

# MARINE GENERATORS





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# MARINE GENERATORS



#### Your energy

Whether you sail for leasure or for work, Eneon<sup>®</sup> is able to provide all the energy you need, ensuring safety, comfort and maximum performance. The variety of Eneon<sup>®</sup> product range offers tailor-made solutions to meet every need.

Eneon<sup>®</sup> means innovation, reliability, safety and sustainability. With Eneon<sup>®</sup> the advanced technologies meet the experience of those working in the industry for many years.

#### A safe choice

Wherever you are sailing and in any weather condition, Eneon<sup>®</sup> is a safe choice. Eneon's reliability is also expressed in its international warranty: a network of official distributors and workshop around the world ensures parts and immediate assistance.

#### **POWER RANGE**

Eneon compact, silent and reliable Generating Sets from 3 to 47 kVA are designed to improve the comfort both on board sailing and engine powered boats and to satisfy even the most demanding shipowners.



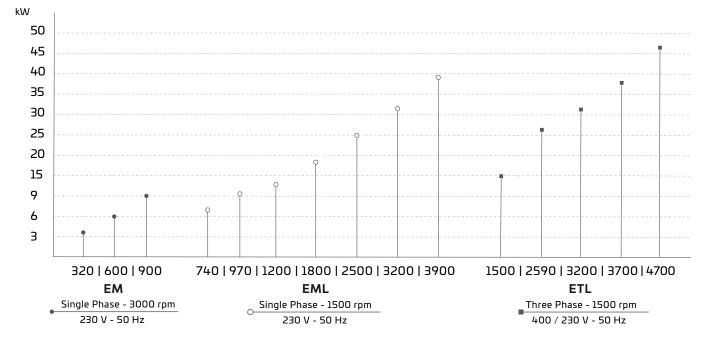
EM SERIES: 3,2 - 9 KVA



EML SERIES: 7,4 - 39 KVA



ETL SERIES: 15 - 47 KVA





#### **FEATURES**

- Connection on one side
- Electronic management
- Easy maintenance
- Local and remote control
- Reduced dimensions and noise level

#### STANDARD EQUIPMENT

- Sound proof canopy: Made entirely from marine grade aluminum (LEGA 5754 H111) powder coated,.
- EOB-3000<sup>®</sup> EOB-1500<sup>®</sup> control panels: Waterproof control panel for engine protection with LCD display.
- Supplied separately for 3.000 rpm EM series generators; Supplied on board the generators for 1.500 rpm EML/ETL series; . • Generating set anchor brackets: 4 steel brackets to attach the generator to the floor of the boat.
- Emergency button: Emergency button positioned on the Generating Set to allow for the immediate shutdown in case of danger or damage.
- · Manuals: User and installation manuals of the generating set along with relative engine and alternator user manuals.

#### ACCESSORIES

- · Silenced muffler kit
- Sea water intake kit
- · Siphon breaker
- · Water gas separator
- · Electrical fuel pump
- · Diesel prefilter with water separator
- Diesel water separator
- Manual oil extraction pump

#### STANDARDS APPLIED

- CE certified
- Power: ISO 8528
- Directive Machinary: 2006/42/CE 89/392CEE 98/37/CE
- · Electromagnetic compatibility: 2004/108/CE 89/336/CEE 93/68/CEE
- Acoustic emmission: 2005/88/CE 2000/14/CE (sound proof version only)

# EOB® CONTROL PANELS



#### EOB-3000® CONTROL PANEL - 25127S



EOB-3000<sup>®</sup> Control panel

EOB-3000® is the most advanced and complete command and control board for Eneon® Generators,

 $\mathsf{EOB}\text{-}3000^{\texttt{®}}\xspace$  is available as standard across the EM 3000 rpm range .

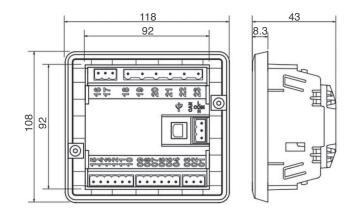
It allows to monitor all the major electrical and mechanical parameters of the generator, to have it constantly under control. EOB-3000<sup>®</sup> control panel is installed remotely, and cable connected to the EM series generators. EOB-3000<sup>®</sup> control panel is not expandable

#### Alarms

- · Low oil pressure
- High water temperature
- High exhaust riser temperature
- Battery Charger fault
- Starting fault
- Mechanical fault
- Low frequency
- High frequency
- Low battery voltage
- Low alternator voltage
- High alternator voltage
- Maintenance request
- Overload

#### Measurements

- Gen voltage (Vac)
- Current (A)
- Frequency (Hz)
- Battery voltage (Vcc)
- Oil pressure (bar)
- Engine temperature (°C)
- Counter



EOB-3000<sup>®</sup> Dimensions



#### EOB-1500® CONTROL PANEL - 25126P



EOB-1500<sup>®</sup> Control panel

EOB-1500<sup>®</sup> control panel is available as standard across the 1500 rpm EML/ETL Eneon® generators.

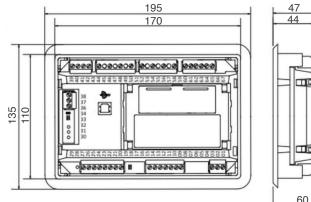
It allows to monitor all the major electrical and mechanical parameters of the generator, to have it constantly under control and it is equipped with a J1939 communication bus to connect external devices that extend the functionalities of the control unit. The EOB-1500 control is standard installed onboard the generators, by ordering an optional panel + cable kit (part No. 24811A) it is possible to install a second remote panel.

#### Alarms

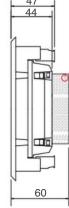
- · Low oil pressure
- High water temperature
- High exhaust riser temperature
- Battery Charger fault
- · Starting fault
- · Mechanical fault
- Low frequency
- High frequency
- Low battery voltage
- Low alternator voltage .
- High alternator voltage
- Maintenance request
- · Overload

#### Measurements

- Gen voltage (Vac)
- Current (A)
- Frequency (Hz)
- Battery voltage (Vcc)
- Oil pressure (bar)
- Engine temperature (°C)
- Counter



EOB-1500<sup>®</sup> Dimensions



# EM SERIES 3000 RPM

#### Features

- Connection on one sideEasy maintenance
- Local and remote command
- $\boldsymbol{\cdot}$  Reduced dimensions and noise level



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Model - Part No.	EM320 - 24705B	EM600 - 24706D	EM900 - 24707F
Max power	3.20 kVA/kW	6.00 kVA/kW	9.00 kVA/kW
Phase	Single phase	Single phase	Single phase
Current	14.00 A	26.00 A	40.00 A
Voltage	230 V*	230 V*	230 V*
Frequency	50 Hz*	50 Hz*	50 Hz*
Start up	Electric	Electric	Electric
Alternator cooling system	Sea water	Sea water	Sea water
Dimensions open version	N.A.	600x430x480 mm	697x430x510 mm
Weight open version	N.A.	142 kg	196 kg
Dimensions soundproof version	580x425x525 mm	650x480x540 mm	800x500x565 mm
Weight soundproof version	99 kg	152 kg	216 kg
Noise level @ 7 meters	54 dB (A)	54 dB (A)	54 dB (A)
Air consumption	0.32 m³/min	0.32 m³/min	0.40 m³/min

#### Engine

Model	YANMAR L70N	KUBOTA Z482	KUBOTA D722
Cooling system	Sea water-Air	Heat exchanger	Heat exchanger
RPM	3000	3000	3000
Number of cylinders	1	2	3
Displacement	320 cc	479 cc	719 cc
Bore	78 mm	67 mm	67 mm
Stroke	67 mm	68 mm	68 mm
Compression ratio: 1	20.00	23.00	23.00
Oil cap capacity	1.101	2.10	3.80
Fresh water pump capacity	-	2.70	2.70
Refrigerant fluid flow	-	22.00 l/min	22.00 l/min
Sea water pump flow	20.00 l/min	12.00 l/min	12.00 l/min
Heat discharge	-	34.00 kcal/min	51.00 kcal/min
Maximum installation angle	10° continuous / 22.5° intermittent		
Speed governor	Mechanical	Mechanical	Mechanical
Consumption at half load	0.80 l/h	1.60 l/h	1.90 l/h
Consumption at full load	1.30 l/h	2.70 l/h	3.60 l/h
Recommended fuel	No. 2D Diesel Fuel:Spec EN 590 -ASTM D975		

\* 240/120V - 60Hz models are available on request

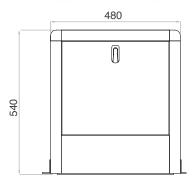


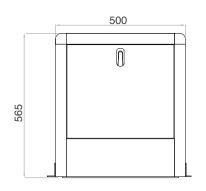
Synchronous, single bearing, brushless 2 poles, single phase, sea water cooled, insulation class "H".

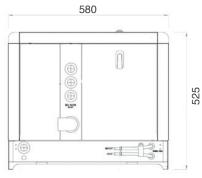
#### Connections

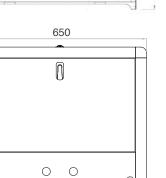
Model	EM320	EM600	EM900
Minimum power cable section	3G2,53G2,53G2,5	3G2,5	3G6
Maximum fuel pump prevalence	0.50	0.50	0.80
Fuel supply line	Ø 8 mm	Ø 8 mm	Ø 8 mm
Fuel supply refusal line	Ø 6 mm	Ø 6 mm	Ø 6 mm
Oil drain cap	3/8 NPT	3/8 NPT	3/8 NPT
Maximum sea water pump prevalence	1.00	1.22	1.22
Sea water supply line	Ø 10 mm	Ø 10 mm	Ø 25 mm
Humid outlet pipe line	Ø 40 mm	Ø 40 mm	Ø 40 mm
Max. exhaust return pressure outlet	500	500	500
Nominal battery voltage	12 V	12 V	12 V
Min CCA rating	400 A; 50 Ah	400 A; 50 Ah	540 A; 70 Ah
Minimum battery cable section	35 mm	35 mm	50 mm



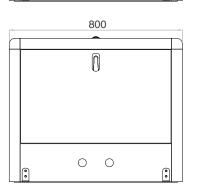








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EM320 - 24705B



EM600 - 24706D



EM900 - 24707F

# **EML SERIES 1500 RPM - MEDIUM POWER**

#### Features

- Connection on one side
- Electronic managementEasy maintenance
- Local and remote command
- · Reduced dimensions and noise level



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Model - Part No.	EML740 - 24708H	EML970 - 24709K	EML1200 - 25421S
Max power	7.40 kVA/kW	9.70 kVA/kW	12.00 kVA/kW
Phase	Single phase	Single phase	Single phase
Current	32.00 A	42.00 A	52.00 A
Voltage	230 V*	230 V*	230 V*
Frequency	50 Hz*	50 Hz*	50 Hz*
Start up	Electric	Electric	Electric
Alternator cooling system	Air	Air	Air
Dimensions open version	800x490x620 mm	900x490x625 mm	910x550x680 mm
Weight open version	266 kg	295 kg	362 kg
Dimensions soundproof version	910x540x670 mm	1040x540x680 mm	1020x600x730 mm
Weight soundproof version	276 kg	305 kg	372 kg
Noise level @ 7 meters	54 dB (A)	54 dB (A)	54 dB (A)
Air consumption	0.71 m <sup>3</sup> /min	0.96 m³/min	1.21 m³/min

#### Engine

Model	KUBOTA D1105-BG	KUBOTA V1505-BG	KUBOTA D1703-BG
Cooling system	Heat exchanger	Heat exchanger	Heat exchanger
RPM	1500	1500	1500
Number of cylinders	3	4	3
Displacement	1124 cc	1499 cc	1647 cc
Bore	78 mm	78 mm	87 mm
Stroke	78 mm	78 mm	92 mm
Compression ratio: 1	22.00	22.00	23.00
Oil cap capacity	4.00 l	4.30 I	7.00
Refrigerant fluid flow	15.90 l/min	15.90 l/min	37.90 l/min
Sea water pump flow	18.90 l/min	18.90 l/min	37.90 l/min
Heat discharge	45.00 kcal/min	53.00 kcal/min	72.00 kcal/min
Maximum installation angle	10° continuous / 22.5° intermittent		
Speed governor	Mechanical	Mechanical	Electronic
Consumption at half load	1.50 l/h	1.90 l/h	2.70 l/h
Consumption at full load	2.70 l/h	3.40 l/h	4.20 l/h
Recommended fuel	No. 2D Diesel Fuel:Spec EN 590 - ASTM D975		

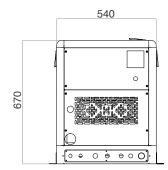
\* 240/120V - 60Hz models are available on request

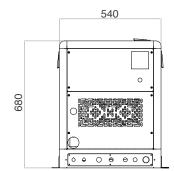


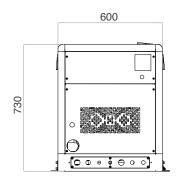
Synchronous, single bearing, brushless 2 poles, single phase, air cooled, insulation class "H".

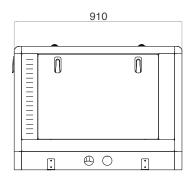
#### Connections

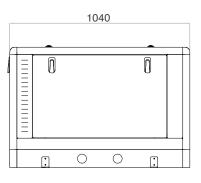
Model	EML740	EML970	EML1200
Minimum power cable section	3G6	3G10	3G10
Maximum fuel pump prevalence	0.80	0.80	0.80
Fuel supply line	Ø 8 mm	Ø 8 mm	Ø 8 mm
Fuel supply refusal line	Ø 6 mm	Ø 6 mm	Ø 6 mm
Oil drain cap	3/8 NPT	3/8 NPT	3/8 NPT
Maximum sea water pump prevalence	1.22	1.22	1.22
Sea water supply line	Ø 25 mm	Ø 25 mm	Ø 25 mm
Humid outlet pipe line	Ø 40 mm	Ø 50 mm	Ø 60 mm
Max. exhaust return pressure outlet	500	500	500
Nominal battery voltage	12 V	12 V	12 V
Min CCA rating	540 A; 70 Ah	540 A; 70 Ah	670 A; 100 Ah
Minimum battery cable section	50 mm	50 mm	50 mm

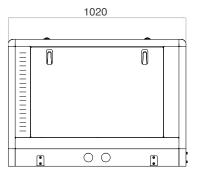














EML740 - 24708H





EML1200 - 25421S

# **EML SERIES 1500 RPM - HIGH POWER**



#### Features

- Connection on one side
- Electronic managementEasy maintenance
- Local and remote command
- · Reduced dimensions and noise level



Model - Part No.	EML1800 - 25422U	EML2500 - 25423W
Max power	18.00 kVA/kW	25.00 kVA/kW
Phase	Single phase	Single phase
Current	83.00 A	109.00 A
Voltage	230 V*	230 V*
Frequency	50 Hz*	50 Hz*
Start up	Electric	Electric
Alternator cooling system	Air	Air
Dimensions open version	1010x550x680 mm	1460x650x850 mm
Weight open version	415 kg	655 kg
Dimensions soundproof version	1130x600x730 mm	1600x710x910 mm
Weight soundproof version	430 kg	670 kg
Noise level @ 7 meters	54 dB (A)	54 dB (A)
Air consumption	1.43 m <sup>3</sup> /min	2.20 m³/min

#### Engine

Model	KUBOTA V2403-BG	KUBOTA V3300-BG
Cooling system	Heat exchanger	Heat exchanger
RPM	1500	1500
Number of cylinders	4	4
Displacement	2434 cc	3318 cc
Bore	87 mm	98 mm
Stroke	102 mm	110 mm
Compression ratio: 1	23.20	22.60
Oil cap capacity	8.00	13.20 l
Sea water pump flow	26.50 l/min	49.50 l/min
Heat discharge	88.00 kcal/min	111.00 kcal/min
Maximum installation angle	10° continuous / 22.5° intermittent	10° continuous / 22.5° intermittent
Speed governor	Electronic	Electronic
Consumption at half load	3.40 l/h	5.60 l/h
Consumption at full load	6.10 l/h	8.00 l/h
Recommended fuel	No. 2D Diesel Fuel:Spec EN 590 - ASTM D975	No. 2D Diesel Fuel:Spec EN 590 - ASTM D975

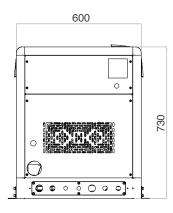
\* 240/120V - 60Hz models are available on request

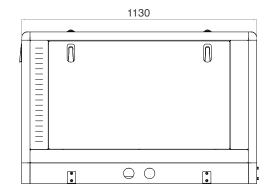


Synchronous, single bearing, brushless 2 poles, single phase, air cooled, insulation class "H".

#### Connections

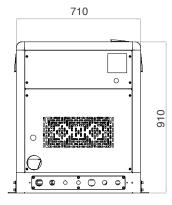
Model	EML1800	EML2500
Minimum power cable section	25 mmq	25 mmq
Maximum fuel pump prevalence	0.80	0.80
Fuel supply line	Ø 8 mm	Ø 8 mm
Fuel supply refusal line	Ø 6 mm	Ø 6 mm
Oil drain cap	3/8 NPT	3/8 NPT
Maximum sea water pump prevalence	1.22	1.22
Sea water supply line	Ø 25 mm	Ø 25 mm
Humid outlet pipe line	Ø 60 mm	Ø 60 mm
Max. exhaust return pressure outlet	500	500
Nominal battery voltage	12 V	12 V
Min CCA rating	670 A; 100 Ah	670 A; 100 Ah
Minimum battery cable section	50 mm	50 mm

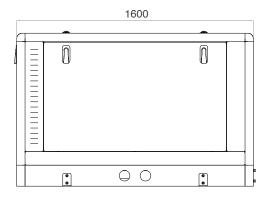














# **EML SERIES 1500 RPM - HIGH POWER**



#### Features

- Connection on one side
- Electronic managementEasy maintenance
- Local and remote command
- Reduced dimensions and noise level



Model - Part No.	EML3200 - 25424Y	EML3900 - 25425A
Max power	32.00 kVA/kW	39.00 kVA/kW
Phase	Single phase	Single phase
Current	139.00 A	170.00 A
Voltage	230 V*	230 V*
Frequency	50 Hz*	50 Hz*
Start up	Electric	Electric
Alternator cooling system	Air	Air
Dimensions open version	1460x650x850 mm	1460x650x850 mm
Weight open version	-	-
Dimensions soundproof version	1600x710x960 mm	1600x710x960 mm
Weight soundproof version	680 kg	700 kg
Noise level @ 7 meters	54 dB (A)	54 dB (A)
Air consumption	2.20 m³/min	2.20 m³/min

#### Engine

Model	KUBOTA V3800-BG	KUBOTA V3800-BG
Cooling system	Heat exchanger	Heat exchanger
RPM	1500	1500
Number of cylinders	4	4
Displacement	3769 cc	3769 cc
Bore	100 mm	100 mm
Stroke	120 mm	120 mm
Compression ratio: 1	22.60	22.60
Oil cap capacity	13.20 l	13.20 l
Sea water pump flow	49.50 l/min	49.50 l/min
Heat discharge	111.00 kcal/min	111.00 kcal/min
Maximum installation angle	10° continuous / 22.5° intermittent	10° continuous / 22.5° intermittent
Speed governor	Electronic	Electronic
Consumption at half load	5.70 l/h	5.70 l/h
Consumption at full load	9.10 l/h	9.10 l/h
Recommended fuel	No. 2D Diesel Fuel:Spec EN 590 - ASTM D975	No. 2D Diesel Fuel:Spec EN 590 - ASTM D975

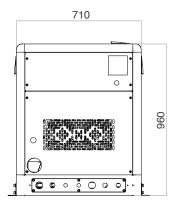
\* 240/120V - 60Hz models are available on request

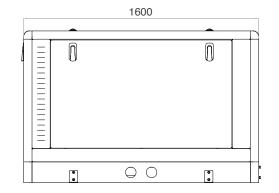


Synchronous, single bearing, brushless 2 poles, single phase, air cooled, insulation class "H".

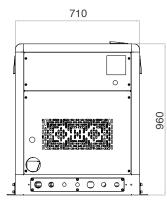
#### Connections

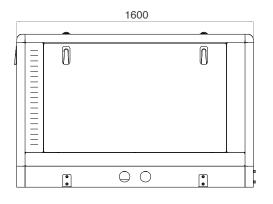
Model	EML3200	EML3900
Minimum power cable section	25 mmq	25 mmq
Maximum fuel pump prevalence	0.80	0.80
Fuel supply line	Ø 8 mm	Ø 8 mm
Fuel supply refusal line	Ø 6 mm	Ø 6 mm
Oil drain cap	3/8 NPT	3/8 NPT
Maximum sea water pump prevalence	1.22	1.22
Sea water supply line	Ø 25 mm	Ø 25 mm
Humid outlet pipe line	Ø 76 mm	Ø 76 mm
Max. exhaust return pressure outlet	500	500
Nominal battery voltage	12 V	12 V
Min CCA rating	670 A; 100 Ah	670 A; 100 Ah
Minimum battery cable section	50 mm	50 mm













# ETL SERIES 1500 RPM

#### Features

- Connection on one side
- Electronic managementEasy maintenance
- Local and remote command
- $\boldsymbol{\cdot}$  Reduced dimensions and noise level



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Model - Part No.	ETL1500 - 25426C	ETL2590 - 24713A	ETL3200 - 24714C
Max power	15.00 kVA	25.90 kVA	32.00 kVA
Phase	Three Phase	Three Phase	Three Phase
Current	22.00 A	34.00 A	45.00 A
Voltage	400/230 V + N*	400/230 V + N*	400/230 V + N*
Frequency	50 Hz*	50 Hz*	50 Hz*
Start up	Electric	Electric	Electric
Alternator cooling system	Air	Air	Air
Dimensions open version	950x550x680 mm	1010x550x680 mm	1460x650x850 mm
Weight open version	362 kg	433 kg	652 kg
Dimensions soundproof version	1020x600x730 mm	1130x600x730 mm	1590x700x900 mm
Weight soundproof version	372 kg	448 kg	670 kg
Noise level @ 7 meters	54 dB (A)	54 dB (A)	54 dB (A)
Air consumption	1.21 m <sup>3</sup> /min	1.43 m <sup>3</sup> /min	2.20 m <sup>3</sup> /min

#### Engine

Model	KUBOTA D1703-BG	KUBOTA V2403-BG	KUBOTA V3300-BG		
Cooling system	Heat exchanger	Heat exchanger	Heat exchanger		
RPM	1500	1500	1500		
Number of cylinders	3	4	4		
Displacement	1647 cc	2434 cc	3318 cc		
Bore	87 mm	87 mm	98 mm		
Stroke	92 mm	102 mm	110 mm		
Compression ratio: 1	23.00	23.20	22.60		
Oil cap capacity	7.00	8.00 l	13.20		
Refrigerant fluid flow	37.90 l/min	37.90 l/min	43.50 l/min		
Sea water pump flow	37.90 l/min	26.50 l/min	49.50 l/min		
Heat discharge	72.00 kcal/min	88.00 kcal/min	111.00 kcal/min		
Maximum installation angle		10° continuous / 22.5° intermittent			
Speed governor	Mechanical	Electronic	Electronic		
Consumption at half load	2.70 l/h	3.40 l/h	5.60 l/h		
Consumption at full load	4.20 l/h	6.10 l/h	8.00 l/h		
Recommended fuel	No. 2D Diesel Fuel:Spec EN 590 - ASTM D975				

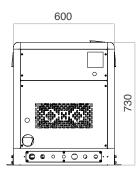
\* 440/254V - 60Hz models are available on request

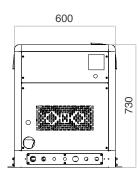


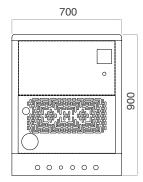
Synchronous, single bearing, brushless 2 poles, three phase, air cooled, insulation class "H".

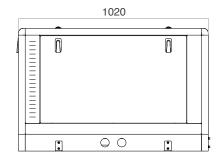
#### Connections

Model	ETL1500	ETL2590	ETL3200
Minimum power cable section	3G10	5G6	5G10
Maximum fuel pump prevalence	0.80	0.80	0.80
Fuel supply line	Ø 8 mm	Ø 8 mm	Ø 8 mm
Fuel supply refusal line	Ø 6 mm	Ø 6 mm	Ø 6 mm
Oil drain cap	3/8 NPT	3/8 NPT	3/8 NPT
Maximum sea water pump prevalence	1.22	1.22	1.22
Sea water supply line	Ø 25 mm	Ø 25 mm	Ø 32 mm
Humid outlet pipe line	Ø 60 mm	Ø 60 mm	Ø 76 mm
Max. exhaust return pressure outlet	500	500	500
Nominal battery voltage	12 V	12 V	12 V
Min CCA rating	670 A; 100 Ah	670 A; 100 Ah	670 A; 100 Ah
Minimum battery cable section	50 mm	50 mm	50 mm











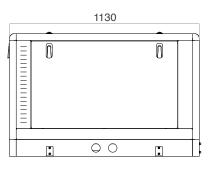
ETL1500 - 25426C

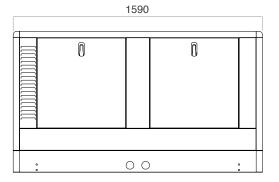


ETL2590 - 24713A



ETL3200 - 24714C





# **ETL SERIES 1500 RPM**

#### Features

- Connection on one side
- Electronic managementEasy maintenance
- Local and remote command
- $\boldsymbol{\cdot}$  Reduced dimensions and noise level



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ENERGY

Model - Part No.	ETL3700 - 25427E	ETL4700 - 25428G
Max power	37.00 kVA	47.00 kVA
Phase	Three Phase	Three Phase
Current	50.00 A	65.00 A
Voltage	400/230 V + N*	400/230 V + N*
Frequency	50 Hz*	50 Hz*
Start up	Electric	Electric
Alternator cooling system	Air	Air
Dimensions open version	1460x650x850 mm	1460x650x850 mm
Weight open version	-	-
Dimensions soundproof version	1600x710x960 mm	1600x710x960 mm
Weight soundproof version	700 kg	700 kg
Noise level @ 7 meters	54 dB (A)	54 dB (A)
Air consumption	2.20 m <sup>3</sup> /min	2.20 m³/min

#### Engine

Model	KUBOTA V3800-BG	KUBOTA V3800-BG	
Cooling system	Heat exchanger	Heat exchanger	
RPM	1500	1500	
Number of cylinders	4	4	
Displacement	3769 cc	3769 cc	
Bore	100 mm	100 mm	
Stroke	120 mm	120 mm	
Compression ratio: 1	22.60	22.60	
Oil cap capacity	13.20	13.20 l	
Refrigerant fluid flow	43.50 l/min	43.50 l/min	
Sea water pump flow	49.50 l/min	49.50 l/min	
Heat discharge	111.00 kcal/min	110.00 kcal/min	
Maximum installation angle	10° continuous / 22.5° intermittent	10° continuous / 22.5° intermittent	
Speed governor	Electronic	Electronic	
Consumption at half load	5.70 l/h	5.70 l/h	
Consumption at full load	9.10 l/h	9.10 l/h	
Recommended fuel	No. 2D Diesel Fuel:Spec EN 590 - ASTM D975	No. 2D Diesel Fuel:Spec EN 590 - ASTM D975	

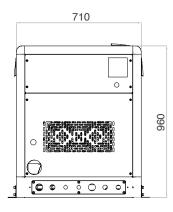
\* 440/254V - 60Hz models are available on request

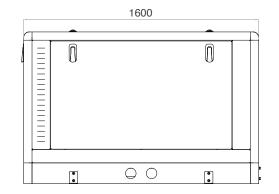


Synchronous, single bearing, brushless 2 poles, three phase, air cooled, insulation class "H".

#### Connections

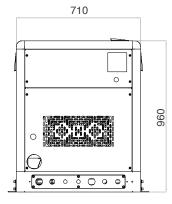
Model	ETL3700	ETL4700
Minimum power cable section	5G10	5G10
Maximum fuel pump prevalence	0.80	0.80
Fuel supply line	Ø 8 mm	Ø 8 mm
Fuel supply refusal line	Ø 6 mm	Ø 6 mm
Oil drain cap	3/8 NPT	3/8 NPT
Maximum sea water pump prevalence	1.22	1.22
Sea water supply line	Ø 32 mm	Ø 32 mm
Humid outlet pipe line	Ø 76 mm	Ø 76 mm
Max. exhaust return pressure outlet	500	500
Nominal battery voltage	12 V	12 V
Min CCA rating	670 A; 100 Ah	670 A; 100 Ah
Minimum battery cable section	50 mm	50 mm

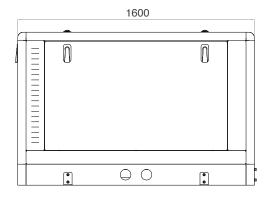






ETL3700 - 25427E







### **PRODUCT RANGE CHART**



Model	EM320	EM600	EM900	EML740	EML970	EML1200		
Features								
Maximum power (kVA/kW)	3.2/3.2	6.0/6.0	9.0/9.0	7.4/7.4	9.7/9.7	12.0/12.0		
Phase	Single phase	Single phase	Single phase	Single phase	Single phase	Single phase		
Voltage (V)	230	230	230	230	230	230		
Frequency (Hz)	50	50	50	50	50	50		
Alternator cooling system	Sea water	Sea water	Sea water	Air	Air	Air		
Dimensions (mm)	580x425x525	650x480x540	800x500x565	910x540x670	1040x540x675	1020x600x730		
Weight (kg)	99	152	216	276	305	372		

#### **Engine features**

Brand	Yanmar	Kubota	Kubota	Kubota	Kubota	Kubota
Stroke cycle (n°)	4	4	4	4	4	4
Fuel	Diesel	Diesel	Diesel	Diesel	Diesel	Diesel
Injection	Direct	Direct	Direct	Indirect	Indirect	Indirect
Model	L70N	Z482	D722	D1105-BG	V1505-BG	D1703-BG
Engine cooling system	Sea water/ Air	Double	cooling system w	ith heat exchang	ger sea water-fre	sh water
RPM	3000	3000	3000	1500	1500	1500
Number of cylinders	1	2	3	3	4	3
Displacement (cm <sup>3</sup> )	320	479	719	1124	1499	1647
Speed regulator	Mechanical	Mechanical	Mechanical	Mechanical	Mechanical	Elettronico
Fuel consumption (I/h)	0,8 (2/4) 1,3 (4/4)	1,6 (2/4) 2,7 (4/4)	1,9 (2/4) 3,6 (4/4)	1,5 (2/4) 2,7 (4/4)	1,9 (2/4) 3,4 (4/4)	2,7 (2/4) 4,2 (4/4)

#### Starting system

Nominal battery voltage (volts)	12	12	12	12	12	12	
SAE @ 32°F 0°C	400 amps 50 Ah	400 amps 50 Ah	540 amps 70 Ah	540 amps 70 Ah	540 amps 70 Ah	670 amps 100 Ah	
Minimum battery cable section (mm <sup>2</sup> )	35	50	50	50	50	50	

# **PRODUCT RANGE CHART**



EML1800	EML2500	EML3200	EML3900	ETL1500	ETL2590	ETL3200	ETL3700	ETL4700
18.0/18.0	25.0/25.0	32.0/32.0	39.0/39.0	15.00/12.0	25.9/20.6	32.0/25.6	37.0/29.6	47.0/37.6
Single phase	Single phase	Single phase	Single phase	Three phase	Three phase	Three phase	Three phase	Three phase
230	230	230	230	400/230+N	400/230+N	400/230+N	400/230+N	400/230+N
50	50	50	50	50	50	50	50	50
Air								
1130x600x730	1600x710x910	1600x710x960	1600x710x960	1020x600x730	1130x600x730	1590x700x900	1600x710x960	1600x710x960
430	670	680	700	372	448	670	700	700

Kubota	Kubota	Kubota	Kubota	Kubota	Kubota	Kubota	Kubota	Kubota
4	4	4	4	4	4	4	4	4
Diesel	Diesel	Diesel	Diesel	Diesel	Diesel	Diesel	Diesel	Diesel
Indirect	Indirect	Indirect	Indirect	Indirect	Indirect	Indirect	Indirect	Indirect
V2403-BG	V3300-BG	V3800-BG	V3800-BG	D1703-BG	V2403-BG	V3300-BG	V3800-BG	V3800-BG
		Double c	ooling system w	ith heat exchan	ger sea water-fre	esh water		
1500	1500	1500	1500	1500	1500	1500	1500	1500
4	4	4	4	3	4	4	4	4
2434	3318	3769	3769	1647	2434	3318	3769	3769
Electronic	Electronic	Electronic	Electronic	Electronic	Electronic	Electronic	Electronic	Electronic
3 (2/4) 5,3 (4/4)	5,6 (2/4) 8,0 (4/4)	5,7 (2/4) 2,1 (4/4)	5,7 (2/4) 2,1 (4/4)	2,7 (2/4) 4,2 (4/4)	3,4 (2/4) 6,1 (4/4)	5,6 (2/4) 8,0 (4/4)	5,7 (2/4) 9,1 (4/4)	5,7 (2/4) 9,1 (4/4)

12	12	12	12	12	12	12	12	12
670 amps 100 Ah								
50	50	50	50	50	50	50	50	50

# **ACCESSORIES**



MODEL	DESCRIPTION	GEN	S/W Kit	Exhaust Kit	Separator	Siphon breaker
EM320 - 3,2 kW	3,2 kW, 230 V, soundproofed	24705B	22662Z	22630K	22631M	22657G
EM600 - 6,0 kW	6,0 kW, 230 V, soundproofed	24706D	22629B	22630K	22631M	22657G
EM900 - 9,0 kW	9,0 kW, 230 V, soundproofed	24707F	22629B	22630K	22631M	22657G
EML740 - 7,4 kW	7,4 kW, 230 V, soundproofed	24708H	22663B	22665F	22668M	22657G
EML970 - 9,7 kW	9,7 kW, 230 V, soundproofed	24709K	22663B	22665F	22668M	22657G
EML1200 - 12,0 kW	12,0 kW, 230 V, soundproofed	25421S	22663B	22666H	22669P	22657G
EML1800 - 18,0 kW	18,0 kW, 230 V, soundproofed	25422U	22663B	22666H	22669P	22657G
EML2500 - 25,0 kW	25,0 kW, 230 V, soundproofed	25423W	22664D	22667K	22670Y	22657G
EML3200 - 32,0 kW	32,0 kW, 230 V, soundproofed	25424Y	22664D	22667K	22670Y	22657G
EML3900 - 39,0 kW	39,0 kW, 230 V, soundproofed	25425A	22664D	22667K	22670Y	22657G
ETL1500 - 15,0 kVA	15,0 kVA, 400/230 V+N, soundproofed	25426C	22663B	22666H	22669P	22657G
ETL2590 - 25,9 kVA	25,9 kVA, 400/230 V+N, soundproofed	24713A	22663B	22666H	22669P	22657G
ETL3200 - 32,0 kVA	32,0 kVA, 400/230 V+N, soundproofed	24714C	22664D	22667K	22670Y	22657G
ETL3700 - 37,0 kVA	37,0 kVA, 400/230 V+N, soundproofed	25427E	22664D	22667K	22670Y	22657G
ETL4700 - 47,0 kVA	47,0 kVA, 400/230 V+N, soundproofed	25428G	22664D	22667K	22670Y	22657G

Kit A/M (Sea water kit): include hose holder, nipples, ball valve, through hull and water filter

Exhaust Kit: include silenced muffler, reinforced ss clamps and exhaust hose

Maintenance kits also available for all the genset models: include air filter, fuel filter and s.w pump impeller for EM320 model, Oil filter, fuel filter, belt, s.w. pump impeller and zinc anodes for all the other models



Silencers





Siphon breaker

Water/gas separator

### NOISE INSULATION MATERIALS



#### • The absorption layer

A thick layer of fire zero rated foam which soaks up noise and stops it bouncing around the engine space.

The transmission layer

A high density barrier provides the highest possible mass and gives the best noise reduction. The damping layer weighs 5kgs per square meter – more than the lead sheet used in older materials.

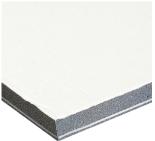
The isolation layer

This thin layer of foam has a crucial function: It acts like the gap in double glazing and stops the noise which hits the transmission layer being carried through to the bulkhead – just like the gap in double glazing.

The multi-layer construction used offers the best possible acoustic result in a thicknesses which can be accommodated in the tightest engine space, beating simpler materials many times as thick.



Maritex



Sealglass

#### PROTECTIVE SKIN

#### Maritex

An immensely tough fibreglass cloth with a sealed metallised skin so it cannot absorb oil. It won't tear or fray. It looks heavy duty, and it is fire zero rated. Maritex is simply the best facing of the range. Maritex is fire zero rated to BS 476 parts 6 and 7.

#### Sealglass

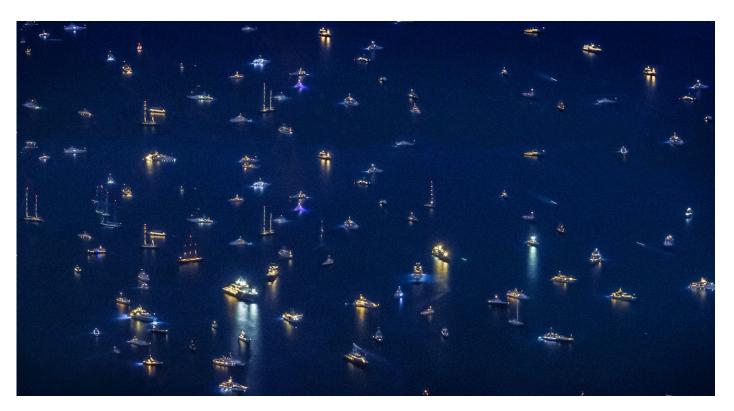
A tough off-white glass cloth, sealed against oil. The cloth is extremely tough and will not tear. The material meets the ISO 9094 fire requirements of the EU Recreational Craft Directive.

Re-inforced Silver Polyester

This facing meets the requirements of the Recreational Craft Directive. It provides a seal to keep oil out. You can pierce it, but it has a reinforcing layer behind it. It will burn, but once laminated in place it meets the ISO 9094 fire requirements of the EU Recreational Craft Directive. In a fire the facing will burn, but not the foam behind it.



**Re-inforced Silver Polyester** 



# ACCESSORIES



#### SCAMO EXHAUST HOSE

Hardwall corrugated (CAJ) and smooth cover (NAJ) rubber hose. Extremely flexible. Marine exhaust hose suitable also for cooling the heat exchangers on pleasure boats up to 24 m.

Standards SAE J 2006:2003 R2 - ISO 13363:2004 Type 2 Class B.

Approved: LLOYD'S REGISTER N. 96/00126 - R.I.NA N. DIP 075110CS

• TEMPERATURE RANGE: -30°C +100°C

Hoses available with internal diameter 40/50/60/90 mm, in 20 m coil (in case of different lengths requested please contact our sales department)





# ACCESSORIES FOR THE INSTALLATION



Seawater filtering kit



Diesel prefilter with water separator



Oil extraction pump



Halyard® VTR Silencers, available on request



Halyard<sup>®</sup> Thermoplastic water/gas separator, available on request



**Diesel water separator** 



**Electrical fuel pump** 



Siphon breaker





Eneon marine generators are a safe choice. Eneon reliability is also guaranteed by an excellent technical assistance. with pre and after sales support, managed directly from our offices in Italy and in the United States and supplied all over the world, through our official network of distributors, workshops and affiliated centres, able to provide spare parts and immediate assistance.

For further information, please contact our After-Sales Service.



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