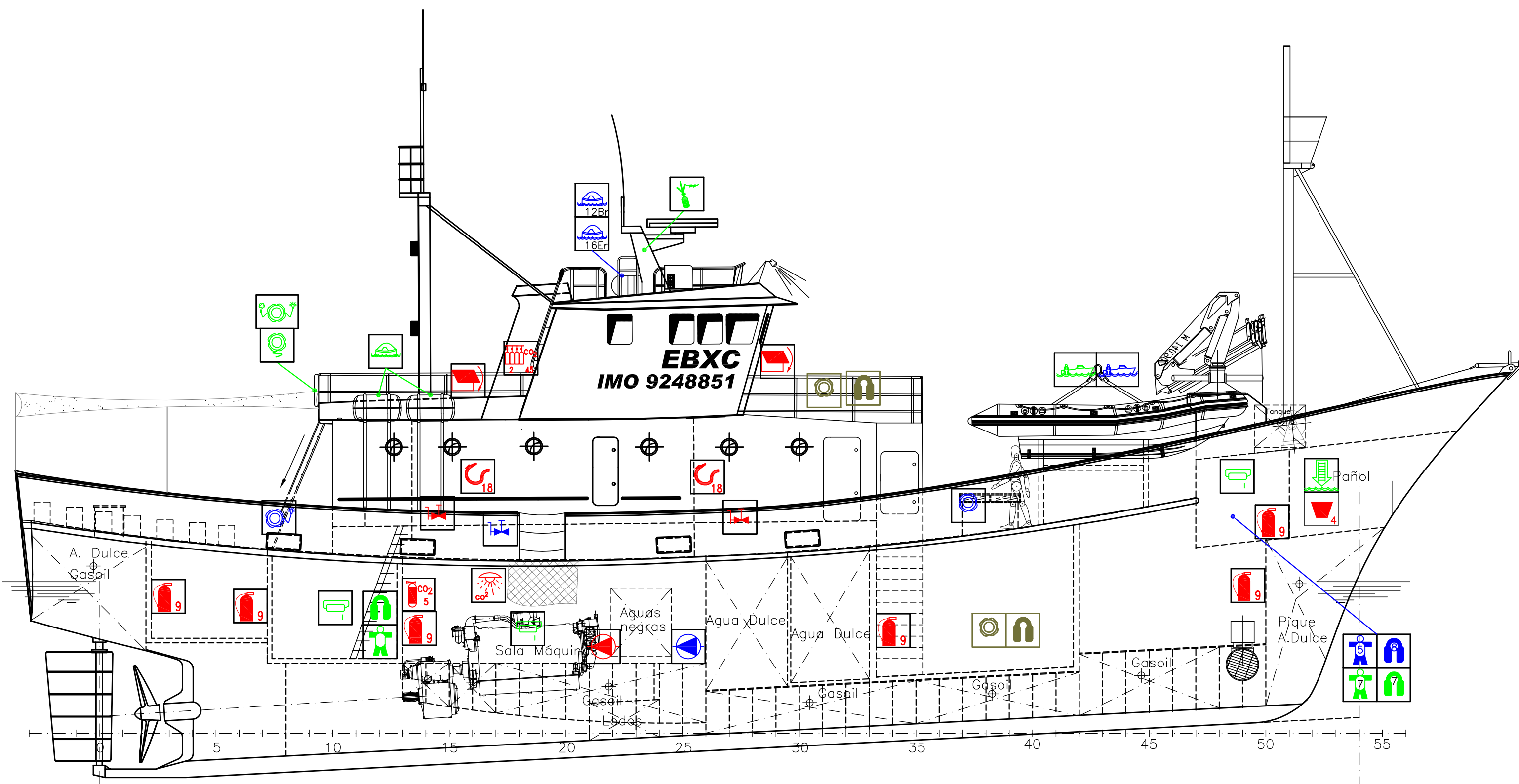
Curso: 2021 - 2022

Autor: Hernando Román, Iván

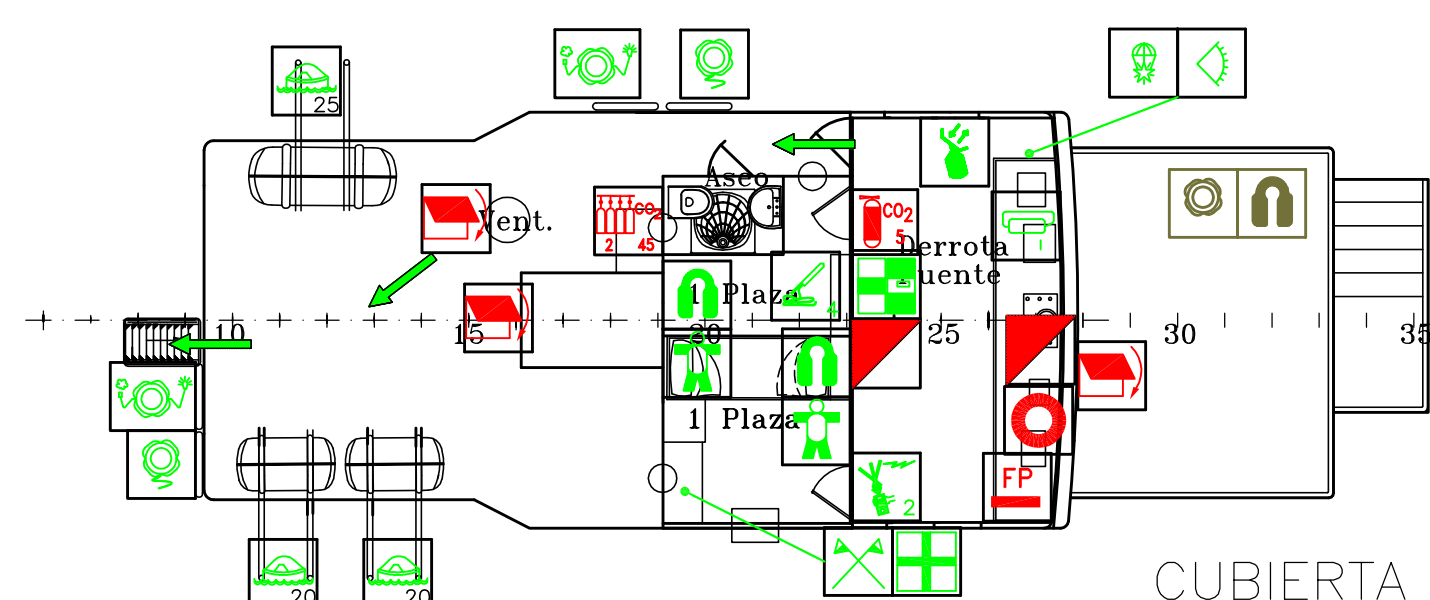
Directores: Osa Amilibia, Juan Luis; Asensio De Miguel, Francisco Javier

ANEXOS

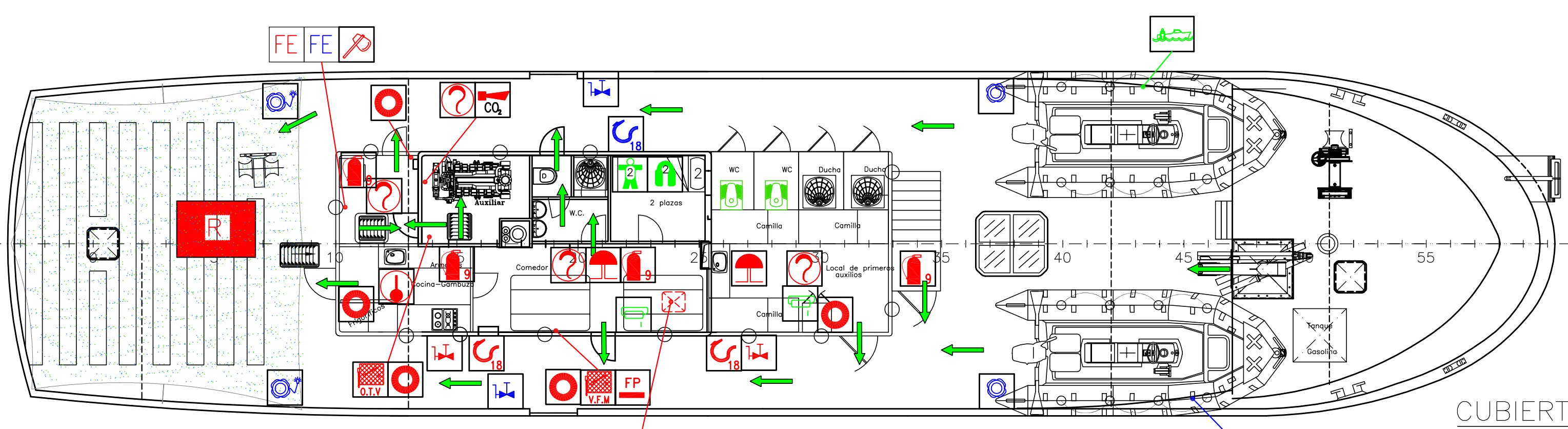
- Anexo 1: Planos del barco Aita mari
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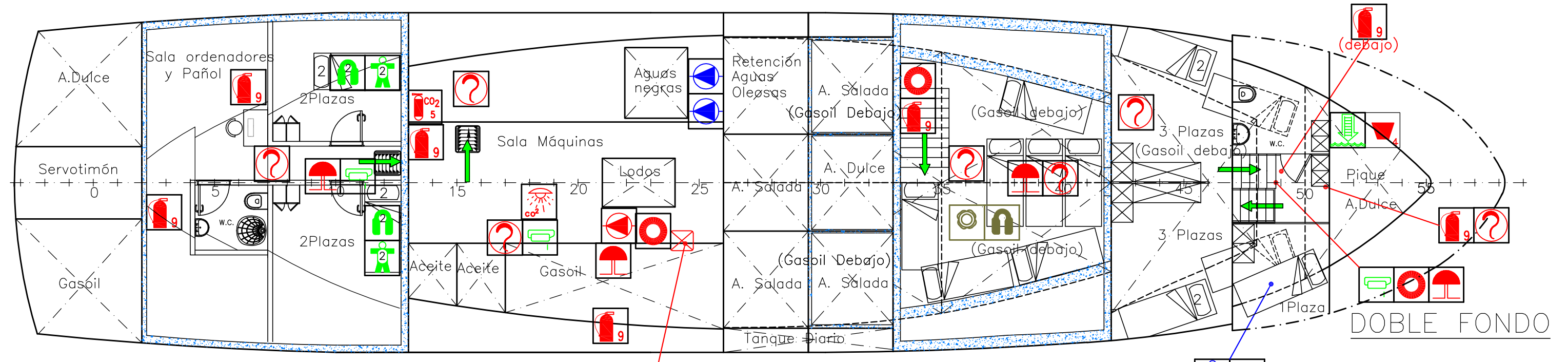
PERFIL



CUBIERTA PUENTE



CUBIERTA



DOBLE FONDO

ICONO	DESCRIPCION	CANT.
	Bote insubmersible	1
	Bote auxiliar	1
	Balsa salvavidas	3
	Balsas salvavidas adicionales de auxilio	2
	Aro con luz y señal fumígena flotante	2
	Aro con rabiza	2
	Aro con luz de respeto	2
	Aros adicionales de auxilio de respeto	2
	Escala de embarco a buque y a balsas	1
	Chaleco salvavidas	15
	Chalecos salvavidas adicionales de respeto	8
	Traje de supervivencia	15
	Trajes de supervivencia adicionales de respeto	5
	Señales de socorro y fumigenas flotantes	12/2
	Aparato lazacabos	4
	Radiobaliza	1
	Respondedor de radar -SART	1
	Radioteléfono portátil	2
	Punto de llamada operado manualmente	6
	Lámpara de señales	1
	Tabla de señales de salvamento	1
	Código Internacional de señales	1
	Botiquin	1
	Boca contraincendios	2
	Boca contraincendios respeto	2
	Manguera contraincendios con boquilla de doble efecto y dispositivo de cierre	2
	Manguera contraincendios con boquilla de doble efecto y dispositivo de cierre de respeto	1
	Bomba contraincendios	1
	Bomba contraincendios respeto	2
	Extintor portátil de CO2	2
	Extintor portátil de polvo seco o de espuma	11
	Balde contraincendios	4
	Hacha de bombero	1
	Equipo de bombero	1
	Equipo de bombero de respeto	1
	Espacio protegido por sistema fijo contraincendios por CO2.	1
	Sistema fijo contraincendios por CO2	1
	Sirena de alarma de disparo de CO2	1
	Detector de humo	8
	Detector de temperatura	1
	Timbre de alarma	6
	Pulsador de alarma general	8
	Válvulas de cierre de conductos de ventilación	3
	Válvulas de disparo rápido de combustible	1
	Interruptor de ventiladores y bombas combustible	1
	Panel de alarmas	2
	Plano contraincendios	2
	Vias de escape	
	Punto de reunión	

ICONO	DESCRIPCION	CANTIDAD
	Chalecos auxiliares no obligatorios (NO Mandatory)	Cantidad variable
	Aros auxiliares no obligatorios (NO Mandatory)	Cantidad variable



06-20 v08 Cambios e/ indicaciones Armador
05-03-20 v05 Se añaden aros y chalecos NO OFICIALES e/ indicaciones Armador

		BUQUE "AITA MARI" (Ex "STELLA MARIS BERRIA")	
ESLORA TOTAL	32.000 m.	ESLORA ENTRE PERP.CALCULOS	27.000 m.
ESLORA ENTRE PERP.	27.400 m.	MANGA DE TRAZADO	7.100 m.
ANCHO DE TRAZADO	3.800 m.	CALADO ESCANTILLONADO	
PLANO N.	193103	VERSION	06
ESCALA	1/80	SEGURIDAD Y CONTRAINCENDIOS	

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CUMMINS INC.
Charleston, SC 29405
Marine Performance Curves

Basic Engine Model:

6BT5.9-D(M)

Curve Number:

D(M)-90437

Engine Configuration:

D402051MX02

CPL Code:

1523

Date:

7-Jun-12

Displacement: **5.9 liter** [359.00 in³]
Bore: **102 mm** [4.02 in]
Stroke: **120 mm** [4.72 in]
Fuel System: **Stanadyne DB4**
Cylinders: **6**

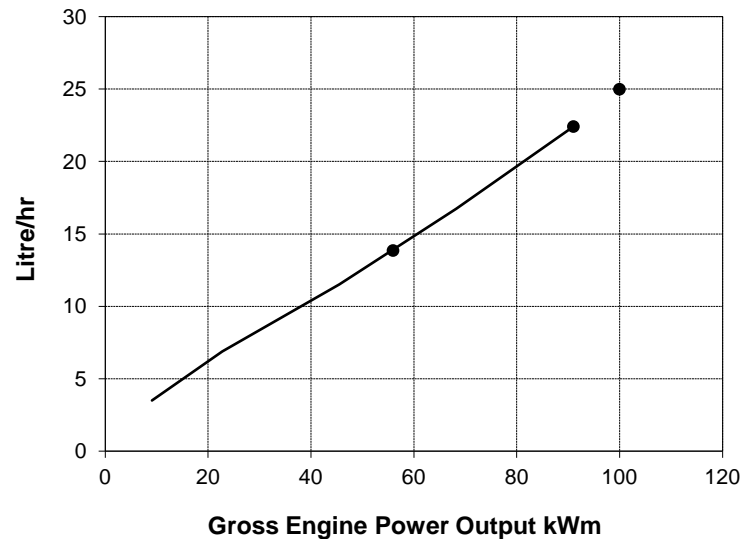
Advertised Power: **91[122]@1500** kW [hp] @ rpm
Aspiration: **Turbocharged**
Exhaust Type: **Wet**

CERTIFIED: This marine diesel engine complies with or is certified to the:
No Certification Issued

Engine Speed	Overload Capacity		Prime Power		Continuous Power	
	kWm	BHP	kWm	BHP	kWm	BHP
RPM						
1500	100	134	91	122	56	75

Engine Performance Data @ 1500 rpm

OUTPUT POWER			FUEL CONSUMPTION			
%	kWm	BHP	kg/kWh	Lb/ BHP/h	Liter/ hour	U.S. Gal/ hour
10% OVERLOAD CAPACITY						
110%	100	134	0.212	0.350	25.0	6.6
PRIME POWER						
100%	91	122	0.209	0.345	22.4	5.9
75%	68	92	0.208	0.343	16.7	4.4
50%	46	61	0.215	0.354	11.5	3.0
25%	23	31	0.257	0.424	6.9	1.8
10%	9	12	0.328	0.540	3.5	0.9
CONTINUOUS POWER						
80%	56	75	0.210	0.346	13.9	3.7



Rating Conditions: Ratings are in accordance with ISO 15550 and ISO 8528-5 reference conditions; air pressure at 100 kPa (29.61 in Hg), air temperature 25°C (77°F), and 30% relative humidity. The fuel consumption data is based on No. 2 diesel fuel weight at 0.85 kg/liter (7.001 lb/U.S. gal).

Power output curves are based on the engine operating with fuel system, water pump, and lubricating oil pump; not included are battery charging alternator, fan, optional equipment, and driven components.

Values from engine control modules and displayed on instrument panels are not absolute. Tolerance varies, but is generally less than +/-5% when operating within 30% of rated power.

Unless otherwise specified, tolerance on all values is +/-5%.

Prime Power Rating is applicable for supplying continual electrical power at varied load. The following are the Prime Rating parameters:

- * Prime Power is available for an unlimited number of hours per year in a variable load application. Variable load should not exceed a 70% average of the Prime Power rating during any operating period of 250 hours.
- * The total operating time at 100% Prime Power shall not exceed 500 hours per year.
- * There is a 10% overload capability for a period of 1 hour within a 12 hour period of operation. Total operating time at 10% overload shall not exceed 25 hours per year.

TECHNICAL DATA DEPT.

Steve T. Holt
CHIEF ENGINEER

Auxiliary Marine Engine Performance Data

Curve No. **D(M)-90437**
 DS : **DS-4020**
 CPL : **1523**
 DATE: **7-Jun-12**

General Engine Data

Engine Model	6BT5.9-D(M)			
Rating Type	Prime Power	Overload		
Rated Engine Power	91	[122]	100	[134]
Governed Engine Speed	1500			
Rated HP Production Tolerance	5			
Rated Engine Torque	579	[427]	636	[469]
Low Idle Speed Range Minimum	950			
Maximum	1150			
Brake Mean Effective Pressure	1237	[179]	1359	[197]
Compression Ratio	16.5:1			
Piston Speed	6	[1180]		
Firing Order	1-5-3-6-2-4			
Friction Power	13	[17]		
Steady State Stability Band at Constant Load	±% 0.5			
Weight Dry - Engine Only	426	[940]		
Weight Dry - Engine With Heat Exchanger	508	[1120]		

Fuel System¹

Approximate Fuel Flow to Pump	####	[32.6]	123.2	[32.6]
Maximum Allowable Fuel Supply to Pump Temperature	60	[140]	60	[140]
Approximate Fuel Flow Return to Tank	####	[26.6]	98.2	[26.0]
Approximate Fuel Return to Tank Temperature	TBD		TBD	
Maximum Heat Rejection to Drain Fuel	TBD		TBD	
Fuel Rail Pressure	N/A		N/A	
Average Fuel Consumption- Emissions ISO 8178 D2 Test Cycle.....	11.3	[3.0]		

Air System¹

Intake Manifold Pressure	TBD		TBD	
Intake Air Flow	94	[200]	104	[220]
Heat Rejection to Ambient	14	[815]	16	[895]

Exhaust System¹

Exhaust Gas Flow	245	[520]	269	[570]
Exhaust Gas Temperature (Turbine Out)	424	[795]	469	[875]
Exhaust Gas Temperature (Manifold)	TBD		TBD	
Heat Rejection to Exhaust	43	[2420]	50	[2860]

Cooling System¹

Sea Water Pump Specifications	MAB 0.08.17-07/16/2001			
Pressure Cap Rating (With Heat Exchanger Option)	69	[10]		
Max. Pressure Drop Across Any External Cooling System Circuit	34	[5]		

Non-Aftercooled

Coolant Flow to Main Cooler (with open thermostat).....	91	[22]		
Standard Thermostat Operating Range Start to open.....	82	[180]		
Full open.....	95	[203]		
Heat Rejection to Engine Coolant ³	77	[4410]	85	[4850]
Sea Water Flow @ 10 psi Pump Pressure.....	34	[9]		

TBD= To Be Determined

N/A = Not Applicable

N.A. = Not Available

- ¹ Unless otherwise specified, all data is at rated power conditions and can vary ± 5%.
- ² No rear loads can be applied when the FPTO is fully loaded. Max PTO torque is contingent on torsional analysis results for the specific drive system. Consult Installation Direction Booklet for Limitations.
- ³ Heat rejection to coolant values are based on 50% water/50% ethylene glycol mix and do NOT include fouling factors. If sourcing your own cooler, a service fouling factor should be applied according to the cooler manufacturer's recommendation.
- ⁴ Consult option notes for flow specifications of optional Cummins seawater pumps, if applicable.

CUMMINS ENGINE COMPANY, INC
 COLUMBUS, INDIANA

All Data is Subject to Change Without Notice - Consult the following Cummins intranet site for most recent data:

<http://marine.cummins.com>

Auxiliary Marine Engine Performance Data

Curve No. D(M)-90437
 DS : DS-4020
 CPL : 1523
 DATE: 7-Jun-12

Emissions (in accordance with ISO 8178 Cycle D2)

NOx (Oxides of Nitrogen)	g/kw-hr [g/bhp-hr]	####	[0.000]
HC (Hydrocarbons)	g/kw-hr [g/bhp-hr]	####	[0.000]
CO (Carbon Monoxide)	g/kw-hr [g/bhp-hr]	####	[0.000]
PM (Particulate Matter)	g/kw-hr [g/bhp-hr]	####	[0.000]

Emissions (in accordance with ISO 8178 Cycle E2)

NOx (Oxides of Nitrogen)	g/kw-hr [g/bhp-hr]	####	[0.000]
HC (Hydrocarbons)	g/kw-hr [g/bhp-hr]	####	[0.000]
CO (Carbon Monoxide)	g/kw-hr [g/bhp-hr]	####	[0.000]
PM (Particulate Matter)	g/kw-hr [g/bhp-hr]	####	[0.000]

Cooling System¹

Sea Water Pump Specifications	MAB 0.08.17-07/16/2001			
Pressure Cap Rating (With Heat Exchanger Option)	kPa [psi]	69	[10]	
Coolant Flow To Engine Heat Exchanger/Keel Cooler				
At 1 psi Friction Head External to Engine.....	l/min [gal/min]	121	[32]	
At 5 psi Friction Head External to Engine.....	l/min [gal/min]	91	[24]	
Standard Thermostat Operating Range	Start to open.....°C [°F]	82	[180]	
	Full open.....°C [°F]	95	[203]	
Heat Rejection to Engine Coolant ³	kW [Btu/min]	77	[4410]	85 [4850]
Sea Water Flow @ 10 psi Pump Pressure.....	l/min [gal/min]	34	[9]	

Singe Loop LTA

Coolant Flow to Main Cooler (with open thermostat).....	l/min [gal/min]	0	[]
Standard Thermostat Operating Range	Start to open.....°C [°F]	-18	[]
	Full open.....°C [°F]	-18	[]
Heat Rejection to Engine Coolant ³	kW [Btu/min]	0	[]
Maximum Coolant Inlet Temperature from LTA Cooler.....	°C [°F]	-18	[]

Two Loop Low Temperature Aftercooling (LTA)

Main Engine Circuit

Coolant Flow to Main Cooler (with open thermostat).....	l/min [gal/min]	0	[]	
Standard Thermostat Operating Range	Start to open.....°C [°F]	-18	[]	
	Full open.....°C [°F]	-18	[]	
Heat Rejection to Engine Coolant ³	kW [Btu/min]	0	[]	0 [0]

Aftercooler (LTA) Circuit

Coolant Flow to LTA Cooler (with open thermostat).....	l/min [gal/min]	0	[]	
LTA Thermostat Operating Range	Start to open.....°C [°F]	-18	[]	
	Full open.....°C [°F]	-18	[]	
Heat Rejection to Engine Coolant ³	kW [Btu/min]	0	[]	0 []
Maximum Coolant Inlet Temperature from LTA Cooler				
For Keel Cooled.....	°C [°F]	-18	[]	
For Radiator @ 35° C [95° F] Ambient Air.....	°C [°F]	-18	[]	
For Radiator @ 50° C [122° F] Ambient Air.....	°C [°F]	-18	[]	

Engines with Radiator Cooling

Coolant Flow to Radiator (Blocked open thermostat)	l/min [gal/min]	0	[]	
Standard Thermostat Operating Range	Start to open.....°C [°F]	-18	[]	
	Full open.....°C [°F]	-18	[]	
Heat Rejection to Engine Coolant ³	kW [Btu/min]	0	[]	0 []

TBD= To Be Determined

N/A = Not Applicable

N.A. = Not Available

- ¹ Unless otherwise specified, all data is at rated power conditions and can vary ± 5%.
- ² No rear loads can be applied when the FPTO is fully loaded. Max PTO torque is contingent on torsional analysis results for the specific drive system. Consult Installation Direction Booklet for Limitations.
- ³ Heat rejection to coolant values are based on 50% water/50% ethylene glycol mix and do NOT include fouling factors. If sourcing your own cooler, a service fouling factor should be applied according to the cooler manufacturer's recommendation.
- ⁴ Consult option notes for flow specifications of optional Cummins seawater pumps, if applicable.

CUMMINS ENGINE COMPANY, INC
 COLUMBUS, INDIANA

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<http://marine.cummins.com>



CUMMINS INC.
Charleston, SC 29405
Marine Performance Curves

Basic Engine Model:

6CT8.3-D(M)

Curve Number:

FR90610

Engine Configuration:

D412044MX02

CPL Code:

2873

Date:

7-Jun-12

Displacement: **8.3 liter** [505.00 in³]
Bore: **114 mm** [4.49 in]
Stroke: **135 mm** [5.32 in]
Fuel System: **Bosch A3500**
Cylinders: **6**

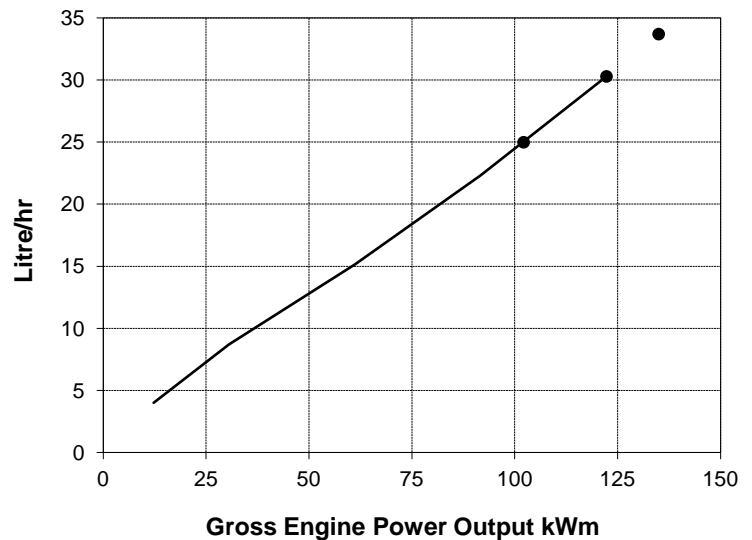
Advertised Power: **122[164]@1500** kW [hp] @ rpm
Aspiration: **Turbocharged**
Exhaust Type: **Dry**

CERTIFIED: This marine diesel engine complies with or is certified to the:
IMO - NOx requirements of the International Maritime Organization (IMO), MARPOL 73/78 Annex VI, Regulation 13

Engine Speed	Overload Capacity		Prime Power		Continuous Power	
	kWm	BHP	kWm	BHP	kWm	BHP
RPM						
1500	135	181	122	164	102	137

Engine Performance Data @ 1500 rpm

OUTPUT POWER			FUEL CONSUMPTION			
%	kWm	BHP	kg/kWh	Lb/ BHP/h	Liter/ hour	U.S. Gal/ hour
10% OVERLOAD CAPACITY						
110%	135	181	0.212	0.349	33.7	8.9
PRIME POWER						
100%	122	164	0.210	0.346	30.3	8.0
75%	92	123	0.207	0.341	22.3	5.9
50%	61	82	0.210	0.346	15.1	4.0
25%	31	41	0.242	0.398	8.7	2.3
10%	12	16	0.279	0.459	4.0	1.1
CONTINUOUS POWER						
80%	102	137	0.208	0.342	25.0	6.6



Rating Conditions: Ratings are in accordance with ISO 15550 and ISO 8528-5 reference conditions; air pressure at 100 kPa (29.61 in Hg), air temperature 25°C (77°F), and 30% relative humidity. The fuel consumption data is based on No. 2 diesel fuel weight at 0.85 kg/liter (7.001 lb/U.S. gal).

Power output curves are based on the engine operating with fuel system, water pump, and lubricating oil pump; not included are battery charging alternator, fan, optional equipment, and driven components.

Values from engine control modules and displayed on instrument panels are not absolute. Tolerance varies, but is generally less than +/-5% when operating within 30% of rated power.

Unless otherwise specified, tolerance on all values is +/-5%.

Prime Power Rating is applicable for supplying continual electrical power at varied load. The following are the Prime Rating parameters:

- * Prime Power is available for an unlimited number of hours per year in a variable load application. Variable load should not exceed a 70% average of the Prime Power rating during any operating period of 250 hours.
- * The total operating time at 100% Prime Power shall not exceed 500 hours per year.
- * There is a 10% overload capability for a period of 1 hour within a 12 hour period of operation. Total operating time at 10% overload shall not exceed 25 hours per year.

Scott T. Holt
CHIEF ENGINEER

TECHNICAL DATA DEPT.

Auxiliary Marine Engine Performance Data

Curve No. **FR90610**
DS : **5010**
CPL : **2873**
DATE: **7-Jun-12**

General Engine Data

Engine Model	6CT8.3-D(M)			
Rating Type	Prime Power		Overload	
Rated Engine Power	122	[164]	135	[181]
Governed Engine Speed		1500		
Rated HP Production Tolerance		0.0		
Rated Engine Torque	779	[574]	859	[634]
Low Idle Speed Range Minimum		750		
Maximum		950		
Brake Mean Effective Pressure	1182	[171]	1305	[189]
Compression Ratio		16.8:1		
Piston Speed	6.8	[1330]		
Firing Order		1-5-3-6-2-4		
Friction Power	17	[23]		
Steady State Stability Band at Constant Load		0.50		
Weight Dry - Engine Only	683	[1505]		

Fuel System¹

Approximate Fuel Flow to Pump	204.4	[54.0]	204.4	[54.0]
Maximum Allowable Fuel Supply to Pump Temperature	60	[140]	60	[140]
Approximate Fuel Flow Return to Tank	174.1	[46.0]	170.7	[45.1]
Average Fuel Consumption- Emissions ISO 8178 D2 Test Cycle.....	14.9	[3.9]		

Air System¹

Intake Manifold Pressure		[N.A.]		[N.A.]
Intake Air Flow	158	[335]	165	[350]
Heat Rejection to Ambient	21	[1200]	25	[1440]

Exhaust System¹

Exhaust Gas Flow	422	[895]	463	[980]
Exhaust Gas Temperature (Turbine Out)	522	[970]	560	[1040]
Exhaust Gas Temperature (Manifold)	N/A		N/A	
Heat Rejection to Exhaust	100	[5695]	113	[6430]

Emissions (in accordance with ISO 8178 Cycle D2)

NOx (Oxides of Nitrogen)	8.060	[6.010]		
HC (Hydrocarbons)	0.536	[0.400]		
CO (Carbon Monoxide)	0.858	[0.640]		
PM (Particulate Matter)	0.496	[0.370]		

Cooling System¹

Sea Water Pump Specifications	MAB 0.08.17-07/16/2001			
Pressure Cap Rating (With Heat Exchanger Option)	69	[10]		
Max. Pressure Drop Across Any External Cooling System Circuit	34	[5]		

Non-Aftercooled

Coolant Flow to Engine Heat Exchanger.....	163	[43]		
Standard Thermostat Operating Range Start to open.....	82	[180]		
Full open.....	95	[203]		
Heat Rejection to Engine Coolant ³	63	[3565]	68	[3870]

TBD= To Be Determined

N/A = Not Applicable

N.A. = Not Available

¹ Unless otherwise specified, all data is at rated power conditions and can vary ± 5%.

² No rear loads can be applied when the FPTO is fully loaded. Max PTO torque is contingent on torsional analysis results for the specific drive system. Consult Installation Direction Booklet for Limitations.

³ Heat rejection to coolant values are based on 50% water/50% ethylene glycol mix and do NOT include fouling factors. If sourcing your own cooler, a service fouling factor should be applied according to the cooler manufacturer's recommendation.

⁴ Consult option notes for flow specifications of optional Cummins seawater pumps, if applicable.

CUMMINS ENGINE COMPANY, INC
COLUMBUS, INDIANA

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<http://marine.cummins.com>

Auxiliary Marine Engine Performance Data

Curve No. **FR90610**
 DS : **5010**
 CPL : **2873**
 DATE: **7-Jun-12**

Emissions (in accordance with ISO 8178 Cycle D2)

NOx (Oxides of Nitrogen)	g/kw-hr [g/bhp-hr]	8.060	[6.010]
HC (Hydrocarbons)	g/kw-hr [g/bhp-hr]	0.536	[0.400]
CO (Carbon Monoxide)	g/kw-hr [g/bhp-hr]	0.858	[0.640]
PM (Particulate Matter)	g/kw-hr [g/bhp-hr]	0.496	[0.370]

Cooling System¹

Sea Water Pump Specifications	MAB 0.08.17-07/16/2001		
Pressure Cap Rating (With Heat Exchanger Option)	kPa [psi]	69	[10]
Max. Pressure Drop Across Any External Cooling System Circuit	kPa [psi]	34	[5]

Non-Aftercooled

Coolant Flow to Engine Heat Exchanger.....	l/min [gal/min]	170	[43]	
Standard Thermostat Operating Range	Start to open.....	82	[180]	
	Full open.....	95	[203]	
Heat Rejection to Engine Coolant ³	kW [Btu/min]	63	[3565]	68 [3870]

TBD= To Be Determined

N/A = Not Applicable

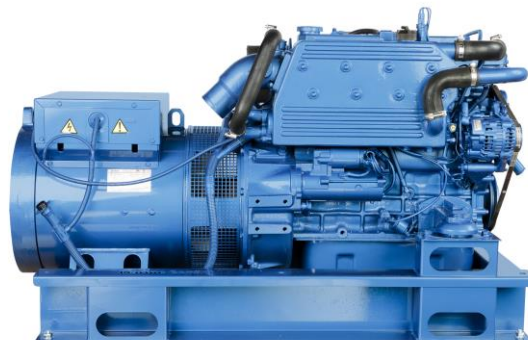
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N.A. = Not Available

CUMMINS ENGINE COMPANY, INC
 COLUMBUS, INDIANA

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Datos generales

Potencia máxima*:	28 kW (35 kVA)	Tensión:	400/230 V
Prime Power**:	25,5 kW	Intensidad de corriente:	50,5 A
Frecuencia:	50 Hz	Fases:	3

Dimensiones y pesos

Longitud total sin cabina:	1308 mm	Longitud total cabinado:	1445 mm
Ancho total sin cabina:	630 mm	Ancho total cabinado:	630 mm
Alto total sin cabina:	732 mm	Alto total cabinado:	788 mm
Peso seco Sin cabina:	494 Kg	Peso seco con cabina:	545 Kg

Motor

Fabricante motor base:	Mitsubishi	Diámetro:	94 mm (3,7 in)
Modelo Solé Diesel:	MINI-74	Carrera:	120 mm (4,72 in)
Tipo:	4 tiempos	Relación de compresión:	22:1
RPM motor:	1500	Sistema de inyección:	Mecánica e indirecta
Nº de cilindros:	4	Sistema de admisión:	Aspiración natural
Cilindrada total:	3331 cc	SAE carcasa sobrevolante:	SAE 3
Tipo aceite:	SAE 15W40	Capacidad de refrigerante:	13 L (3,43 gal)
Capacidad aceite:	10 L (2,64 gal)	Volante:	SAE 11 1/2
Potencia:	30,8 kW (41,89 CV)	Caudal de refrigerante:	105 l/min (27,74 gal/m)
Caudal de agua salada:	37,5 l/min (9,91 gal/m)	Caudal de aire de admisión:	2,25 m ³ /m

Condiciones estándar según normativa ISO 3046 (100 kPa de presión barométrica, 30 % de humedad relativa y temperatura de 25 °C).

* Potencia máxima: potencia suministrada a capacidad máxima del grupo

** Prime Power: potencia nominal según ISO 3046, ISO 8528-1. Capacidad de sobrecarga del 10 % una hora cada 12 horas.

1 kW \cong 1,36 CV 1 kW \cong 1,36 HP (metric) 1 kW \cong 1,36 CH

Detalles del sistema de combustible

Consumo 25%:	2,4 L/H (0,63 Gal/H)	Tipo de combustible:	Diésel
Consumo 50%:	4,1 L/H (1,08 Gal/H)	Calidad de combustible:	Fueloil diésel ASTM
Consumo 75%:	6 L/H (1,59 Gal/H)	Tipo de bomba de inyección:	en línea
Consumo 100%:	8,3 L/H (2,19 Gal/H)	Tipo de regulador de bomba:	Mecánico

Sistema eléctrico

Voltaje de la batería:	12 V	Tipo de solenoide de paro:	ETR
Motor de arranque:	2,2 kW	Alternador:	50 A

Detalles de instalación

Diámetro int. manguera de escape:	75 mm (2,95 in)	Max. altura aspiración gasoil:	0,6 m (1,97 ft)
Diámetro int. manguera de agua salada:	32 mm (1,26 in)	Max. altura aspiración agua salada:	2,5 m (98,43 in)
Diámetro int. manguera aspiración gasoil:	8 mm (0,31 in)	Max. temp. de agua salada:	32 °C (89,6 °F)
Diámetro int. manguera retorno gasoil:	-	Máximo ángulo de instalación***:	15 °
Capacidad batería mínima:	12 V 95 A/h		

Detalles de alternador

Marca:	SINCRO	Cos φ:	0,8
Modelo:	SK160WA	Tropicalizado:	S
Tipo de regulador:	BL4	Sistema de excitación:	BRUSHLESS
Número de polos:	4	Precisión regulación de voltaje**:	1%
Tipo de aislamiento*:	H	Normas:	EN 60034-1, IEC 60034-1, ISO 8528-3
Protección IP*:	23	Tipo de alternador:	Síncrono

Accesorios opcionales

Pack antisifón (obligatorio si el generador está bajo nivel de agua)	Refrigeración por quilla (escape seco o escape húmedo)
Sistema eléctrico a 24 V	Kit Tubos de inyección doble pared y alarma
Pack de respeto (filtros de fuel y aceite, rodete, correa)	Alarma de bajo nivel de refrigerante
Sistema de escape seco	Filtro decantador agua/gasoil
Sistema de escape	Separador agua/húmo
Filtros de Agua	Mangueras de gasoil
Grifos de fondo	Mangueras de escape
Pack de puesta en marcha	Mangueras de agua salada



* Otras protecciones disponibles.

** Con carga de 0 a 100 %, variación de velocidad de -2 % hasta +5 %, 0,8 factor lineal y carga equilibrada.

*** En todas direcciones

Para otros requisitos por favor, póngase en contacto con el Departamento de Ventas

Panel SCO 10



Descripción General

- Display LCD con luz, 128 x 64 píxeles
- Dos indicadores LED
- Medidas Grupo Electrónico (Ver información de Display)
- Configuración protegida con contraseña
- Indicador de horas de funcionamiento
- Multilenguaje
- Protecciones Grupo Electrónico Ver Gestión de Alarma)
- Función de Pre calentamiento
- Terminal Preexcitación D+
- Salida CAN bus con el protocolo SAE J1966
- Dos temporizadores multiuso
- Dimensiones 180 x 120 x 55 mm
- Peso 450 g

Gestión de Alarma

Apagado (SD)

- Alta Temperatura del refrigerante del motor
- Baja Presión de Aceite
- Sobre velocidad
- Sobrecarga*
- Corto Circuito*
- Sobre corriente*
- Alto/Bajo Voltaje
- Alta/Baja Frecuencia
- Parada de Emergencia

Advertencias (WRN)

- Alto/Bajo Voltaje de Batería
- Aviso de Mantenimiento

Sensor fallos (FLS)

Descripción de uso

- Modo OFF
- Modo MAN (Manual motor start/stop)
- Modo AUT (Auto motor start/stop)



Fuente de Alimentación

- Suministro de Voltaje 12/24V DC Con protección de fusibles
- Consumo 80/51 mA

Condiciones de Operación

- Temp. de funcionamiento -20+70 °C
- Humedad 95 % Sin condensación
- Protección Panel Frontal IP65

Conformidad estándar

- Directiva de Baja Tensión EN 61010-1:95+A1:97
- Electromagnético EN 50081-1:94, EN 50081-2:96
- Compatibilidad EN 50082-1:99, EN 50082-2:97

Información de pantalla

Medida

- L1-L3 Voltaje (V), Frecuencia (Hz), Presión Aceite (bar)
- Temperatura Refrigerante (°C), Voltaje Batería (V), RPM
- Potencia* (kW), Potencia Aparente* (kVA), Intensidad* (A), PF*

Registro Histórico

Equipamiento Opcional

Kit Armario IP 65

- Panel integrado en un armario eléctrico con protección IP65
- Kit con paro de emergencia, interruptor y alarma

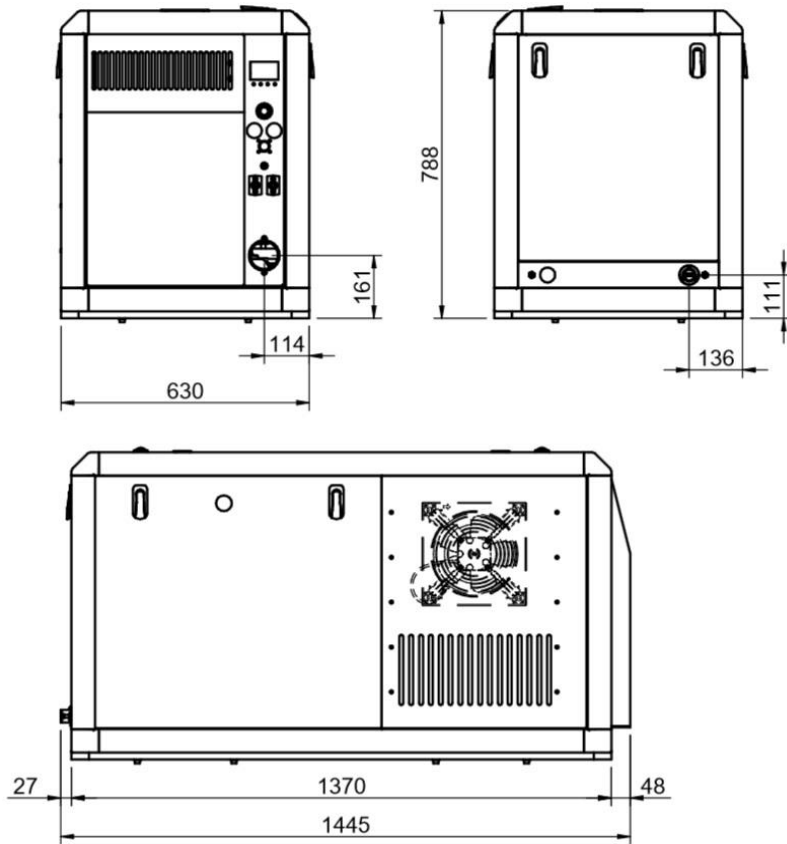
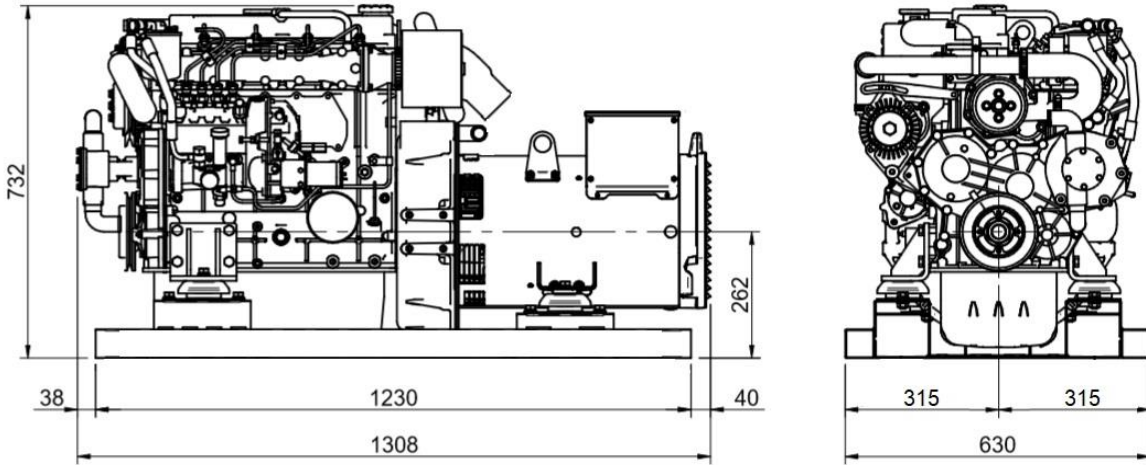
Transformadores de Corriente

Permite las siguientes lecturas:

- Intensidad (A), Potencia (kW), Potencia Aparente (kVA) y PF
- Transformadores Aislados a la masa
- Unidad transformador voltaje para separar voltaje principal
- Controlador con ratio de voltaje (1:1)

* La función especificada necesita los transformadores de voltaje (equipamiento opcional) para poder ver la información en el panel.

Dimensiones



Distribuidor autorizado

www.solediesel.com
info@solediesel.com

Planos detallados, folletos y manuales están disponibles en la web [solediesel.com](http://www.solediesel.com). Todos los derechos reservados. Las especificaciones técnicas y la presentación están sujetas a variaciones y cambios sin previo aviso. Información no contractual.



HiKu Mono PERC

400 W ~ 425 W

CS3N-400 | 405 | 410 | 415 | 420 | 425MS

MORE POWER



Module power up to 425 W
Module efficiency up to 20.9 %



Lower LCOE & BOS cost



Comprehensive LID / LeTID mitigation technology, up to 50% lower degradation



Better shading tolerance

MORE RELIABLE



Minimizes micro-crack impacts



Heavy snow load up to 5400 Pa,
enhanced wind load up to 2400 Pa*

*Black frame product can be provided upon request.



Enhanced Product Warranty on Materials and Workmanship*



Linear Power Performance Warranty*

1st year power degradation no more than 2%
Subsequent annual power degradation no more than 0.55%

*According to the applicable Canadian Solar Limited Warranty Statement.

MANAGEMENT SYSTEM CERTIFICATES*

ISO 9001: 2015 / Quality management system
ISO 14001: 2015 / Standards for environmental management system
ISO 45001: 2018 / International standards for occupational health & safety

PRODUCT CERTIFICATES*

IEC 61215 / IEC 61730 / CE
FSEC (US Florida)
UL 61730 / IEC 61701 / IEC 62716
UNI 9177 Reaction to Fire: Class 1 / Take-e-way



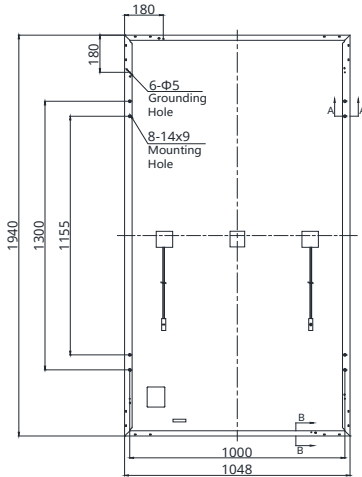
* The specific certificates applicable to different module types and markets will vary, and therefore not all of the certifications listed herein will simultaneously apply to the products you order or use. Please contact your local Canadian Solar sales representative to confirm the specific certificates available for your Product and applicable in the regions in which the products will be used.

CSI Solar Co., Ltd. is committed to providing high quality solar products, solar system solutions and services to customers around the world. Canadian Solar was recognized as the No. 1 module supplier for quality and performance/price ratio in the IHS Module Customer Insight Survey, and is a leading PV project developer and manufacturer of solar modules, with over 50 GW deployed around the world since 2001.

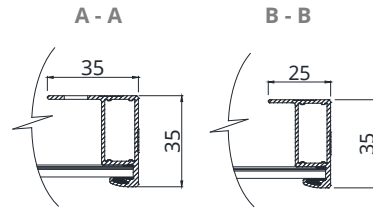
* For detailed information, please refer to the Installation Manual.

ENGINEERING DRAWING (mm)

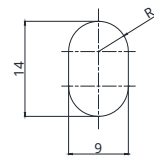
Rear View



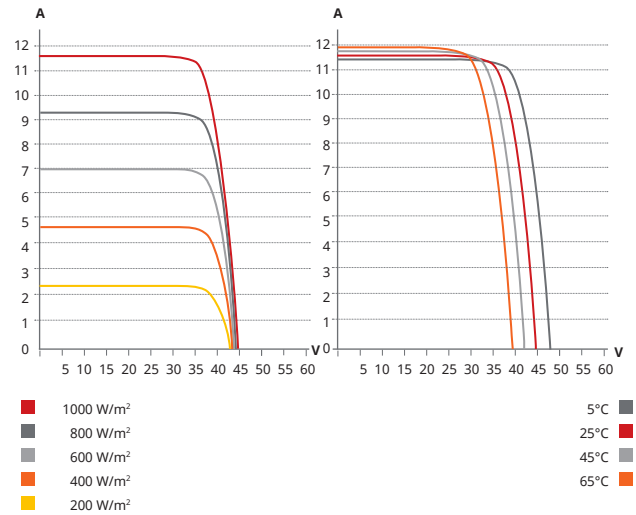
Frame Cross Section



Mounting Hole



CS3N-410MS / I-V CURVES



ELECTRICAL DATA | STC*

CS3N	400MS	405MS	410MS	415MS	420MS	425MS
Nominal Max. Power (Pmax)	400 W	405 W	410 W	415 W	420 W	425 W
Opt. Operating Voltage (Vmp)	37.2 V	37.4 V	37.6 V	37.8 V	38.0 V	38.2 V
Opt. Operating Current (Imp)	10.76 A	10.83 A	10.92 A	10.98 A	11.06 A	11.13 A
Open Circuit Voltage (Voc)	44.5 V	44.7 V	44.9 V	45.1 V	45.3 V	45.5 V
Short Circuit Current (Isc)	11.50 A	11.56 A	11.62 A	11.68 A	11.74 A	11.80 A
Module Efficiency	19.7%	19.9%	20.2%	20.4%	20.7%	20.9%
Operating Temperature	-40°C ~ +85°C					
Max. System Voltage	1500V (IEC/UL) or 1000V (IEC/UL)					
Module Fire Performance	TYPE 1 (UL 61730 1500V) or TYPE 2 (UL 61730 1000V) or CLASS C (IEC 61730)					
Max. Series Fuse Rating	20 A					
Application Classification	Class A					
Power Tolerance	0 ~ + 10 W					

* Under Standard Test Conditions (STC) of irradiance of 1000 W/m², spectrum AM 1.5 and cell temperature of 25°C.

ELECTRICAL DATA | NMOT*

CS3N	400MS	405MS	410MS	415MS	420MS	425MS
Nominal Max. Power (Pmax)	298 W	302 W	306 W	310 W	313 W	317 W
Opt. Operating Voltage (Vmp)	34.7 V	34.9 V	35.1 V	35.2 V	35.4 V	35.6 V
Opt. Operating Current (Imp)	8.60 A	8.66 A	8.72 A	8.81 A	8.85 A	8.91 A
Open Circuit Voltage (Voc)	41.9 V	42.1 V	42.2 V	42.4 V	42.6 V	42.8 V
Short Circuit Current (Isc)	9.28 A	9.33 A	9.38 A	9.42 A	9.47 A	9.52 A

* Under Nominal Module Operating Temperature (NMOT), irradiance of 800 W/m²-spectrum AM 1.5, ambient temperature 20°C, wind speed 1 m/s.

MECHANICAL DATA

Specification	Data
Cell Type	Mono-crystalline
Cell Arrangement	132 [2 X (11 X 6)]
Dimensions	1940 X 1048 X 35 mm (76.4 X 41.3 X 1.38 in)
Weight	22.5 kg (49.6 lbs)
Front Cover	3.2 mm tempered glass
Frame	Anodized aluminium alloy
J-Box	IP68, 3 bypass diodes
Cable	4 mm ² (IEC), 12 AWG (UL)
Cable Length (Including Connector)	Portrait: 400 mm (15.7 in) (+) / 280 mm (11.0 in) (-); landscape: 1250 mm (49.2 in)*
Connector	T4 series or H4 UTX or MC4-EVO2
Per Pallet	30 pieces
Per Container (40' HQ)	720 pieces

* For detailed information, please contact your local Canadian Solar sales and technical representatives.

TEMPERATURE CHARACTERISTICS

Specification	Data
Temperature Coefficient (Pmax)	-0.35 % / °C
Temperature Coefficient (Voc)	-0.27 % / °C
Temperature Coefficient (Isc)	0.05 % / °C
Nominal Module Operating Temperature	42 ± 3°C

PARTNER SECTION



* The specifications and key features contained in this datasheet may deviate slightly from our actual products due to the on-going innovation and product enhancement. CSI Solar Co., Ltd. reserves the right to make necessary adjustment to the information described herein at any time without further notice.

Please be kindly advised that PV modules should be handled and installed by qualified people who have professional skills and please carefully read the safety and installation instructions before using our PV modules.

CSI Solar Co., Ltd.

199 Lushan Road, SND, Suzhou, Jiangsu, China, 215129, www.csisolar.com, support@csisolar.com



Similar to the illustration

grid | power VL

Series OPzS/power.bloc OPzS

Vented lead-acid battery

grid | powerVL Series OPzS

Typical applications:

- Telecommunications
 - Mobile phone stations
 - BTS-stations
 - Off-grid/on-grid solutions
- Power Supply
- Security lighting

Your benefits:

- Very high expected service life – due to optimized low-antimony selenium alloy
- Excellent cycle stability – due to tubular plate design
- Maximum compatibility – design according to DIN 40736-1
- Higher short-circuit safety even during the installation – based on HOPPECKE system connectors
- Extremely extended water refill intervals up to maintenance-free – optional use of AquaGen® recombination system minimizes emission of gas and aerosols¹

grid | powerVL Series power.bloc OPzS

Typical applications:

- Telecommunications
 - Mobile phone stations
 - BTS-stations
 - Off-grid/on-grid solutions
- Power Supply systems
- Security lighting

Your benefits:

- High expected service life – due to optimized low-antimony selenium alloy
- Excellent cycle stability – due to tubular plate design
- Maximum compatibility – dimensions according to DIN 40737-3
- Easy assembly and installation – battery lid with integral handle
- Higher short-circuit safety even during the installation – based on HOPPECKE system connectors
- Extremely extended water refill intervals up to maintenance-free – optional use of AquaGen® recombination system minimizes emission of gas and aerosols¹



¹ Similar to sealed lead-acid batteries



Capacities dimensions and weights

Series OPzS	DIN Type	C ₁₀ /1.80 V Ah	C ₅ /1.77 V Ah	C ₃ /1.75 V Ah	C ₁ /1.67 V Ah	max.* Weight kg	Weight electrolyte kg (1.24 kg/l)	max.* Length L mm	max.* Width W mm	max.* Height H mm	Fig.
grid power vL 2-215	4 OPzS 200	213	182	161	118	17.3	4.5	105	208	420	A
grid power vL 2-270	5 OPzS 250	266	227	201	147	21.0	5.6	126	208	420	A
grid power vL 2-325	6 OPzS 300	320	273	241	177	24.9	6.7	147	208	420	A
grid power vL 2-390	5 OPzS 350	390	345	303	217	29.3	8.5	126	208	535	A
grid power vL 2-470	6 OPzS 420	468	414	363	261	34.4	10.1	147	208	535	A
grid power vL 2-550	7 OPzS 490	546	483	426	304	39.5	11.7	168	208	535	A
grid power vL 2-690	6 OPzS 600	686	590	510	353	46.1	13.3	147	208	710	A
grid power vL 2-805	7 OPzS 700	801	691	596	411	59.1	16.7	215	193	710	B
grid power vL 2-920	8 OPzS 800	915	790	681	470	63.1	17.3	215	193	710	B
grid power vL 2-1035	9 OPzS 900	1026	887	767	529	72.4	20.5	215	235	710	B
grid power vL 2-1150	10 OPzS 1000	1140	985	852	588	76.4	21.1	215	235	710	B
grid power vL 2-1265	11 OPzS 1100	1256	1086	938	647	86.6	25.2	215	277	710	B
grid power vL 2-1380	12 OPzS 1200	1370	1185	1023	706	90.6	25.8	215	277	710	B
grid power vL 2-1610	12 OPzS 1500	1610	1400	1197	784	110.4	32.7	215	277	855	B
grid power vL 2-1880	14 OPzS 1750	1881	1632	1397	914	142.3	46.2	215	400	815	C
grid power vL 2-2015	15 OPzS 1875	2016	1748	1496	980	146.6	46.7	215	400	815	C
grid power vL 2-2150	16 OPzS 2000	2150	1865	1596	1045	150.9	45.9	215	400	815	C
grid power vL 2-2420	18 OPzS 2250	2412	2097	1796	1176	179.1	56.4	215	490	815	D
grid power vL 2-2555	19 OPzS 2375	2546	2213	1895	1242	182.9	55.6	215	490	815	D
grid power vL 2-2690	20 OPzS 2500	2680	2330	1995	1307	187.3	55.7	215	490	815	D
grid power vL 2-2960	22 OPzS 2750	2952	2562	2195	1437	212.5	67.0	215	580	815	D
grid power vL 2-3095	23 OPzS 2875	3086	2678	2294	1503	216.8	65.9	215	580	815	D
grid power vL 2-3230	24 OPzS 3000	3220	2795	2394	1568	221.2	66.4	215	580	815	D
grid power vL 2-3500	26 OPzS 3250	3488	3028	2594	1699	229.6	65.4	215	580	815	D

C₁₀, C₅, C₃ and C₁ = Capacity at 10 h, 5 h, 3 h and 1 h discharge

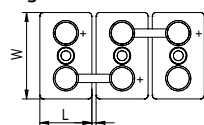
* according to DIN 40736-1 data to be understood as maximum values

Series power.bloc OPzS	DIN Type	C ₁₀ /1.80 V Ah	C ₅ /1.77 V Ah	C ₃ /1.75 V Ah	C ₁ /1.67 V Ah	max.* Weight kg	Weight electrolyte kg (1.24 kg/l)	max.* Length L mm	max.* Width W mm	max.* Height H mm	Fig.
grid power vL 12-50	12 V 1 power.bloc OPzS	50	44	39	28	37.0	15.0	272	205	383	A
grid power vL 12-100	12 V 2 power.bloc OPzS	100	101	88	78	48.0	13.0	272	205	383	A
grid power vL 12-150	12 V 3 power.bloc OPzS	150	151	132	117	67.0	18.0	380	205	383	A
grid power vL 6-200	6 V 4 power.bloc OPzS	200	202	176	155	47.0	13.0	272	205	383	B
grid power vL 6-250	6 V 5 power.bloc OPzS	250	252	220	194	60.0	20.0	380	205	383	B
grid power vL 6-300	6 V 6 power.bloc OPzS	300	302	264	233	67.0	18.0	380	205	383	B

C₁₀, C₅, C₃ and C₁ = Capacity at 10 h, 5 h, 3 h and 1 h discharge

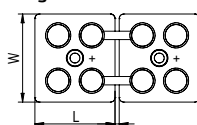
* according to DIN 40737-3 data to be understood as maximum values

Fig. A Series OPzS



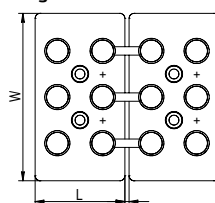
grid | power vL 2-215 -
grid | power vL 2-690

Fig. B Series OPzS



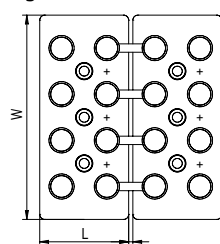
grid | power vL 2-805 -
grid | power vL 2-1610

Fig. C Series OPzS



grid | power vL 2-1880 -
grid | power vL 2-2150

Fig. D Series OPzS



grid | power vL 2-2420 -
grid | power vL 2-3500

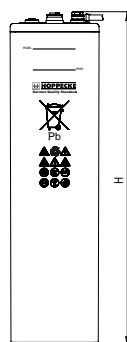
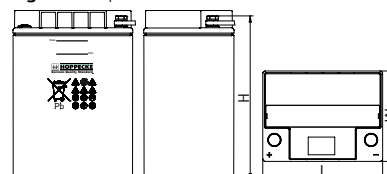
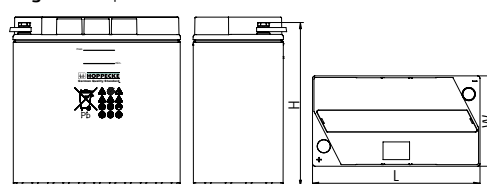


Fig. A Series power.bloc OPzS



grid | power vL 12-50 -
grid | power vL 12-150

Fig. B Series power.bloc OPzS



grid | power vL 6-200 -
grid | power vL 6-300

Design life: up to 20 years

Optimal environmental compatibility – closed loop for recovery of materials in an accredited recycling system

Design life: up to 18 years

Optimal environmental compatibility – closed loop for recovery of materials in an accredited recycling system

HOPPECKE Batterien GmbH & Co. KG
Bontkirchener Str. 1
D - 59929 Brilon
Tel: +49 (0) 2963 61-374
Fax: +49 (0) 2963 61-270
E-Mail: reservepower@hoppecke.com



MOD 3~10KTL3-XH

- Battery ready, future proof
- Dual MPP Trackers
- Type II SPD on DC and AC side
- Active Arcing Protection
- 24h self-consumption monitoring



GROWATT

www.ginverter.com

P O W E R
- I N G O
T O M O -
R R O W O

Primary

Datasheet	MOD 3000TL3-XH	MOD 4000TL3-XH	MOD 5000TL3-XH	MOD 6000TL3-XH	MOD 7000TL3-XH	MOD 8000TL3-XH	MOD 9000TL3-XH	MOD 10KTL3-XH
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Input data (DC)

Max. recommended PV power (for module STC)	6000W	8000W	10000W	12000W	14000W	16000W	18000W	20000W
Max. DC voltage	1100V							
Start voltage	160V							
Nominal voltage	600V							
MPPT voltage range	140V-1000V							
No. of MPP trackers	2							
No. of PV strings per MPP tracker	1							
Max. input current per MPP tracker	16A							
Max. short-circuit current per MPP tracker	20A							

Input data (DC battery)

Compatible battery	ARK XH Battery System(7.68kWh-25.6kWh)							
Operating voltage range	600 V-950 V							
Max.operating current	11A				18.5A			
Max.charge power	6000W				10000W			
Max.discharge power	3300W	4400W	5500W	6600W	7700W	8800W	9900W	11000W*

Output data (AC)

AC nominal power	3000W	4000W	5000W	6000W	7000W	8000W	9000W	10000W
Max. AC apparent power	3300VA	4400VA	5500VA	6600VA	7700VA	8800VA	9900VA	11000VA*
Nominal AC voltage (range*)	220V/380V, 230V/400V (340-440V)							
AC grid frequency (range*)	50/60 Hz (45-55Hz/55-65 Hz)							
Max. output current	5.0A	6.7A	8.3A	10.0A	11.7A	13.3A	15.0A	16.7A
Adjustable power factor	0.8leading...0.8lagging							
THDi	<3%							
AC grid connection type	3W+N+PE							

Efficiency

MAX. efficiency	98.3%	98.3%	98.3%	98.3%	98.6%	98.6%	98.6%	98.6%
European efficiency	97.5%	97.5%	97.5%	97.5%	98.1%	98.1%	98.1%	98.1%
MPPT efficiency	99.9%							

Protection devices

DC reverse polarity protection	Yes
DC Switch	Yes
AC/DC surge protection	Type II / Type II
Insulation resistance monitoring	Yes
AC short-circuit protection	Yes
Ground fault monitoring	Yes
Grid monitoring	Yes
Anti-islanding protection	Yes
Residual-current monitoring unit	Yes
String fault monitoring	Yes
AFCI protection	Yes

General data

Dimensions (W / H / D)	425/387/147mm	425/387/147mm	425/387/147mm	425/387/147mm	425/387/178mm	425/387/178mm	425/387/178mm	425/387/178mm
Weight	12.5kg	12.5kg	12.5kg	12.5kg	14kg	14kg	14kg	14kg
Operating temperature range	- 25°C ... +60°C							
Nighttime power consumption	< 5.5W							
Topology	Transformerless							
Cooling	Natural convection							
Protection degree	IP66							
Relative humidity	0~100%							
Altitude	4000m							
DC connection	H4/MC4(Optional)							
AC connection	Connector							
Display	OLED + LED/WIFI + APP							
Interfaces: USB/RS485/WIFI /GPRS/LAN/RF	yes/yes/Optional/Optional/Optional/Optional							
Warranty:10 years	Yes							

CE, VDE0126, Greece, EN50549, C10/C11, VFR 2019, IEC62116, IEC61727, IEC 60068, IEC 61683, CEI0-21, N4105, TOR Erzeuger G98/G99, G100, AS4777, UNE21 7001, UNE206007, PO12.2

* For Belgium C10/C11, MOD 10KTL3-XH max. battery discharge power is limit to10000W and max. output power is limit to 10000VA.

* The AC voltage range and frequency range may vary depending on specific country grid standard.
All specifications are subject to change without notice.



eusko motor

eusko motor s.l.

Pol. Txalaka - Troia Ibilbidea, 18 6B4
20115 ASTIGARRAGA (Gipuzkoa)
Tel.: 943 40 00 19 - Fax: 943 40 48 29
E-mail: comercial@euskomotor.es

ASOCIACION SALVAMENTO MARITIMO HUMANITARIO
C/Aritzatalde nº4
20800 - ZARAUTZ
Gipuzkoa

ALBARAN

· SMH

Nº ALBARAN	FECHA	CLIENTE	N.I.F.	FORMA ENVIO	PAGINA
H/21-00468	28-06-2021	1171	G75144584	LANGARRI DEBIDOS	1

UBICA	REFERENCIA	DESCRIPCION	CANTIDAD	PRECIO		IMPORTE
C6-B2	FF42000 FS20203	S/PEDIDO - IÑIGO FILTRO DE GASOIL FILTRO SEPARADOR AGUA/GASOIL (SFR2130 FW)	2,00 6,00	✓ 11,92 ✓ 34,06	10,00 10,00	21,46 183,92
C7-B4	LF9009	FILTRO DE ACEITE	2,00	✓ 73,55	10,00	132,39
C7-A2	AF1811	FILTRO DE AIRE (BALDWIN 2756)	4,00	✓ 110,64	10,00	398,30
C8-C3	WF2073 FS20203	FILTRO DE AGUA FILTRO SEPARADOR AGUA/GASOIL (SFR 2130 FW)	4,00 3,00	✓ 30,55 ✓ 34,06	10,00 10,00	109,98 91,96

FORMA DE PAGO	BASE IMPONIBLE	% I.V.A.	CUOTA IVA	TOTAL ALBARAN
PREPAGO	938,01	0.0	0.0	938,01 €



3330 Lt
4000 Lt.
4000 Lt.
Se trasiega el
al T.D.
46,987
46,987



C/ Almirante Cerverá, 9
12100-Grau de Castelló(Castellón)
CIF / NIF : B12040044
Tel. : 964282648

Asoc. Salvamento Maritimo Humanitario
C/ Aritzabatalde, 4, Bajo
20800 - Zarautz (Guipuzcoa)

Mecanica Naval y Obras Publicas

Agente Oficial: Cummins - Twin-Disc - Vetus

FACTURA	FECHA	NIF / CIF	CLIENTE	EMBARCACIÓN - VEHÍCULO		
W02 / 00013	29-Ene-2021	G751445844	01019			
UNIDADES	CODIGO	DESCRIPCION	PRECIO	DESCUENTO	IMPORTE	
<i>Albarán N° 0/00013 de fecha 29-Ene-2021</i>						
1,00	2909	Sensor temperatura agua todas las series Cummins	106,48	12,00	93,70	
1,00	4033	Juego cables sensor presion serie B Cummins	37,64	12,00	33,12	
1,00	16873	Pedidos Cummins 24 horas	12,00		12,00	
1,00	8684	Portes material hasta Almeria	10,00		10,00	

De conformidad con lo establecido en la normativa vigente en Protección de Datos de Carácter Personal, le informamos que sus datos serán incorporados al sistema de tratamiento titularidad de TALLERES NASIO S.L. con CIF B-12040044 y domicilio social sito en ALMIRANTE CERVERA, 9 12100 GRAU DE CASTELLÓN (CASTELLÓN), con la finalidad de poder emitirle la correspondiente factura. En cumplimiento con la normativa vigente, TALLERES NASIO S.L. informa que los datos serán conservados durante el periodo legalmente establecido en cumplimiento de establecido. Le informamos de que los tratamientos indicados se encuentran legitimados por la ejecución de un contrato y por el correcto desarrollo de la relación jurídica que existe entre ambas partes.

Forma de Pago:	Base Imponible	Descuento	%	Importe IVA	Total
Contado	148,82€		21	31,25€	180,07€

Reparacion garantizada de acuerdo al real decreto 1457/86 y la ley 23/03. Garantia de 3 meses o 2000Km. Excepto en embarcaciones profesionales o vehiculos industriales que es de 15 dias.

Vencimientos: 29-Ene-2021--> 180.07€

ALBARANES

Faktura / Factura: 21F001697
Kontzeptua / Concepto: TARIFA HORNIDURENGATIK TARIFA POR SUMINISTROS
ASOCIACION SALVAMENTO MARITIMO HUMANITARIO Aritzatalde, 4 - bajo 20800 ZARAUTZ GIPUZKOA
C.I.F. / N.I.F.: G75144584

Oharrak / Observaciones:

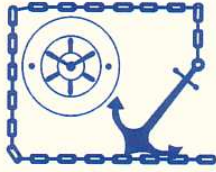
Año 2020 - octubre a diciembre - Consumo energía - Muelle Donibane - Monaguillo 6.1
 Aita Mari - Buque afecto a navegación internacional

Aldia Periodo		Deskribapena Descripción	G.G.B. Kopuruak E. Cuantitativos	Prezioa Precio	Oinarra Base	% BEZ % IVA
Hasiera Inicio	Amaiera Fin		KWH KWH			
01/10/2020	27/10/2020	Hornidura elektrikoa Suministro eléctrico	819	0,341300	279,52	0
30/10/2020	26/11/2020	Hornidura elektrikoa Suministro eléctrico	1.544	0,341300	526,97	0

Pasaia, 2021ko Otsailaren 22a
Pasaia, 22 de Febrero de 2021
 Jaso nuen / Recibí:

Zerga-oinarra / Base Imponible.....	806,49
BEZ / IVA (Salbuetsia/Exento).....	0,00
Sartu beharreko zenbatekoa / Importe a ingresar.	806,49

Liquidazio hau, irailaren 5eko Estatuko Portuei eta Merkataritza Marinari buruzko Legearen testuategina onesten duen 2/2011 Legegintzako Errege Dekretuaren arabera, eta tarifak onesteari buruzko 2020ko abenduaren 11eko Portu Agintaritzaren Administrazio Kontseiluaren ebazpenen arabera egin da.
 La presente liquidación ha sido efectuada de conformidad con el Real Decreto Legislativo 2/2011, de 5 de septiembre, por el que se aprueba el Texto Refundido de la Ley de Puertos del Estado y de la Marina Mercante, y las resoluciones del Consejo de Administración de la Autoridad Portuaria de fecha 11 de diciembre de 2020, referentes a la aprobación de tarifas.



NAUTICA

PLAYAUNDITXASO



Pº Iribarren s/n Puerto Deportivo - Pabellones 3, 4, 7, 8, y 9 - 20280 HONDARRIBIA (Guipúzcoa) Tel: 943 641 534 · 943 395 061

Nº.PRESUPUESTO	M00002
Cod.Cliente	007315
CIF. Cliente	
Telf. Cliente	
EMBARCACION	
MODELO	

Nº.PRESUPUESTO	FECHA
M00002	25/01/2022

ASOC VOL SALV MARITIMO HUMANITARI

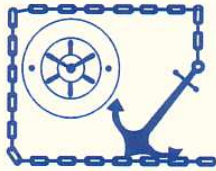
Referencia	DESCRIPCION	Uni./Horas	Precio unid.		IMPORTE
	PRESUPUESTO DE GRUPO ELECTRÓGENO APTO PARA FUNCIONAR EN PARALELO 150 GT SIN CABINA VER DETALLES TECNICOS EN PDF ADJUNTO EL PACK PUESTA EN MARCHA ES UN PAQUETE DE ACCESORIOS QUE INCLUYE TODO LO NECESARIO PARA REALIZAR EL PRIMER ARRANQUE DEL MOTOR SOLÉ DIESEL: FILTRO DE ACEITE, FILTRO DE GASOIL, PACK TURBINA (RODETE Y JUNTA), CORREA, ÁNODO, FUSIBLE, FILTRO DE AIRE Y TODOS LOS LÍQUIDOS NECESARIOS PARA ARRANCAR EL MOTOR. ADEMÁS, CONTIENE TRES BOTES DE SPRAY: IMPRIMACIÓN, PINTURA Y PROTECTOR DIELÉCTRICO; PARA MANTENER COMO NUEVO EL MOTOR. ES UN PACK IMPRESCINDIBLE PARA LLEVAR A BORDO ANTES DE CUALQUIER TRAVESÍA Y PERMITE REALIZAR EL MANTENIMIENTO BÁSICO PARA MANTENER EL MOTOR DEL BARCO EN BUENAS CONDICIONES DE FUNCIONAMIENTO. DISPONIBLE EN LAS VARIANTES NECESARIAS PARA TODAS LAS GAMAS DE NUESTROS MOTORES MARINOS. *ESTE PACK NO INCLUYE NI ACEITE NI LIQUIDO REFRIGERANTE. * SE INCLUYE EN EL PRESUPUESTO COMO EXTRA KIT PARA UN CAMBIO COMPLETO DE AMBOS LÍQUIDOS				
200000	GRUPO 150 GT SIN CABINA 24 V - 400/230V	1.00	43,310.00		43,310.00
200000	CONEXION ESTRELLA-EUROPEA (3 LINEAS-1NEUTRO)				
200000	ANTICONGELANTE 25LTS	1.00	139.20		139.20
200000	ACEITE MOTOR 25 LTS	1.00	321.75		321.75
Total Mano de Obra		Total Repuestos		Total Serv.Externos	

Forma de Pago: Transferencia a
Bankinter: 0128 0350 91 0500000963
Kutxa: 2095 5202 29 1062499800

BASE IMPONIBLE	IVA	IMPORTE TOTAL

Inscrita en el Reg Merc de Gipuzkoa, Tomo 1938, Libro 0, Folio 146, seccion8CIF: B-20.759.809
garantia trabajos realizados: 3 meses segun RD(1457/86)





NAUTICA

PLAYAUNDITXASO



Pº Iribarren s/n Puerto Deportivo - Pabellones 3, 4, 7, 8, y 9 - 20280 HONDARRIBIA (Guipúzcoa) Tel: 943 641 534 · 943 395 061

Nº.PRESUPUESTO	M00002
Cod.Cliente	007315
CIF. Cliente	
Telf. Cliente	
EMBARCACION	
MODELO	

Nº.PRESUPUESTO	FECHA
M00002	25/01/2022

ASOC VOL SALV MARITIMO HUMANITARI

Referencia	DESCRIPCION	Uni./Horas	Precio unid.		IMPORTE
200000	PACK PUESTA EN MARCHA	1.00	515.00		515.00
200000	ANTICONGELANTE EXTRA PARA KIT PUESTA EN MARCHA	1.00	139.20		139.20
200000	ACEITE MOTOR EXTRA KIT PUESTA EN MARCHA	1.00	321.75		321.75
250023	PORTES FABRICA-HONDARRIBIA	1.00	275.00		275.00
200000	EQUIPAMIENTO DE SERIE				
200000	LIBRE MASA				
200000	KIT TRANSMISORES AMPEROMÉTRICOS				
200000	ALARGO DE CABLEADO ELECTRICO A 4 MTS				
200000	BOMBA DE EXTRACCION DE ACEITE				
200000	BANCADA RIGIDA				
200000	SILENTBLOCKS				
200000	PANEL DE CONTROL SCO 10				
200000	MANUAL DEL PROPIETARIO Y ALTERNADOR				
200000	EMBALAJE A DESTINO				
200000	VALIDEZ PRESUPUESTO: 30 DIAS				
200000	INSTALACION (M/OBRA Y DESPLAZAMIENTOS)NO INCLUIDO				
200000	FORMA PAGO:30% FECHA PEDIDO-RESTO A SALIDA FABRICA				
200000	* FORMA DE PAGO POR SER PRODUCTO A MEDIDA				
200000	PLAZO DE ENTREGA A CONSULTAR FECHA PEDIDO				
200000					
200000	CUALQUIER CERTIFICADO QUE REQUIERA EL ARMADOR				
200000	SE PRESUPUESTARA SIEMPRE ANTES DE HACER EL PEDIDO				

Total Mano de Obra	Total Repuestos	Total Serv.Externos
	45,021.90	

Forma de Pago: Transferencia a
 Bankinter: 0128 0350 91 0500000963
 Kutxa: 2095 5202 29 1062499800

BASE IMPONIBLE	IVA	IMPORTE TOTAL
45,021.90	21.00	9,454.60
		54,476.50

Inscrita en el Reg Merc de Gipuzkoa, Tomo 1938, Libro 0, Folio 146, seccion8CIF: B-20.759.809
 garantia trabajos realizados: 3 meses segun RD(1457/86)

